CMA
Competition & Markets Authority

Online platforms and digital advertising

Market study final report

1 July 2020

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Summary

Platforms funded by digital advertising provide highly valuable services, allowing people to find information in an instant and connect with family and friends from around the world – all at no direct cost to the consumer. Google and Facebook are the largest such platforms by far, with over a third of UK internet users' time online spent on their sites. Google has more than a 90% share of the £7.3 billion search advertising market in UK, while Facebook has over 50% of the £5.5 billion display advertising market. Both companies have been highly profitable for many years.

Both Google and Facebook grew by offering better products than their rivals. However, they are now protected by such strong incumbency advantages – including network effects, economies of scale and unmatchable access to user data – that potential rivals can no longer compete on equal terms. These issues matter to consumers. Weak competition in search and social media leads to reduced innovation and choice and to consumers giving up more data than they would like. Weak competition in digital advertising increases the prices of goods and services across the economy and undermines the ability of newspapers and others to produce valuable content, to the detriment of broader society.

The concerns we have identified in these markets are so wide ranging and self-reinforcing that our existing powers are not sufficient to address them. We need a new, regulatory approach – one that can tackle a range of concerns simultaneously, with powers to act swiftly to address both the sources of market power and its effects, and with a dedicated regulator that can monitor and adjust its interventions in the light of evidence and changing market conditions.

We are therefore recommending that the government establish a pro-competition regulatory regime for online platforms. A Digital Markets Unit (DMU) would be empowered to enforce a code of conduct to govern the behaviour of platforms with market power, ensuring concerns can be dealt with swiftly, before irrevocable harm to competition can occur. The DMU should also have powers to tackle sources of market power and increase competition, including powers to increase interoperability and provide access to data, to increase consumer choice and to order the breakup of platforms where necessary.

We have identified a wide range of specific interventions that the DMU could introduce under this regime to tackle the market power of Google and Facebook, from ordering Google to open up data to rival search engines and separate aspects of its open display advertising business, to requiring Facebook to increase its interoperability with competing social media platforms and give consumers a choice over whether to receive personalised advertising. We are now taking forward further advice on the development of this pro-competition regulatory regime through the Digital Markets Taskforce.

Introduction

1. This is the final report of the CMA's market study into online platforms and digital advertising. Digital advertising plays an important role in the provision of **hugely valuable services and content to consumers, including internet search, social media and news journalism**. Consumers typically do not pay directly for these services – rather, platforms and publishers finance them by using consumers' attention and data to sell targeted digital advertising. In turn, for a wide range of firms, from the largest conglomerate to the local café, digital advertising provides a highly effective method of delivering ads that are relevant to consumers, helping to drive brand awareness and sales.

2. The main types of digital advertising are search advertising, in which sponsored ads are provided in response to users' search queries, and display advertising, in which static or video ads are displayed alongside the content a user is interested in. Currently, Google generates almost all search advertising while Facebook has a strong position in display advertising. Alongside the owned and operated platforms of Google and Facebook there is an 'open display market' in which publishers such as online newspapers compete in real time to sell advertising inventory to advertisers. Each of these forms of digital advertising requires a relevant ad to be selected and served to an individual consumer in a fraction of a second – an extraordinary technological feat that was not possible only a few years ago.

Scope and objectives

3. This market study has assessed how well the markets for search, social media, and digital advertising are working, and the role of Google and Facebook within them. We have focussed our work on three high-level issues:

   - **to what extent Google and Facebook have market power in search and social media** respectively and the sources of this market power;
   - **whether consumers have adequate control over the use of their data by online platforms**; and
   - whether **a lack of transparency, conflicts of interest and the leveraging of market power** undermine competition in digital advertising.

4. In addressing these issues, we have aimed to inform the broader debate on the regulation of online platforms, as explored in the Furman and Stigler

Center reviews.[1] These reviews concluded that relying solely on existing competition law was not sufficient and that a new pro-competition approach should be taken to regulating platforms. In March this year, the UK government announced it was accepting all of the Furman Review's strategic recommendations for unlocking competition in digital markets and asked the CMA to lead a Digital Markets Taskforce to advise the government on how to take these recommendations forward.

5. The CMA welcomes these actions as a positive step towards the development of a new pro-competition regime, and is today formally launching the Taskforce work by issuing a call for inputs. Google and Facebook are two of the largest platforms in the world, and an important objective of this market study has been to provide concrete evidence and practical advice to inform the development of this new pro-competition regulatory regime, drawing on a detailed understanding of advertising-funded platforms' business models and the challenges they pose.

Why do these issues matter for consumers?

6. Although people do not typically have to pay directly for the content that is supported by digital advertising, all consumers stand to experience harm in a variety of forms if competition in these markets is not working well.

7. First, competition problems may **inhibit innovation and the development of new, valuable services for consumers**. It is the threat of being overtaken by rivals that provides the spur to companies to innovate and produce new products that consumers want. If platforms are insulated from this threat – or indeed if they can stop new alternative platforms from growing – consumers will suffer from reduced innovation and choice in the future. Google and Facebook were able to emerge, with limited resources, on the back of a good idea, producing new and innovative services that are highly valued by consumers. However, they are now protected by such strong and self-reinforcing incumbency advantages that similar innovation by new entrants is much more difficult.

8. This impact on innovation is likely to be the largest source of consumer harm. We have heard from many companies which have told us that the power of the online platforms poses an existential threat to their businesses and we are concerned that, without reform, existing market dynamics will mean that the

[1] Furman Review (2019), Unlocking digital competition. Stigler Center (2019), Committee on Digital Platforms Final Report.

next great innovation cannot emerge to revolutionise our lives in the way that Google and Facebook have done in the past.

9. Second, although services such as search and social media appear to be free to those who use them, they are paid for indirectly through advertising revenues. The **costs of digital advertising, which amount to around £14 billion in the UK in 2019, or £500 per household, are reflected in the prices of goods and services across the economy**. These costs are likely to be higher than they would be in a more competitive market, and this will be felt in the prices that consumers pay for hotels, flights, consumer electronics, books, insurance and many other products that make heavy use of digital advertising.

10. Our analysis indicates that Google's and Facebook's market power has a significant impact on prices and revenues. For example, Google's revenue per search in the UK has more than doubled since 2011, and our in-depth analysis of Google and Bing's search prices suggest that Google's prices are 30-40% higher on desktop and mobile when comparing like-for-like search terms. Facebook's average revenue per user in the UK has increased from less than £5 in 2011 to over £50 in 2019, and our comparison with other social media platforms suggests that its average revenue per user in 2019 was significantly higher than that of its competitors.

11. Third, competition problems result in consumers receiving **inadequate compensation for their attention and the use of their personal data by online platforms**. Although many online services are currently provided free of charge, in a well-functioning market, consumers might be offered a reward for their engagement online, or offered a choice over the amount of data they provide or adverts they receive.

12. We have found that the profitability of both Google and Facebook has been well above what is required to reward investors with a fair return for many years. In 2018 we estimated that the cost of capital for both Google and Facebook was around 9%, compared to actual returns on capital of over 40% for Google and around 50% for Facebook. We would expect these excess profits to be shared more freely with consumers in a more competitive market.

13. Fourth, limited choice and competition also have the consequence that **people are less able to control how their personal data is used** and may effectively be faced with a 'take it or leave it' offer when it comes to signing up to a platform's terms and conditions. For many, this means they have to provide more personal data to platforms than they would like.

14. Finally, concerns relating to online platforms funded by digital advertising can lead to **wider social, political and cultural harm through the decline of authoritative and reliable news media**, the resultant spread of 'fake news' and the decline of the local press which is often a significant force in sustaining communities. For online newspapers and other content providers, traffic from online platforms and revenue from digital advertising represents a vital part of their business. Problems in the search, social media or digital advertising sectors can dramatically affect their advertising revenues and reduce their ability to invest in news and other online content, to the detriment of those who value such content and to broader society.

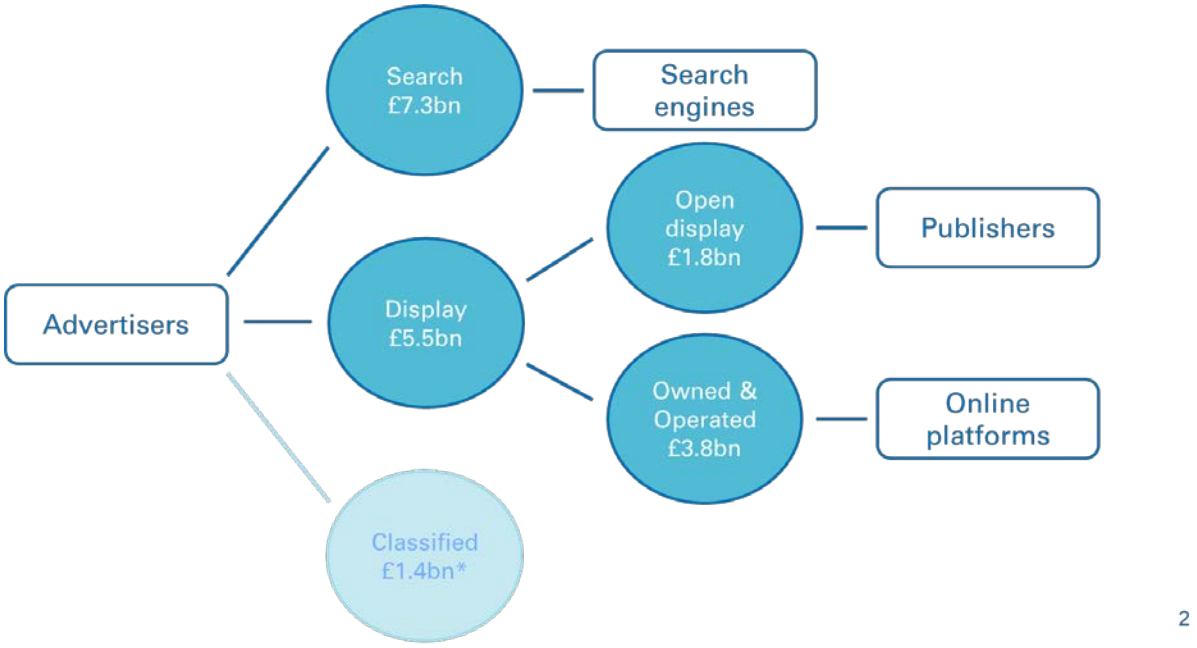
15. We have found that intermediaries (the largest of which is Google) capture at least 35% of the value of advertising bought from newspapers and other content providers in the UK. Greater competition and transparency would put downward pressure on these intermediaries' fees, helping publishers to receive a larger share of this value. Newspapers highlighted a wide range of other concerns, including restrictions on their ability to control their own content and data, to manage traffic to their websites and to target advertising; addressing these could make a vital contribution to the sustainability of news media in the country.

What are our findings?

Size of market and shares of supply

16. We estimate that around £14 billion was spent on digital advertising in the UK in 2019, around 80% of which was spent on Google and Facebook. Search advertising comprised around half of these revenues, at over £7 billion, and display expenditure was over £5 billion. The balance was made up of online classified advertising (comprising digital comparison tools and online marketplaces). This is shown in Figure 1 below.

Figure 1: Expenditure on different types of digital advertising in the UK in 2019



Source: CMA estimates based on parties' data. *IAB / PwC for classified. Figures may not sum due to rounding.

17. Media agencies and most advertisers have told us that search and display advertising are not substitutable, mainly because they perform different roles. Search is intent-based advertising designed to encourage those consumers who have already shown an interest in buying the product to make a purchase, while display is suitable for raising brand awareness and reaching new audiences that might not yet have shown interest.

18. Google has had a very high share of the general search market for many years. **Google has generated around 90% or more of UK search traffic each year over the last ten years and generated over 90% of UK search advertising revenues in 2019**. The only fully independent competitor to Google in the core functions of general search is Bing, owned by Microsoft. As discussed below, Google also has a very strong position in various segments of the open display market.

19. Facebook (including Instagram, which it bought in 2012) **generated over half of UK display advertising revenues in 2019**. For comparison, its largest competitor, YouTube (owned by Google), earned between 5 and 10%.

20. It is important to be clear that 'big' is not necessarily 'bad' in these markets. Where a platform has gained a large market share by being consistently better than its competitors and where it must respond to continued competitive pressures to maintain that position, it may be considered to operate within a competitive market even with a large market share. However, if potential competitors face substantial barriers to entry and expansion, such

that the market is no longer properly contestable, then a high market share can translate into market power, giving the platform the opportunity to increase prices, reduce quality or leverage market power to undermine competition in potentially competitive markets and deny innovative rivals the chance to bring new services to market.

21. We have not seen a significant challenge to the position of Google and Facebook for many years and have identified a number of characteristics of these markets that inhibit entry and expansion by rivals and undermine effective competition. These include:

- network effects and economies of scale;
- consumer decision making and the power of defaults;
- unequal access to user data;
- lack of transparency;
- the importance of ecosystems; and
- vertical integration, and resultant conflicts of interest.

22. The effect of any of these characteristics in isolation would be substantial, but we have found they are mutually reinforcing and in combination provide an unassailable incumbency advantage. We discuss each of them below, drawing on Chapters 3 to 5 of this report which present our findings in more detail in relation to, respectively, search and social media, consumer control over data, and digital advertising.

Network effects and economies of scale

23. Network effects occur when the value of a service to its users increases as the total number of users increases. Economies of scale arise where average costs decrease with increasing scale. These features mean that once a platform reaches a certain size, it can be extremely difficult for smaller new entrants to challenge them effectively.

24. In relation to search, the crawling and indexing activities required to create a 'map' of the internet that can be searched in real time represent a major cost and are subject to significant economies of scale.

25. There are advantages to scale in user queries and click behaviour (known as 'click-and-query' data), since the more such data that search engines have, the more able they are to improve their algorithms. Such scale advantages are particularly high for uncommon or 'tail' queries. Both Google and Microsoft told us that a substantial proportion of queries that they see are uncommon or new, which suggests that the ability to return appropriate results for such tail

queries is likely to be valuable to consumers, and to be an important factor in users' assessment of search quality. In addition, a higher volume of user search queries is of benefit to advertisers wishing to bid for keywords in the tail of uncommon search queries.[2]

26. We conducted an analysis of all of the search events seen by Google and Bing in a one-week period in the UK, and found that while a relatively large proportion of Bing's tail queries were also seen in the Google dataset, a very small proportion of Google's tail queries were also in the Bing dataset. This demonstrates Google's scale advantages over Bing in relation to uncommon search queries.

27. Overall, the greater scale of queries seen by Google supports its ability to deliver more relevant search results compared to its competitors, especially in relation to uncommon and new queries. In view of the importance of search relevance to consumers and keyword coverage to advertisers, **a lack of comparable scale in click-and-query data is likely to be a key factor that limits the ability of other search engines to compete with Google**.

28. **Social media platforms are characterised by strong network effects**, since the value to someone of joining a network is directly related to the other people who are already on the network. Having a large network of connected users also attracts developers and content providers to the platform - which in turn further increases its value to users - and advertisers keen to access a wide range of users.

29. These characteristics lead to substantial barriers to expansion. We note that there have been some examples over the last decade of entry in the social media sector funded by display advertising, including Instagram (subsequently acquired by Facebook), Snapchat and TikTok. However, with the possible exception of Instagram, these platforms are yet to reach a very significant scale in the supply of display advertising. In the case of Instagram, its success in achieving scale may be linked to its acquisition by Facebook.

30. Overall, **rival social media platforms do not act as a material threat to Facebook's competitive position**. Although new entry is possible, new platforms must overcome network effects and other barriers by offering a differentiated proposition that induces users to switch. No current platform offers a range of services comparable to Facebook's and none can provide access to a similarly extensive user base. Even where platforms are

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[2] These keywords (which for example might include specific detail on product characteristics desired by the user) are often preferred by advertisers as they can allow for more specific targeting and higher returns on investment. Our analysis of search prices suggests that, of queries with ads, less common queries attract a higher price than more common queries.

successful in developing a user base, to be viable in the long-term, they must successfully monetise their services, and in the last ten years we note that rival platforms have struggled to do this.

Consumer decision-making and the power of defaults

31. The digital economy has transformed the way we interact with information – the answer to a question that in the past would have taken considerable time and effort to find is now available in a fraction of a second. As access to huge reserves of information has become almost instantaneous, so our ability to filter extraneous information and focus on what is most relevant has become more important, and our tolerance for delays has fallen. Both of these factors have encouraged 'default behaviour' on the part of consumers – a propensity to avoid wasting time by accepting the default option presented.

32. We have found that **default behaviour by consumers has had a profound impact on the shape of competition in both search and social media**. First, defaults play a very important role in influencing consumers' use of search engines, and second, default settings and the way in which choices are presented to consumers have a strong influence on the ability of platforms – particularly social media platforms – to collect data about their users, and the ability of users in turn to control the use of their data.

33. In search, Google has negotiated agreements with Apple and with many of the largest mobile phone manufacturers under which it pays a share of search advertising revenues to these partners in return for Google Search occupying the default search positions on the device. The scale of these payments is striking and demonstrates the value that Google places on these default positions. In 2019, Google paid around £1.2 billion in return for default positions in the UK alone, the substantial majority of which was paid to Apple for being the default on the Safari browser. Rival search engines to Google that we spoke to highlighted these default payments as one of the most significant factors inhibiting competition in the search market. Consumers primarily access the internet through mobile devices, which account for over two-thirds of general searches, a share which has grown substantially in recent years and is likely to continue to grow in the future.

34. **Google's extensive default positions across devices and browsers, and in particular on almost all mobile devices in the UK, act as a barrier to expansion for other search engines**, making it more difficult for these providers to grow their user bases and improve their search quality and search monetisation rates. In addition, there is likely to be a positive feedback loop between Google's position as the largest search engine and its ability to acquire extensive default positions that further reinforce this position.

35. Personal data is something that many people care deeply about, and it is important that consumers have control over what data they provide to platforms and how it is used. We have found that consumers do not have sufficient control, because of platforms' restrictions of choices and use of defaults and choice architecture.

36. Some platforms operate a take-it-or leave-it model, where they do not give their users the ability to control their data. This is particularly prevalent across most social media platforms, including Facebook and Instagram, whose users **are unable to turn off personalised advertising** while continuing to use the service. This is in contrast to search engines: both Google and Bing allow consumers to opt out of personalised advertising and some search engines such as DuckDuckGo do not use personalised advertising at all.

37. Even with those platforms who do offer a choice in principle, we are concerned that this is typically not, in practice, provided in a way that users can realistically be expected to engage with. It is often time-consuming and complicated to exercise choice because of the way in which options are framed. For all of the social media platforms reviewed, we found that it is not obvious how to access privacy settings, which tends only to be visible after navigating through multiple screens. And we have identified many examples of how **platforms' choice architecture and use of defaults inhibits consumers' ability to exercise informed choice** and nudges consumers into making choices that are in the best interest of the platforms.

38. It is unsurprising, therefore, that many consumers do not engage, despite evidence that most would like to have more control over the use of their data. Most platforms only collect limited data about consumer engagement with their privacy settings and controls, but the evidence that does exist suggests that consumer engagement overall is very low. For example, we found that only a very small percentage of new users who registered with Facebook in February 2020 engaged with ad preferences or privacy controls within 30 days of registering.

39. We also found that platforms' privacy terms and conditions were long and complicated, typically stretching to many thousands of words. We do not think it is reasonable for platforms to expect consumers to have read and understood all of these, often complex, terms before signing up to use a service. Research has shown that very few consumers read privacy policies when signing up to an online service and the evidence we have gathered confirms this: for example, in a recent 28-day period, the average visit to the Google privacy page was just 47 seconds, with 85% of visits lasting less than 10 seconds.

40. The upshot of this is that users understandably simply agree to the default choices they are presented with. These are set by the platforms, and it is hard to be confident that they will adequately balance users' preferences about the use of their personal data against the substantial benefits to the platform.

Unequal access to user data

41. Data about users is highly valuable for targeting digital advertising (particularly display advertising) and measuring its effectiveness. Advertisers and publishers have told us that Google and Facebook enjoy significant competitive advantages in both targeting advertising and measuring its effectiveness because of their extensive access to user data.

42. Google collects a vast amount of user data from three main sources: from its user-facing services (it provides over 50 such services, including search and Gmail); from mobile devices running Android, Google's operating system; and from the analytical technology they place on third-party sites and apps (known as tags). Facebook gathers user data from the three main services it provides in the UK (Facebook, Instagram and WhatsApp) and from Facebook analytics technology placed on third-party sites (known as pixels).

43. Advertisers and media agencies have told us that Google offers in-depth targeting options, driven by its unique and vast sources of data, while Facebook has the advantage of offering the ability to target specific audiences based on demographic characteristics, interests and location. This creates a substantial competitive advantage for Google and Facebook, both of which have access to more extensive datasets than their rivals. **The inability of smaller platforms and publishers to access user data creates a significant barrier to entry**.

44. The evidence suggests that the user data used for targeting digital advertising is highly valuable to advertisers and publishers. For example, Google ran a trial in 2019 to compare the revenue publishers received from personalised advertising with revenue from non-personalised ads. Our analysis of the results suggests that UK publishers earned around 70% less revenue when they were unable to sell personalised advertising but competed with others who could.

45. The ability to measure the effectiveness of advertising is an important driver of advertisers' decisions on how to allocate expenditure across publishers and platforms. To measure effectiveness, advertisers need to be able to track user actions online, which is done through analytical tools such as tags. Google tags and Facebook pixels are widely available on advertiser websites and apps. In particular, multiple studies have found that Google tags are found on

over 80% of the most popular websites, and that Facebook has the second highest prevalence of tags, covering between 40-50% of the most popular websites. Both dwarf other platforms' very limited coverage. In addition, Google's mobile data also allows it to track user actions offline (eg to identify visits to shops). This means that Google and Facebook are better able to track users and demonstrate the effectiveness of using their platforms relative to others, which is likely to create a barrier to entry for potential rivals.

46. We have also heard concerns that large platforms use data protection regulations such as the General Data Protection Regulation (GDPR) as a justification for restricting access to valuable data for third parties, while retaining it for use within their ecosystems, thereby consolidating their data advantage and entrenching their market power.

47. Platforms have a crucial 'gatekeeper' function in the digital economy, mediating relationships between consumers and businesses in a wide variety of markets. We have found that, by virtue of this position, and their market power, large platforms such as Google and Facebook increasingly appear to be acting in a quasi-regulatory capacity in relation to data protection considerations, setting the rules around data sharing not just within their own ecosystems, but for other market participants. Google's recent announcement that it was phasing out support for third-party cookies on the Chrome browser, restricting publishers' ability to offer personalised advertising, is an important example of this.

48. Our concern is that such platforms have **an incentive to interpret data protection regulation in a way that entrenches their own competitive advantage**, including by denying third parties access to data that is necessary for targeting, attribution, verification and fee or price assessment while preserving their right to use this data within their walled gardens.

Lack of transparency

49. One of the key functions of online platforms that are funded by digital advertising is to be able to identify and target users as they interact with the platform. This involves complex decision-making in real time using large quantities of data. This applies equally to user-facing services such as search and social media as to the operation of programmatic digital advertising: neither of these would be possible without the use of sophisticated algorithms. Yet one consequence of this reliance on 'black box' decision-making is that **market participants find it difficult to understand or challenge how decisions are made and to exercise choice effectively**.

50. In relation to the auctions used to sell advertising inventory, for example, we have found that platforms have considerable discretion over a wide variety of parameters that affect the prices advertisers pay, including how relevance is assessed and the level of reserve prices (which determine the price paid in over half of the auctions in Google Ads). Further, for the substantial majority of advertisers which make use of platforms' automated bidding tools, platforms even have discretion over which auctions advertisers participate in and the level of their bid. Over 90% of UK advertisers on Facebook use the default automated bidding feature, which does not allow advertisers to specify a maximum bid.

51. Several newspapers have also expressed concerns about the impact of algorithms employed by Google and Facebook on traffic to their sites. We have found that these two platforms provide almost 40% of the traffic to large publishers and have heard concerns about unexpected changes to the Google Search and Facebook News Feed algorithms that have resulted in dramatic reductions in traffic to certain newspapers overnight.

52. This reliance on opaque algorithms poses a fundamental challenge to traditional notions of how markets work. Since they are unable to scrutinise the basis on which decisions are made, platforms' users are often required to accept outcomes on trust. From the platforms' perspective, it can be difficult to convince sceptical users that they are making decisions in their best interests, since there is no independent verification of this. Effectively, platforms both set the rules and are the sole arbiters of whether they abide by them.

53. In relation to monitoring the quality and effectiveness of digital advertising, neither Facebook nor Google allows full independent verification of its own inventory. This has led to a perception on the part of advertisers and agencies that we spoke to that Google and Facebook are able to 'mark their own homework' for the measurement of viewability of ad impressions on their own inventory. This could weaken competition, potentially resulting in advertisers over-paying for advertising inventory.

54. The lack of transparency is particularly severe in the open display market where publishers and advertisers rely on intermediaries to manage the process of real-time bidding and ad serving but cannot observe directly what the intermediaries are doing or, in some cases, how much they are being charged. Market participants such as newspapers and advertisers typically do not have visibility of the fees charged along the entire supply chain and this limits their ability to make optimal choices on how to buy or to sell inventory, reducing competition among intermediaries.

55. Overall, **the lack of transparency that we have observed has the potential to create or exacerbate a number of competition problems**. Platforms with market power have the incentive and ability to increase prices, for example, or to overstate the quality and effectiveness of their advertising inventory. They can take steps to reduce the degree of transparency in digital advertising markets, reducing other publishers' ability to demonstrate the effectiveness of their advertising and forcing advertisers to rely on information and metrics provided by those platforms. And the lack of transparency undermines the ability of market participants to make the informed decisions necessary to drive competition. The upshot of all of these issues is that competition is weakened and trust in the market is eroded.

The importance of ecosystems

56. One of the defining features of Google and Facebook's businesses is that they have built large 'ecosystems' of complementary products and services around their core service. For example, in addition to search, Google has a strong position in browsers (through Chrome), operating systems (through Android) and video streaming (through YouTube). From its origins as a social network, Facebook has expanded into messaging, devices, gaming and retail.

57. Integration of a wide range of products and services can deliver efficiency savings and can also improve the consumer experience overall, by increasing the ease with which a range of different services are accessed. Yet the increasing expansion of Google and Facebook's ecosystems can also give rise to competition concerns.

58. Platforms with market power can leverage their position into downstream or adjacent markets, giving themselves an advantage over potential competitors and undermining competition in those markets. We have heard numerous complaints about this form of activity, for example that Facebook is using its position in social media to leverage into adjacent markets, or that Google is using its position in general search to undermine competition in different forms of specialised search, including online travel agents and shopping comparison services.[3]

59. Further, platforms can use ecosystems to protect their most profitable services from competition. If platforms can convince consumers to stay within their ecosystem, a new entrant would need to compete on many fronts to displace them. In addition, by gaining control of certain adjacent markets (for example, browsers and operating systems for Google), platforms can control

[3] There have been EU antitrust enforcement cases into these types of concerns, such as Google Search (Shopping).

the entry points to their core markets. Further, where the adjacent market may impose a competitive constraint in the future (for example, specialised search and display advertising for Google), controlling it can insulate the platform from the future threat of competition.

60. Finally, by expanding the breadth and variety of online services provided, Google and Facebook are able to gather increasing amounts of the two critical inputs to the digital advertising market: consumer attention and data. This in turn results in greater advertising revenues, enabling them to invest at a greater rate than their rivals, which creates a feedback loop that further cements their powerful position.

Vertical integration and conflicts of interest

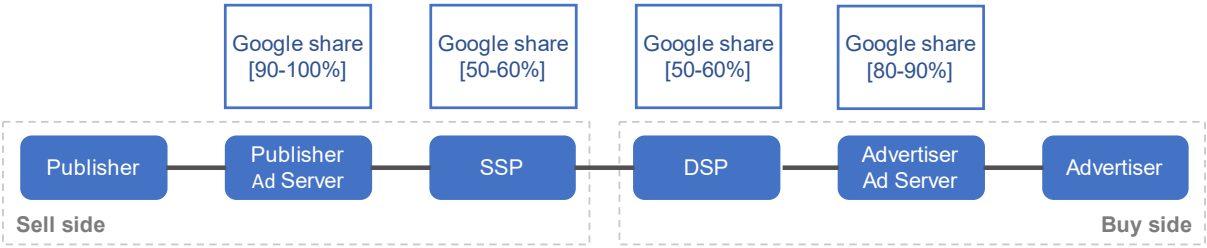
61. All of the advertising-funded platforms that we have considered in this study are vertically integrated in the sense that they run integrated sales functions – often based on the use of quality-adjusted second-price auctions – for the sale of their own advertising inventory. This is generally referred to as 'owned and operated' inventory. In contrast, in the open display market, publishers and other content providers compete to sell advertising inventory using a wide variety of third-party intermediaries and exchanges.

62. We have heard a number of concerns, particularly from publishers, about the extent of vertical integration that has taken place in the open display market. **While vertical integration can allow intermediaries to realise technical efficiencies, it can also give rise to conflicts of interest** and allow companies with market power at one stage of the value chain to use it to undermine competition at other stages.

63. The concerns that we have heard focus on the role of Google, which, as shown in Figure 2 below, has a very strong position in advertising intermediation in the UK, controlling a share of [90-100]% of the publisher ad server segment,[4] [80-90]% of the advertiser ad server segment and shares of [50-60]% in supply-side platforms (SSPs) and [50-60]% in demand-side platforms (DSPs).

[4] A publisher ad server manages the publisher's inventory and provides the decision logic underlying the final choice of which ad to serve, based on real time bids and bilateral deals. Publishers typically single-home on one ad server and have told us that switching ad server is a complex and lengthy process which takes several months to complete and involves significant risks of revenue loss.

Figure 2: Google's roles in advertising intermediation



Source: CMA: We include Google AdX, Google Ad Sense and Google AdMob in our definition of SSPs and Google DV360 and Google Ads in our definition of DSPs.

64. Google has market power in the open display market stemming from three main sources: its inventory of search and display advertising and associated large base of advertisers; its data on users; and its strong position in intermediation, particularly as the largest publisher ad server, initially through the acquisition of DoubleClick and other intermediary businesses.

65. We have identified two main concerns. First, Google has been able **to use its market power in search and its wider ecosystem to build its position as a DSP**. This has involved leveraging its user data and large base of advertisers (from Google Ads) to favour its DSP, and tying access to YouTube to use of its DSP services.

66. Second, **Google's strong position at each level of the intermediation value chain creates clear conflicts of interest**, as it has the ability and incentive to exploit its position on both sides of a transaction to favour its own sources of supply and demand. While some other intermediaries are also vertically integrated, Google's market power gives it the ability to exploit these conflicts by self-preferencing its own activities, and thereby further reinforcing its market power.

67. Parties have expressed to us a wide variety of specific concerns regarding Google's self-preferencing behaviour in intermediation. These relate to, for example, restrictions on publishers' ability to access the bid data required to compare the performance of Google's SSP with rivals and the imposition of restrictions on publishers' ability to set differential price floors. In some of the cases we have discussed, Google has highlighted a potential efficiency justification for the practice in question. In others, Google has stated that it has changed its behaviour in response to concerns, although we note that the lack of transparency of auction mechanisms makes it difficult for publishers and advertisers to verify whether this is the case.

68. Overall, the fact that Google has a very strong position as: a publisher ad server, with influence over which ads are served and at which price; an SSP, which sells inventory on behalf of publishers; and a DSP, which buys

inventory on behalf of advertisers, raises clear conflicts of interest. Google has been able to exploit these conflicts in the past and retains the ability and incentive to continue to do so.

The case for a pro-competition regulatory regime for platforms

69. On the basis of the evidence we have gathered in this study, we believe that **there is a compelling case for the development of a pro-competition ex ante regulatory regime**, to oversee the activities of online platforms funded by digital advertising. We recommend that the government brings forward legislation to introduce such a regime.

70. This would be a 'pro-competition' regulatory regime, in that its objectives would be to encourage competition by overcoming barriers to entry and expansion, thus tackling sources of market power and promoting innovation. In addition, it would protect competition and consumers where online platforms have a position of market power, by ensuring they do not engage in exploitative or exclusionary practices, or practices likely to reduce trust and transparency.

71. The concerns we have identified in this market study are both interrelated and self-reinforcing. Network effects and consumer default behaviour lead in combination to a form of path dependency, in which incumbent platforms generate higher revenues and attract more consumer attention and data, which can then be leveraged across ecosystems to consolidate and increase market power.

72. Google and Facebook have such entrenched market power as a result of these self-reinforcing entry barriers, that we have concluded that the CMA's current tools, which allow us to enforce against individual practices and concerns, are not sufficient to protect competition. Further, the markets we have reviewed are fast-moving, and the issues arising within them are wide-ranging, complex and rapidly evolving. Tackling such issues requires an ongoing focus, and the ability to monitor and amend interventions as required.

73. We therefore recommend a new pro-competition regulatory regime with strong and clear ex ante rules, which can address a wide range of concerns holistically, can be enforced rapidly by a dedicated regulatory body, and can be updated and refined as required. The regulatory regime that we are recommending comprises two broad categories of intervention:

- the **enforceable code of conduct,** which is designed to protect competition by governing the behaviour of platforms that have market power over an important online gateway; and

- a range of **pro-competitive interventions**, which are designed to tackle the sources of market power and promote competition and innovation.

74. These two categories of intervention have distinct functions. The function of the enforceable code of conduct would be to govern the behaviour of platforms that enjoy a position of market power. It would apply to platforms with 'strategic market status' (SMS), as envisaged by the Furman Review. The objective of the code would be to address the harmful effects that can arise from the exercise of market power, thereby helping to 'protect' competition, rather than tackling the underlying causes of market power.

75. Pro-competitive interventions, in contrast, would aim to address the sources of market power that we have identified within the markets we have reviewed, by tackling issues on both the demand and supply side of those markets and thereby seeking to 'promote' competition. These include a number of types of intervention suggested by the Furman Review – in particular, data-related remedies including the provision of third-party access to data and measures to increase interoperability – as well as remedies not directly considered by the Furman Review, including consumer control and separation measures. Many of these would be very significant interventions, the costs and benefits of which would need to be considered very carefully.

76. All of the interventions that we are proposing would need a dedicated regulatory body to implement them. Consistent with the Furman recommendations, we use the term Digital Markets Unit (DMU) to refer to the body empowered to implement the regulatory functions we are considering. We use the term DMU very broadly, noting that this could be a new or an existing institution, or even that the functions could be assigned across several bodies.

Enforceable code of conduct

77. **We recommend that an enforceable code of conduct be established to govern the behaviour of SMS platforms funded by digital advertising**. Once it is in place, the code has the potential to address many of the concerns that we have identified in both consumer-facing and digital advertising markets in a more rapid and effective way than through the use of our existing tools.

78. The code should apply to the small number of platforms whose conduct raises the most significant competition concerns. The government has asked the Digital Markets Taskforce to recommend the criteria by which a platform would be designated as having SMS, taking account of a broad range of online platforms. For the purposes of this market study, we have considered

which platforms funded by digital advertising should be considered to have SMS. Based on the principles set out in the Furman Review and the extensive evidence we have gathered on their market power, we would expect both Google and Facebook to be designated with SMS.

79. We propose that the code should take the form of high-level principles rather than detailed and prescriptive rules. Given the complex and rapidly changing nature of the markets within scope and the issues we have identified, there is a risk that overly prescriptive rules would soon become redundant or fail to anticipate important new developments. The code would have a statutory basis, with powers given to the DMU to suspend, block and reverse decisions of SMS firms and order conduct in order to achieve compliance with the code, backed up by financial penalties for non-compliance. The DMU's investigations would be completed quickly so as to act before there is significant competitive harm.

80. We propose that the code should be based around three high-level objectives (**fair trading, open choices, trust and transparency**), with principles within each objective, providing greater specificity as to the behaviour required by the code. The fair trading principles are intended to address concerns around the potential for exploitative behaviour on the part of the SMS platform, the open choices principles are intended to address the potential for exclusionary behaviour, while the trust and transparency principles are designed to ensure that SMS platform provides sufficient information to users, so that they are able to make informed decisions.

81. Each SMS platform would have its own tailored code. Published guidance for each SMS platform would provide more detail on practical application of the principles to the markets within which the SMS platform would operate. While not formally part of the code, an initial draft of the guidance would be published alongside the code, and it would be updated by the DMU as the market evolves.

82. Overall, we believe the code would have a number of advantages over existing ex post enforcement tools in competition, consumer and data protection law, including: the ability to cover a much wider range of concerns holistically; the ability to address concerns more rapidly and before they result in competitive harm; a greater focus on remedies and remedy design; and greater clarity for platforms and other market participants over what represents acceptable behaviour when interacting with users and competitors. Having a dedicated DMU focus on the sector should also help develop regulatory expertise and understanding over time.

Pro-competitive interventions

83. In addition to the code, **we recommend the DMU have the power to introduce 'pro-competitive interventions'** to transform competition in digital platform markets. While the key objective of the code is to mitigate the effects of market power by governing the behaviour of platforms with SMS to stop the exploitation of users and the exclusion of competitors, the pro-competitive interventions would aim to tackle sources of market power directly, by overcoming barriers to entry and expansion. Consistent with the transformational nature of pro-competitive interventions, they would require greater opportunities for consultation with affected parties and longer timescales for analysis and decision-making.

84. The Furman Review recommended that the DMU should have powers to implement a range of data-related remedies including data mobility, systems with open standards and open data. We agree that data-related remedies are key in digital platform markets, reflecting the fundamental role that data plays in the business models of online platforms, particularly those funded by digital advertising, and the fact that differential access to data is at the heart of important barriers to entry and expansion.

85. The main data-related interventions that we have assessed in this study, and which we consider should be part of the DMU's toolkit, are the following:

- **Increasing consumer control over data**, which includes providing choices over the use of data and facilitating consumer-led data mobility;
- **Mandating interoperability** to overcome network effects and coordination failures;
- **Mandating third-party access to data** where data is valuable in overcoming barriers to entry and expansion and privacy concerns can be effectively managed; and
- **Mandating data separation / data silos**, in particular where the data has been collected by the platforms through the leveraging of market power.

86. We also consider that powers to introduce two additional forms of intervention are necessary. First, to address the power of defaults in the markets we have reviewed, the DMU should have to power to **introduce consumer choice and default interventions,** which would allow it to restrict platforms' ability to secure default positions and to introduce choice screens. Second, to address potential conflicts of interest arising from vertical integration, the DMU should have the power to introduce different forms of **separation intervention**, from operational separation, to full ownership separation.

How would these interventions solve the issues we have identified?

87. We have assessed in some detail how the code and pro-competitive interventions should be used to address the issues we have identified in relation to search, social media, consumer control over data, and digital advertising.

Search

88. The code would be an essential tool in addressing concerns about several aspects of the exercise of market power by Google in general search, including the leveraging of that market power to adjacent markets and concerns regarding self-preferencing in specialised search. However, we think it is unlikely to have a significant effect in tackling the root causes of Google's market power in search. We therefore consider that pro-competitive interventions are likely to be required to overcome barriers to entry and expansion on the demand and supply side of search.

89. First, we consider that the extent of Google's default positions is a very significant current barrier to entry and expansion in search and addressing concerns in relation to defaults could have a significant positive impact on competition in search. While Google's default payments may be passed on to consumers to some extent by device manufacturers, this is likely to be outweighed by the costs imposed on consumers due to weaker competition in search, such as increased prices for the goods and services that use search advertising. We therefore **recommend that the DMU should have the power to restrict Google's ability to secure default positions, to restrict the monetisation of default positions on devices and to introduce choice screens**. The DMU should also have the ability to influence and approve the design of any choice screens introduced.

90. Second, we consider that the DMU should have **the power to require Google to provide click and query data to third-party search engines to allow them to improve their search algorithms**, thus helping to overcome Google's scale advantages in data. We are confident that such an intervention could be designed in a way that does not involve the transfer of personal data, and hence without raising privacy concerns. Such an intervention would have a positive impact on competition through helping to overcome barriers to entry and expansion, which should provide a spur to greater innovation, although the DMU would need to pay careful attention to design, including which data should be within scope, to reduce the risk of third parties copying aspects of Google's algorithm.

Social media

91. The market power of Facebook derives in large part from strong network effects stemming from its large network of connected users and the limited interoperability it allows to other social media platforms. Under the code we consider that there would also be an important role for the DMU to intervene if Facebook proposes reductions in interoperability that restrict rivals' ability to compete directly with it.

92. We also **recommend the DMU be given powers to mandate interoperability**. Interventions to require greater interoperability will involve balancing a number of considerations including the competitive and consumer benefits of overcoming network effects and the potential costs of greater homogenisation of services and risks to privacy. We think that the case for interoperability is greater in respect of functionality which is: directly helpful in overcoming identified network effects; not highly innovative; and in respect of which privacy concerns can be managed effectively.

93. Our assessment against these criteria is that there is a strong case for mandating greater interoperability in relation to finding contacts and cross posting functionalities, but that the evidence does not currently favour more ambitious forms of interoperability such as full content interoperability. Given the market position of Facebook and the extent to which it benefits from network effects, we think that such interventions should apply to Facebook in the first instance (eg Facebook should offer a defined find contacts service to users of a third-party platform, but rival platforms should not be required reciprocate). The balance of considerations is likely to change over time given the fast-evolving nature of social platforms and the DMU will be well-placed to judge the right forms of interoperability to deliver consumer benefits on an ongoing basis.

Consumer control over data

94. We believe the balance of control over consumers' data is too far in favour of the platforms. Consumers value privacy and want control over their data, but many social media platforms do not allow consumers to turn off personalised advertising. Those platforms that do provide a choice use defaults and choice architecture that make it difficult for consumers to exercise this choice.

95. To address these concerns, we recommend that the DMU be given powers to introduce two interventions that would require platforms to give consumers genuine choice and control over the use of their data in a way that they can reasonably be expected to exercise:

- **The choice requirement remedy**, requiring platforms to give consumers the choice not to share their data for personalised advertising.
- **The 'Fairness by Design' duty**, placing a duty on platforms to ensure that they are maximising users' ability to make informed choices about the use of their personal data.

96. We consider it reasonable to focus both the choice requirement remedy and the Fairness by Design duty on platforms with SMS in the first instance. These are the platforms with market power, which hold the largest amount of consumer data, are used by the most consumers, and consumers find it most difficult to avoid using. The DMU can review and refine the implementation of these measures and assess the impacts before considering potential wider application to non-SMS platforms.

97. Under a choice requirement remedy, platforms would be required to offer consumers the choice of a basic service without personalised advertising. The DMU should also be able to approve the way in which the choice is presented, including whether the default is to allow personalised advertising or not. The platforms would be able to offer consumers incentives to accept personalised advertising, as this should both benefit consumers and help platforms manage potential revenue implications. The Fairness by Design duty would require platforms to design choice architecture in a way that encourages free and informed consumer choice. It would be subject to a rigorous trialling and testing and monitoring regime, to ensure it provides the intended support for consumers in practice.

Conflicts of interest and exploitation of market power in digital advertising

98. We believe the code of conduct would be an effective tool to address a wide range of the concerns we have identified in digital advertising. For example, under the 'fair trading' objective, the code could be used to address concerns around the potential for auction manipulation, particularly where platforms exercise considerable discretion on bidders' behalf, such as through automated bidding. Under the 'open choices' objective, the code could be used to address self-preferencing concerns within search advertising and ad tech intermediation. For instance, it could require platforms not to prefer their own customers over third parties who use other intermediaries.

99. We also think there is a strong case for the power to introduce separation and access interventions in the open display market. The strong position of Google's publisher ad server, SSP and DSP, and its unique access to Google's ad inventory, means that each of these businesses potentially faces a conflict of interest, potentially acting on the advertiser side, on the publisher

side and on Google's own account. Further, Google can increase its market power by tying access to YouTube to use of its DSP services. Based on our analysis, we consider that there is a case for two broad forms of intervention to address these concerns in open display advertising:

- Separation of the function of ad serving from the advertising advisory function (DSP), where the ad server has market power; and
- The prohibition of a DSP restricting access to its inventory, where that inventory is sufficiently important to generate market power for the DSP.

100. We **recommend that the DMU should have powers to implement ownership separation and operational separation and to oblige parties to provide access to inventory on reasonable terms.** There are various forms of separation, each of which could apply to the separation remedies described above. These can be categorised as: full ownership separation; operational separation, which would include management separation and 'firewalls' between different businesses under common ownership; or restrictions directly targeted at conflicts of interest, where intermediary firms are not allowed to act on both sides of a single transaction.

101. In considering the use of its separation powers, the DMU should look to balance the costs of intervention with the benefits for consumers through innovation and more effective competition. We recognise that ownership separation would be a highly interventionist remedy and the DMU would need to consider the feasibility of the UK acting unilaterally in this area.

Data access and transparency in digital advertising

102. Many of the concerns we have identified in digital advertising markets relate to data. First, many of the basic functions of digital advertising, such as pricing and ad verification, are characterised by a lack of transparency and information asymmetries, inhibiting effective demand-side engagement and leading to a lack of trust. Second, we have found that differential access to data for targeting and attribution creates a substantial barrier to entry and expansion in digital advertising, with Google and Facebook enjoying a much wider variety of sources of such data and restricting other parties' access to it, sometimes on the basis of data protection regulation.

103. There is a strong case for **greater transparency over fees and verification data**. In relation to fees, we consider it to be good practice that data on fees charged by ad tech intermediaries should be provided to contracted parties, and that a move to more widespread publication of data on average fee or take rates could help bring a degree of confidence to market participants. In

our view, this would be an appropriate role for the DMU to take on. We also recommend that **the DMU should have the power to introduce a transaction ID** but suggest that further work would need to be undertaken by the DMU to assess how such a transaction ID could be designed to avoid potential privacy concerns.

104. In relation to verification, Google and Facebook should give advertisers access to the tools or information necessary to carry out their own, independent verification of advertising purchased on the inventory owned and operated by Google and Facebook and that all sides work to secure the necessary contractual arrangements to ensure that this is done in a way that is consistent with the requirements of GDPR.

105. To address concerns relating to Google's and Facebook's greater access to user data for targeting advertising and assessing its effectiveness, we have identified three forms of intervention, all of which could improve competition in digital advertising markets by providing more equal access to data for targeting and attribution. **We recommend the DMU have powers to introduce:**

- **Data separation (or data silo) interventions** which would prohibit platforms from combining certain categories of data within their ecosystems**;**
- **User ID and data access interventions,** which would provide for the creation of a secure common digital ID that market participants could use to assign to their own data,
- **Data access interventions,** which would require platforms to provide third parties access to certain categories of data; and
- **Data mobility interventions,** which would allow consumers to share the data that platforms hold on them with other parties, potentially both promoting competition and increasing consumer control over their data.

106. Although each of these interventions would improve competition, they differ in terms of their potential implications for effective targeting and data protection and privacy. The DMU will wish to apply different interventions in different circumstances. For example, data separation is most likely to be appropriate where the linking of the data constitutes a significant barrier to entry and expansion, where the data has been collected through the exercise of market power and where there are significant privacy concerns and limited efficiency benefits from the data being combined. The case for user ID and data access interventions is stronger where there are strong competition and efficiency

benefits in sharing the data, and privacy concerns can be managed through aggregation or anonymisation. The potential use of these interventions is a key focus of our proposed further work with ICO, as discussed below.

Decision on a market investigation and further CMA work

107. We have carefully considered what actions the CMA should now take to help in the creation of the new pro-competition regulatory regime and to address the concerns we have identified. This has included: whether we should launch a market investigation and/ or use our enforcement powers; how to take forward the work of the Digital Markets Taskforce; joint work with the ICO; and international advocacy and cooperation.

Decision on a market investigation reference

108. Whenever the CMA conducts a market study, it has a statutory duty to consider whether to launch a market investigation. Undertaking such a market investigation enables the CMA, amongst other things, to intervene directly in relevant markets through order making powers.

109. In our interim report in December, we noted that Google and Facebook had a high degree of market power in their respective markets, with consumers facing substantial harm as a result, and that the statutory test for making a market investigation reference had been met across a number of related markets. However, our provisional view was that we should not launch a market investigation on the basis that recommendations to government for regulatory reform represented the best means of addressing our concerns.

110. In the consultation responses to our interim report, several stakeholders supported this approach, while many others advocated strongly for us to undertake a market investigation. These responses included calls for investigations into a number of different markets, and to solve different issues and competition concerns. We have considered these representations very carefully. Our view remains that the statutory test for a reference has been met. However, we have concluded that we should not launch a market investigation now but should focus our work in the near term on further support for regulatory reform, as this is the most effective means of delivering the interventions we are proposing. There have been two significant developments since our consultation that have strengthened this conclusion.

111. First, and most significantly, the acceptance by the government of the Furman Review's strategic recommendations, coupled with commissioning of the Digital Markets Taskforce, has given us renewed confidence that the

government is committed to taking forward pro-competitive reforms in this area, which are consistent with the findings and aims of this market study.

112. This development is consistent with our conclusion that a new pro-competition regulatory regime is essential to delivering and enforcing the kinds of interventions we have proposed in this report. Although some of the interventions we have proposed the DMU takes forward could be implemented using order making powers within a market investigation, effective design and implementation of these measures will require a holistic approach, taking into account the interaction between the code and pro-competitive interventions, and the ability to monitor, test and amend interventions on an ongoing basis, to ensure that they are effective. This will require a new pro-competition regulatory regime.

113. Such a regime will need to be implemented through legislation, and we believe we can best support such legislation through detailed and practical recommendations to government regarding the powers it should allocate to the DMU, both through this report and, subsequently, through the Digital Markets Taskforce. We do not consider it would be helpful to the process of designing such legislation if we were to run a market investigation in parallel, as this would risk cutting across broader regulatory reform.

114. Second, the disruption caused by the COVID-19 pandemic, to the CMA but also to many of our stakeholders, has been significant. We are mindful that launching any market investigation introduces burdens onto the businesses within its scope, and given the current disruption to the economy we do not think it would be appropriate, or in the best interests of consumers, to launch a market investigation at this stage.

115. We are optimistic that, following the report of the Taskforce, the government will be ready to take forward the necessary legislation for establishing the Digital Markets Unit in good time. If that turns out not to be the case, or if some of our recommended interventions are judged not to be well-suited to the emerging new regime, then the CMA will stand ready to take direct action of its own through a market investigation. The CMA will keep this option under review following the conclusion of the Taskforce.

Enforcement action

116. The CMA is currently actively considering possible enforcement cases in the digital sector, drawing on the work of the market study. More broadly, the CMA will also continue to consider any examples of digital platforms exploiting their market power or otherwise engaging in anti-competitive conduct, and will

stand ready to take enforcement action where it identifies evidence of anti-competitive conduct.

Digital Markets Taskforce

117. The recommendations we have made to government within this report are a big step forward towards the establishment of a new pro-competition regime, but that is not the end of our work in this area. This market study has focused on a subset of online platforms that are likely to be within the scope of the DMU – our detailed recommendations are based only on an assessment of online platforms that are funded by digital advertising.

118. As the next step to inform the new regime, the CMA will be leading the work of the Digital Markets Taskforce, commissioned by the government to provide expert advice on the action that is necessary to promote competition and innovation in digital platform markets. More specifically, the government has asked the Taskforce to set out recommendations for the practical application of the potential pro-competitive measures set out in the Furman Review.

119. The Taskforce will draw on a wide range of evidence to inform its advice, including the findings and recommendations of this market study, while its scope will be extended to all online platforms, including those that are not funded by digital advertising.

120. The CMA is today formally launching this work by publishing a call for inputs. Responses to this consultation are requested by 31 July 2020.[5] The Taskforce will now provide advice to government by the end of the year. Building on the important work of this market study, the Taskforce will be a critical next step in the journey towards development of a new pro-competition regime for digital platform markets.

Work with the Information Commissioner's Office (ICO)

121. We have engaged constructively with the ICO throughout this market study on issues relating to the intersection of competition and data protection law and on the potential design and development of several of the interventions we are proposing. After the completion of the study, we will build on this positive collaboration with the ICO as part of an ongoing programme of joint work to promote markets which are competitive, empower consumers and safeguard individuals' rights to privacy.

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[5] Digital Markets Taskforce case page.

122. There will be several areas of focus for this ongoing work. These will include, for example, ongoing consideration of the issues discussed in this study regarding the interaction between competition and data protection regulation in digital advertising markets, including in particular how to respond to and engage with Google's proposals for phasing out third party cookies on Chrome browsers over the next 18 months. We will also wish to further develop thinking on our proposed Fairness by Design intervention and how it would complement the Data Protection by Design obligation under data protection regulation, and consider how data-related remedies may apply to other digital platform markets outside those we have reviewed in this study. More broadly, we will consider the data protection, consumer empowerment and competition implications of different models of consumer control over data, including privacy-enhancing technologies and forms of data mobility such Personal Information Management services. The details of our intended collaboration with the ICO are set out in Chapter 10.

Advocacy and cooperation with our international partners

123. Throughout the market study the CMA has engaged extensively with other international authorities. This includes discussions with: authorities in countries undertaking similar market studies into digital advertising, including France, Germany and Sweden; countries developing proposals for ex ante regulation of platforms, including Australia, Germany and Japan; and authorities that have recently completed or have ongoing enforcement investigations in relation to digital advertising, including authorities in the United States and the European Commission. We believe these forms of international engagement are vital in seeking to develop a consensus on the issues and the potential solutions to the global challenges posed by digital platforms.

124. Following the completion of the market study the CMA will continue to look to inform the international debate about how to address concerns relating to online platforms funded by digital advertising. In particular, we will seek to disseminate the findings we have set out in this report through seminars, bilateral and multilateral engagement, proactively advocate the need for ex ante regulation through fora such as the OECD and International Competition Network, and work closely with any enforcement agency investigating issues in digital advertising markets to share the knowledge and investigative techniques we have learnt.

Summary of recommendations

125. To achieve this substantial package of reform, the necessary next step is for the government to pass legislation. We have set out our recommendations to the government in Box 1 on the broad content of this legislation.

Box 1: Our recommendations to the government

The government should legislate to introduce a new regulatory regime for platforms comprising both the code and the pro-competitive interventions, drawing on the work of this study into online platforms funded by digital advertising, and that of the Digital Markets Taskforce, which will also be considering online platforms funded by transactions.

More specifically, we make the following high-level recommendations to government for what this legislation should include:

Recommendation 1: Establish an enforceable code of conduct to govern the behaviour of platforms funded by digital advertising that are designated as having strategic market status (SMS). The purpose of the code would be to meet three high-level objectives of fair trading, open choices and trust and transparency.

Recommendation 2: Establish the requirement for a DMU to undertake SMS designation, introduce and maintain the code based on objectives set out in the legislation, and produce detailed supporting guidance.

Recommendation 3: Give the DMU the necessary powers to enforce the principles of the code on a timely basis, and amend its principles in line with evolving market conditions.

Recommendation 4: Give the DMU the necessary powers to introduce a range of pro-competitive interventions, which should include:

a. Data-related interventions (including consumer control over data, interoperability, data access and data separation powers)
b. Consumer choice and default interventions
c. Separation interventions

1. Introduction

Context

1.1 This is the final report of our market study into online platforms and digital advertising in the UK.

1.2 The study was launched in the context of concerns, raised in the UK and globally, about the powerful position held by a small number of online platforms. These have focussed, alongside a broader set of issues such as online harms and fake news, on the market power of large online platforms and their ability to extract large volumes of data from consumers to entrench that power. Several institutions in the UK raised specific concerns about the market power of platforms that are funded by digital advertising, and the lack of transparency and conflicts of interest in the business-to-business digital advertising market, and recommended that the CMA undertake a market study in this area (some examples of these calls are provided in Box 1.1).

1.3 We launched our market study on 3 July 2019 in response to these calls. Its scope is structured around three related themes:

1) to what extent online platforms that are funded by digital advertising have market power in consumer-facing markets, and the sources of this market power;

2) whether consumers have adequate control over how data about them is used and collected by online platforms; and

3) whether competition in digital advertising markets is distorted by a lack of transparency, conflicts of interest or market power held by platforms.

1.4 On 18 December, we published our market study interim report. That report set out our understanding of the markets within the scope of the market study and our initial findings on each of the above themes, and identified a broad range of potential interventions to address our emerging concerns. We published the responses we received to this consultation on 8 April 2020.[6]

[6] Online platforms and digital advertising market study case page.

Box 1.1: Calls for a CMA market study into digital advertising

Digital Competition Expert Panel (Furman Review):[7]

'The CMA should conduct a market study into the digital advertising market encompassing the entire value chain, using its investigatory powers to examine whether competition is working effectively and whether consumer harms are arising.'

Cairncross Review:[8]

'The Review recommends that the Competition and Markets Authority use its information-gathering powers to conduct a market study into the online advertising industry. By looking more closely into the position of different players, their roles, costs and profitability, the CMA will be able to identify how efficiently the online advertising market is working, and what remedies, if any, are needed.'

House of Lords Select Committee on Communications:[9]

'We recommend that the Competition and Markets Authority (CMA) should conduct a market study of digital advertising to investigate whether the market is working fairly for businesses and consumers.'

Which?:[10]

'The Competition and Markets Authority (CMA) should conduct a market study in to the digital advertising industry as a matter of urgency.'

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[7] Unlocking digital competition, report of the Digital Competition Expert Panel aka 'the Furman Review'.
[8] The Cairncross Review: a sustainable future for journalism.
[9] Select Committee on Communications, UK advertising in a digital age.
[10] Which?, Control, Alt, or Delete? The future of consumer data.

1.5 A primary aim of this study has been to inform government thinking on the regulation of online platforms and to provide analysis to support the government's response to the Furman Review.[11] In particular, we aim to ensure that any proposals for future regulation by government are based on a sound understanding of advertising-funded platforms' business models and the challenges that they may pose. We also want to inform the development of a new regulatory landscape that extends beyond advertising-funded platforms, here in the UK and globally. We have already made substantial progress towards these aims.

1.6 Since publication of our interim report, the government announced in the Budget on 11 March that it was formally accepting all six of the Furman Review's strategic recommendations for unlocking competition in digital markets.[12] It also announced that 'a new cross-regulator taskforce, based in the Competition and Markets Authority (CMA), will report to the government within six months on a pro-competitive regime for digital platform markets. This will include advice on implementing a pro-competitive code of conduct for digital platforms with strategic market power.' We welcome this announcement of establishing the Digital Markets Taskforce as a positive step towards the development of a new pro-competition regime in the UK.

1.7 As well as supporting a number of recommendations that we are making to government, the analysis and findings set out in this report will also inform the assessment and report by the Digital Markets Taskforce.

Coronavirus (COVID-19)

1.8 Since publishing our interim report in December, the majority of the UK and global population has been forced to adjust and adapt to substantial restrictions on its freedom and usual way of life due to the COVID-19 pandemic. As a result, some forecasts suggest the UK will face the most severe downturn in economic output seen for hundreds of years.[13] There have also been some inevitable consequences for the work of this study, with the CMA and parties we have engaged with facing significant disruption and uncertainty.

1.9 As has been the case for so many organisations, we have had to adapt our approach to working during the lockdown, dealing with home-working, absence due to illness, and increased childcare responsibilities during the

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[11] Furman Review (2019), Unlocking digital competition.
[12] HMT, Budget 2020, section 2.43.
[13] Financial Times, BoE warns UK set to enter worst recession for 300 years, May 2020.

final few months of the study. We are also acutely aware of the pressures that many companies are under during these challenging times, and we are extremely grateful to all parties that have continued to cooperate so constructively with the study. Even so, we have faced some understandable delays in receiving critical data from a range of parties.

1.10 For these reasons, we have had to scale back aspects of the further analysis we proposed to undertake at the interim report stage. In particular, we chose not to take forward a quantitative survey of advertisers due to a very low response rate at the pilot stage, undertaking a smaller scale qualitative survey instead. Overall, however, we have been able to carry out extensive further analysis in the second half of the study, including in-depth quantitative work, and are grateful to all parties who provided the data required for this. We have also needed to take account of the ongoing disruption caused by the virus in considering the appropriate action for us to take following the conclusion of this study. We set this out in Chapters 9 and 10 of the report.

Evidence gathering

1.11 Over the course of the study, we have consulted a large number of parties, and gathered a broad range of evidence. This has involved a high volume of submissions from parties, in response to our statement of scope, our interim report consultation, and our numerous requests for information. We are grateful to all those who have helped us progress our work at a rapid pace. Figure 1.1 summarises the sources of evidence we have been able to gather.

Figure 1.1: Overview of our evidence sources

Source: CMA.

1.12 The extensive data we have been able to gather directly from market participants has enabled us to carry out analysis on a wide range of market outcomes, including revenues and shares of supply, pricing for search and display advertising, profitability, fees charged by advertising intermediaries and many others. A summary of the responses to our interim report consultation can be found in Appendix B.[14]

This document

1.13 This final report marks the conclusion of our market study. The purpose of this document is therefore to set out the conclusions we have reached on the state of competition in the markets within our scope, as well as setting out our recommendations for how to address the issues we have identified. We

[14] For a summary of responses to our statement of scope, see Appendix B to our interim report.

consider that this document provides compelling evidence to the government in support of our full suite of recommendations.

1.14 This final report follows a similar structure to our interim report, building on the analysis and findings we published previously. Chapter 2 provides an overview of how the markets, platforms, and issues within our scope interrelate. The chapters that follow then provide a detailed analysis of the issues we have found under each of the three themes. Where there are elements that are more complex or technical, such as an explanation of the role of data within digital advertising sectors, or of the ways that consumers are tracked online for the purpose of serving personalised advertising, we have provided additional detail in supporting appendices.[15] We hope that, as well as supporting the case for our recommendations to government, the evidence and analysis included within this report and supporting appendices will inform both the work of the future Digital Markets Unit – a new regulatory function proposed by the Furman Review to oversee its pro-competition proposals – and global policy-making in the area of online platforms.

1.15 Building on the strong groundwork provided by the Furman Review for the UK government, [16] the special advisors' report for the European Commission,[17] and Stigler Center Committee's report on the challenges posed by digital platforms, [18] we have taken the discussion forward by identifying which specific features and concerns are most relevant to each market or individual platform. Chapter 3 reviews the consumer-facing services within general search and social media. Chapter 4 analyses issues relating to consumer control of data on those same platforms. Chapter 5 considers issues that are specific to digital advertising markets.

1.16 Chapter 6 explains how the issues identified within this market study lead to detriment for both consumers and broader society, and gives an indication of the potential benefits to consumers from more competition in these markets. This analysis is not a formal impact assessment for the recommendations set out in this report, but serves to illustrate the nature and scale of harm from the concerns we have identified and the potential benefits of regulatory reform to consumers and broader society.

1.17 Building on our findings, Chapter 7 sets out the case for a pro-competition regulatory regime for online platforms, and in that context makes our

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[15] See Appendix F for information on the role of data in digital advertising. See Appendix G for information on the role of tracking in personalised advertising.
[16] Furman Review (2019), Unlocking digital competition.
[17] Jacques Cremer, Yves-Alexandre de Montjoye and Heike Schweitzer (2019), Competition for the digital era, final report for the European Commission.
[18] Stigler Center (2019), Committee on Digital Platforms Final Report.

recommendations to government. These recommendations are intended to inform the necessary legislation to develop the new regime.

1.18 Chapter 8 then sets out a number of more detailed proposals for how the new regime could be applied in practice to platforms that are funded by digital advertising. In doing so, the chapter clarifies how the code of conduct and the different types of pro-competitive interventions would address the specific concerns we have identified in the markets for general search, social media, and digital advertising. The purpose of the additional detail we have included in this chapter is to provide 'proof of concept' to the government of the new approach we are advocating, while also informing, as far as we are able at this stage, the future work of the DMU. More detailed analysis on each of the individual interventions can be found in Appendices T to ZA.

1.19 Chapter 9 then explains our decision not to make a market investigation reference at this stage, choosing to focus on recommendations to government in the near term, both through this report and subsequently through the Digital Markets Taskforce.

1.20 Chapter 10 concludes by highlighting the further work that the CMA will be undertaking to take our recommendations forward. This includes the next steps for the Digital Markets Taskforce and its call for inputs, international engagement and advocacy, further work with the ICO and the potential for future action using our markets and enforcement powers.

1.21 Consistent with our intention for this study to shine a light on these complex and opaque markets, we have attempted to reveal as much detail from our evidence and findings as possible. Through our interim report in December, and again in this final report, we have surfaced a great deal of information that was not previously in the public domain. As was the case in our interim report, there has been some information we have chosen not to publish – in some cases because the information is highly commercially sensitive, and in others because parties that provided the information to us indicated that they wished to remain anonymous for fear of repercussions in the market if their identity were revealed. There are as a result some instances where we have anonymised parties' submissions, presented confidential numbers in ranges, or sought to make more generalised statements in order to convey the key messages while not disclosing confidential information. We indicate these instances with the use of [square brackets], and in some cases [✂].

1.22 We stand ready to work with government and market participants to take our proposed pro-competitive reforms forward as a priority.

2. Overview

- Google and Facebook are the largest online platforms that are funded by digital advertising. Their business model relies on attracting consumers' attention and gathering data about them, which they use to sell targeted advertising.

- The services provided by both companies are highly valued by consumers. Search engines give us instant access to information, news and a wide range of goods and services. Social media services enable us to connect with friends and family around the world, keep up with news or current trends and share creative content with one another. Both platforms have opened up access to sophisticated and targeted advertising for millions of small businesses around the world.

- Over a third of UK internet users' total time online is spent on sites owned by Google and Facebook. Both companies are also able to gather substantially more data about consumers than their rivals.

- As a result, both Google and Facebook now hold powerful positions in the UK digital advertising markets. We estimate that search advertising revenues totalled around £7.3 billion in 2019, of which more than 90% was earned by Google. Total spend on display advertising was worth £5.5 billion, of which we estimate more than half went to Facebook. Overall, we estimate that around 80% of all expenditure on search and display advertising in the UK in 2019 went to Google or Facebook.

- Both Google and Facebook are highly profitable. Our analysis demonstrates that both companies have for many years been earning profits that are substantially higher than any reasonable estimate of what we would expect in a competitive market.

- In this study, we are assessing whether problems such as market power, lack of transparency and conflicts of interest mean that competition in search, social media and digital advertising is not working as well as it should.

- These issues matter to consumers: if competition in search and social media is not working well, this can lead to reduced innovation and choice, while poor competition in digital advertising can increase the prices of goods and services across the economy, and undermine the ability of newspapers and other providers who rely on digital advertising revenue to produce valuable content.

Introduction

2.1 Our study has covered three themes relating to platforms that are funded by digital advertising: competition in consumer-facing services; consumer control over data; and competition in digital advertising markets. The aims of this

chapter are to explain why we have looked at each of these three themes and how they are connected, to explain how the key consumer-facing and digital advertising markets work, and to set out at a high level why this all matters to consumers.

2.2 The chapter covers the following topics:

- The business model of platforms funded by digital advertising, including an explanation of the importance of consumer attention and data. This section clarifies why we have focused on the services provided by Google and Facebook.
- A high-level introduction to the digital advertising market, including the different types of digital advertising.
- A summary of some key market outcomes, including expenditure on different forms of digital advertising, and an analysis of the profits earned by Google and Facebook.
- An explanation of how a lack of competition in these markets can result in a wide range of negative impacts for consumers.

The business model of platforms funded by digital advertising

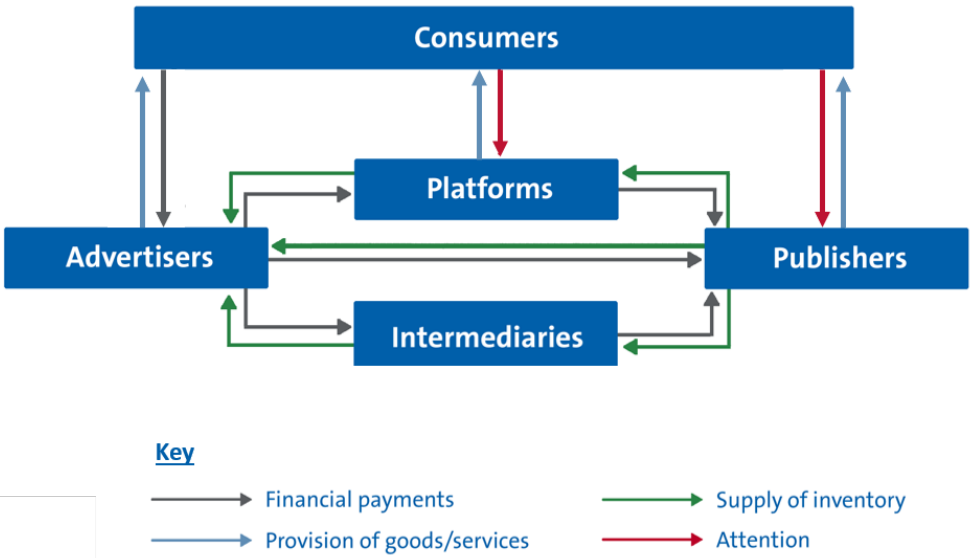
2.3 Online platforms typically seek to attract consumers by offering their core services for free. Once they have attracted a critical mass of consumers, they seek to make money from business users on another side of the platform. In transaction-based platforms, such as Amazon Marketplace or Apple's App Store, this is predominantly through the commission that is charged to retailers or app developers respectively.

2.4 For other platform services, such as search engines and social media services, monetisation comes predominantly through serving adverts. More specifically, they make money by selling inventory to advertisers.[19] In an online setting, inventory is essentially empty space on a web page or mobile app, which can be filled with text (including links to other websites), images, and videos. Google and Facebook are by far the largest two companies operating with this business model – we have therefore focused heavily on these two companies throughout our market study.

[19] Advertising 'inventory' is a space, whether located on a billboard, in a newspaper, on a web page, or on a TV screen, where adverts can be displayed.

2.5 Although consumers do not pay money for these services, there is still an exchange that takes place between them and the platform. In exchange for searching the internet, watching videos, or communicating with friends, consumers provide their attention and data about themselves. Advertising-funded platforms are able to combine the attention of their users with contextual or personal information they have about them to serve highly-targeted adverts, which are in high demand by advertisers. These exchanges are illustrated in Figure 2.1 below. The importance of consumer attention and data in the digital advertising market is explained in more detail later in this chapter.

Figure 2.1: Consumer services supported by digital advertising



Source: CMA assessment.

2.6 The advertising-funded business model is not novel, nor is it inherently problematic from a competition perspective. Newspapers have been generating revenue in the UK through advertising for several hundred years. On television, ITV provided the first alternative to the BBC in 1955,[20] when it began its ad-funded broadcasting. Similarly, commercial radio stations have been generating revenue through advertising in the UK ever since the market was liberalised in 1973.[21] These services have added substantial value to our society.

2.7 The same is true of many services provided by digital platforms. Search engines give us instant access to information, news, directions, and other websites with minimal effort. Social media services enable us to connect with friends and family around the world, make new friends, keep up with news or

[20] ITV summary of its history.
[21] Frequencyfinder.org.uk, history of radio transmission in the UK.

current trends, and share creative content with one another. These services, which are funded by digital advertising, are highly valued by consumers (see Box 2.1).

Box 2.1: The value of online platform services

Platform services that are funded by digital advertising bring substantial benefits to consumers, while being provided free of charge. Research published in 2018 demonstrated that consumers place great financial value on a range of online services, with values of multiple thousands of dollars being assigned to search engines and digital maps. Video streaming services such as YouTube, and social media more broadly received lower, but still significant valuations.[22]

The fact that these services are so important to consumers and valued so highly is precisely why it is critical that competition is effective in these markets. The current COVID-19 pandemic has emphasised the critical importance of digital services for consumers' well-being and prosperity. Through our work in this area we want to ensure that current consumers are reaping the maximum potential rewards from these services, and that future consumers will continue to benefit from new innovative services that can transform our lives.

2.8 The targeted nature of digital advertising can add value to both advertisers and consumers. For consumers, targeted adverts will be more relevant to them, which can make them less irritating and more likely to provide genuinely useful information about products and services they may be interested in. For advertisers, improved targeting should deliver a greater return on their investment as their adverts will be viewed more often by their intended audience. Overall, more relevant and better targeted adverts can be expected to result in more purchases, increasing consumer and producer welfare as a result.

2.9 Platforms such as Google and Facebook have made it substantially easier for businesses to reach and serve adverts to consumers all around the world, in a way that was only previously possible for large companies. This has opened up greater advertising possibilities for a long tail of small businesses, and enabled large numbers of predominantly online businesses to thrive that may otherwise not have been viable.

2.10 Despite these benefits that online platforms have undoubtedly delivered, the markets within which they operate contain a range of features that mean they frequently tend towards a 'winner-takes-most' dynamic, with limited competition 'in' or 'for' the market, and with demand often aggregated by one

[22] Brynjolfsson, Eggers, and Gannamaneni (2018), Using massive online choice experiments to measure changes in well-being, National Bureau of Economic Research, Working Paper 24514.

or sometimes two very large platforms. This may result in sub-optimal outcomes for consumers in these and other markets over the longer term. These features, which have been well-articulated in existing reports, including the Furman[23] and Stigler Center[24] reviews, are summarised in Box 2.2.

Box 2.2: Key features of online platforms

While the precise characteristics of each platform varies from market to market, they tend to share a set of general features that collectively support a 'winner-takes-most' dynamic:

- Online platforms typically have very low marginal costs and significant economies of scale in delivering the core service, and economies of scope in relation to data.
- Network effects mean that the value of a service to existing users of a platform increases as the total number of users increases. The nature of the network effects can vary significantly between platforms.
- The fact that consumers do not pay directly for the platform's services limits their incentives to switch, and means that new entrants must attract users through demonstrably better quality or innovative features, rather than being able to undercut on price.

In this report we have set out our assessment of how important these and other features are in general search and social media – the two most significant platform markets that are funded by digital advertising.

Google's and Facebook's positions in respect of consumer attention and data

2.11 There are two key factors that influence the revenue that online platforms and publishers can generate through digital advertising:

- **Capturing consumers' attention:** this is an essential requirement for selling any form of advertising inventory. The more of consumers' attention that platforms can capture, whether that is through increased reach or keeping consumers online for longer periods, the more attractive the platform's inventory is to advertisers, and the more inventory they will have to sell.[25]

[23] Furman Review (2019), Unlocking digital competition.
[24] Stigler Center (2019), Committee on Digital Platforms Final Report.
[25] As consumers spend more time online using platforms, they will scroll through more webpages or further down their newsfeed, enter more search queries, watch more videos, and so on. This means that the platform has more opportunities to show them adverts, increasing the inventory that they have available to sell.

- **Understanding preferences, purchasing intent and behaviour:** understanding the wants and needs of specific consumers at any point in time is valuable to advertisers as they can target their adverts towards those individuals that they suspect are most likely to make a purchase. This targeting – whether it is based on contextual information such as the subject of a web page, or on personal data such as the individual's age or recent purchases – can result in a higher return on investment for advertisers, and a willingness to pay higher prices. Similarly, advertisers are more likely to be willing to pay high prices in the future if they are given evidence that consumers exposed to adverts on a platform went on to make a purchase. Platforms are therefore rewarded by advertisers for having extensive and up-to-date knowledge of their consumers' characteristics, preferences and behaviour. The key input to this knowledge is data.[26]

2.12 The following sections of this chapter explain how Google and Facebook lead the race to capture online consumers' attention and to gather data on their preferences and intentions.

Consumer attention

2.13 Prior to the COVID-19 pandemic, UK internet users were spending an average of 3 hours 24 minutes each day online,[27] with the majority of this time spent in a relatively narrow set of sites and services, including social media, information, news, shopping, and entertainment such as videos, music, and games. More recently in April 2020, while most households were confined to their homes, the average UK internet user spent 3 hours 56 minutes online – an increase of 32 minutes each day.

2.14 The characteristics of many of these markets are such that they tend to tip towards high levels of concentration. With a narrow set of highly concentrated markets, the majority of internet users' attention is captured by a small number of very large companies and, in particular, mainly by Facebook and Google.

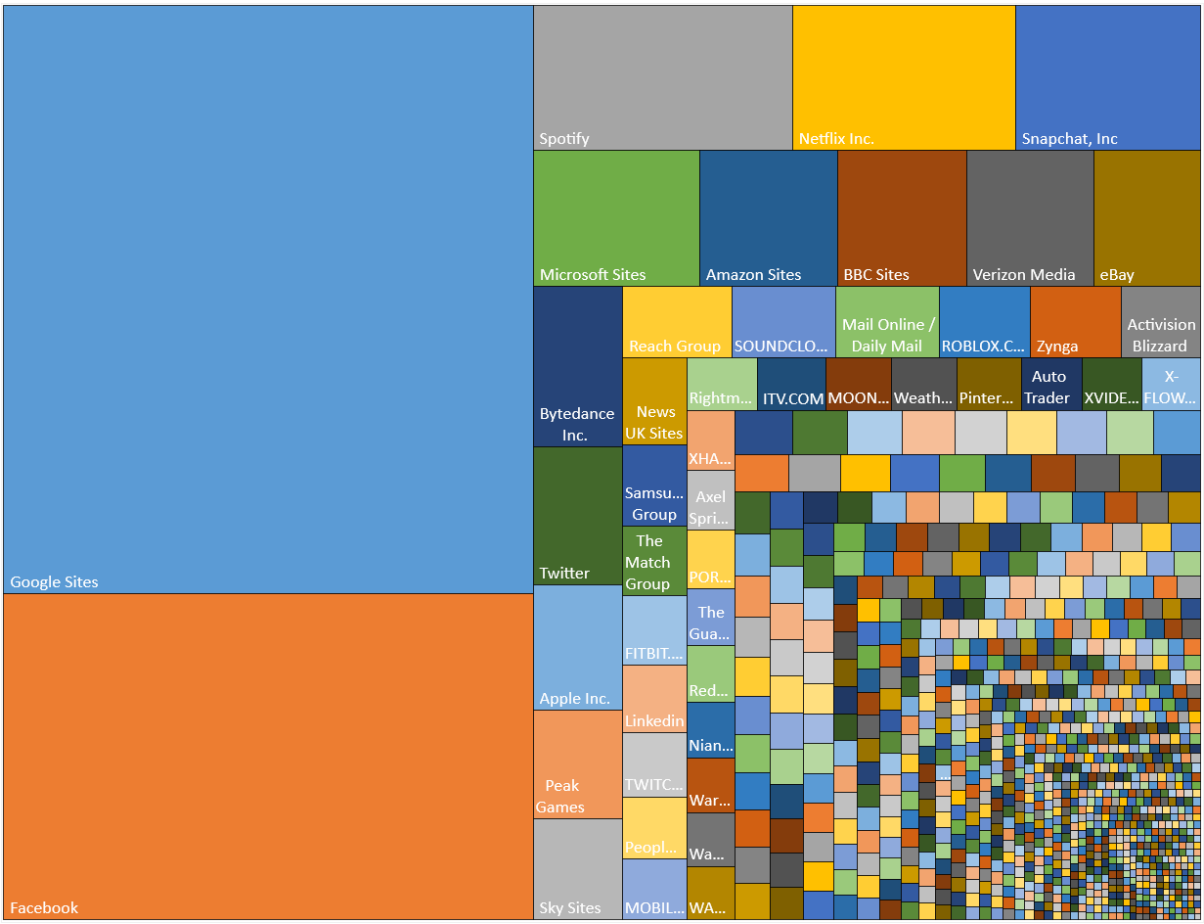
2.15 In terms of reach, around 96% of UK internet users access at least one Google site each month. Facebook's reach is around 87%. Of the total time spent by UK users online in February 2020, 37% was on sites owned by

[26] See Chapter 4 and Appendix F for more detail on the role of data in relation to the provision of contextual and personalised advertising.
[27] Comscore, MMX Multi-Platform, Total Digital Audience, Desktop aged 6+, Mobile aged 13+, February 2020, UK.

either Google (including YouTube) or Facebook (including Instagram and WhatsApp).[28]

2.16 This success by Google and Facebook in attracting consumers' attention is illustrated by Figure 2.2 below, which shows consumer time spent on the top 1000 online 'properties' in February 2020. UK consumers spent around 83% of their total time online on these top 1000 properties, with the remaining 17% split between an extremely long tail of websites.[29]

Figure 2.2: UK consumer time spent on top 1000 online properties



Source: Comscore MMX Multi-Platform, Total Digital Population, Desktop aged 6+, Mobile aged 13+, February 2020, UK.
Notes: Top 1000 properties account for 83% of total user time spent online.
* Where 'Google Sites' includes all Google owned properties eg YouTube and Google Search.
†Where 'Facebook' includes Facebook, Instagram and WhatsApp.

2.17 Google's and Facebook's share of user attention has held up during the COVID-19 pandemic, increasing to 39% in April 2020. This suggests these platforms' market positions are likely to be resilient to the current crisis, a topic we discuss further below.

[28] Ibid.
[29] Ibid.

Consumer preferences and purchasing intent

2.18 Although there are important differences in the data-gathering practices of Google and Facebook, both companies are able to combine various sources and types of data to build up a profile of an individual, which can be used to make inferences about the types of products and services that they are likely to purchase. These profiles can include information on a consumer's individual characteristics, likes and dislikes, political views, income, frequent locations and journeys, and so on.

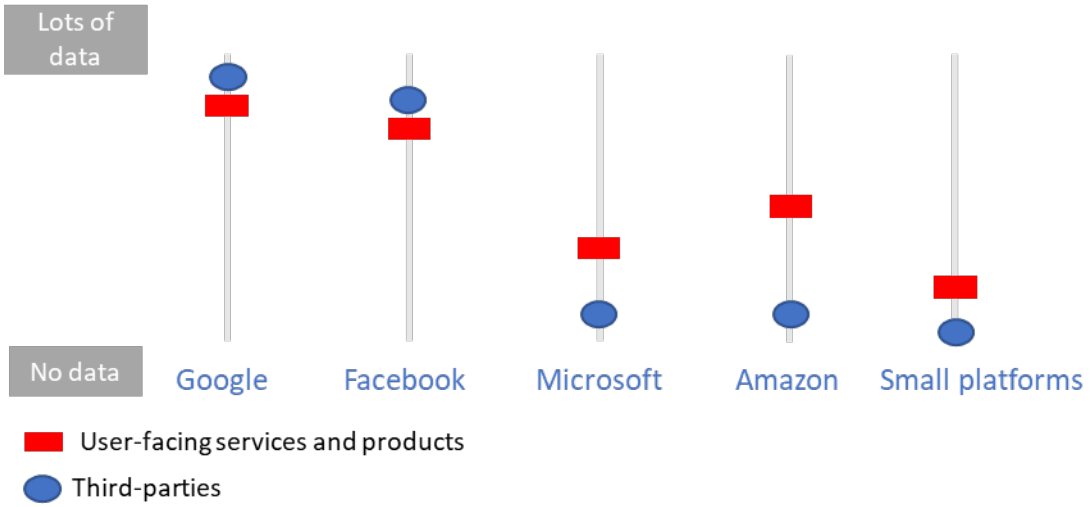
2.19 They can pool this information from a number of sources, including:

- information that consumers explicitly volunteer about themselves when registering for a service, such as name and contact details;
- observed contextual information such as information about a device being used to access the service or the precise location of the consumer at a particular time;
- observed data from tracking users' activity across the web, from which inferences can be drawn based on the articles they read or the websites they visit;[30] and
- conclusions about a consumer's characteristics and preferences that are inferred from observing their activity within the services, such as posts they like or click on within Facebook, or videos they view on YouTube.

2.20 Our assessment of the scale of data collection by Google and Facebook, in comparison to some of their rivals, is illustrated in Figure 2.3 below, which distinguishes between data gathered from the platforms' own consumer-facing services and products (first party data), and data collected from third parties, notably those that use the platforms' services, such as advertisers and publishers (third party data).[31]

[30] See Appendix G for an explanation of how Google and Facebook are able to track internet users' activity on third-party websites and apps.
[31] See Appendix F for more detail.

Figure 2.3: Illustration of the scale of data collection by certain platforms, split by first and third-party data sources



Source: CMA.
Note: Small platforms include Twitter, Snap, TikTok and Pinterest.

2.21 The ability to serve targeted adverts to consumers is highly valuable to advertisers. An important distinction we draw in this study is between 'contextual advertising' (which is targeted on the basis of the content the user is currently viewing, as in most traditional forms of non-digital advertising) and 'personalised advertising' (which is targeted based on personal information about the user, whether volunteered or observed from activity across the web over time).

2.22 Similarly, the ability to demonstrate a link between exposure to an advert and consumer purchasing behaviour (sometimes known as 'attribution') is key in attracting and retaining advertisers. Personalised advertising and attribution both require user data, and this is why platforms are incentivised to gather as much user data as they can on as many consumers as possible.

Regulations to protect privacy

2.23 There are tensions between these incentives to compete for increasing amounts of user data, and the legal framework that is in place to protect consumers' privacy. Box 2.3 highlights some of the key elements of the law that governs the use of personal data for advertising purposes, while a more detailed description of the legal and voluntary framework can be found in Appendix A. We explore the relationship between data protection regulation and competition in Chapter 5.

Box 2.3: data protection law

There are several aspects of law in the UK that relate to the protection of consumers' personal data. These include:

- **The General Data Protection Regulation 2016/679 (the 'GDPR')** – the GDPR provides the general framework for the protection of personal data that applies in the UK. Coming into effect in May 2018, it built upon similar principles derived from the Data Protection Directive 95/46/EC and in the Data Protection Act 1998. Amongst other things, it sets out the range of circumstances in which processing of an individual's personal data can be lawful.

- **The Consumer Rights Act 2015 (CRA)** – Part 2 of the CRA requires the terms in consumer contracts and consumer notices to be fair and, if written, transparent.

- **Unfair Contract Terms Directive (2005/29/EC) / Consumer Protection from Unfair Trading Regulations 2008 (SI 2008/1277) (CPRs)** – broadly speaking, they prevent businesses (described as 'traders' in the CPRs) from treating consumers unfairly. Businesses are also responsible for the commercial practices of anyone who acts on their behalf or in their name. Both the business and those acting on their behalf may be held liable for breaches of the CPRs.

Search, social media, and their ecosystems

2.24 Google and Facebook's advantage in attracting consumers' attention and collecting their data, and their resultant high share in digital advertising revenues, has been achieved primarily through their core services in general search and social media respectively. These consumer-facing markets are therefore the primary focus of our analysis in Chapter 3.

Understanding general search

The demand-side

2.25 Web-based search engines are a tool to help consumers to navigate the internet and find useful information in response to a broad range of search queries. They make money by serving these consumers with paid-for adverts.

2.26 Research by Ofcom shows that search engines are consumers' preferred method for finding what they are looking for online: [32]

- 97% of UK adults reported using a search engine in the previous year to look for information online; and
- 50% of UK adults reported that the first place they usually go online is a search engine.

2.27 Consumers access search engines in several ways:

- **Web browsers** – web browsers have default search engines in the navigation bar; some consumers may choose their browser and search engine at the same time.
- **Web navigation** – in the course of a session, consumers may navigate to one or more search engines, and many have a search engine as their home page.
- **Search apps** – on mobile devices, consumers tend to access search engines via apps such as widgets. They may use default search apps that come installed on mobile devices, or choose to download their preferred search app from an app store.
- **Voice assistants** – via smart speakers such as Amazon Echo and Google Home, as well as on some phones and tablets.

The supply side

2.28 General search engines work by maintaining an index of the websites that are available on the internet and returning a set of ranked, curated search results when consumers enter search queries.

2.29 Google's general search results pages return different categories of search results, including generic search results and specialised search results. In addition, Google Search may return a third category of results, namely online search advertisements.

[32] Ofcom (2019), Online Nation.

Understanding social media

The demand side

2.30 Social media platforms facilitate interaction between their users, allowing them to communicate with each other, and share and discover engaging content. Social media platforms are generally available through a mobile app, with some also available via a web browser.[33] As with general search, providers of social media services make money by serving their consumers with paid-for adverts.

2.31 Features commonly provided by social media platforms include: user profiles or accounts; user 'friends' or connections; a personalised 'feed' of news or other content; content sharing features; comments; private messaging features; and likes or 'reactions'.[34] In a consumer survey by Ofcom, a variety of factors were considered important by users of Facebook, Twitter, Snapchat, Instagram and YouTube:[35]

- keeping in touch with friends and family;
- browsing to pass the time;
- sharing photos and videos;
- keeping up-to-date with news and current affairs; and
- watching videos.

2.32 As we discuss in Chapter 3, there are important differences in the reasons cited by users for using different social media platforms, with Facebook, for example, used primarily to keep in touch with friends and family, and YouTube used primarily for watching videos. In Box 2.4 we highlight some of the approaches that have been taken by other institutions to define social media.

[33] Some social media platforms may only be accessible via mobile eg TikTok or Snapchat.
[34] Ofcom (2019), Online Nation.
[35] Ofcom (2019), Online Nation.

Box 2.4: What is meant by 'social media'?

This box sets out attempts by a selection of other institutions to define social media.

Ofcom's Online Nation (2019)[36]

'Social media' is often used generally to refer to a set of popular online services, encompassing a range including Facebook, Twitter, Snapchat, Instagram, YouTube, Reddit, Tumblr, Pinterest and WhatsApp. Attempting to map the exact boundaries of the social media sector, however, is more difficult.

Communicating with others through user-generated text, photos and videos might be considered the central function of 'social media' in its most basic terms – but, many online platforms facilitate these kinds of interactions. Further, whether a service is considered 'social media' can often depend on the individual using it – for instance, Reddit or YouTube could have primarily 'social' functions for some users but not others. Some companies even reject the 'social media' label – Snapchat, for instance, refers to itself as a camera company, while Pinterest' recent IPO filing emphasised its uniqueness as a 'media-rich utility'.

Consequently, the concept of 'social media' has blurred boundaries that intersect with video-sharing services, blogging sites, messaging apps and forums.'

The ACCC (2019)[37]

'Social media platforms are 'online services that allow users to participate in social networking, communicate with other users, and share and consume content generated by other users (including professional publishers). Social media platforms generally display content for consumption as linear 'feeds', curated by algorithms or displayed chronologically. Examples include Facebook, Instagram and Snapchat. Platforms may also offer additional functions including instant messaging services.'

Bundeskartellamt Facebook decision (2019)[38]

'It can be assumed that there is a specific demand for social networks, which is fundamentally different from the demand for other social media. The key purpose of social networks is finding and networking with people the users already know, and to exchange on a daily basis experiences, opinions and contents among specific contacts which the users define based on identity. Providers meet this demand by offering the corresponding core functionalities which grant users a "rich social experience".'

The supply side

2.33 The broader social media sector is generally understood to include a range of online services, including those offered by Facebook, Twitter, Snapchat, Instagram, YouTube, Reddit, Tumblr, Pinterest and WhatsApp.[39]

2.34 A differentiated service to consumers appears to be the main way in which social media platforms compete for consumer attention. Differentiation can incentivise consumers to access multiple platforms, allowing for the co-existence of platforms.

2.35 To create a service that is attractive to consumers, social media platforms must be able to present their users with relevant content. Successful social media platforms feature a vast quantity of content that may be shown to consumers. To prevent congestion and maintain consumer attention, platforms must determine the most relevant content for a given consumer, and the order in which to present it. They do this using an algorithm, which makes decisions based on a range of data about the consumer and the content.

The importance of ecosystems

2.36 As illustrated in greater detail in Appendix E, it is significant that the most successful digital companies in recent years have increasingly been building large ecosystems of complementary products and services around their core service. This strategy has been particularly evident for both Google and Facebook, enabling them to cement the position and strength of their core service, and to leverage this strength into other markets.

2.37 The expansion of these digital ecosystems is resulting in an increasing proportion of our online activity being channelled through a small number of companies. Integration of a wide range of products and services can deliver efficiency savings, potentially reducing prices, and can also potentially improve the consumer experience overall, by increasing the ease with which a range of different services are accessed.

2.38 However, this expansion can also give rise to competition concerns:

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[36] Ofcom (2019), Online Nation.
[37] ACCC (2019), Digital platforms inquiry – final report.
[38] Bundeskartellamt (2019), Bundeskartellamt prohibits Facebook from combining user data from different sources.
[39] Ofcom (2019), Online Nation.

- Platforms with market power can leverage their position into downstream or adjacent markets, giving themselves an advantage over potential competitors and undermining competition in those markets. We have heard numerous complaints about this form of activity, for example that Facebook is using its position in social media to leverage into adjacent markets such as [✂]. There have also been EU antitrust enforcement cases proving these types of issues regarding Google.[40]

- By surrounding its core service with a large number of complementary products and services, a platform will further insulate its most profitable service from competition. If a platform can manage to convince consumers to operate to a large degree within their ecosystem online, then a new entrant would need to compete on many fronts to displace them. For example, by launching its video calling 'Portal' products, Facebook will secure demand for its services WhatsApp and Facebook Messenger, the functionality of which are built into the devices.[41] Similarly, with Google's browser Chrome, or its smart speakers with Google Assistant, Google is able to direct consumers towards its search engine through the use of default settings and bundled services. By gaining control of these adjacent markets, the platforms are able to control the entry points to their core markets, and in doing so protect the primary source of their revenue.

- By expanding the breadth and variety of online services provided, Google and Facebook are able to gather increasing amounts of the two critical inputs to the digital advertising market: consumer attention and data. This in turn results in greater advertising revenues, enabling them to invest at a greater rate than their rivals, which in turn creates a feedback loop that further cements their powerful position.

2.39 Figures 2.4 and 2.5 illustrate the extent of the ecosystems that Google and Facebook have been able to create around their core consumer-facing services of search and social media respectively. These diagrams are not intended to be exhaustive for the entities that these companies own, nor on the functional interlinkages between them, and do not include their business-facing digital advertising services.

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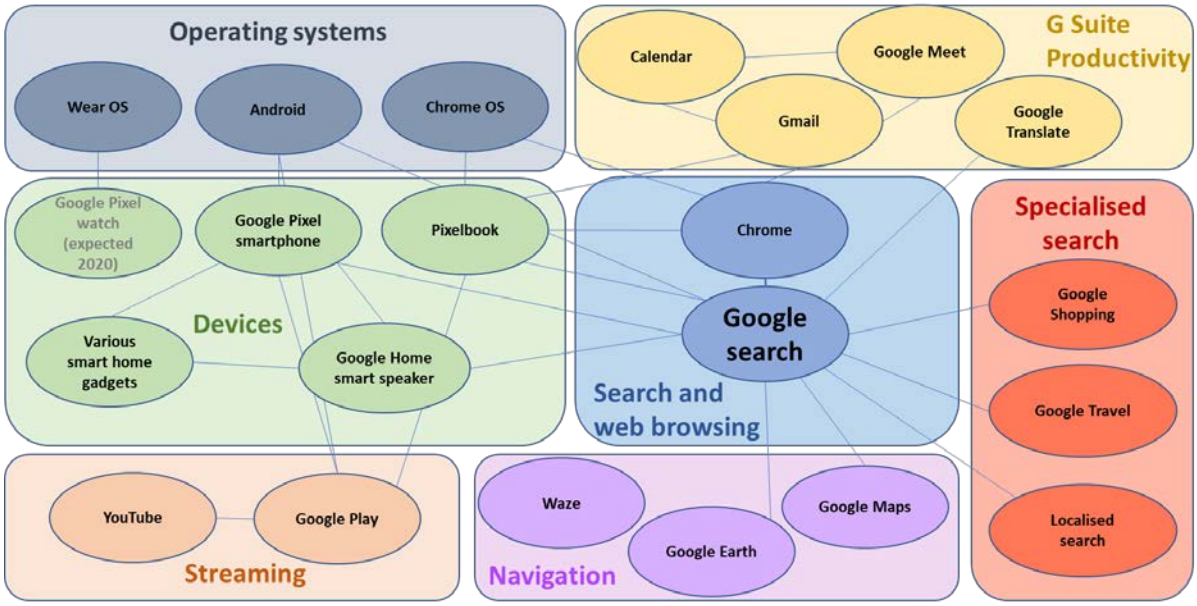
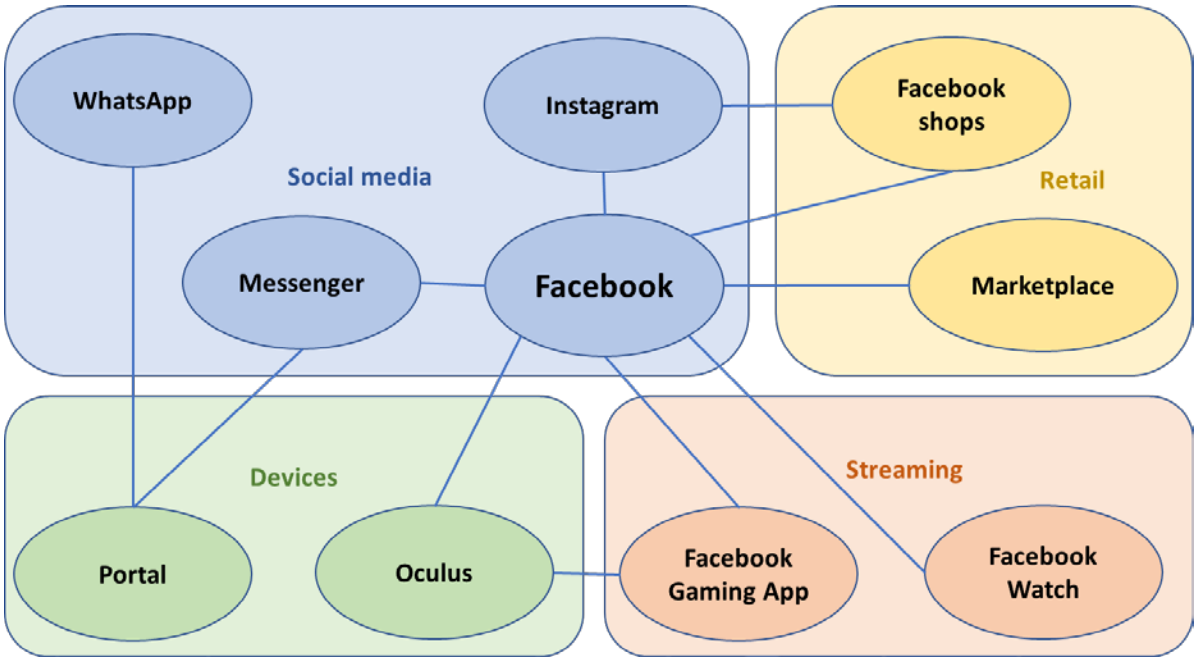
[40] European Commission anti-trust case, Google Search (Shopping).
[41] Features of Facebook's Portal devices.

Figure 2.4: Illustration of Google's online consumer-facing ecosystem



Source: CMA's interpretation of a selection of Google's products and services

Figure 2.5: Illustration of Facebook's online consumer-facing ecosystem



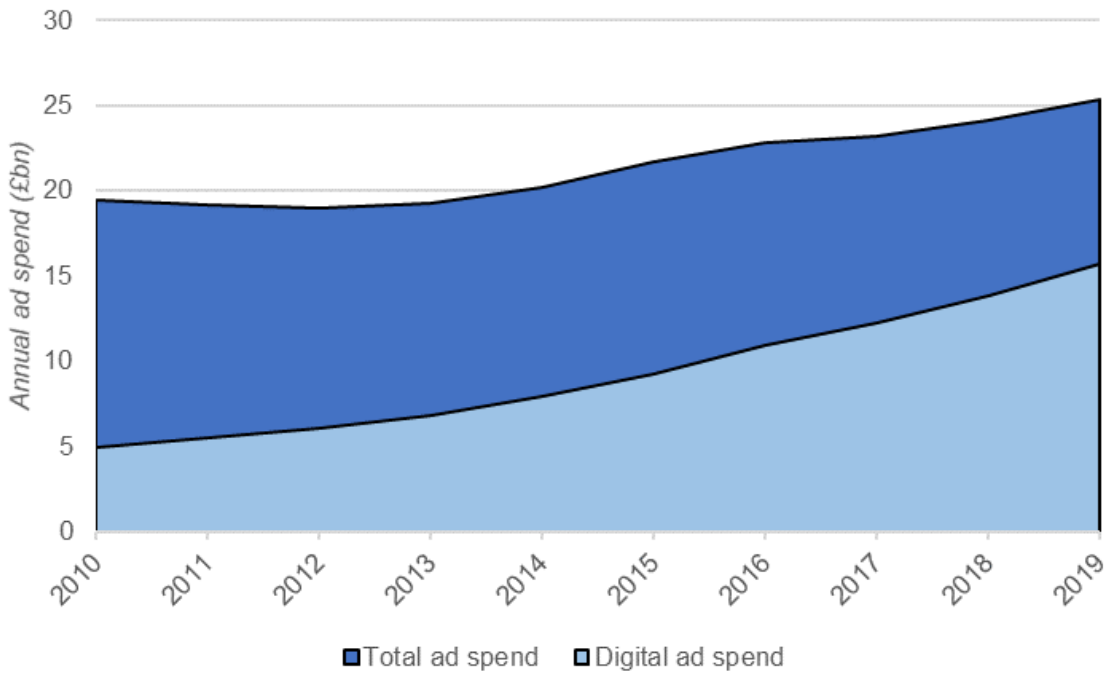
Source: CMA's interpretation of a selection of Facebook's products and services

Digital advertising markets

2.40 Digital advertising is the largest and fastest growing segment in the UK advertising sector. According to estimates by the Internet Advertising Bureau

(IAB) and PWC in the Digital Adspend Report,[42] the UK digital advertising market was worth £15.7 billion in 2019[43] (up from £13.6 billion in 2018) and now accounts for 62% of total advertising spend, up from 25% in 2010.[44] The increasing proportion of advertising spend in the UK going through digital channels is demonstrated by Figure 2.6 below.

Figure 2.6: Digital advertising revenue in the UK as a share of total advertising revenue (in 2019 prices)



Source: AA/WARC Expenditure Report.

2.41 Recent forecasts for 2020 – from the Advertising Association/WARC Expenditure Report[45] – suggest that the negative impact of COVID-19 on total advertising revenues will be substantial, with a year-on-year reduction of 16.7%, including a 20.5% decline for national newspapers, and a 24.1% decline for regional newspapers. Strong positive growth is then expected to return the following year. Unsurprisingly, given the tendency for people to spend more time at home and online during the pandemic, digital advertising revenues are expected to decline by less than other more traditional formats – a year-on-year reduction of around 12% is forecast for online search and display advertising, including a 15% decline in online advertising revenues for national newspapers, and a 19% decline for regional newspapers.

[42] Digital Adspend Report (2019), provided to us by the IAB.
[43] Our estimates that we have set out in this report suggest the total figure is lower, at around £14 billion.
[44] AA/WARC Expenditure Report.
[45] Ibid.

2.42 This increasing importance of online channels for advertising campaigns has created opportunities as well as challenges. Entirely new businesses and markets have developed in response to technological advancements offered by online advertising. And small businesses now have much improved access to flexible and targeted advertising opportunities. But on the other hand, there are many existing businesses, such as newspapers, that previously relied on traditional forms of advertising revenue that have had to adapt.

2.43 There are three broad types of digital advertising: search, display, and classified. We explain these at a high level below, and consider the markets in more detail in Chapter 5.

Search advertising

2.44 Search advertising is where an advertiser pays for its advert (typically in the form of a text link) to appear next to the results from a consumer's search on an internet search engine, although adverts may also appear in other forms of search, for example on maps. The selection and targeting of these adverts is based primarily on keywords entered by the user. Advertisers will pay for their adverts to be displayed when consumers enter particular keywords or phrases, with payment typically made if the consumer clicks on the advert.

2.45 The advert shown to a consumer may also be influenced by some limited data about the person such as their location at the time. For example, if a consumer is searching for a 'coffee shop near me', the advert displayed will depend on a combination of which companies have purchased impressions for the keywords 'coffee shop', and on which of them are closest to the location of the user.

2.46 Consumers can then click on the text link, as they can with the other organic search results (ie those that have not been paid for). In search advertising, advertisers or their agencies generally buy direct from search providers using the providers' self-service online sales interfaces, such as Google Ads. Search advertising is aimed at driving consumers to take a particular action such as clicking a link. It is therefore used for direct response campaigns and is normally paid for on a cost-per-click (CPC) basis.

Display advertising

2.47 Display advertising enables advertisers to place ads on websites or apps in a variety of formats, including banner-style adverts, 'native' advertising,

sponsored content, and video advertising.[46] The space that the website or app owners – referred to in this context as publishers[47] – sell for this advertising is referred to as inventory.

2.48 The display advertising sector is segmented into two channels: owned and operated platforms; and the open display market.

2.49 The owned and operated channel is primarily made up of large social media platforms, which sell their own advertising inventory directly to advertisers or media agencies through self-service interfaces. For example, an advertiser can purchase inventory directly through Facebook Ads Manager or Snapchat Ads Manager.

2.50 In the open display market, a wide range of publishers (for example, including online newspapers) sell their inventory to a wide range of advertisers through a complex chain of intermediaries that run auctions on behalf of the publishers and advertisers. In practice, the largest intermediaries at each level of this complex chain are owned by a single company – Google.

2.51 Though some direct deals for display advertising continue to be made through traditional channels (ie involving human interaction), the use of programmatic technology has increased over time, with the result that almost all display advertising is now sold programmatically (ie ad selection, and the pricing and delivery of ads, are automated by computers using complex algorithms).

2.52 Programmatic display advertising provides an opportunity for businesses and other organisations to target their marketing messages to particular audiences on the basis of detailed consumer profiles. It is particularly associated with raising brand awareness and shifting brand perceptions.[48] Display advertising may be sold on a CPC basis, but is more commonly sold on the basis of how many times it is viewed, referred to as cost per impression, and typically measured as cost per thousand impressions (CPM).

Classified advertising

2.53 Classified advertising involves advertisers paying online companies to list specific products or services on a specialised website serving a particular

[46] We explain these formats in more detail in Chapter 5.
[47] Unless otherwise specified, in this study we distinguish between platforms and publishers, both of which sell advertising inventory. In the case of platforms, including search and social media platforms, the inventory is sold through integrated sales interfaces, while in the case of publishers, including newspapers and other content providers, inventory is sold through intermediaries on the open display market.
[48] IAB (2018), Digital Advertising Effectiveness.

vertical market. Payments for classified advertising will typically consist of listing fees or commissions.

2.54 We did not find that there was a consistent industry definition for what should be included within classified advertising. For the purposes of our study, we note that there is a broad range of online platforms focused on specific sectors that provide for advertisers the ability to list specific products and services and for consumers the functionality to make comparisons across these listings. Sectors where classified advertising is common include recruitment, ecommerce, consumer finance, travel, property and cars. We have considered the role of classified advertising previously in our market study on Digital Comparison Tools, published in 2017.[49]

2.55 Although the functioning of competition within the classified advertising market (eg competition between price comparison websites) has not been a central focus of our study, we have analysed the competitive relationship between these markets and both search and search advertising and social media and display advertising.

Demand for digital advertising

2.56 Digital advertising has increasingly opened up flexible and affordable opportunities for smaller companies. The scale of the large platforms, such as Google and Facebook, provides the possibility for small advertisers to reach out more easily to potential customers on a national scale. These platforms provide self-service interfaces that automate and simplify the complex process of buying advertising.

2.57 This makes advertising accessible to businesses with very small budgets, or even to individuals, resulting in Google and Facebook having a small number of large advertiser buyers, along with an extremely long tails of customers with relatively low expenditure. To illustrate this, Facebook has over a million advertiser customers in the UK, and Google has over 200,000,[50] while the top [5-10]% of advertisers on Google and Facebook, based on value of spend, made up more than 85% of each of their total revenues. This tells us that, while Google and Facebook have made advertising more accessible to a

[49] CMA (2017), Digital comparison tools summary of final report. From the consumer's perspective, classified advertising is very closely associated with digital comparison tools, defined by the CMA previously as 'digital intermediary services used by consumers to compare and potentially to switch or purchase products or services from a range of businesses'.
[50] CMA calculations based on data provided by Facebook and Google for 2019. For more detail on this data and what it includes, see Appendix N.

large number of small businesses, the vast majority of their revenue still comes from a small number of large companies.

2.58 The use of media agencies is still common among larger advertisers running large multi-channel campaigns. Based on information provided by media agencies, we estimate that around a quarter of all digital advertising expenditure in the UK is channelled through media agencies. Decision-making by larger advertisers is becoming increasingly data-driven and sophisticated. The use of technology tools provided either by the platforms or intermediaries to target audiences and measure advertising outcomes at a granular level is becoming increasingly common.

Market outcomes

2.59 As noted in Chapter 1, several bodies and independent reviews called on the CMA to undertake this market study. One of the key reasons they gave was the fact the CMA has legal powers to require the provision of information, allowing us to collect data on issues and concerns where there is currently a lack of evidence.

2.60 We have used these powers to gain a more detailed understanding of how these markets work and of key outcomes within them. In this section, we set out some of our key findings from three main areas: overall revenues in digital advertising; the fees charged by intermediaries in the open display market; and the profitability of Google and Facebook.

Digital advertising revenues

2.61 Search advertising is the largest category of digital advertising in the UK, with our estimates of total ad spend of £7.3 billion in 2019, of which we found Google earned more than 90%.

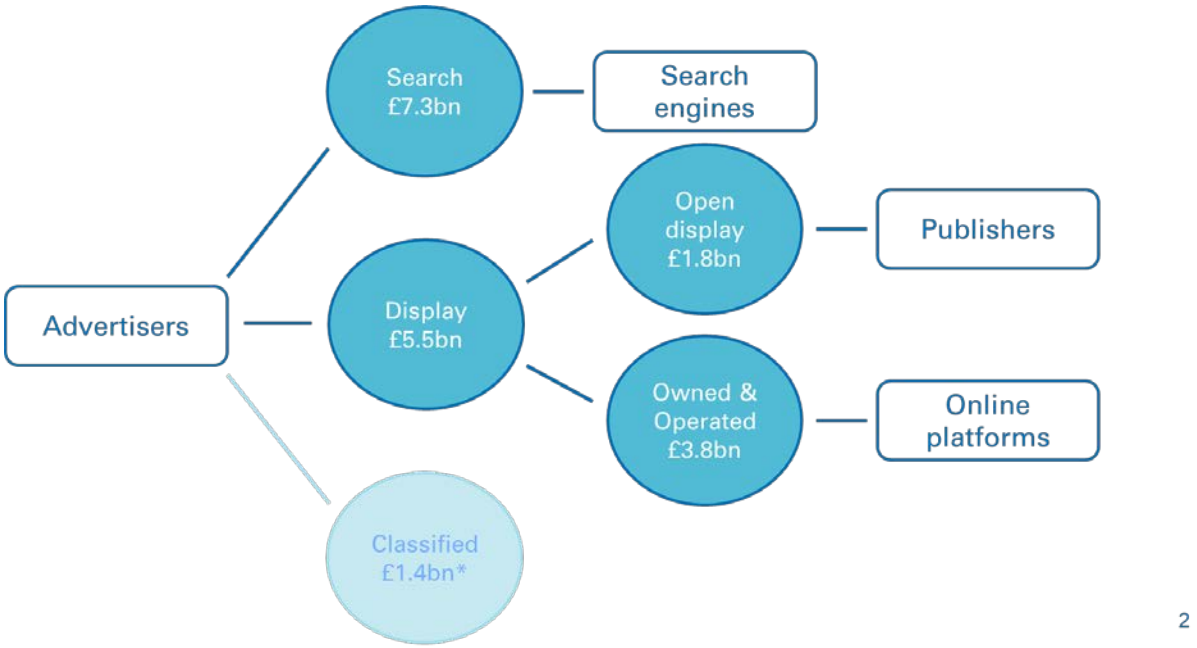
2.62 Total spend in display advertising was worth £5.5 billion in 2019, of which we estimate more than half went directly to Facebook, and around 60% to Facebook and Google combined. Around a third of the total was sold through the open display channel. Video advertising accounted for £2.3 billion of display advertising revenues.

2.63 Overall, we estimate that around 80% of all expenditure on search and display advertising in the UK in 2019 was accrued as revenue by just two companies – Google and Facebook. This includes the revenue from advertising on each of their own platforms, as well as from intermediation services.

2.64 These estimates, based on data for actual revenues provided by market participants, are broadly comparable with other publicly-available estimates.[51] For example, the most recent IAB/PwC Digital Adspend Report estimated that total spend on UK search advertising was around £8 billion in 2019, and spend on display advertising was around £6.2 billion.[52]

2.65 Our high-level estimates are illustrated in Figure 2.7 below.

Figure 2.7: Types of digital advertising and channels of purchase



Source: CMA estimates for 2019 for search and display advertising. Estimate for classified comes from IAB/PwC Digital Adspend Report 2019.[53] Figures may not sum due to rounding.

2.66 We have used information in Chapter 5 to estimate shares of supply for different platforms. This analysis is described in more detail in Appendix C.

Fees charged by intermediaries

2.67 Several publishers have expressed concerns that a lack of transparency and competition in ad tech intermediation allows intermediaries to extract a large share of advertisers' expenditure, reducing the amount that is ultimately paid to publishers. The difference between what advertisers pay and what publishers earn from digital advertising is sometimes referred to as the 'ad tech tax'. If publishers earn lower revenues than would be the case in a more

[51] We note that differences in estimates will be down to the methodologies adopted. While we have been able to request the data for actual revenues from the vast majority of companies in the market, other industry estimates have been based partly on surveys.
[52] IAB UK & PwC Digital Adspend Study 2019.
[53] The IABUK / PWC report assesses classified advertising more narrowly than we have in our study. This figure may therefore be an underestimate of what we have defined as classified advertising.

competitive and transparent market, this would reduce their ability and incentive to fund quality content that ultimately benefits consumers.

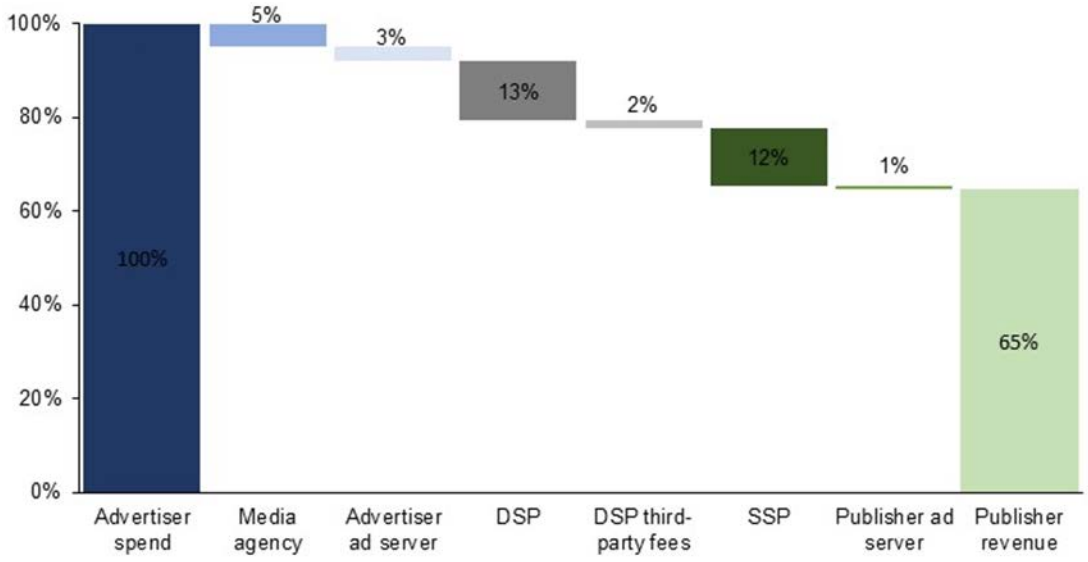
2.68 Past estimates of the proportion of revenue that makes its way through to publishers vary, but they all suggest that intermediaries capture a significant portion of advertisers' expenditure. For example, research by Plum consulting indicated an average of 62% of advertiser spend was received by publishers.[54] More recently, an ISBA/PWC study found that publishers receive 51% of advertising expenditure on average.[55]

2.69 We have gathered our own data about fees and charges from most of the major intermediaries that operate in the UK. We have used this data to estimate the average take rate by intermediaries at various levels of the open display advertising supply chain, as a percentage of the initial expenditure by advertisers.

2.70 Based on this evidence, we estimate that on average in 2019, publishers received around 65% of initial advertising revenue that was paid by advertisers (ie the overall 'ad tech take' was around 35 pence from every pound spent by advertisers). As set out in Chapter 5, this estimate is based on reported fees and may exclude some components of fees that will affect what publishers receive in practice. The findings of this analysis are summarised in Figure 2.8, and explained in more detail in Chapter 5.

[54] Plum Consulting (2019), Online advertising in the UK.
[55] As discussed in Chapter 5, PWC highlighted in their report some inconsistencies which suggest their estimate may understate the amount received by publishers.

Figure 2.8: CMA analysis of take rates across the open display supply chain (2019)



Source: CMA analysis of intermediary data

2.71 Although intermediaries are undoubtedly performing valuable functions, including targeting advertising and evaluating bids from multiple demand sources in real time, it is striking that collectively they are able to take more than a third of the total amount paid by advertisers. As noted earlier in this chapter, and discussed in detail in Chapter 5, Google owns the largest intermediary in each of the main levels of the supply chain.

2.72 These findings, which are broadly consistent with previous studies with differing methodologies, strongly support the hypothesis that greater competition in the ad tech supply chain would increase efficiency, benefitting publishers and advertises alike.

Profitability of advertising-funded platforms

2.73 As highlighted in the sections above, Google and Facebook's strong positions in the general search and social media markets respectively have translated into substantial revenues in the digital advertising market. This section summarises our analysis of the profits earned by Google and Facebook from these core services.

2.74 We have focused on a few standard reporting metrics to inform our analysis of these companies' revenues, costs, and profits. In particular:

- We have assessed the amount of profit each company has earned in absolute terms using the metric 'earnings before interest and taxation' (EBIT).

- We have analysed the level of their profits with reference to the 'return on capital employed' (ROCE). This approach compares accounting profit with the size of investment made by firms to achieve those profits.

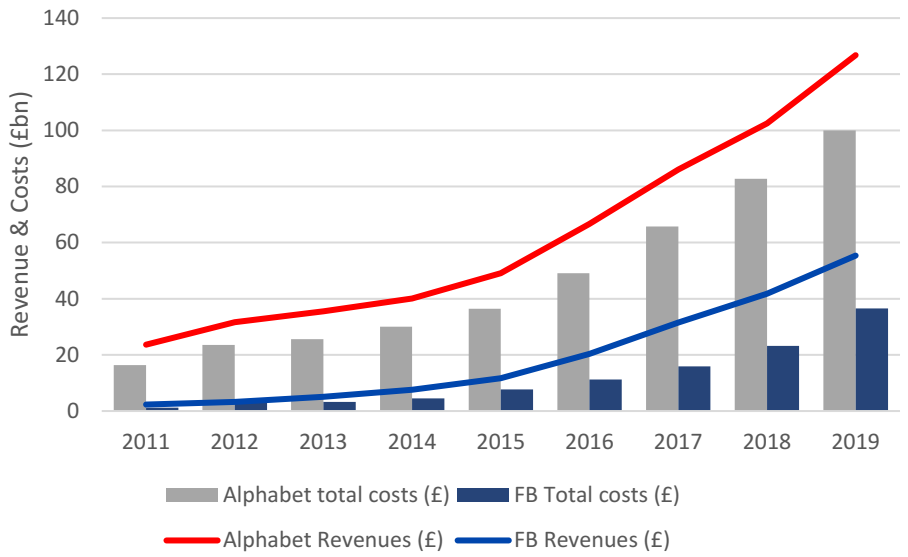
- We have compared our findings against the companies' weighted average cost of capital (WACC), which is a widely used benchmark for returns on an investment. The WACC is essentially the minimum return required on an investment or asset to satisfy the owners and creditors.

2.75 We summarise the main findings of this analysis below, while a more detailed explanation can be found in Appendix D.

Revenues and costs for Google and Facebook

2.76 Figure 2.9 shows the worldwide revenues and costs for Google and Facebook from 2011 to 2019.

Figure 2.9: Alphabet Group and Facebook Revenues and Costs 2011 to 2019

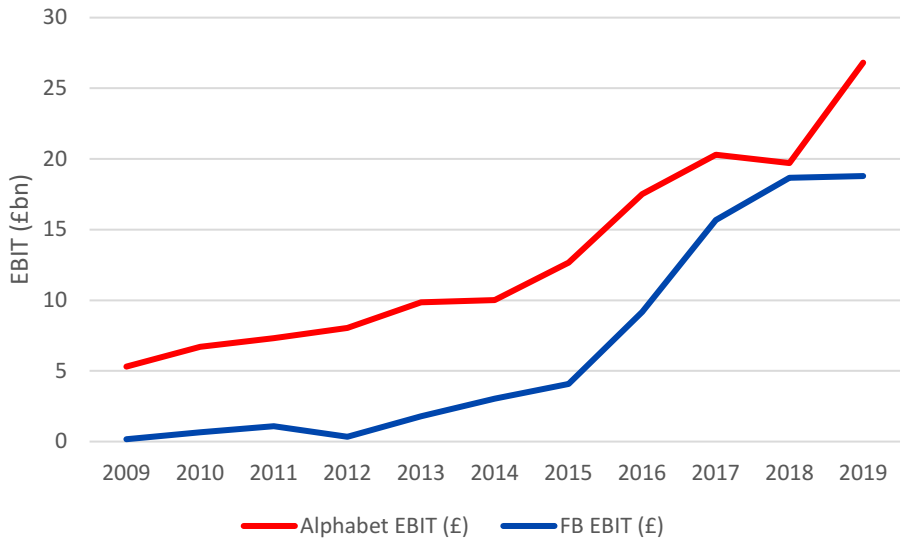


Source: CMA analysis of Alphabet Group and Facebook filed 10-K reports.

Profits earned by Google and Facebook

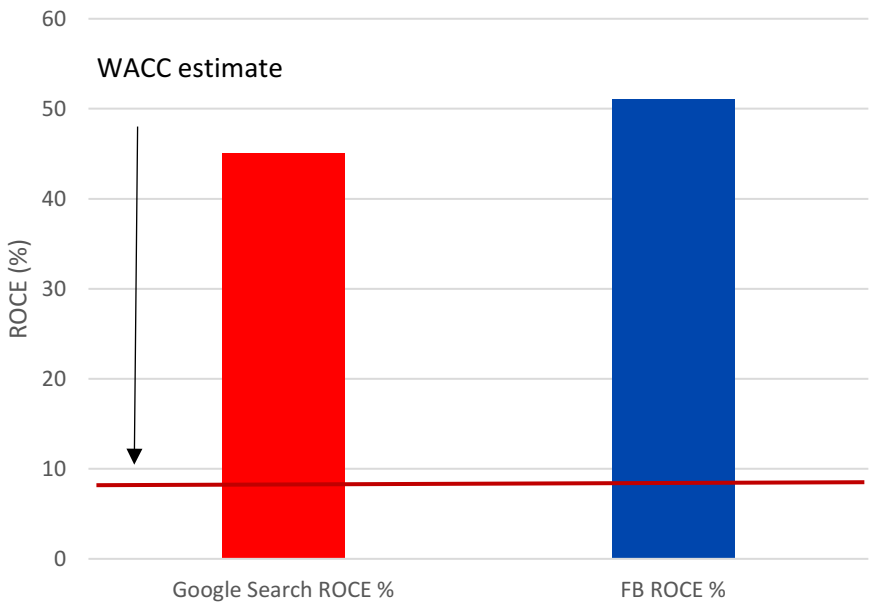
2.77 Figure 2.10 shows worldwide profits (measured using EBIT) in absolute terms from 2009 to 2019 for each company at the group-level based on published information. Figure 2.11 then compares our estimates of the two companies' ROCE with our estimates of their WACC – this analysis looks at the profitability of individual segments within the groups (eg the profitability of Google Search, rather than the whole of Alphabet). This is based on information supplied to us by the companies.

Figure 2.10: Alphabet Group and Facebook EBIT 2009 to 2019



Source: CMA analysis of Alphabet Group and Facebook filed 10-K reports.

Figure 2.11: Google Search and Facebook ROCE vs WACC estimates (2018)



Source: CMA analysis of Alphabet Group and Facebook financial data submissions.

2.78 We have found through our profitability analysis that the global return on capital employed for both Google and Facebook has been well above any reasonable benchmarks for many years. We estimated that the cost of capital for both Google and Facebook in 2018 was around 9%, whereas their actual returns have been substantially higher, at least 40% for Google's search

business and 50% for Facebook.[56] This evidence is consistent with the exploitation of market power.

2.79 Both Facebook and Google raised some concerns with us over our profitability analysis following publication of our interim report. Both submissions highlighted the need to consider intangible assets in assessing profitability of companies such as Google and Facebook, and argued that it was important to reflect the risks taken by investors when making the investments required to develop the businesses. Google also provided analysis of a number of other firms in related sectors which would also have high ROCE on our measure, indicating that high ROCE was not necessarily indicative of market power.

2.80 Following further consideration of these issues, we are satisfied with the approach we have taken. Our original analysis included material adjustments to allow for the cost of investment in the assets, including intangible assets, required to operate a platform. We have compared a number of sensitivities based on the submissions. The level of profit earned by the firms above that required to repay investors is so high that any reasonable adjustments to reflect the points made in the responses do not materially change the conclusions that the profits are indicative of the ability to exploit market power.[57]

2.81 We explain this analysis, including sensitivities, and our response to challenges from each company in more detail in Appendix D.

Implications for consumers

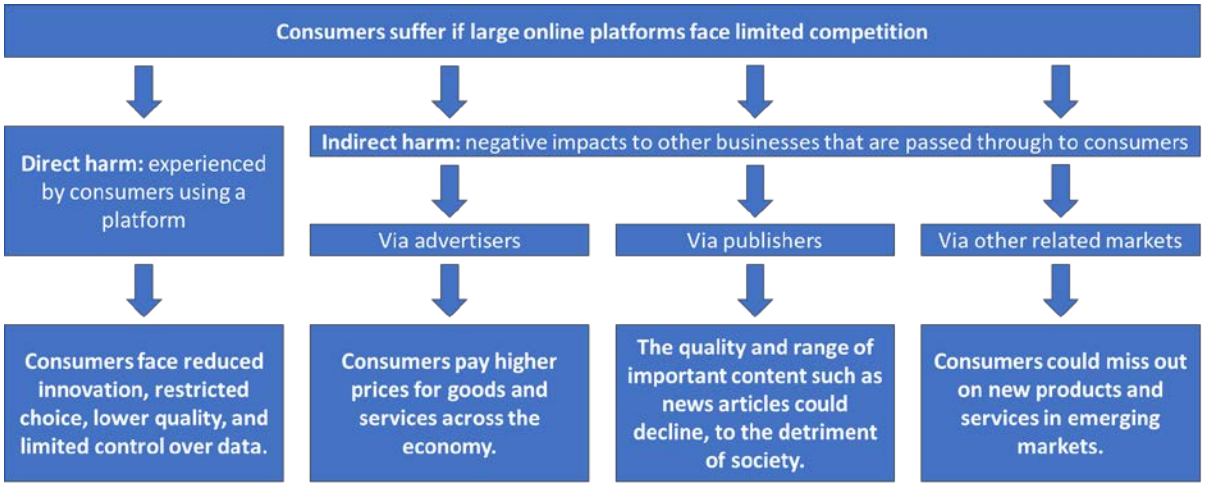
2.82 Competitive markets have the potential to deliver good outcomes for consumers when sellers are incentivised to differentiate themselves from their rivals through lower prices, higher quality, or innovative new offerings.

2.83 In this study, we have assessed whether problems such as market power, lack of transparency and conflicts of interest have the result that competition is not working as well as it should. There are several ways in which consumers could be harmed by weak competition in digital platform markets,

[56] This analysis is based on Facebook's whole business, where 99% of its revenues are from digital advertising, and a lower estimate of the ROCE of Google's search business, which takes account of data provided by Google. In order to minimise the burden of our information requests, we have not updated this analysis for 2019 as the overall conclusion – that both companies are highly profitable – would be unaffected by a marginal change to the estimates.
[57] UK profits estimated based on the share of UK revenue applied to a measure of overall profits.

both directly and indirectly. These are shown in Figure 2.12 and explained in more detail below.

Figure 2.12: Harm to consumers from a lack of competition



Source: CMA simplified assessment of consumer harm.

2.84 On one side of the platforms, consumers face a range of potential direct impacts from a lack of competition, felt through the transactions between them and the platform. These could lead to the following harmful outcomes:

- **Reduced innovation and choice** – barriers to entry and expansion weaken the incentives of new entrants and challenger platforms to come forward with disruptive innovation. Instead, they might be limited to investing in innovations that complement the incumbents' services. These dynamics will also limit the incentives of incumbents to innovate themselves. The result is that the range of new features and services being brought to market will be more limited than it would otherwise have been. In essence, our concern is that consumers may miss out on the next Google or Facebook because the conditions for continued competition and innovation have been stifled.

- **Excessive extraction of data** – consumers receive search and social media services in exchange for the provision of their attention and their data. In a more competitive market, consumers might not need to provide so much data in exchange for the services they value.

- **Lower quality of service** – there are various ways that the quality of services offered by platforms would be enhanced if they were subject to more intense competition. Looking beyond the immediate quality of the core services provided (eg relevance of search results or ease of communication with friends) a lack of competition may affect a range of other factors, such as:

the extent to which they protect consumers' privacy;

the extent that they shield users from harmful content, misinformation and fake news, or online abuse;

the volume and density of adverts that they carry;

how clearly and easily the adverts can be distinguished from organic content; and

how easily the services can interoperate with other complementary ones.

- **Poor returns to consumers** – the price charged by Google and Facebook to access their services is currently zero. It's plausible that the price charged in more competitive circumstances would be negative, with consumers rewarded, financially or otherwise, for entering a search query or scrolling through their news feed.[58]

2.85 On the other side of the platforms, a lack of competition may result in direct harm to business users. In the case of platforms funded by digital advertising, these businesses include advertisers, publishers, advertising intermediaries, and content creators. In the absence of effective competition, these various businesses could expect to face lower quality services, higher prices, or a lower share of the revenues than they would receive in a more competitive market. We would expect these effects to be passed through to consumers with the following indirect effects:

- **Price of goods and services being advertised –** online platforms with market power may be able to exploit advertisers (the vast majority of which are likely to be SMEs, microbusinesses or private individuals) through high prices and increasing the overall cost of advertising. If the costs of digital advertising are higher than they would be in a more competitive market, we would expect this to be felt in the prices that consumers pay for hotels, flights, consumer electronics, insurance and many other products that make heavy use of digital advertising.[59]

- **Quality and range of creative content, including journalism –** for content providers such as online newspapers, digital advertising is a vital source of revenue. If problems in the digital advertising market mean that such providers receive a lower share of advertising revenues than they should, this is likely to reduce their incentives and ability to invest in news

[58] This idea has been discussed elsewhere such as Stigler Center study, the Furman Review and a paper by Weyl et al (2017) on Should we treat data as labour?.
[59] As set out in Appendix N, sectors that advertise heavily across both Google and Facebook include retail, entertainment & media, financial services and consumer packaged goods.

and other online content, to the detriment of those who use and value such content and to broader society.

- **Price, quality and choice in adjacent markets –** a powerful platform can leverage its strong position in its core market into other adjacent markets, ultimately giving itself an advantage over its rivals. The effects of limited competition for consumers discussed above are then potentially spread out to a wider range of markets. Importantly, this could act as a handbrake on innovation right across the ecosystem of online services and related technology.

- **Social harms –** competition concerns can also lead to and exacerbate a range of broader online harms, including many of those addressed in last year's government White Paper.[60] For example, a thriving and competitive market for independent news and journalism is essential for an effective democracy: if the sustainability of authoritative journalism is undermined, this is likely to worsen concerns around fake news and misleading information. More generally, if users are to be truly empowered to keep themselves and their children safe online, adequate choice over platforms and other digital providers is indispensable.

2.86 This document sets out the basis of our findings that Google and Facebook face limited competition, both in their consumer facing markets, and in digital advertising markets. We see from analysis of Google's and Facebook's profitability that, even considering a relatively static snapshot of the world as it is today, the potential gains for consumers from increased competition are substantial. We discuss the assessment of potential consumer harm in more detail in Chapter 6.

2.87 Looking to the future, we could expect the dynamic benefits to consumers from a more competitive market to be far greater than the static gains, as the real prize for consumers over the long term will come from increased innovation and the new transformative products and services that will come online as a result.

2.88 Our increased dependence on digital services during the current coronavirus pandemic demonstrates vividly how important these harms might be, and how high are the stakes in ensuring vibrant, sustainable competition in digital platform markets in the future. We are spending more time online and are increasingly dependent on the services offered by platforms to communicate and engage with the outside world. Content providers such as newspapers

[60] Online Harms White Paper, April 2019.

have seen digital advertising revenues collapse while the position of the largest platforms has been consolidated. There is a real risk that, without decisive action, these harms will lead to lasting competition damage, to the detriment of consumers and broader society. Chapters 7 and 10 set out what form we think this decisive action should take, by the government and the CMA respectively.

3. Competition in consumer services

- Google and Facebook initially grew by offering new and innovative services. However, each now benefits from strong network effects that insulate them from competition. Further, they have both been able to take steps to limit the competitive threat that they face. In combination, these create powerful, self-reinforcing barriers to entry and expansion that have further consolidated their market positions.

- Google has significant market power in the general search sector, having had a share of supply of around 90% or higher in the UK for more than a decade. Google's strong position is primarily maintained by three key barriers to entry and expansion: economies of scale in developing a web index; access to click-and-query data at scale; and Google's extensive default positions.

- Facebook has significant market power in social media. Strong network effects mean that entry over the last decade has only been successful where platforms have provided a sufficiently different service, that does not compete closely with Facebook. By controlling (and sometimes degrading) the level of interoperability that it offers to other social platforms, Facebook has further insulated itself from competitive pressure.

- Google and Facebook have increasingly expanded from general search and social media respectively into related markets. This can provide benefits for consumers, for example by increasing choice, or allowing them to access services with less friction. However, we are concerned that Google and Facebook can leverage their market power into adjacent markets in a way that further excludes rivals, diminishing competition and reducing choice and innovation over time. Concerns about such practices could be investigated under a code of conduct.

Introduction

3.1 Online platforms that are funded by digital advertising serve multiple user groups, including consumers and advertisers.[61]

3.2 As discussed in the previous chapter, the high revenues that Google and Facebook generate from digital advertising derive from their success in capturing consumers' attention and understanding their characteristics and

[61] Some of these platforms also serve other user groups, such as publishers, retailers and app developers.

preferences. They achieve this primarily through their search and social media platforms.

3.3 This chapter sets out our research and findings in relation to:

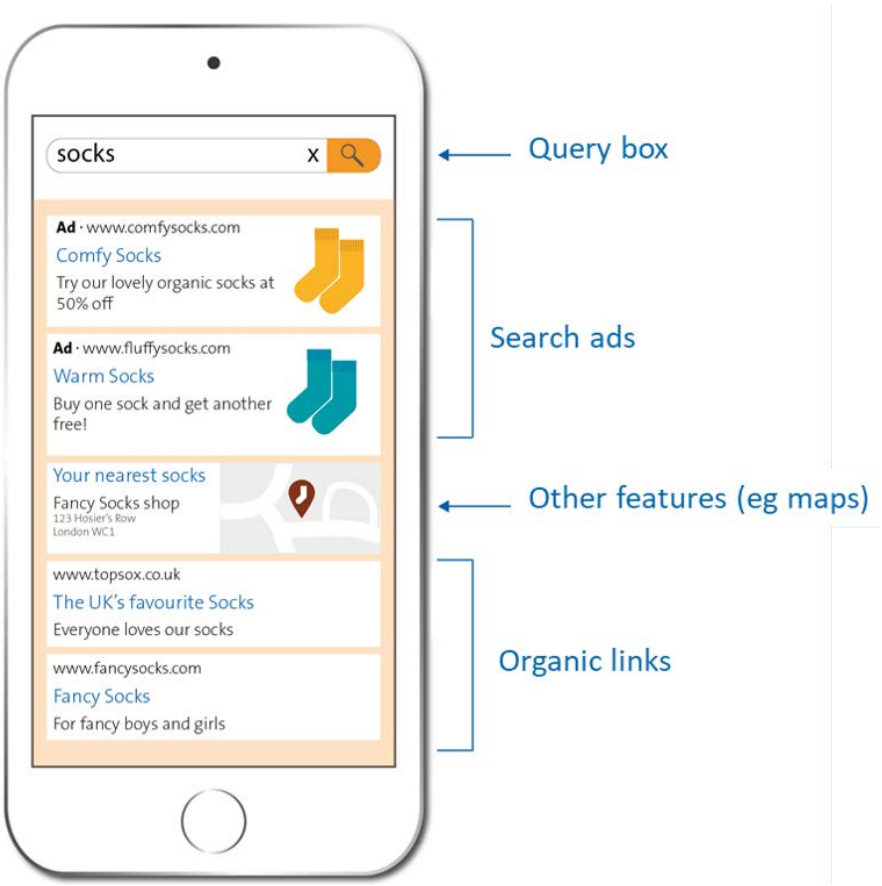
- the extent of market power enjoyed by Google and Facebook on the consumer side of their search and social platforms; and
- the key barriers to entry and expansion in these sectors.

Competition in search

3.4 Web-based search engines play an important role for consumers in the modern world, helping them to navigate the internet, and to find useful information quickly and easily in response to a broad range of search queries.

3.5 Figure 3.1 below shows the key elements of a search engine results page. When users enter queries into the search box, the search engine returns a set of organic links and may also return search adverts and other content and features.

Figure 3.1: Illustration of a search engine results page



Source: CMA.

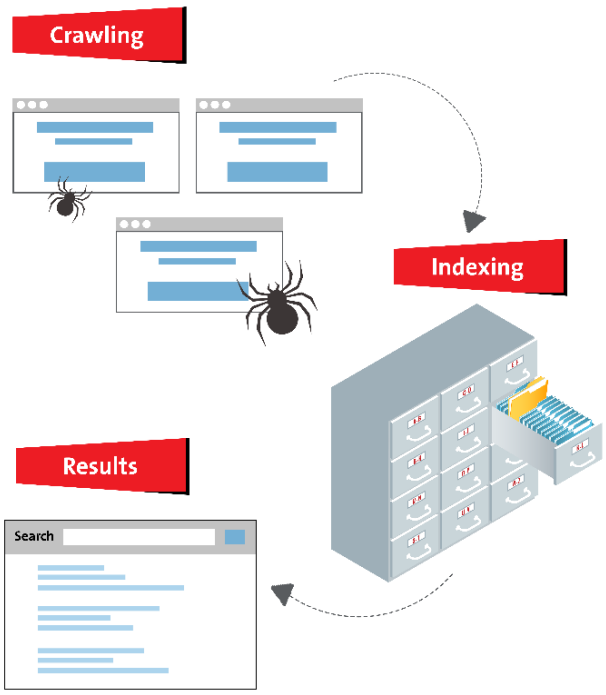
3.6 Search engines such as Google and Bing (which is owned by Microsoft) maintain an index of websites and use algorithms to determine which results to serve in response to a query. These steps can be summarised as follows:

- **Crawling** – search engines use automated bots to crawl the web for new or updated webpages and bring data about those pages back to the search engine's servers. These bots follow links from known webpages and use known webpages' URL addresses. Search engines also make use of crawl requests and sitemaps submitted by webmasters (ie people who are responsible for maintaining websites) who want their website to be found.

- **Indexing** – search engines record and organise data and metadata collected from crawling into an index. The data can include the title of a webpage, the words it contains and their location within the webpage, as well as metadata on the author of the page and the time the page was last updated. Search engines supplement data derived from web-crawling with other information and features. These may include, for example, maps, local business directories, shopping tools, and live feeds of sports scores and exchange rates.

- **Ranking and returning results** – when users enter a search query, search engines use a series of algorithms in order to assess the intent behind the query and instantly select and return the most relevant and useful information from the index.

Figure 3.2: Web crawling and indexing



Source: CMA.

3.7 Aside from Google and Bing, other English-language search engines do not maintain their own at-scale index of webpages, but instead buy organic links and search adverts through syndication agreements. For example, Yahoo Search (owned by Verizon Media), Ecosia, and DuckDuckGo access Bing's organic links and adverts through syndication deals.[62]

Box 3.1: History of search

In the 1990s, at least fourteen search engines launched their services for the first time, deploying a range of different approaches to indexing and ranking webpages.

- JumpStation (which launched in 1993) used a web-crawling technology to build an index of the web, [63] whereas Yahoo (which launched in 1994) relied on staff categorising websites into a hierarchical structure.
- Other early launches included Lycos in 1994, Ask Jeeves (which would later become Ask.com) in 1997, and MSN Search (which would later become Bing) and Google in 1998.[64]

By the early 2000s, Google had established itself as one of the top search engines in the world, alongside Yahoo and MSN Search.[65]

- Google said that the initial innovation that drove its success was its proprietary 'PageRank' algorithm, which judged relevance based on the number of websites linking to potentially relevant pages.
- Google received a capital injection in 1997[66] and by 2000 it had developed the world's largest search index.[67]

Through the 2000s, search engines innovated through the addition of features.

- By 2005, Google, MSN and Yahoo all offered web, news and images search features. Google also had shopping sites (Froogle) and Maps. MSN Search had Encarta. Yahoo's features included Video, Directory and Products.[68]

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[62] Verizon Media (owner of Yahoo Search and AOL) and Ecosia have syndication agreements with Microsoft. DuckDuckGo previously had a sub-syndication agreement with Verizon Media and now syndicates directly from Microsoft.
[63] Dynamic Competition in Online Platforms, BEIS, March 2017, page 32-33.
[64] Dynamic Competition in Online Platforms, BEIS, March 2017, page 32-33.
[65] The Guardian, 'Google timeline: a 10 year anniversary', 7 Sep 2008, Accessed 31.10.2019.
[66] The Telegraph, 'The man who Googled himself $1 billion', 5 Oct 2004, Accessed 31.10.2019.
[67] Google blog, 'Google Launches World's Largest Search Engine', 26 Jun 2000, Accessed 31.10.2019.
[68] The Guardian, 'Online's top 25 search engines', 24 Feb 2005, Accessed 31.10.2019.

- Google was the first search engine provider to launch a mapping product, with Maps for desktop launching in 2005 and Maps for mobile following in 2007.[69]

There is a long history of search providers other than Google and Bing choosing to outsource some or all of their search engine activities.

- As early as 2000, Yahoo agreed to make Google its default search results provider. Yahoo's president said that 'Google will provide its underlying Web search engine to serve as a complement to Yahoo's popular Web directory and navigational guide'.[70,71]

- By late 2010, Yahoo had outsourced its search results and advertising to Microsoft[72] and Ask.com had refocused away from developing its own search engine technology.[73]

- This left Google and Microsoft (now Bing) as the only two large web-crawling English-language search engines, which remains the case today.

3.8 We refer to Google, Bing, and the search engines that syndicate from them as 'general search' providers. These are platforms that are used by consumers to answer a broad range of search queries.

3.9 General search engines are not the only online platforms that help consumers to find information online. Online marketplaces (such as Amazon and eBay) and price comparison sites (such as Booking.com and Comparethemarket.com) also help consumers to search for certain types of information. We refer to platforms that specialise in a subset of consumer queries as 'specialised search' providers.

3.10 We first set out below how general search platforms compete, before presenting shares of supply and outlining competitive constraints faced by Google Search. We then discuss potential barriers to entry and expansion.

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[69] Google blog, 'Google announces launch of Google maps for mobile with 'my location' technology', 28 Nov 2007, Accessed 31.10.2019.
[70] Google blog, 'Yahoo! Selects Google as its Default Search Engine Provider', 26 Jun 2000, Accessed 1/11/2019.
[71] The same press release noted that Yahoo! used a different indexing method compared to Google and others 'Unlike search engines, which use automated 'spiders' to electronically crawl the Web to capture and store sites in the search engine's index, Yahoo!'s staff of experts appropriately categorizes Web sites into an intuitive hierarchical organizational structure'.
[72] In 2009, Yahoo and Microsoft agreed that Microsoft would be the exclusive provider of algorithmic search results and search advertising to Yahoo in EMEA. This partnership was renewed in 2018, subsequent to Verizon Media's acquisition of Yahoo's operating business.
[73] The Guardian, 'Ask.com gives up on search as Google takes over – adieu Jeeves', 9 Nov 2010, Accessed 1/11/2019.

Finally, we present our findings on the extent to which Google Search has market power.

Parameters of competition

3.11 Search engines compete for consumers directly by seeking to provide high-quality services. They also compete over access to consumers, through the default search positions on web-browsers and devices.[74]

3.12 Search engines compete for consumers over the following dimensions of quality:

- **Relevance of results** – the ability of a search engine to return useful, relevant results in response to a range of queries is a key dimension of quality. Activities such as crawling and indexing, developing additional features, and refining algorithms each play a role in search relevance.[75]

- **Ease of use** – consumers also want to be able to conduct their searches effectively and efficiently. Many search engines have built 'instant answer' boxes into the search results page, reducing the need for consumers to click through to other web pages. Features such as autocomplete and voice search also contribute to ease of use.

- **Attractiveness of interface** – search engines also compete to provide visually attractive interfaces, which can be another aspect of quality from the perspective of consumers.

- **Privacy and trust** – privacy is important for some consumers; some consumers prefer to accept less personalised (and potentially less relevant) search results and adverts, in return for their search engine collecting and storing less data about their searches. Consumers may also trust particular brands.

- **Rewards and incentives for users** – price is not a key parameter of competition in search; none of the general search engines that we heard from charge users or pay them for searches undertaken. However, some search engines compete for consumers' searches by offering non-monetary rewards (such as promotional points that can be used to get discounts on other products), or by making contributions to good causes.

[74] For example, when a consumer buys a new mobile phone, search queries typed into the pre-installed browser or search widget will be served by the default search engine, unless the consumer makes an active choice to move away from the default. We discuss default search positions later in this chapter.
[75] As discussed later on this chapter, search engines that access search results through syndication agreements undertake these activities to a more limited extent.

Box 3.2: How search engines measure and improve search quality

Search engines engage in several types of experimentation and testing in order to iterate and improve search quality.[76]

First, search engines may conduct **live experiments**, where they direct a proportion of user traffic to a new trial version of the search engine. For example, one group of users may be served results based on the current ranking algorithm, while another group is served results based on a modified algorithm. The search engine analyses interaction data (for example, data on what links the user clicked and whether they hit the back button following a click) in order to build a picture of which version works better for users. Later in this chapter, we discuss how 'click and query data' (which includes interaction data) helps search engines to develop the quality and relevance of their search results.

Secondly, some search engines seek qualitative feedback from **dedicated panels** of human reviewers who have agreed to evaluate the product. For example, reviewers may be asked to compare two candidate sets of search results (or two candidate ways of presenting the results) and state which one they prefer. Some search engines also use human reviewers to judge various aspects of web-page quality and trustworthiness.

We discuss search quality in more detail in Appendix I.

3.13 The evidence that we have reviewed suggests that search engines and consumers generally see relevance of results as the most important aspect of quality.[77] This suggests that, in addition to any points of differentiation that they offer, competitive search engines need at least to offer a similar level of relevance to that of the market leader (Google).

3.14 Competition over quality in search plays out through various mechanisms, including in-house innovation (for example, to improve search algorithms, or design new features), the acquisition of innovative companies and the signing of commercial partnerships with third parties that offer databases, maps or other features (to supplement organic links).

3.15 However, search default positions and competition over access to these default positions is also a very important feature of the search sector. For example, Google makes very large payments to Apple in particular in return

[76] See for example: Google, 'How search works' and 'How our Quality Raters make Search results better', Accessed 26 November 2019.
[77] See for example survey conducted by DuckDuckGo.

for being the default search engine on its devices. We discuss access to consumers and defaults later in this chapter.

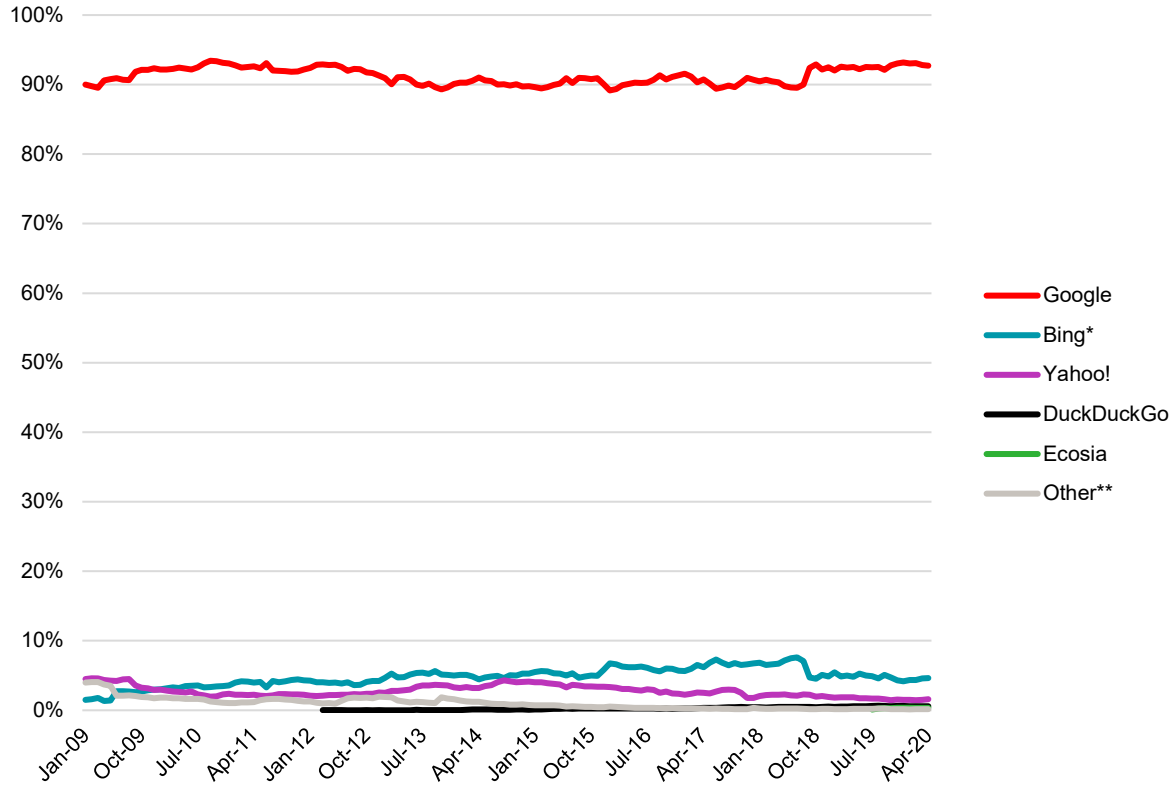
3.16 Search engine providers also compete to attract advertisers to their platforms, in order to fund the services that they supply to consumers. Google and Bing own and operate their own search advertising infrastructure. Other search engines rely in part or whole on search adverts that they access through syndication agreements. We discuss search advertising in Chapter 5.

Shares of supply

3.17 Google has persistently had a very high and stable share of general search in the UK over the period for which data is available. As shown in Figure 3.3, based on Statcounter data on website referrals, Google's share of supply has been between 89% and 93% throughout the last ten years.[78] MSN (now known as Bing) overtook Yahoo Search in 2009 and these search engines have continued to be the second and third biggest providers in the UK throughout the subsequent ten years.

[78] Source: Statcounter Global Stats. Appendix C contains a chart showing this data. As explained in Appendix C, Statcounter calculates shares of supply as the quantity of page referrals generated through a search engine, as a proportion of total page referrals generated through search engines.

Figure 3.3: Shares of supply by page referrals from January 2009 to April 2020



Source: Statcounter Global Stats.
Notes: UK data.
* Bing's share represents that of Bing and MSN Search. MSN Search was rebranded as Bing in 1998.
** 'Other' consists of: AlotSearch; AOL; AskJeeves; AVGSearch; Babylon; Baidu; Conduit; NortonSafeSearch; Snapdo; Webcrawler; WindowsLive; Yandex; and 'other'.

3.18 A limitation to using Statcounter data to calculate shares is that page referrals will not account for search engine usage where the answer desired by the consumer is displayed directly on the results page, eg through 'instant answers'. Therefore, we have also calculated shares of supply on the basis of volume of searches using data provided by the parties. We consider that this most accurately reflects the intensity with which users engage with a search engine.

3.19 Our analysis using parties' data on search volumes resulted in similar findings to Figure 3.3, with some additional, more granular results, albeit over a shorter time period. The results are presented below. Google's share of supply in search was 93% in 2019. Bing and Yahoo Search had the next two highest shares at 5% and 1% respectively. The next most used search engines in the UK in 2019 were DuckDuckGo and Ecosia. DuckDuckGo was launched in 2008 and Ecosia launched in 2009. Both of these search engines

use Bing search results and adverts and had a share of less than 1% of general search as of 2019.[79]

3.20 Google's share of supply is very high in desktop search and close to 100% in mobile search. Bing has a larger share of desktop search than mobile search. As of 2019:

- Google's share of supply in search is 93% overall, 97% on mobile devices and 84% on desktop devices.
- Bing's share of supply in search is 5% overall, less than 2% on mobile devices and 13% on desktop devices.[80,81]

3.21 We note that mobile searches account for a high and growing proportion of total search activity; our analysis of parties' data shows that 68% of all UK searches in December 2019 were on mobile devices, up from 60% in January 2018.[82] Further growth in the importance of mobile devices is likely to further strengthen Google's overall position in general search.

3.22 The evidence we have seen suggests that many consumers mostly use one general search engine per device. Google's very high share of supply in mobile search in the UK suggests that the proportion of consumers using only one search engine is higher still on mobile devices.

3.23 Several factors may explain why consumers do some searching on a second search engine. First, they may face different defaults on different devices. Secondly, some consumers may actively choose to use a different search engine for certain tasks.[83]

3.24 In the section below, we consider sources of competitive constraint on Google Search, including from rival general search platforms and specialised search platforms.

Competition between general search platforms

3.25 We have not carried out a formal market definition assessment, but have instead looked at competitive constraints across the sector and have focused on observing direct indicators of market power and barriers to entry and

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[79] Where shares are calculated on the basis of the number of searches made on search engines. CMA analysis of search engine's data. See further Appendix C.
[80] Where shares are calculated on the basis of the number of searches made on search engines. CMA analysis of search engines' data. See further Appendix C.
[81] Desktop devices include laptop devices. Mobile devices include tablet devices.
[82] CMA analysis of search engines' data. See further Appendix C.
[83] For example, DuckDuckGo said that 'some users choose to only use us when making perceived more-private searches and choose to use Google the rest of the time'.

expansion.[84] An understanding of substitutability is important in assessing how closely different providers compete and the nature of the competitive constraint faced by Google. We consider these constraints as part of our assessment of competition below.

3.26 Google Search has played an important role in helping consumers to navigate the Internet since its launch in 1998 and is well-known for introducing innovations to web-based search, including its 'PageRank' algorithm. As by far the most-used general search engine in the UK, Google handles a larger volume of UK search queries and operates a larger volume of UK search advertising inventory than its competitors.

3.27 Other general search engines identified Google as their main competitor or as one of their main competitors (alongside Microsoft Bing). Microsoft submitted that Google's perceived advantage on relevance among consumers especially applies to uncommon queries (also known as 'tail queries') and that Google has richer local and specialty results. As discussed in the sections below, Google Search holds extensive default positions across nearly all UK mobile devices. It also holds significant default positions on desktop, through Google Search being set as the default on the Chrome browser.

3.28 Google submitted that Bing was the main competing general search engine to Google Search in the UK. Aside from Google, Microsoft is the only other search engine provider that maintains an at-scale English-language index and produces its own organic search results and search adverts. Bing holds extensive default positions on Windows PCs, through Microsoft's agreements with Windows PC manufacturers. Microsoft said that Bing's strengths relative to Google are that it is a good alternative for consumers for most of their likely search queries (ie common queries) and for those who dislike Google.

Quality and relevance of search results

3.29 As discussed above, relevance of results is generally viewed as the most important aspect of quality for consumers. We reviewed a range of evidence to understand how consumers and industry participants perceive Google's

[84] This is in common with the standard approach in CMA market studies, which do not seek to establish whether a firm has dominance in a defined market, but are focussed on assessing the range of competitive constraints applying to firms, and how these could be strengthened. In a market study, the CMA considers 'the extent to which a matter in relation to the acquisition or supply of goods or services of one or more than one description in the United Kingdom has or may have effects adverse to the interests of consumers' (Enterprise Act 2002, section 130A(2)).

search results to compare to those of other general search providers.[85] This evidence is summarised below and discussed in more detail in Appendix I.

3.30 Google submitted the results of its Information Satisfaction tests, in which human raters score unbranded search results from mobile devices for a random set of queries.[86]

- Google submitted the results of 98 tests from the US between 2017 and 2020. Google outscored Bing in each test; the gap stood at 8.1 percentage points in the most recent test and 7.3 percentage points on average over the period.

- Google submitted the results of 25 tests from the UK from 2019. Google outscored Bing in each test; the gap stood at 10.0 percentage points in the most recent test and was 8.5 percentage points on average over the period.

3.31 Google also submitted a Comparative Quality Analysis (dated July 2019), in which users of mobile devices were asked to rate Google's results side-by-side alongside those of Bing, DuckDuckGo, Qwant and Ecosia. The document concluded that 'Google quality is much better than others in all locales tested' (which included the US and the UK).

3.32 Microsoft submitted results from its Bing Challenge consumer research in which desktop users compare Google and Bing results side-by-side. In the most recent period (Q4 19):

- When brands were visible, 42% preferred Google, 23% preferred Bing, and the remainder were draws.

- When brands were hidden, 37% preferred Google, 35% preferred Bing and the remainder were draws.

3.33 Microsoft also submitted some qualitative research that indicated that the perceived relevance of results was a source of relative weakness for Bing in the UK, and an internal memo stating that Bing was 'trailing' Google on relevance in a number of regions outside of the US.[87]

3.34 We also asked other commercial parties for their views on quality differences between Bing and Google. Apple said that Google is 'the best English

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[85] We note that relevance is subjective and there is no single measure that is used across the sector to compare different search engines.
[86] [✂].
[87] [✂].

Language search engine', while [a search engine] said that Google has the 'best algorithmic results'. The Horizon Digital Economy Research Unit questioned the impartiality of consumer tests conducted by search engines and suggested that 'the dominance of Google in the general search engine market is not necessarily an indication of its overall better performance'.[88]

3.35 On the whole, the evidence that we reviewed suggested that Google's search results are generally perceived to be of higher quality than those of Bing. However, the studies we reviewed were not entirely consistent. For example, Google scored more highly than Bing in all Google studies (both when brands were visible and when they were not), whereas Google and Bing received a similar number of preferences in some unbranded tests commissioned by Microsoft. We also note that, even in studies where Google scored more highly than Bing, there were a significant number of instances in which users did not express a strong preference for either Google or Bing's results.

3.36 In relation to brand, we note that the 'Google' brand is closely associated with the act of web-searching and several competitors highlighted this as a source of strength. DuckDuckGo submitted that 'users have come to expect Google as the default and think of it synonymously with search. Even die-hard DuckDuckGo users still say they "Google it."' As set out in Appendix I, there is evidence that some consumers struggle to tell the difference between search engines in the absence of brands and logos.

3.37 Some of the consumer studies we reviewed suggested that quality differences between Google and other general search engines may be more pronounced in relation to queries with a local dimension and certain other categories of query, including those where search features and specialist datasets (ie that are not obtained from web-crawling) play a role in answering the query. However, the studies that we reviewed did not categorise queries according to whether these were common (ie head queries) or rare (ie tail queries).

Features and incentives

3.38 Both Google Search and Bing offer a wide range of search features, alongside traditional organic links to websites. For example, both allow consumers to make specific searches for images, videos, maps, shopping and flights.[89,90] Google research comparing the search features of search

[88] Horizon's response to our consultation on our interim report.
[89] Google, accessed on 9.10.2019.
[90] Bing, accessed on 10.10.2019.

engines including Bing, DuckDuckGo and Ecosia stated that 'Google leads in search features (coverage and utility)'.

3.39 Google highlighted its recent innovations in areas such as 'activity cards',[91] visual previews and artificial intelligence. It said that the actions of its general search engine competitors were not a significant consideration behind these investments, because its main focus is innovating to improve the user experience.

3.40 One way that Bing differentiates from Google is through 'Microsoft Rewards'. Under this scheme, signed-in Bing users receive a notional payment in the form of promotional reward points for undertaking searches.[92]

Competition from syndication partners

3.41 Google also listed downstream search engines with syndication business models, such as Yahoo Search, Ecosia and DuckDuckGo as being among its competitors[93]. We note that [✂] and that some of these providers source most of their customers from Google.[94]

3.42 However, as explained above, each of these downstream search engines relies on search results and adverts from Bing.[95] These providers do not hold significant search default positions, or produce their own organic links, and instead seek to attract consumers through other means. For example, DuckDuckGo has a focus on privacy and describes itself as 'the search engine that doesn't track you',[96] while Ecosia is a 'purpose company', whose advertising profits are reinvested or used to plant trees.[97] As set out above, these providers have very low shares of supply in the UK. Overall, we consider that platforms that do not produce their own organic links and adverts provide only limited fringe competition to Google.

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[91] A Google Search feature that organises information about a user's previous searches to help them to 'pick up where they left off' when they start another search session. See Google (2019), Pick up where you left off on Search, accessed on 3.12. 2019.
[92] These can be redeemed for gift cards, donation and sweepstake entries, but do not have a monetary value.
[93] For example, Google submitted that DuckDuckGo is one of the 'privacy-focused players' that it competes with and that 'DuckDuckGo's key advantage is the reputation it has cultivated amongst users for protecting user privacy [and] choosing not to offer personalised search services'. It also submitted that Ecosia was one of the general search engines that it competes with.
[94] For example, most DuckDuckGo users have switched to it from Google Search.
[95] Verizon Media (owner of Yahoo Search and AOL), Ecosia and DuckDuckGo have syndication agreements with Microsoft.
[96] DuckDuckGo, accessed 7.11.2019.
[97] Ecosia (2019), Financial reports and tree-planting receipts, accessed on 10.10.2019.

Conclusion

3.43 Overall, we consider that Bing is Google's closest competitor in general search, but does not provide a strong constraint on Google Search on the consumer side of its platform.

Competition between Google Search and specialised search platforms

3.44 Google told us that it faces strong competition from a range of different specialised search providers who specialise in paid listings in particular sectors, eg Amazon in retail and Booking Holdings[98] in travel. Google said that because consumers search for particular things, different competitive constraints are relevant to different query types. It said that [a small proportion] of commercial search queries (eg shopping, credit cards, finance, travel, hotels and plumbers) generate most of Google's search revenues. Specialised search services exist in each major commercial content category and Google competes with these services. Google also said that the pressure on it to innovate derives not just from competition in one category alone, but from the aggregate effect of competition across all categories.

3.45 This issue was addressed in the European Commission's *Google Shopping* investigation (2017), which considered whether specialised search services were in the same market as general search.[99] It found the markets to be distinct for a range of reasons. Most notably, the Commission found that the two types of service operate as complements rather than substitutes, as a substantial number of consumers access specialised search via general search rather than accessing them independently.

3.46 From a consumer perspective, there are substantial differences between general search and specialised search. General search engines help consumers with a wider range of queries including many that are not served by specialised providers, while specialised search provides functionality that allows consumers to compare listed products across multiple dimensions. Specialised search providers told us that these differences mean that specialised search and general search are unlikely to be directly substitutable for consumers.

3.47 Further, all the specialised search providers we contacted stressed that the relationship between them and Google Search is vertical rather than horizontal in nature, with Google being a 'gatekeeper' for traffic to their websites. This is supported by traffic data from specialised search providers which shows that

[98] Booking Holdings is the owner of travel-related websites such as Booking.com, Agoda and OpenTable.
[99] European Commission Decision AT39740 Google Search (Shopping), June 2017, paragraphs 166 to 177.

Google is an important source of traffic for these providers, with most providers relying on Google for at least 40% of their traffic. In turn, a large proportion of Google's revenues in sectors where specialised search providers are present comes from the specialised search providers themselves, rather than from other advertisers.[100]

3.48 Notwithstanding this vertical relationship, we have considered the extent to which specialised search exercises some competitive constraint on Google, through attempting to attract consumer traffic directly to specialised search websites rather than via Google's search engine. For example, Money Supermarket reported that it would prefer more people to go directly through its own website, rather than through Google. Some specialised search providers are becoming more successful in generating their own traffic through promoting their brands and mobile apps, particularly as mobile usage has increased. However, our analysis of traffic data to specialised search providers shows that in most cases they are still heavily reliant on Google as the main route for access.

3.49 In addition, Google can employ strategies to influence this traffic and consequently the competition it faces from specialised search providers over the long term. These include changes to its organic search algorithms that have the effect of demoting specialised search providers in organic search rankings and self-preferencing of Google's own specialised search services. These strategies are discussed in more detail in Appendix P. By using them, Google may be able to limit the traffic to specialised search providers, making it more difficult for them to develop their services and brands and limiting the competition Google faces from specialised search providers over the longer term.

3.50 There is some evidence suggesting that Google may face competition from Amazon on Google's search queries that relate to retail. We note that Amazon is likely to have important competitive advantages from its broader role as an ecommerce channel. The value of Amazon's first-party data was stressed to us by media agencies and several advertisers from the retail sector. However, Amazon submitted that it considers itself to be one of Google's largest customers, and that this illustrates that it does not compete with Google. Some survey evidence suggests that Amazon is sometimes the preferred consumer starting point for product search.[101] However, other survey evidence

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[100] For example, we note that Google's largest five customers of search advertising are all specialised search providers [✂].
[101] For example, a BloomReach Survey, 'State of Amazon 2016', September 23, 2016, found that Amazon is the preferred starting point for product search. The survey sought to determine where consumers begin their product

has found that the percentage of shoppers starting their shopping journey on Amazon is significantly lower than the percentage of shoppers starting on Google.[102] Even if Amazon imposes some competitive constraint on Google in relation to retail search advertising, we note that this would only apply to advertising representing a minority of Google's revenues in search. According to IAB figures, around 19% of search revenues are derived from the retail sector. [103]

3.51 Overall, we consider that specialised search providers provide only a limited competitive constraint to Google Search on the consumer side of the platform. We discuss specialised search later in this chapter in the section on Google's expansion into related markets.

Barriers to entry and expansion in search

3.52 Having considered current sources of competitive constraint on Google Search, we now discuss barriers to entry and expansion that may prevent search engines from acting as an effective constraint.

Web-crawling and indexing

3.53 In order to return relevant search results, search engines must be able to draw on an index that provides an up-to-date picture of a very wide range of relevant webpages (or else syndicate results from a provider that does so).

3.54 Google and Microsoft are the only two search engine providers that maintain at-scale English-language web-indexes.[104] The main way that they acquire information for their index is through their automated web-crawling bots. These bots follow the links between webpages and bring data about those pages back to the search engine's servers.

3.55 Based on submissions from these parties, Google's index contains around [500-600 billion] pages and Microsoft's index contains around [100-200 billion] pages. The total number of pages in a web-index is only one measure through

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searches and found that 55% of respondents reported Amazon, while 28% reported search engines and 16% reported retailers.

[102] A 2018 study published by Publicis Sapient and Salesforce found that 28% of shoppers start their product search on marketplaces such as Amazon and eBay in 2018 (up from 22% in 2017), as compared to 48% for Google (up from 17% in 2017).

[103] IAB UK & PwC Digital Adspend Study 2019. Amazon may also compete to some extent in other sectors defined in the IAB report, such as consumer electronics.

[104] Other web-crawling search engines include Yandex, Cliqz and Mojeek. Yandex is a Russian multinational that has a more-than 40% share of search in Russia. Cliqz is a Germany-based search engine. Mojeek is a small UK-based search engine.

which indexes can be assessed; the relevance of the pages in an index is also important, as is the extent to which an index is up-to-date.

3.56 Crawling and indexing the web represents a significant cost for those search engines that do it. Microsoft estimated that its indexing investments added up to billions of dollars over time, while other estimates have suggested that Google and Bing spend hundreds of millions of dollars a year on this activity.[105]

3.57 Developing a web-index is subject to economies of scale: the costs associated with crawling and indexing do not increase proportionally with the number of users of the search engine. It is difficult for smaller search engines to invest in at-scale crawling and indexing, since their ability to repay these costs and earn a return on investment is contingent on their ability to secure the other inputs necessary to compete effectively in search. For example, they would also need to achieve scale in both search queries and search advertising, in order to offer relevant results and monetise effectively.

3.58 Some parties suggested that crawler-blocking presents a problem for web-crawling search engines. The mechanism for crawler-blocking is that webmasters place robots.txt[106] files on their websites, requesting that some or all crawlers do not access all or parts of the website.[107] We heard that website owners may have legitimate motivations for doing so. For example, motivations can include fraud prevention and avoiding the increased running costs that can result from a large number of automated bots crawling a website.

3.59 When web-crawlers encounter blocking, search engine providers can contact webmasters to seek a change of policy. However, the effort and cost of doing so means that search engines that are subject to fewer blocking instructions may have an advantage. Established search engines may benefit from cross-side network effects, between users and webmasters (people who operate and maintain websites), in that the more users a search engine has, the more

[105] For example, the European Commission quoted DuckDuckGo as follows: 'Bing and Google each spend hundreds of millions of dollars a year crawling and indexing the deep Web. It costs so much that even big companies like Yahoo and Ask are giving up general crawling and indexing. Therefore, it seems silly to compete on crawling and, besides, we do not have the money to do so'. Source: Google Search (Shopping) Commission Decision (non-confidential version), 27 June 2017, page 66.
[106] See further: description of robots.txt files.
[107] We heard that website owners may have legitimate motivations for doing so. For example, motivations can include fraud prevention and avoiding the increased running costs that can result from a large number of automated bots crawling a website.

incentive webmasters have to design their website or take actions that make their website more easily found by that search engine.[108]

3.60 Microsoft submitted that whereas, overall, its index was competitive with Google's, a small fraction of sites have robot.txt files that enable Google to crawl the site but prohibit Bing. Microsoft gave several examples of important websites that allow crawling by Google but prohibit crawling by Bing over all or part of the site. These include or have included eBay's UK website,[109] the UK Passport Service website,[110] and the London Stock Exchange website.[111] Its main concern was that user impression of Bing search quality would be harmed if several high-profile websites were not properly searchable.

3.61 Yandex (which has a more-than 40% share of search in Russia)[112] and Mojeek (a small UK-based search engine) indicated that crawler-blocking was not the main barrier to them expanding their English-language web-indices. Rather, economies of scale and other issues were more important. However, Cliqz said that it had incurred 'significant business development expenses' over the last 5 years by having to contact popular publishers to gain permission to crawl their websites.

3.62 Our own research into this issue (which is set out in Appendix I) found that the web-crawler bot of a new search engine that honoured all robots.txt would have access to approximately 0.2% fewer sites compared to Google and Bing and that Google had access to a slightly higher proportion (0.02%) of sites than Bing. We note that, even if a small number of popular sites cannot be crawled by some search engines, this could limit the ability of those search engines to return high-quality search results to certain queries.

3.63 In summary, Google and Microsoft are the only two providers that undertake English-language web-crawling and indexing at a scale that can support a competitive search engine in the UK. We consider that this reflects substantial scale economies in crawling and indexing, plus uncertainty for other search engines as to whether they can secure the other inputs (including sufficient scale in search queries and adverts) needed to earn a return on these investments. While network effects in indexing (and crawler-blocking) appear to be a less significant issue than cost-based scale economies, in combination, these factors represent a barrier to entry and expansion for

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[108] This could include prioritising limited bandwidth to allow crawlers of popular search engines but not others to crawl and index the website. It could also include prioritising submitting updated site maps and crawl requests to popular search engines but not others, which helps popular search engines have more up-to-date results.
[109] eBay.co.uk robot.txt, accessed on 13 November 2019.
[110] UK Passport Service robot.txt, accessed on 15 October 2019.
[111] London Stock Exchange robot.txt, accessed on 15 October 2019.
[112] Source: Statcounter Global Stats. Statcounter calculates shares on the basis of page referrals. For more information please see Appendix C.

English language web-crawling search engines. We discuss scale-effects in search queries below.

Scale effects in click-and-query data

3.64 Network effects occur when the value of a service to its users increases as the total number of users increases. Search engines are subject to same-side network effects, in the sense that users benefit from increased quality as the search engine acquires a greater number of users.[113] This is because search engines can use data showing how users responded to past searches in order to improve their ranking algorithms, and return more relevant results to users.

3.65 Search engines collect and store these aggregated 'click-and-query' datasets containing information about what users searched for and how they interacted with the results that they were served. They collect this data from searches undertaken on their own platforms and, where applicable, searches undertaken on the platforms of their downstream syndication partners.

3.66 Click-and-query data plays an important role in helping search engines to improve the relevance of results. It helps search engines to understand how well their product is performing and to identify and test potential improvements, such as changes to ranking and spelling correction algorithms. This data is particularly important to search engines that produce their own organic links (for example, Google and Bing), but certain click-and-query data is also collected by syndicator search engines, for example, to test how well instant answers and other features that they control are performing.

3.67 We have considered to what extent Google enjoys scale advantages associated with click-and-query data and whether these act as a barrier to expansion in search, drawing on quantitative analysis we have conducted of the scale and distribution of the click-and-query data seen by Google and Bing, as well as evidence concerning the strength of the relationship between data scale and search relevance. This is discussed in detail in Appendix I and summarised below.

Quantitative analysis of queries

3.68 Search engines informally describe the 15-20% queries that they see most frequently in a period as 'head' queries and the 25-30% queries they see least

[113] Further, the more websites optimise their website to be more easily found by a search engine, the better its quality of search results which helps it to attract and retain more users. The evidence that we have reviewed suggests that this cross-side network effect is not as significant as the same-side network effect from improvements to returning more relevant results to a user detailed in this section.

frequently as 'tail' queries.[114] While these boundaries are not precise, these concepts are important because, as discussed below, the benefits of additional data scale are higher for uncommon (ie tail) queries than for common (ie head) queries.

3.69 We conducted a detailed analysis of all of the [3-4 billion] search events seen by Google and Bing in a one-week period in the UK, in order to understand better the differences in the query data seen by these search engines. We found that the number of distinct queries seen by Google in this period was around 16 times greater than the number of distinct queries seen by Bing.[115]

3.70 We also assessed the extent of overlap in the search queries seen by these search engines within our one-week sample. Figure 3.4 shows the distribution of Google search events which were for queries also seen by Bing, and vice versa. It shows that a relatively large proportion of Bing's tail queries were also present in the Google dataset. By contrast, a small proportion of Google's tail queries were present in the Bing dataset. For example:

(a) Of the queries that Google only saw once or twice, only 1.0% were in the Bing dataset.

(b) Of the queries that Bing only saw once or twice, 31.5% were in the Google dataset.

3.71 These results are consistent with the fact that, in total, Google saw many more distinct queries than Bing in the period.[116]

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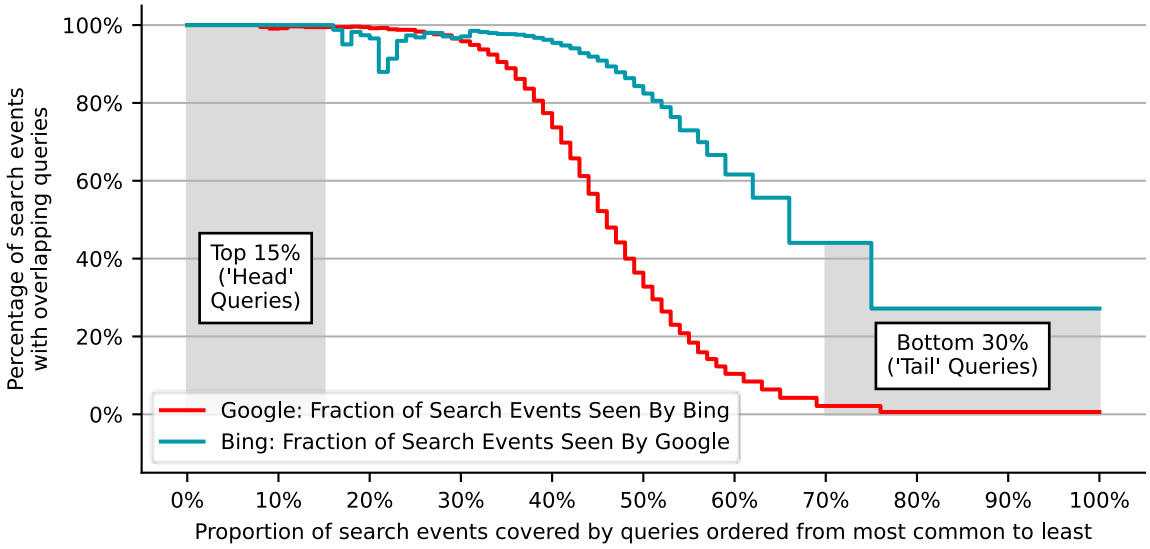
[114] Bing generally identifies the top 20% of queries that is sees as head and the bottom 30% as tail. Google identifies those queries that are seen more than five times per day and account for 15% of queries in a given period as head and those that are contained in a query set when adding together the least common queries until they amount to 25% of total traffic as tail.

[115] Each search that is undertaken is counted as a 'search event'. The text that is associated with a search event is a 'query'. The set of queries that remain once duplicates have been removed are 'distinct queries'. For example, if a dataset was made up entirely of the query 'apple', which appeared 5 times, and the query 'orange', which appeared 5 times, then the total number of search events would be 10 and the total number of distinct queries would be 2.

[116] It should be noted the data submitted to us by Google and Bing was for raw queries ie before the correction of any spelling mistakes. Had we seen queries after the correction of spelling mistakes, we expect that the number of distinct queries would have reduced significantly and that the degree of overlap between the datasets would likely have increased.

Figure 3.4: Distribution of the percentage of Google search events which were for queries seen by Bing, and vice versa, by the frequency of their search query



Source: CMA analysis of Google and Bing data
Notes: We define the head as the 15% of queries seen most often in a dataset and the tail as the 30% of queries seen least often.

3.72 Google and Microsoft also submitted some other statistics regarding the distribution of search queries that they receive:

- Google said that the proportion of its daily traffic which are queries that it has never seen before 'has remained constant at about 15% for many years'.
- Microsoft submitted that roughly 36% of the search queries run on Bing are entered 10 or fewer times in a month.

3.73 Although these statistics are not directly comparable to our analysis above, they provide a further indication that relatively uncommon queries account for a significant proportion of the queries seen by search engines.

Parties' views

3.74 There is some debate over the strength of scale effects in click-and-query data. In part, this may reflect the challenges in objectively comparing the relevance of different search engines' search results (as discussed earlier in this chapter).

3.75 Microsoft submitted that Google's greater scale enables it more easily to deliver more relevant results for users. Microsoft submitted that scale effects are important for search relevance including for 'tail queries' and 'fresh

queries'.[117] Google acknowledged that 'there may be value to having a greater amount of click and query data for "tail queries'", but submitted that 'relevance of search results is not strongly correlated with access to large query datasets'. It also said that there are often more efficient approaches to improving the results for tail queries than increasing scale of data. It said that major improvements in the relevance of search results have come from technological and analytical developments that do not depend on having more data.

Our assessment

3.76 In addition to our own analysis, we reviewed submissions from parties and academic research regarding the relationship between click-and-query data scale and relevance of search results. Overall, this evidence shows that:[118]

- **There are advantages to scale in click-and-query data** – search engines that see more queries (and more consumer responses to those queries) can engage in increased experimentation and learning about what consumers want and have greater possibilities to iterate and improve their service.

- **The marginal benefit of additional data depends on the type of query** – where a search engine sees a search query very frequently (sometimes referred to as 'head queries'), then the marginal benefit from seeing that query more often is relatively lower. Conversely the marginal benefit of seeing a query more often is higher for uncommon queries (sometimes referred to as 'tail queries').

3.77 Search technology has developed in various ways over the last decade and the role of click-and-query data scale, more general cost-based economies of scale, and other factors such as engineering expertise is likely to have varied depending on the innovation in question. However, even where new technologies are initially developed without using click-and-query data, being able to test and refine algorithm updates across a large volume of search queries may support the deployment of these technologies.

3.78 Google – as the most used search engine – sees each uncommon query more times than Bing in a given time period. We consider that, in particular,

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[117] For example, the query 'weather' is commonly seen by search engines (ie it is a 'head query'). It is also a relatively static query in the sense that the consumers of today, last week, and last year are all likely to have had a similar intent when entering this query (ie the intent to find a weather forecast). By contrast, search queries related to contemporary events, such as fashion trends and local news, may be less commonly seen (ie they may be 'tail queries') and the results that consumers are seeking may be changeable over time (ie they may be 'fresh queries').
[118] We discuss this evidence further in Appendix I.

this supports Google's ability to serve more relevant results to uncommon queries compared to Bing. Even if click-and-query data only helped Google return more relevant results for a modest proportion of search queries, this would further reinforce consumers' perceptions of Google as the highest-quality search engine and make them less inclined to consider alternative providers.

3.79 Overall, our assessment is that the greater scale of English-language queries seen by Google supports its ability to deliver more relevant search results compared to its competitors. We consider that this effect is more material for particular types of query, such as uncommon or 'tail' queries. Given the importance of search relevance to consumers, the lack of comparable scale in click-and-query data limits the ability of other search engines to compete with Google.

Syndication agreements

3.80 As noted above, downstream search engines including Yahoo Search, DuckDuckGo and Ecosia access Bing search results and adverts through negotiated syndication agreements.

3.81 Under syndication agreements, the upstream provider (Google or Bing) agrees to provide search results and adverts, and the downstream provider incorporates these into its own search engine product, under its own branding.[119] The downstream provider may supplement the syndicated results and adverts with additional information and features.

[119] From the agreements that we have seen, downstream search engines generally syndicate organic search results and search adverts from the same upstream provider. However, in some cases, downstream search engines have the possibility of buying organic search results without adverts. For example, Google's Websearch Service allows website owners to use Google search results in exchange for a search fee. Website owners then have the option of also displaying Google search adverts through its AdSense for Search and AdSense for Shopping services.

Box 3.3: The role of syndicators from a consumer perspective

Search engines that rely on syndication agreements present organic search results produced by Bing or Google. So how do these syndicators differentiate themselves? We understand that sources of differentiation include:

- Social purpose – some syndicators spend part of their search advertising revenues on social or charitable causes.
- Privacy – some syndicators say that they do not log or store information about user searches.
- Search features – when users enter search queries, syndicators and their upstream partners alike often serve additional features (such as map extracts, news clippings and weather forecasts), alongside organic links and adverts. Some syndicators serve different features compared to their upstream partner.

It is possible that syndicators could play a more distinct role in the sector in future. For example, we are not aware of any current syndication agreements that allow syndicators to re-rank the organic search results that they receive from Google or Bing. If this were to change, then syndicator search engines may be able to differentiate themselves more strongly.

3.82 In the agreements that we have seen, advertising revenues arising from clicks on search adverts on the downstream search engine are generally shared between the two parties. In addition, or instead, the downstream provider may be charged a fixed fee per 1,000 search requests and certain additional fees.

3.83 From the perspective of upstream providers, syndication agreements act as a distribution channel for their search results and adverts and help them to achieve greater scale. This may lead to direct benefits, in the form of revenue-share and other payments made by the downstream partner. In addition, these agreements help upstream providers to build greater scale in click-and-query data and in search advertising, which may in turn help the provider to improve its search relevance and search advertising monetisation.[120, 121]

[120] For example, Microsoft submitted that: 'a primary motivation for entering syndication deals is to help increase our scale to improve competitiveness over time'.
[121] We have seen some syndication agreements where the upstream provider receives only a low share of search advertising revenues. In these cases, we consider that obtaining greater scale in click-and-query data and in search advertising volume may be the main benefits that the upstream provider derives from the syndication agreement.

3.84 From the perspective of downstream providers, syndication agreements can provide them with a viable means of competing in search. As highlighted above, competitive web-crawling search engines have to overcome a series of interrelated challenges including developing sufficiently relevant search results (through at-scale crawling and indexing and at-scale access to customers and clicks) and developing an at-scale advertising platform (which also requires at-scale access to customers and clicks). By contrast, syndication strategies appear to be lower cost and lower risk.[122] Several downstream providers indicated that, in combination, the barriers to developing their own competitive results and adverts were not surmountable, leaving syndication as the only viable option.

3.85 As the only at-scale English-language web-crawling search engines, Google and Bing will naturally have a strong bargaining position in discussions with downstream search engines. As a result, they may choose not to offer agreements to some providers, or may insist on terms that limit the ability of downstream providers to compete. For example, Ecosia said that it had approached Google many times over the years, but that Google had always declined its request. In addition, none of the syndication agreements that we reviewed allows downstream providers to re-rank the search results that they received. Several downstream providers said that they would like to be able to modify search results, in order to improve their ability to differentiate.

3.86 The reliance of downstream search engines with syndication business models on Google or Bing, and the contractual terms that they face, acts as a barrier to these providers expanding and playing a more substantial role in the competitive process.

Other supply-side barriers

3.87 Some parties highlighted additional supply-side barriers to entry and expansion.

3.88 First, the development of search features is subject to cost-based economies of scale. As with web-indexing, smaller search engines seeking to develop competitive features would likely face higher unit costs than larger search engines. In some cases, smaller players appear to have responded by obtaining search features and content from third parties. For example, DuckDuckGo uses Wikipedia for answers, Yelp for businesses, and Apple for maps.

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[122] In addition, where syndication agreements are based on a revenue share, they provide downstream search engines with a degree of hedging between costs and revenues.

3.89 Secondly, Microsoft suggested that accessing at-scale location data from user devices is a critical input to providing relevant, localised results. It indicated its belief that Google has unique advantages in this area, due to the location data that it receives from the Android operating system and the location data it receives when users access Google Search or other apps like Google Maps/Waze. Bing also gets location data from searches undertaken by its users, however far fewer searches are undertaken on Bing compared to Google.

3.90 Having location data as a dimension of click-and-query data helps search engines to learn how best to factor location into their ranking algorithms. We also saw some evidence that having location data (in real time), helps search engines develop location-related search features. For example, consumer research conducted by Microsoft suggested that Google has an advantage in local restaurant queries 'from Android phone location tracking, allowing it to track popular times and prompt users to submit reviews'.

3.91 We consider that cost-based scale economies in search features and Google's greater access to location data may provide Google with an advantage in relation to location-based queries and act as an additional barrier to expansion for other providers.

Consumer access to search and default arrangements

3.92 Consumers access search engines through one or more of the 'access points' on their mobile and desktop devices, such as web browsers, search widgets and voice-activated assistants.[123]

3.93 Mobile and desktop devices typically come with a set of access points pre-installed, each of which is associated with a default search engine. As discussed below, access point owners (such as device manufacturers) consider search engine quality and the financial compensation offered by the search engine when deciding which search engine to set as default.

3.94 Browsers and devices typically allow consumers to modify the search engine that is associated with their device or browser, by entering a settings menu and choosing from a list of secondary options. Consumers may also bypass or supplement search defaults, for example by downloading additional web-browsers (that use a different default search engine), or by navigating to an

[123] Browsers and devices generally allow consumers to change the initial default search engine through a settings menu. Within these settings, consumers may be presented with several alternative options. Unless otherwise stated, we use the term 'default' to refer to the initial or primary default on a browser or device and the term 'secondary option' to describe the set of alternative search engines that are offered to consumers within the settings menu of a device or browser.

alternative search engine within a web-browser. However, the defaults that feature on devices have a strong influence on the search engines that consumers use and, in turn, act as a barrier to expansion for search engines that do not hold these positions.

3.95 Below, we briefly review the default positions held by search engines, the relationship between defaults and consumer search behaviour, and the extent to which search engines other than Google can compete effectively for search defaults.

3.96 As part of our work on search defaults, we requested and analysed data from Google and Microsoft regarding all of their search default positions and reviewed a sample of legal agreements concerning default positions (including those between Google and Apple, Google and Samsung, and Microsoft and Windows PC manufacturers). We also considered submissions from a range of parties. We assess search defaults in more detail in Appendix H.

Default positions held by search engines

3.97 Google holds very extensive default positions in relation to mobile devices (including smartphones and tablet devices).[124] It has had a default agreement[125] with Apple for over 15 years.[126] It also has default agreements with many of the largest Android mobile phone manufacturers and mobile phone networks. In combination, these agreements mean that Google Search is the primary default on the vast majority of mobile devices in the UK.

3.98 Some of these agreements entitle the device manufacturer to earn a fee or search advertising revenue share, when the device manufacturer opts to pre-install Google Chrome and Google Search. Other agreements also entitle the device manufacturer to earn a share of search advertising revenues generated through its own browser, if Google Search is set as the default search engine (for example, this applies to Google's agreements with Apple and Samsung, in relation to the UK).

3.99 Bing is the initial default on the majority of desktop PCs in the UK. Most desktop PCs in the UK come with Microsoft Windows. Microsoft has agreements with these manufacturers for the Microsoft Edge web-browser to be set as the default and for Bing to be set as the default search engine.

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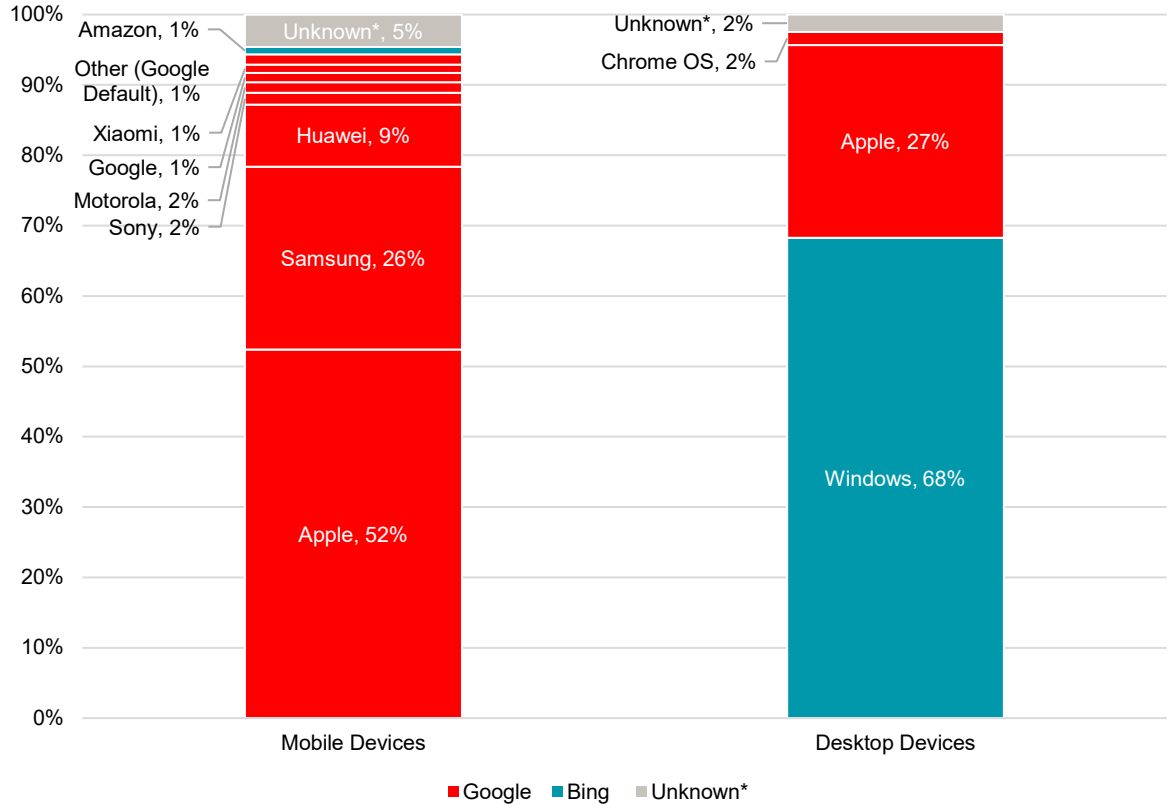
[124] Google also holds default positions on smart speakers.
[125] We use the term 'default agreement' to describe commercial agreements that relate to the setting of particular search engines as the default at search access points.
[126] Google has had a default search distribution agreement with Apple [✂].

Google Search is the initial default in the UK on desktop PCs made by Apple.[127]

3.100 The default positions held by Google and Bing on mobile and desktop devices are summarised in Figure 3.5 below.

Figure 3.5: Search default positions on mobile and desktop devices, based on device usage, February 2020



Source: CMA analysis of Statcounter Global Stats data.
Notes: The data for mobile devices represents shares amongst mobile device manufacturers (including tablet devices), calculated on the basis of 'page referrals'. The data for desktop devices represents shares amongst desktop operating systems (including laptop devices). 'Unknown' consists of all device manufacturers and operating systems that accounted for a share of less than 1% and for which we were unable to identify the default search engine. Google or Bing may hold additional default positions on these devices and browsers. See Appendix H for further details.

Impact of defaults on user behaviour

3.101 The evidence that we have reviewed indicates that default positions have a significant impact on consumer behaviour in search.

3.102 First, there is a positive correlation between default positions and shares of supply in search. As shown in Figure 3.5, Google Search holds the initial

[127] Google Search is the default search service in the Safari browser, which is pre-installed on Apple devices.

default position across nearly all of the mobile device sector,[128] and less than a third of the desktop PC sector. While Google is the largest search engine in the UK across mobile and desktop devices, its share of search is relatively higher in mobile, where it occupies more extensive default positions, than in desktop. A similar correlation can be observed for Bing.

- Google Search has default agreements covering much more of the mobile device sector (at least 94%) than the desktop PC sector (29%). In turn, Google has a relatively higher share of supply in mobile search (97%) than it does in desktop search (84%).

- Bing is the initial default on around 68% of desktop PCs and almost none of the mobile device sector. Bing's share of supply is much higher in desktop search (13%) than in mobile search (less than 2%).[129]

3.103 The results above show that Google's default positions in mobile appear to have a stronger impact than Bing's default positions in desktop. We consider that in part this may reflect Google's status as market leader, with consumers generally perceiving it to offer higher quality results than Bing. However, mobile defaults are also likely to be more powerful than desktop defaults, for example because consumers are less likely to take steps to change or bypass defaults when faced with a smaller screen. Evidence set out in Appendix H further indicates that, holding the identity of the search engine constant, defaults are generally more powerful on mobile devices than on desktop devices.

3.104 Several other case studies indicate a positive relationship between default positions held and search queries and/or search advertising revenues:

(a) For a period in the 2010s, a proportion of mobile phones used the Windows Mobile operating system and came with Bing as the default search engine. Google received a much lower share of queries (and Bing received a much higher share of queries) on Windows mobile devices than on Android mobile devices.[130]

(b) In 2014, Mozilla switched the default search provider in its browser from Google to Yahoo! in the United States. Google internal documents

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[128] Except for the default positions held by Bing in relation to certain tablets, we are not aware of any mobile devices that have a non-Google default in the UK as of February 2020. We weren't able to confirm which search engine holds the default position on certain mobile devices with a less than 1% share of the mobile device sector by usage. Therefore the 'unknown' category may contain further devices where Google Search is the default.
[129] The shares given in this paragraph relating to search engines' default positions are based on Statcounter's Global Stats for browsers. Statcounter calculates mobile device vendors' and desktop operating systems' shares of supply on the basis of page referrals. The search engine shares related in this paragraph are based upon CMA analysis of search engine data. See more detail on our market outcomes analysis in Appendix C.
[130] Case AT.40099, Google Android, 18/07/2018.

indicate that [✂] of Google's US Firefox default traffic and [✂] of Google's US Firefox default revenue was lost as a result of this switch.

(c) Google's modelling from [the last five years] indicated that, if Apple were to replace Google with another provider as the default search engine in 2017, Google would experience a drop in search advertising revenue on Apple devices of [✂] per year.

(d) Microsoft modelling [within the last five years] indicated that, if Bing were the search default on iOS devices, it believed it could grow its share of searches on Apple iPhones from [✂] to [✂] in the United States.

3.105 Secondly, the high level of compensation, also known as 'traffic acquisition costs', paid by Google in particular demonstrates that it values default positions highly.

3.106 In 2019, Google paid around £1.2 billion for default positions in the UK alone. This figure was more than 17% of Google's total annual search revenues in the UK, as reported in Chapter 5, and all of these payments were in return for Google being set as the primary default. The substantial majority of the total default payments made by Google were paid to Apple ([✂]), with a smaller proportion going to Android mobile phone manufacturers ([✂]) or other partners ([✂]). [131]

3.107 Microsoft made approximately [£50-100 million] in payments for default positions in the UK in 2019. These include some payments for primary default placements (including on Windows desktop PCs) and some payments to be a secondary option, within a settings menu. Microsoft, DuckDuckGo and Verizon Media pay for Bing, DuckDuckGo and Yahoo Search respectively to appear as secondary options within the Safari browser on Apple devices.[132] These providers pay a substantial percentage of search advertising revenue to be a secondary option on Apple devices. However, these payments are far lower in pound terms than the payments made by Google for the primary default position. This is consistent with primary default positions generating more searches and more search advertising revenue, other things equal, than secondary placements within a settings menu.

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[131] The payments quoted are Google's best estimates. Google makes these payments on a revenue share basis. This means that, when consumers undertake Google searches through specified search entry points, a share of any search advertising revenues that are generated are payable to the relevant partner.

[132] These payments are made on a revenue share basis. This means that, when consumers select the specified search engine as their default in Safari and then make searches, a share of any search advertising revenues that are generated are payable to Apple.

3.108 Google told us that, in tenders for defaults, it determines the revenue share it wishes to offer based on the value it believes it can generate from the opportunity on offer. [✂]

3.109 We also reviewed internal documents submitted by Google which suggest that at least part of the rationale for entering into default agreements is to make Google's search advertising revenues more secure. For example, an internal document referred to search advertising revenues as being 'exposed' where these came from mobile devices for which Google did not have a default agreement in place.

3.110 Apple submitted that search engines do not pay Apple for the right to be set as the primary default search engine on its devices. [✂]. However, as set out in Appendix H, our assessment is that Google does pay to be the primary default on Apple devices. The agreement between Google and Apple states that Google will be the default web search provider and the same agreement states that Google will pay Apple a specified share of search advertising revenues. We also note that Google does not pay compensation to any partners that set Google Search as a secondary option. This further suggests that Google's payment to Apple is in return for Apple setting Google as the primary default.

3.111 Overall, we consider that the high levels of compensation paid by search engines under default agreements further indicates that search defaults influence consumer search behaviour and, in turn, search advertising revenues. In particular, it is striking that the largest search engine, with a strong brand and high and sustained shares of supply, makes such significant payments for default positions.

3.112 The finding that defaults are impactful in search is consistent with research from other settings; the power of default settings is an area of behavioural economics that has been well researched and is well-evidenced across a wide range of settings, such as pension savings, medical insurance and food consumption.[133] There is a general recognition that the presence of status quo bias means that individuals will often stick with the default choices they are presented with.

3.113 We consider that the influence of defaults in general search is likely to be underpinned by several factors. First, consumers may not understand that they can change the default search engine on a device or in a browser.

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[133] See for example: Thaler, R.H., and Sunstein, C. (2008) Nudge: Improving Decisions About Health, Wealth and Happiness, Yale University Press, New Haven, CT. The role of defaults in data collection in general search and social media is discussed in this report in Chapter 4 and Appendix L.

Secondly, they may be put off by complexity or other hassle factors. For example, Ecosia told us that Google displays a warning notice when consumers seek to change the default search engine in Chrome or on Android devices and that this discourages consumers from following through with a switch. DuckDuckGo said that even when the consumer is convinced to take that action, it can be only a temporary change – the consumer's device and browser can roll back the search engine selection (eg with software updates).Thirdly, consumers may perceive little benefit to changing defaults, especially if the default search engine is the market leader (Google) and the alternatives are not well understood.

3.114 We received some submissions arguing that search defaults have a positive impact on the consumer experience. For example, Google said that users may value 'having Google's high quality search service available to answer queries as a default straight 'out of the box'.

3.115 An alternative approach to consumers being presented with a default search engine on their browser or device is for consumers to face a choice screen, prompting them to consider different options and to select an additional or alternative search engine of their choosing. One example of a choice screen is outlined in Box 3.4 below.

Box 3.4: Android choice screens

Following the European Commission's Android decision in July 2018, Google announced that users would be provided with a choice screen of general search providers on all new Android phones and tablets in the European Economic Area, including the UK, where the Google Search app is pre-installed.[134]

From 1 March 2020 until 30 June 2020, a choice screen has appeared in the UK during device set up, offering users with a choice of Bing, DuckDuckGo and info.com, in addition to Google as the default search engine on the Chrome web browser.[135] Future auction cycles determining which search engines will be made available to users will occur on a quarterly basis.

The effect of a user selecting a search provider from the choice screen will be to (i) set the search provider in a home screen search box to the selected provider, (ii) set the default search provider in Chrome (if installed) to the selected provider, and (iii) install the search app of the selected provider (if not already installed).

Stakeholders' views regarding the likely effectiveness of this choice screen at improving competition are described in Appendix V.

[134] Android (2019), About the choice screen, accessed on 26 November 2019.
[135] Android (2020), Choice Screen winners, updated 1 June 2020.

3.116 While choice screens entail a small amount of additional effort for a consumer compared to simply being presented with a default, we consider that any time costs for consumers would be small and the potential competition benefits substantial. We discuss choice screens further in Appendix V on search remedies.

Ability of search engines to compete for default positions

3.117 As above, Google holds the most significant default positions in English-language search, Microsoft holds some default positions, and other providers do not hold significant positions. Several search engines told us that they were unable to compete with Google for default positions due to the scale of payments required.

3.118 The submissions that we received suggested that access point owners decide which search engine to set as default based on a combination of search engine quality and the level of compensation that a search engine can provide. For example:

- Google said that providers such as Apple, Samsung, Opera, and Mozilla all select search defaults based on competition between search providers, taking account of the quality of the service they offer and the amount of revenue they are willing to share.

- Microsoft suggested that Google has been able to secure default placement on Android and Apple devices and that this was likely due to its ability to share large amounts of search revenues resulting from its market position in search.

- Apple told us that it selected Google as the default search engine on its products because that is what most consumers want.

3.119 We consider that the default position on Apple devices is the most significant in search in the UK, as indicated by the scale of devices covered and the scale of payments made to Apple. We requested detailed evidence from Apple, Google and Microsoft (which held discussions with Apple in [the last five years] regarding the possibility of Bing becoming the default on Apple devices), in order to understand how competition for this position has operated. We found that Apple's negotiations with Google and Microsoft have been complex and multi-faceted, but that perceived search engine quality and revenue offered to Apple were important components of these discussions.

3.120 In relation to revenue, modelling undertaken by Microsoft indicated that, if Bing were the default search on iOS devices, the number of queries on Apple devices going to Bing would substantially increase and Bing's monetisation would improve. The modelling indicated that Bing would not generate as many queries or as much search advertising revenue through the Apple default position as Google could, if it continued to hold the default position. Although Microsoft has been unsuccessful in winning the primary default position on Apple devices, it still pays Apple a revenue share. This means that, if consumers enter the settings menu, switch their search engine from Google to Bing and undertake searches on Bing, a share of the resulting search advertising revenue is payable to Apple.

3.121 Google's default agreements with Android phone manufacturers are also significant, in terms of the mobile devices covered and payments made to manufacturers. Samsung said that it pre-installed Google Search and Chrome and set Google as the default search engine on Samsung's own web browser considering user experience/preference as well as financial benefits, in the form of the advertising revenue share that it has agreed with Google. Microsoft said that it believes no competitor, including Bing, can likely match the combination of upfront incentive and revenue share that it understands that Google offers Android manufacturers. It said that despite the European Commission's Android decision in July 2018, it has still not been able to negotiate pre-installation of Bing search as the default on Android devices and no new deals have been made possible by that decision.

3.122 As set out above, Microsoft holds default positions with desktop PC manufacturers. Payments made under these agreements are smaller than those made by Google to Apple and to large Android manufacturers such as Samsung. Microsoft suggested that it can compete for these PC defaults for two reasons. First, it said it has strong business relationships with Windows Original Equipment Manufacturers (OEMs) and [✂]. Secondly, it said it believes that Google may be less interested in PC distribution because it has more attractive distribution options for Google Search and Chrome on PCs, for example, by prompting visitors to Google.com and YouTube to download Chrome.

3.123 We consider that search engine quality and financial compensation are the key components of how access point owners select defaults and that search engines other than Google face barriers to competing on both of these.

3.124 Google has a strong brand and is generally perceived to be the highest quality search engine. This suggests that, in practice, other search engines are likely to have to offer at least as much financial compensation as Google in order to win a default contract. However, given Google's relative popularity with users,

it can generate more queries through a given default position than other search engines can. For this reason, and because Google also has superior monetisation per query due to its greater scale,[136] other search engines are unlikely to be able to offer as much financial compensation as Google can.

3.125 Further, whereas Google does not pay to be the secondary option on any devices, search engines such as Microsoft have agreed to do so (for example, Microsoft's agreement with Apple). We consider that these payments for secondary placement are indicative of the relatively weaker bargaining position of search engines other than Google, and may also mean that search engines such as Bing face an even higher bar when it comes to competing for the primary default position, since, unlike Google, they will share revenues with Apple whether or not they are the primary default.

3.126 In addition, there is a positive feedback loop between Google's position as the largest and most revenue-generating search engine and its ability to acquire extensive default positions that further reinforce this position. Google's scale in search queries and search advertising supports its ability to offer higher search quality and generate higher revenues compared to its competitors[137], supporting its ability to secure primary default positions. The default positions held by Google in turn make it more difficult for alternative search engines to access users and advertisers and improve their search quality and monetisation rates.

3.127 We recognise that payments for defaults can lead to benefits in markets other than search. For example, default payments from search engines are a source of income for some web browsers and device manufacturers.

3.128 Where default payments take the form of revenue share payments, we would expect recipients to pass these on to consumers to some extent, where they are operating in competitive markets. However, any consumer benefits that default payments create in browser and device markets are likely to be outweighed by the costs that default payments create for consumers due to weaker competition in search. Particularly on mobile devices, the current scale and breadth of payments by Google harms competition between search engines. This reduced competition can lead to increased prices for goods and services across the economy that use search advertising (as described in Chapter 5), as well as weaker dynamic competition and innovation on the user side. We also expect that Google would only agree to make substantial

[136] This is the assumption adopted by Microsoft in modelling relating to the Apple default position. See further Appendix H.
[137] As set out in Chapter 5, CMA analysis suggests that Google is able to achieve significantly higher search advertising prices than Bing, its main competitor, on a like-for-like basis.

payments where the benefit to Google from doing so (for example in terms of protecting its profits in search) exceeds the level of the payment. Therefore, we would expect these default payments to have a negative impact on welfare overall. We discuss remedies relating to search defaults further in Chapter 8 and Appendix V.

Google's expansion into related markets

3.129 As described in Appendix E, Google's search product forms part of a wider ecosystem of user-facing services. For example, Google has developed several specialised search products over the last two decades – such as Google Flights and Google Hotel Finder, a flight comparison and hotel comparison websites, respectively, both launched in 2011. In parallel Google has introduced a range of richer results on its search engine result pages (SERPs), such as 'One-Boxes' that induce the users to 'find their answers directly on Google' instead of being directed to a third-party website. As part of this, Google has introduced 'One-Boxes' that link to its own specialised search websites. Notable examples include shopping, news, local search, travel and jobs.

3.130 Google's market power in general search, and the importance of general search to related markets for complementary services, entail that Google may have the ability to exclude rivals in related markets. Google may also have the incentive to do so, for example in order to protect its position in general search, by reducing the threat of entry into general search from related markets. We set out below several concerns related to exclusionary behaviour that have been raised by third parties. These relate to specialised search and to smart speakers.

Concerns raised by competitors in related markets

3.131 Concerns were expressed to us by several specialised search providers that Google can engage in a range of practices that can make it more difficult for them to compete. These are set out in more detail in Appendix P.

3.132 First, specialised search providers expressed concerns about Google self-preferencing its Google Flights, Google Hotel Ads, and Google Local Search One-Boxes. They submitted that Google places these boxes prominently at the top of the SERP where the user is more inclined to click. They argued that the prominence of 'One-Boxes' has the effect of diverting traffic away from specialised search providers, making it more difficult for them to compete. For example, [a specialised search provider] estimated that, for certain queries, being in position two rather than one (due to the Google Flights One Box

taking up the first position) reduced its click through rate (CTR) by 46.5%. Although some providers can integrate with Google specialised search products, they are 'disintermediated' as traffic is diverted from their websites.

3.133 Second, specialised search providers expressed concerns about Google exploiting the data it collects from its ecosystem to get a competitive advantage on specialised search rivals. They submitted that Google can use the data it collects about their business (eg through Google Ads, Google Flights) and their customers (eg Gmail), to improve and promote its own specialised search products. They were also concerned that Google may scrape data from their websites (eg consumer reviews) and feed this data into its own products, as it used to do in local search.

3.134 Third, specialised search providers expressed concerns about Google updating its organic search algorithms to demote traffic to specialised search rivals, for example by pushing their organic links down the search results page. Some suggested that some of Google's organic algorithms (the so-called Panda algorithms) are particularly penalising specialised search websites because of several factors including these websites' nature as aggregators and the fact that they display on-site duplicate content (ie, duplicate or similar content across specialised search websites). The demotion of traffic to specialised search providers could decrease their revenues by reducing the revenues they get from ads placed on their websites (eg display and classified advertising) and so could stifle their incentives to invest in innovation. Google's practices could also stifle potential entry in specialised search as new entrants would find it difficult to compete on the merit with Google specialised products.

3.135 Separately, in relation to voice search using smart speakers, Sonos has raised a concern about contractual terms that restrict the concurrent use of Google Assistant and Amazon's Alexa on Sonos smart speakers.[138] Google Assistant partly relies on results from Google's search engine. Sonos argues that this may be a way for Google to leverage its market power in search into the adjacent markets such as smart speaker devices and voice assistant software on smart speakers.

Google's responses to the concerns raised

3.136 Google submitted that the introduction of 'richer' search results on the SERP such as the Google One-Boxes are innovations that enable Google to show

[138] Sonos smart speakers have both of these assistants built-in. However Sonos submitted that Google prevents usage of the wake words for each assistant concurrently: only one assistant can be active at a given time.

higher quality results and that serve to improve its general search service. Google submitted that [✂].

3.137 Google said that concerns that it could foreclose voice recognition services that compete with Google Assistant are unfounded. It submitted that Sonos users can choose whether to use Google Assistant or Amazon Alexa at device setup and can easily switch at any time after that. It suggested that having multiple wake-words for different assistants on a device would lead to more false activations. It also noted that users have many other access points (aside from Sonos speakers) for voice recognition services.

Google's ability and incentive to engage in exclusionary behaviour

3.138 The European Commission has looked at some of the practices above that relate to specialised search previously in the context of its Google Shopping investigation and found them to be anticompetitive. In 2017 the European Commission imposed a €2.4 billion fine on Google for abusing its dominant position in general search by giving preferential treatment to Google Shopping – Google's own comparison shopping service (CSS) – on the SERP. The Commission found that Google's conduct was abusive because it diverted traffic away from competing CSS to Google's own comparison shopping service by placing the Google Shopping One Box (which included only Google's results) prominently at the top of the SERP.

3.139 We have not sought to conclude on the merits of the specific concerns set out above as part of this study. However, these are examples of potentially concerning practices that could be investigated under the new regulatory regime that we are advocating, through the enforceable code of conduct.[139] Appendix U sets out our assessment of potential practices to be tackled under a code.

3.140 We recognise that, where Google enters markets related to search, this can have material benefits for consumers. However, we are concerned that Google has the ability and incentive to engage in exclusionary practices and that these could lead to harm to competition in markets related to general search, such as specialised search, voice assistants and devices that use these services.

3.141 Google's ability to engage in these practices ultimately stems from the market power of its search engine. All of the specialised search providers that we spoke to told us that they are heavily reliant on Google as a key source of

[139] Furman Review (2019), Unlocking digital competition

user traffic and do not have alternatives. This is supported by traffic data from specialised search providers which shows that Google is an important source of traffic for these providers, with most providers relying on Google for at least 40% of their traffic, both on desktop and mobile/tablet.

3.142 Google's incentive to foreclose competition may arise in part from a desire to limit the competition its general search engine faces over the longer term. In addition, Google may have the incentive to gain additional profits from the most lucrative specialised search sectors by offering these products itself.

3.143 Harm to specialised search providers, rival voice assistants or device manufacturers through any of these practices is likely to lead to harm to consumers. Consumers are likely to be worse off in that they see a reduction in choice and product innovation, and potentially an increase in prices in the future. In addition, the competitive constraint imposed on Google's general search may be reduced.

3.144 We note that there may be some benefits from technical integration of general search with specialised search – for example that users can locate and access information on the SERP more easily. These, and other technical issues and justifications, would need to be taken into account and weighed against any anticompetitive effects in any investigation, either under the code of conduct proposed in Chapter 7, or using existing ex post enforcement powers.

Findings in search

3.145 Search engines play an important role for consumers in the modern world, helping them to navigate the web, and quickly and easily find useful and interesting information. Google Search in particular is well-known for providing a high-quality search product and for introducing a series of search-related innovations, from PageRank to Google Maps.

3.146 The evidence shows that Google has significant and enduring market power in general search. Google has had very high and stable shares of supply in search in the UK for at least the last ten years. Mobile searches are growing faster than desktop searches – and Google's share is even higher in mobile search (97%) than in desktop search (84%). Innovation played an important role in helping Google to build its customer base in the early years of web-based search: it grew by offering a high-quality product that consumers valued. However, general search is now subject to significant barriers to entry and expansion, which together limit the current and potential competitive threat faced by Google.

3.147 In order to compete effectively, search engines must have the means to access consumer queries at scale and be able to deliver relevant results to a wide range of queries. The key inputs to achieving relevant results include click-and-query data and an extensive and up-to-date web-index.

3.148 Web-index development is subject to cost-based economies of scale; search engines with a web-crawling business model need to make substantial investments against a backdrop of uncertain returns. Click-and-query data is also subject to scale effects. Google's greater scale supports its ability to iterate and improve quicker than other search engines and maintain a lead on search relevance. In contrast, rival search engines receive fewer queries and clicks, making it more challenging for them to improve the relevance of their search results.

3.149 Google's extensive default positions act as a significant barrier to expansion for rival search engines, by limiting their ability to access consumers, build their scale and grow into stronger competitors over time. Important default positions, including those on Apple and Android mobile devices, are awarded by device manufacturers on the basis of perceived service quality and the financial compensation that the search engine can offer. Having been by far the largest search engine for more than a decade, Google benefits from higher perceived quality among many consumers, can generate more search advertising revenues from a given default, and is able to pay more for default positions than other search engines. Given the influence that defaults have on consumer behaviour, Google's default positions help it to maintain high query volumes and make it more difficult for other search engines to attract more queries and iteratively improve their search quality and search monetisation.

3.150 Therefore, existing rivals to Google and prospective entrants face a series of self-reinforcing barriers to expansion, limiting the competitive threat faced by Google. Google's scale helps it to further improve the quality of its results and to pay for extensive default positions. In contrast, rivals lack the scale that would enable them to improve their quality and monetisation, which in turn restricts their ability to access consumers, build their scale and compete more effectively.

3.151 Weak competition in general search may negatively affect consumers in several ways. First, Google faces weaker incentives to keep improving Google Search in the interests of consumers, compared to a scenario where it faced a stronger competitive threat. For example, Google may choose to invest less of its profits in innovating to further improve search relevance compared to a more competitive scenario. Second, Google can to collect more consumer data (or offer consumers worse terms in return for their data), compared to a scenario where it faced a stronger competitive threat from

other search engines. We discuss consumer control over data in Chapter 4. Third, consumers are harmed indirectly through higher prices for other goods and services, if Google is able to use its market power over consumers to raise search advertising prices above competitive levels. We discuss competition in digital advertising in Chapter 5.

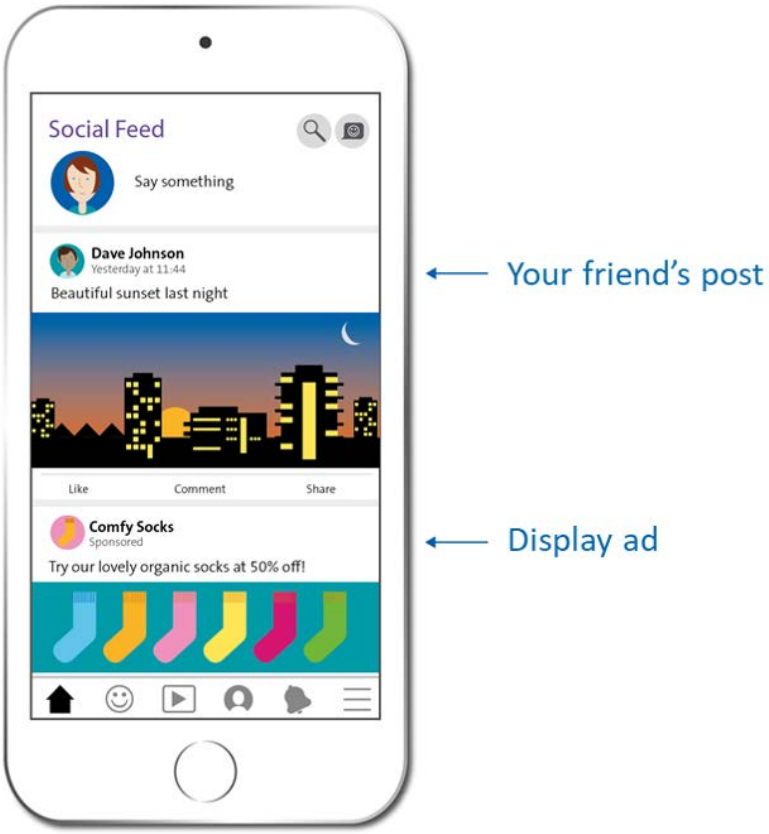
3.152 We are concerned that Google also has the ability and incentive to leverage its market power from general search into related markets. Combining Google's general search service with complementary Google services may provide some benefits for consumers, for example by allowing them to experience a range of Google services in an integrated package. However, if Google does so in a way that excludes efficient rivals from competing with their own complementary services, then over time consumers may be left with worse services, both in related markets and in general search.

Competition in social media

3.153 As set out in Chapter 2, we use the term 'social media' in a broad sense to describe a range of online platforms that allow consumers to interact with each other and with engaging content.

3.154 These platforms tend to have some common features such as: consumer accounts or profiles, which allow consumers to create an online persona; a 'feed' or homepage where consumers can engage with content including posts, photos and videos; and messaging features allowing consumers to communicate directly with others. Most social media platforms also feature adverts, as shown below in Figure 3.6.

Figure 3.6: Illustration of a social media homepage



Source: CMA.

3.155 Platforms that can be considered to be within a broad definition of social media include Facebook; YouTube; Snapchat; WhatsApp (part of the Facebook group); Instagram (part of the Facebook group); TikTok; Twitter; LinkedIn; Pinterest; Reddit; and Tumblr.[140] We found that, while these platforms have some common functionality, they are differentiated in terms of the particular customer needs that they attend to and the design of the features that they offer.

3.156 As Facebook is the largest supplier of display advertising in the UK, we have assessed the extent of competitive constraint that it faces on the user side, both from the platforms above and from other sources.[141]

3.157 We first set out below how social media platforms compete, before presenting shares of supply and outlining competitive constraints faced by Facebook. We

[140] As well as these 11 platforms there are a range of other, smaller platforms, that conform to this definition of social media. For example, platforms such as House Party could be considered to meet a broad definition of social media but account for less than 1% of time spent on the Facebook platform.
[141] Our focus is on Facebook's main social networking platform, which accounts for around [35-40]% of display advertising in the UK. However we also consider the role of the wider Facebook 'ecosystem', including WhatsApp and Instagram.

then discuss potential barriers to entry and expansion. Finally, we present our findings on the extent to which Facebook has market power on the user-side.

Parameters of competition

3.158 The social media platforms that we considered compete for consumers' attention through a combination of the parameters below:

- **Size and type of user network** – generally, social media platforms with a larger network of users are more likely to be attractive to consumers as there is a greater chance that other users they want to interact with are on the platform.[142] Advertisers are also more likely to want to advertise on platforms with more users as this gives them access to a wider audience. Platforms may also choose to differentiate by focusing on attracting particular types or groups of consumers.

- **Content** – social media platforms compete to offer consumers interesting content to keep them engaged. The type of content displayed by platforms can vary. Social media platforms allow consumers to share their own content, known as 'user generated content'. Some content may be personal to consumers, such as photos of themselves or their friends. Other content may be related to consumers' interests, such as posts on sports or current events. Many platforms also feature professional content produced by third parties. As discussed in the section on 'cross-side network effects' below, platforms may be able to show a greater range of content by interoperating with other platforms.

- **Innovative features** – offering innovative new ways to communicate or interact with content may attract consumer attention. Platforms therefore compete to offer new features that will attract consumers. Platforms may also innovate by improving on existing features.

- **Ad load and quality of advertising** – social media platforms need to monetise to be successful in the long-term. Typically, they do this by displaying adverts. However, greater levels of advertising are generally disliked by consumers, so platforms typically self-enforce rules on the quantity and quality of advertising that may be displayed. Platforms may also provide consumers with controls over the advertising they are shown.

[142] We discuss this further below as part of our assessment of network effects.

- **Privacy** – consumers may wish to control the extent to which their activity on platforms can be viewed by other users and external parties. Platforms may therefore compete to offer better privacy controls to consumers.[143]

- **Platform 'governance'** – as social media platforms allow consumers to share content, it is possible that negative or harmful content may be uploaded and displayed. Platforms must therefore moderate content posted to prevent negative content from degrading consumers' experience.[144]

- **Price** – most social media platforms offer services to consumers at zero monetary cost. However, some services can also be provided on a subscription basis.[145]

3.159 As shown by Table 3.1 below, in broad terms, social media platforms offer similar types of functionality, enabling consumers to communicate with other users and experience engaging content.

Table 3.1: Social media platforms' functionalities

	Profile/ Account	*Curated/ Personalised Feed*	*Friends/ Contacts/ Connections*	*Followers/ Subscribers*	*Photo Sharing*	*Video Sharing*	*Comments*	*Messaging*
YouTube	✓	Recommended	✓	✓	✓	✓	✓	✓
Facebook	✓	News Feed	✓	✓	✓	✓	✓	✓
Snapchat	✓	Discover	✓	✓	✓	✓		✓
WhatsApp	✓		✓		✓	✓		✓
Instagram	✓	Explore	✓	✓	✓	✓	✓	✓
Twitter	✓	Timeline		✓	✓	✓	Replies	✓
LinkedIn	✓	✓	✓	✓	✓	✓	✓	✓
TikTok	✓	For You	✓	✓		✓	✓	✓
Pinterest	✓	✓		✓	✓	✓*	✓	✓
Reddit	✓	Front Page	✓	✓	✓	✓	✓	✓
Tumblr	✓	Dashboard		✓	✓	✓	✓	✓

Source: Adapted from Ofcom (2019), Online Nation.
* Available on iOS only

3.160 However, the closeness of competition between different platforms depends on the degree to which consumers consider them substitutes, rather than the

[143] Facebook and LinkedIn submitted that privacy is increasingly important to users. Facebook submitted that it is seeking to build a 'privacy-focussed' social platform, revolving around seven principles: private interactions; encryption; reducing permanence; safety; interoperability; secure data storage. LinkedIn noted that users' ability to protect their privacy and alter settings is increasingly important.
[144] Google submitted that recent innovation on YouTube has focused on identifying and removing negative content, and that it will prioritise responsibility to its users ie trust and safety. TikTok submitted that 'ensuring a safe and positive in-app environment' is a top priority. Verizon Media submitted in relation to Tumblr that content moderation tech and staff is a required input. Tumblr was acquired by Automattic Inc. in August 2019.
[145] Eg LinkedIn, or Friends Reunited.

extent to which they share common functionalities. Despite sharing basic functionalities, we found that these platforms are differentiated in important ways, including in the user needs they meet.[146]

3.161 We found that an important aspect of differentiation is the extent to which platforms emphasise communication between users, versus the consumption of engaging content. Social media platforms also differentiate based on the type of communication and content consumption that they facilitate:

- Platforms encouraging communication may facilitate interactions amongst different networks of value to consumers. For example: a consumer's close friends and family; wider communities that a consumer belongs to, such as those living in their local area or their school/university cohort; or interest-based groups rather than groups with pre-existing social ties.

- Platforms oriented more strongly towards content may similarly be used by consumers for content relating to their personal lives, content relating to their interests, or some combination of the two. Consumers may access these platforms to create and share content and/or to passively consume it.

3.162 For example, LinkedIn and Snapchat are two platforms that focus on different types of user need. LinkedIn emphasises interactions among professional networks, whereas Snapchat emphasises 'authentic' networking with close friends.

3.163 Facebook's portfolio of social media platforms (Facebook and Messenger; Instagram; and WhatsApp) caters to a wide range of user needs across the communication-content spectrum.[147] The Facebook platform in particular stands out as a platform that can serve a broad range of consumer needs, in contrast to other platforms which are more specialised in purpose. We discuss how different social media platforms are differentiated in more detail in the section on 'Competition between Facebook and other social media platforms' below.

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[146] In response to our interim report, Facebook submitted that assessing market definition by considering the similarity in platforms' functional characteristics is incorrect and contradictory to the CMA's merger guidelines. We note that this is not the approach we have adopted, with our assessment of substitutability instead relying upon third-party survey evidence and platforms' internal documents, including their consumer research.
[147] For example, Facebook-owned Instagram is primarily used by consumers for viewing and sharing visual content whilst Facebook-owned WhatsApp is generally used for private communication between (groups of) consumers.

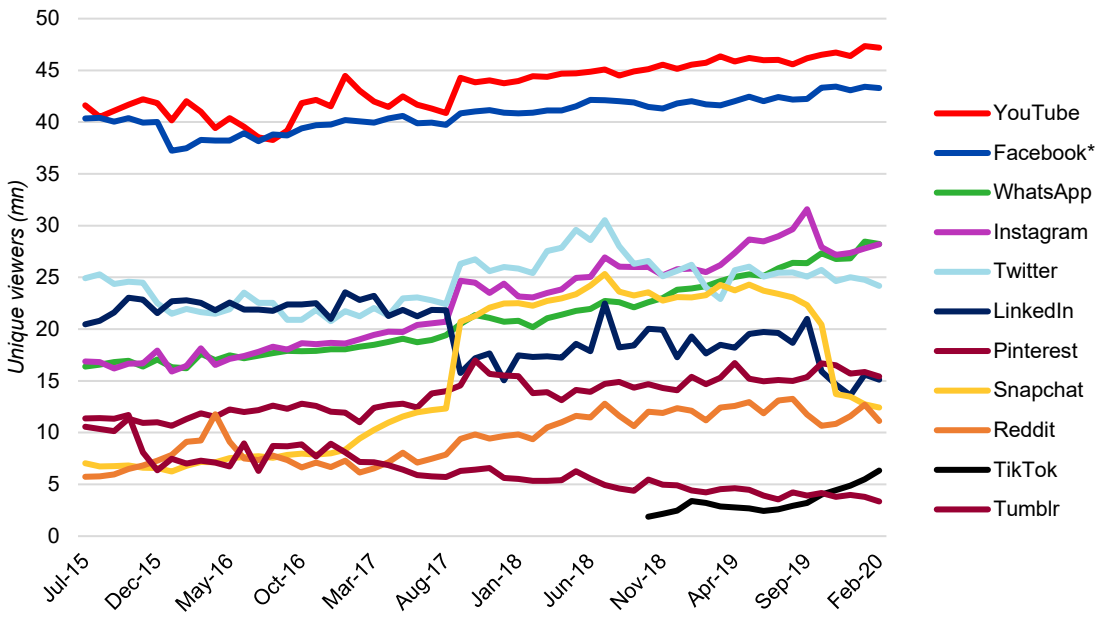
3.164 We consider that social media platforms that are generally accessed for similar reasons are likely to be closer substitutes from the perspective of consumers and, in turn, closer competitors.

Shares of supply

3.165 Facebook and YouTube (owned by Google) are by far the largest social media platforms in the UK, both in terms of the number of consumers accessing them and the amount of time that consumers spend on them.

3.166 Figure 3.7 shows that both Facebook and YouTube have consistently grown their user bases. Facebook has an audience of over 43 million users in the UK, accounting for 84% of the British online population.[148] YouTube is even larger, with an audience of over 47 million users, accounting for over 92% of the British online population. In contrast, WhatsApp and Instagram (both part of Facebook group), which have the next largest audiences, each reach just under 55%.[149]

Figure 3.7: Monthly active users in social media from July 2015 to February 2020 (including YouTube)



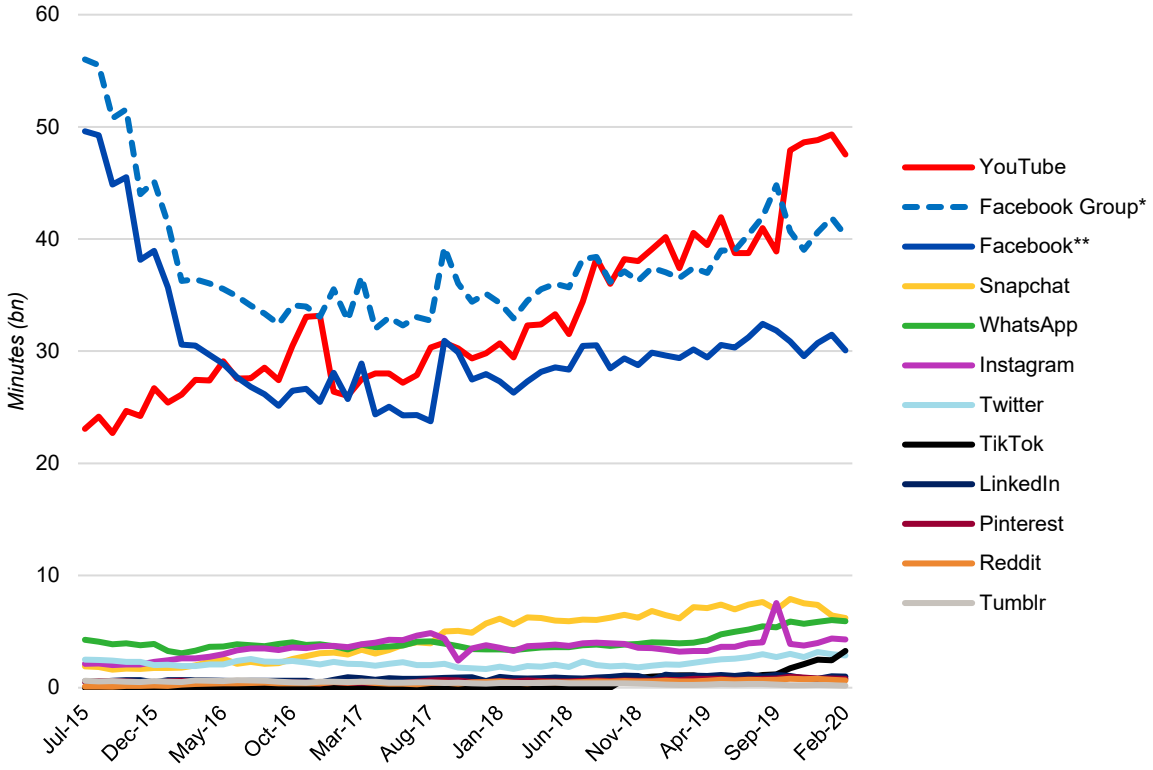
Source: Comscore MMX Multi-Platform, Total Digital Population, Desktop aged 6+, Mobile aged 13+, July 2015 – February 2020, UK
Notes: In November 2018, Comscore altered its methodology which contributes to the discontinuities in the data around this date.
* Including Messenger.

3.167 Facebook and Google-owned YouTube also account for the greatest amount of consumer time spent on social media platforms in the UK. As illustrated by

[148] As of February 2020.
[149] Combined, Facebook's portfolio of platforms (Facebook, Messenger, Instagram and WhatsApp) have a reach of 87%.

Figure 3.8, the total time spent by consumers on YouTube and Facebook far exceeds that spent on Snapchat, the next largest platform in terms of user time spent.

Figure 3.8: Total user time spent on social media platforms from July 2015 to February 2020 (including YouTube)



Source: Comscore MMX Multi-Platform, Total Digital Population, Desktop aged 6+, Mobile aged 13+, July 2015 – February 2020, UK Notes: In November 2018, Comscore altered its methodology which contributes to the discontinuities in the data around this date.
*Including Facebook, Messenger, Instagram and WhatsApp.
** Including Messenger

3.168 There is a significant degree of differentiation between social media platforms. As discussed further below, of the platforms that we assessed, there are particularly important differences between YouTube, which most consumers use for video streaming, and platforms such as those of Facebook, which focus more on consumer needs related to social networking.[150] Therefore, in order to obtain a more meaningful indicator of Facebook's market power, we have not included YouTube when calculating shares of supply in social media based on time spent. Therefore, in Figure 3.9, and henceforth in this report

[150] We assess the competitive constraint imposed on Facebook by YouTube in more detail in the next section of this chapter.

unless otherwise stated, any statistics that we present for 'social media' do not include YouTube.[151]

3.169 Figure 3.9 shows that Facebook had a share of 54% of time spent in social media in the most recent period. Snapchat, which holds the next greatest share, had only 11% of time spent. Facebook submitted that shares of supply calculated on this basis overstate its position in the market, as it competes with any online platform that captures user time and attention, rather than only social media platforms.[152] We assess this argument in more detail in the section on 'Competitive constraints on Facebook' below.

3.170 Facebook's share of time spent in social media has declined over the last five years, having fallen from 80% in July 2015. However, we note that the number of users accessing Facebook has increased throughout the period. In addition, the absolute time spent by users on Facebook has increased over the last two years.

3.171 Combined, Facebook's platforms (Facebook, Instagram and WhatsApp) had a share of 73% of social media as of February 2020.[153]

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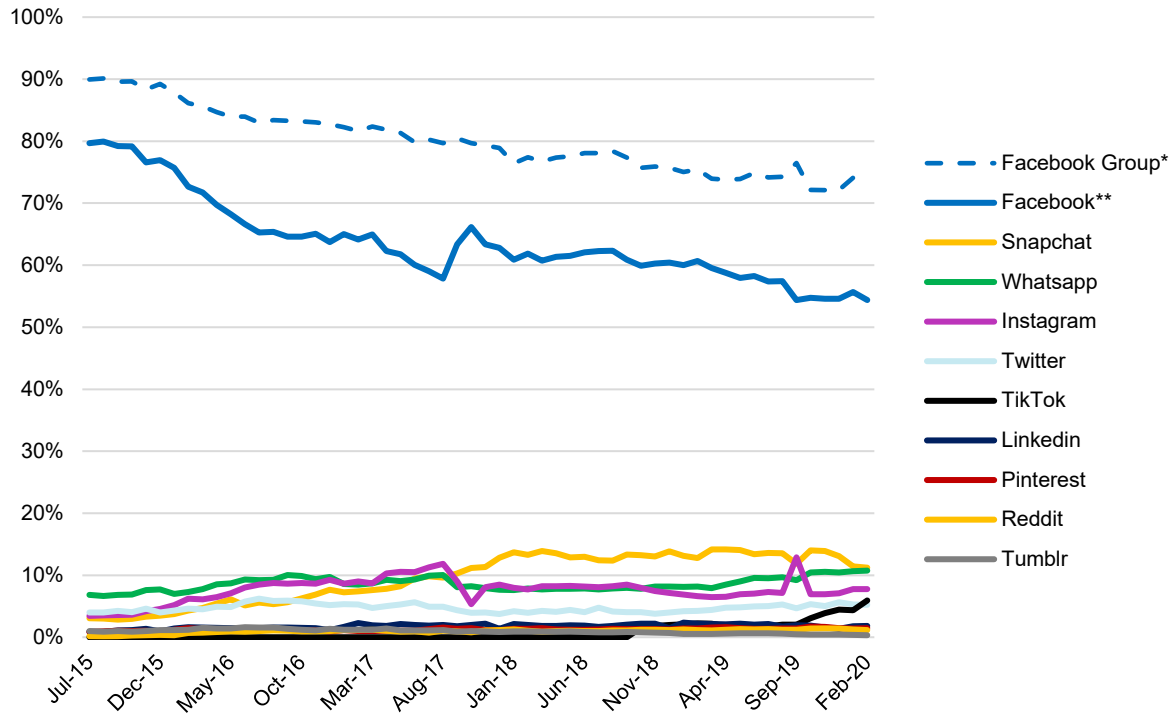
[151] As discussed in the next section, there are also important differences between Facebook and the other third-party social media platforms that we assessed, with none of these being a close substitute to Facebook. This suggests that, if anything, Facebook is part of a narrower market than the 'social media' set used in Figure 3.9 and has higher market shares than shown.

[152] In response to our interim report, Facebook calculated and submitted alternative shares, which assessed user time captured by Facebook as a percentage of total user time spent on the internet, including social media, dating, news and search platforms. Facebook calculated separate shares for time spent on mobile and desktop devices, reporting its own share to be [✂] and [✂] respectively.

[153] Comscore MMX Multi-Platform, Total Digital Audience, Desktop aged 6+, Mobile aged 13+, February 2020, UK.

Figure 3.9: Shares of supply by user time spent in social media from July 2015 to February 2020



Source: Comscore MMX Mutli-Platform, Total Digital Population, Desktop aged 6+, Mobile aged 13+, July 2015 – February 2020, UK.
Notes: In November 2018, Comscore altered its methodology which contributes to the discontinuities in the data around this date.
*Including Facebook, Messenger, Instagram and WhatsApp.
** Including Messenger

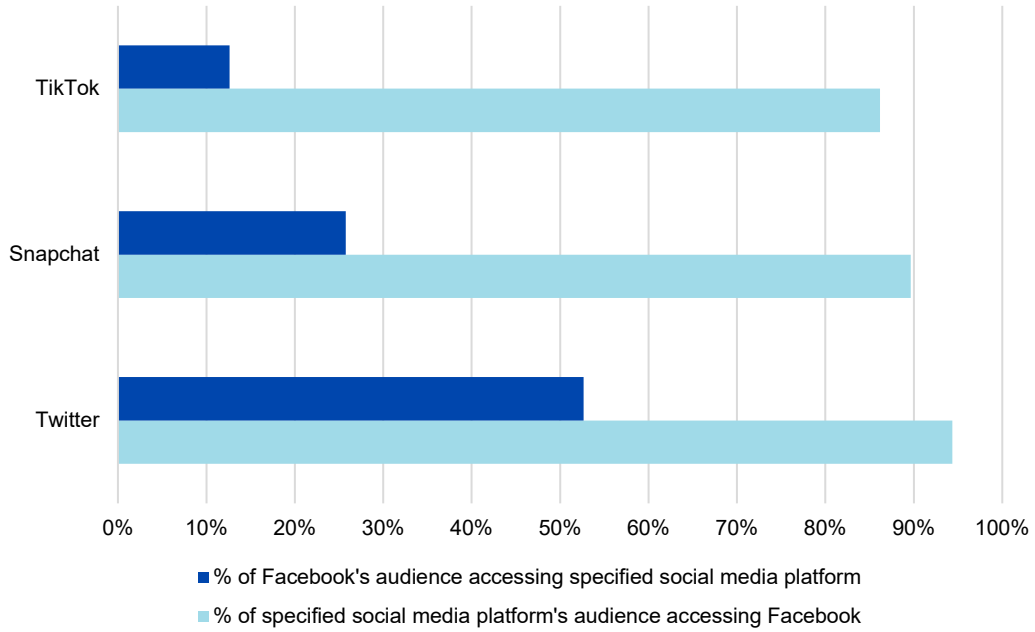
3.172 Many consumers use more than one social media platform. We analysed Comscore's 'cross-visiting' data to assess the extent to which consumers do so. A consumer is described as 'cross-visiting' between two platforms if they access both of the specified platforms within a calendar month. The cross-visiting data does not allow us to assess consumers' intensity of use; to be counted as a consumer that has cross-visited, a user must simply access both platforms once within the month.[154]

3.173 We found that the majority of every social media platform's audience 'cross-visits' with Facebook. For example, as shown by Figure 3.10 below, 86% of TikTok's audience cross-visited with Facebook, 90% of Snapchat's audience cross-visited with Facebook and 94% of Twitter's audience cross-visited with Facebook. The lowest proportion of a social media platform's audience cross-visiting with Facebook was Tumblr at 81%. In contrast, only 13% of Facebook's audience cross-visited with TikTok, 26% cross-visited with Snapchat and 53% cross-visited with Twitter. Therefore, each social media

[154] See Appendix C for further detail on our market outcomes analysis.

platform we analysed is generally used alongside (rather than as an alternative to) Facebook.

Figure 3.10: Consumer cross-visiting behaviour, February 2020 UK



Source: Comscore MMX Multi-Platform, Total Digital Population, Desktop aged 6+, Mobile aged 13+, February 2020, UK

Competitive constraints on Facebook

3.174 In the section below, we first set out the consumer needs that Facebook fulfils. We then consider sources of competitive constraint on Facebook, including from YouTube, other social media platforms, and other consumer services.

3.175 In response to our interim report, Facebook submitted that any market definition analysis on the user side that relies only (or mainly) on a platform's 'functional characteristics' is not consistent with the CMA's guidelines.[155] However, first, we do not agree that a structured market definition exercise is a necessary step to identifying whether Facebook has market power and it is not required by the relevant legislation.[156] Secondly, we have not mainly relied on functional characteristics to assess the competitive constraints faced by Facebook. Rather, we consider that the key question is the extent to which Facebook's behaviour is constrained by other providers. The strongest competitive constraints on Facebook will be imposed by providers that are close substitutes, such that consumers can fulfil their needs using those providers' services instead of those of Facebook. We have considered a wide

[155] Facebook's response to our consultation on the Interim Report.
[156] In a market study, the CMA considers 'the extent to which a matter in relation to the acquisition or supply of goods or services of one or more than one description in the United Kingdom has or may have effects adverse to the interests of consumers' (Enterprise Act 2002, section 130A(2)).

set of potential competitors in our analysis below, to address Facebook's contention that it competes with any online platform that captures user time and attention, rather than only social media platforms.

Why do consumers access Facebook?

3.176 Historically, Facebook entered by providing an innovative service that allowed university students to connect with other students of the same university online, providing a platform for them to recreate existing social circles on the internet.[157]

3.177 Contemporary research, as well as Facebook's internal documents, show that interacting with existing close contacts (ie friends and family) remains the most important reason for which consumers access Facebook.[158] For example:

- Ofcom research found 'keeping in touch with family and friends' to be the activity consumers most commonly identified as being the most important when accessing Facebook.[159]

- A Facebook internal document exploring the extent to which different interactions on Facebook are 'worth people's time' finds that the top five interactions most valued by UK consumers all involved some form of interaction with close friends.[160] With the exception of the ninth ranked interaction ('to check a business page for info') each of the remaining top ten interactions also related to social interaction eg with acquaintances or groups.

- Facebook consumer research found that UK consumers were most likely to see the Facebook platform as helping them to 'stay connected to friends and family', compared to a range of other potential benefits.

3.178 However, Facebook serves a wide range of consumer needs, in addition to social networking with friends and family. These include social networking with more distant connections, content-related needs such as video streaming, and other needs such as gaming and shopping. We discuss some of these below.

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[157] The Independent (2018), 'When did Facebook Start?', accessed 23/05/2020.
[158] Facebook provides numerous services with which to accomplish this eg 'Stories', 'Timeline', 'Newsfeed', and its integrated Messenger app.
[159] Ofcom (2019), Online Nation, p.132.
[160] Eg sending a message to a close friend or interacting with posts from close friends.

3.179 Since entering, Facebook has amassed a more extensive social graph than any other social media platform.[161] This allows Facebook to offer access to the widest range of potential connections; its users can use the Facebook platform to network with distant social ties, as well as close contacts.[162]

3.180 Over time, Facebook has added features to the Facebook platform, using its extensive consumer network to facilitate networking amongst wider communities rather than just between existing friends and family. Internal documents note the Facebook platform's 'Events', 'Groups', 'Local Pages' and 'Pages' features as examples of services connecting communities.

3.181 Facebook has also introduced more 'content-oriented' services aimed at consumer entertainment and has sought to use its consumer network to differentiate these. For example, the Facebook platform's 'Newsfeed' offering can be used to share and view posts made by friends and family. It can also be used to consume wider media content eg news.[163]

3.182 Facebook 'Watch' is an example of a content-oriented service introduced more recently, which is integrated into Facebook and allows consumers to view 'shows', series of episodes following a consistent story-line or theme.[164] Internal documents describe the competitive advantage Facebook has over existing video platforms as being its ability to 'bring people together to bond around the content they love and actively engage in the conversation'.

3.183 In recent years, Facebook has further diversified its consumer offerings by adding services that are more distinct from social media, further increasing the range of consumer needs that it can cater to. For example, the Facebook platform now features a platform allowing users to buy and sell goods (Facebook Marketplace), play games (Facebook Gaming) and in the US also offers a dating service (Facebook Dating). We describe some examples of these offerings below, and in Appendix E.

Competition between Facebook and YouTube

3.184 Facebook told us that YouTube (which is in the same corporate group as Google) competes with Facebook, as well as other social media platforms.

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[161] Social graphs are used by social media platforms to describe networks of connected users. They capture which users are in the network, and how these users are connected to each other by relevant relationships, such as 'friendships' or 'follows'. YouTube has a similar reach to Facebook, but does not have a 'social graph' identifying connections between friends and family. See further information on Facebook's social graph in Appendix J.
[162] See further our section on 'Network effects' below.
[163] A Facebook internal document noted that of the [50-60%] of consumers seeking to access Facebook to browse, the majority were seeking posts from friends and family ([30-40%]). News content was the second most popular type of content ([20-30%]).
[164] Facebook (2017), 'Introducing Watch and Shows on Facebook', accessed 23/05/2020.

Facebook submitted that the estimated shares of supply of time spent, as presented in our interim report, showed an association between decreasing user time on Facebook and increasing user time on YouTube. Our view is that this does not demonstrate that consumers are substituting Facebook's services with YouTube's. We also note that, on a UK basis, Figure 3.8 above shows that both YouTube and Facebook have experienced an increase in total user time spent on their platforms over recent years. Facebook also submitted a number of documents including:

- [✂]
- [✂]
- [✂]

3.185 Our assessment is that the documents above provide only limited evidence of direct competition between YouTube and Facebook. In particular:

- [✂]
- Facebook found that relative increase in Facebook's time spent resulting from the YouTube 'outage' was [✂]. We consider this indicates that Facebook competes most closely with YouTube with respect to its video watching features rather than its wider consumer offering.

3.186 Other evidence also suggests that many consumers use YouTube for particularly distinctive reasons, compared to the reasons why they use Facebook. Ofcom's *Online Nation* research shows that users most commonly valued 'Keeping in touch with friends and family' when accessing Facebook, an activity not commonly valued when accessing YouTube. In contrast, users most commonly value 'Watching videos' when accessing YouTube.[165] We present a comparison of how important each of these activities are on Facebook and YouTube in Table 3.2 below:

[165] Ofcom, 'Online Nation', page 133.

Table 3.2: Principal uses of Facebook and YouTube

		Don't know	*Not at all important*	*Fairly unimportant*	*Neither important nor unimportant*	*Fairly important*	*Very important*
Keeping in touch with friends and family	Facebook	1%	5%	3%	12%	37%	42%
	YouTube	4%	56%	10%	16%	9%	6%
Watching Videos	Facebook	2%	19%	11%	30%	29%	9%
	YouTube	1%	4%	3%	15%	30%	46%

Source: Adapted from Ofcom's Online Nation, Figure 5.10.
Notes: Figure compares consumer rankings for Facebook and YouTube regarding the importance of 'Keeping in touch with friends and family' and 'Watching Videos'.

3.187 We also note that:

- Consistent with the Ofcom survey evidence outlined above, internal documents submitted by Google indicate that the most common reasons consumers in the UK access YouTube are for entertainment and to view 'how-to' videos on the platform.[166]

- 'User generated content' is a key feature of many social media platforms. However, YouTube also provides access to a wider range of content, including through its paid-for 'premium' music and video streaming services.

- We reviewed some evidence demonstrating that social media platforms seem to view YouTube as a competitor in its capacity as a provider of content rather than as a provider of the wider communication services offered by social media platforms. For example, [✂] and a Pinterest internal document describes YouTube's '[f]ocus on media and entertainment to replace traditional TV'.

- Finally, Google told us that YouTube does not have a social graph. Social graphs give social media platforms the ability to identify connections between consumers. Therefore, YouTube cannot recommend videos based on consumers' 'friends' viewing behaviour or recommend content users may like based on friends' activity, as done by other social media platforms such as Facebook and Instagram. Moreover, this suggests that YouTube is not a close substitute to the Facebook platform for users that wish to network with friends and family.

3.188 We further note that consumers use social media platforms for a range of reasons, and that YouTube may act as substitute for Facebook when it comes

[166] This is consistent with Ofcom (2019), Online Nation, which found music videos and how-to vids to be most the popular categories of video amongst UK consumers watching online video content.

to some of these, such as watching entertaining videos. However, YouTube does not have a social graph and does not appear to be a close substitute when it comes to important Facebook activities such as networking with a wide range of friends and family. Overall, YouTube does not currently appear to provide a strong competitive constraint on Facebook, despite its comparable reach and levels of consumer engagement.[167]

Competition between Facebook and other social media platforms

3.189 Aside from YouTube, the next two largest social media platforms to Facebook in terms of number of users are WhatsApp and Instagram. As Facebook-owned properties, these do not provide a competitive constraint on the Facebook platform.

3.190 Other social media platforms do not appear to be close substitutes to Facebook when it comes to interacting with friends and family (the main reason that consumers use the Facebook platform) and with more distant social ties. These platforms have differentiated to focus on different needs and/or have significantly smaller networks.

3.191 In addition, none of the other social network platforms offer a comparable portfolio of services to the Facebook platform or attend to as wide a range of consumer needs. Instead, each provides a more specialised offering that competes with some aspect of Facebook's services. For example:

- Reddit is a 'network of communities' and in this respect appears to compete most closely with the Facebook platform's 'Group' features.
- TikTok is used to create and share short form videos that are set to music. It seems to compete most closely with 'Facebook Watch'.
- LinkedIn is positioned as a social media platform for consumers' professional networks. In this respect, LinkedIn has differentiated itself by focussing on a specific aspect of consumers' lives and type of consumer network. It appears to compete most closely with Facebook 'Jobs'.
- Pinterest is a visual 'discovery tool' and is positioned for consumers seeking to experience content relating to specific interests, including food and drink, travel, style and beauty, and fitness.
- Snapchat emphasises communication amongst close friends, through visual rather than text-based messages, and is commonly perceived as a

[167] We discuss competition for ad spend between YouTube and Facebook in Chapter 5.

more 'playful' platform. Its ephemeral features mean that it is also generally considered a more private platform than its competitors, encouraging its users to present themselves more authentically. It seems to compete most closely with Facebook's Messenger product that allows consumers to communicate privately.

- Twitter is intended to facilitate 'real-time global open platform discussions' and originally differentiated itself by limiting the length of its users' posts, with consumers only being able to make text posts of 140 characters or less.[168] Twitter is distinctive in the degree to which consumers use its services to keep up to date with news and other current affairs.[169] In this regard, Twitter seems to compete most closely with Facebook's features that allow its users to consume news and other media eg Newsfeed.

3.192 Facebook submitted that consumers often use multiple social media platforms and also 're-allocate' the amount of time they spend on social media between these platforms. Facebook told us that this enables new platforms to more easily attract users' time. Our own analysis is consistent with Facebook's submissions that users access multiple social media platforms. However, consumers' use of multiple platforms does not necessarily imply that their services can be used as substitutes by consumers and that these other platforms can meet the same consumer needs as Facebook.[170]

3.193 The high proportions of other platforms' audiences that cross-visit with Facebook, and the significantly lower proportion of Facebook's audience that cross-visits with each of the other platforms, suggest that Facebook is a must-have platform. Cross-visiting statistics show that other platforms are used by sub-sets of users, but nearly always in combination with Facebook.

3.194 Facebook submitted that it should not be penalised for delivering a high-quality service and that academic studies show that it delivers significant net consumer benefits. However, we consider that the limited competitive constraints faced by Facebook (and the barriers to competitive entry and expansion set out below) mean that Facebook faces less pressure to innovate and improve its services in the interests of consumers than it would if these barriers were addressed.

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[168] AdAge (2017), 140 characters, the defining quirk of Twitter, becomes a relic of the past, accessed 22/05/2020.
[169] Ofcom (2019), Online Nation, page 131. 'Twitter stands apart from Facebook, Instagram and Snapchat in that people are more likely to value the platform for keeping up to date with news and current affairs or following public figures…'
[170] See further the section on network effects below.

3.195 The wider 'family' of Facebook platforms reinforces Facebook's competitive position; consumers that 'switch' some of their time away from the Facebook platform may remain within the Facebook 'ecosystem' of apps.[171] For example, consumers wishing to undertake some social networking on a more private basis than the Facebook 'Newsfeed' experience could choose to do so through a third-party platform such as Snapchat, or could choose to do so through a Facebook service such as Facebook Messenger or WhatsApp.

3.196 We note that the Facebook platform has a relatively lower share of time spent for younger consumers. However, 18-24 year olds still spend the greatest proportion of their time on social media platforms within the Facebook 'ecosystem'.[172] With respect to the Facebook platform in particular, Facebook's research into UK teens' use of social media in 2017 [173] found that its competitors tended to be specialised in purpose, with Facebook being distinctive with respect to its status as a multi-functional app. UK teens identifying Facebook as their favourite social media app were most likely to indicate the breadth of its user base and the wide range of purposes it can be used for as being the reason for this.[174]

3.197 In summary, Facebook is a 'must have' platform for social media users; it has a more extensive consumer network than other platforms and can serve a wider range of needs. While some other platforms have been able to enter the market and grow their user base by providing differentiated services, users of these platforms almost all still use Facebook.

Competition between Facebook and other consumer services

3.198 Facebook submitted that in addition to the social media platforms included in the discussion above, it competes with any firm that 'attracts user time away from Facebook'. In a broad sense, we recognise that a range of different online and offline providers that serve different consumer needs are all seeking to capture user attention. However, we consider that the strongest competitive constraints on Facebook will be imposed by providers that are close substitutes, such that consumers can fulfil their needs using those providers' services instead of those of Facebook.

3.199 As set out above, the most important reasons consumers identify for accessing the Facebook platform are to interact with family and friends. We

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[171] Where 'switching' describes reducing the proportion of time spent on the platform.
[172] See Appendix C for social media platforms' shares amongst consumers of different age groups.
[173] [✂].
[174] [✂].

consider that the platforms in our social network set above are likely be closer substitutes to Facebook in this respect than other online and offline platforms.

3.200 As noted above, Facebook has diversified its offering on the Facebook platform in recent years by providing consumer services in related sectors. For example, Facebook Marketplace was launched in 2016,[175] Facebook Gaming was launched on desktop in 2018,[176] and Facebook Dating was launched in the US in 2019.[177]

3.201 Where Facebook has diversified into wider services, it may compete with incumbent providers in those sectors. Consistent with this, internal documents submitted by Facebook identify [✂] as a competitor with respect to Facebook Dating, and [✂] are noted with respect to Facebook Marketplace. However, providers in these sectors are unlikely to provide a strong constraint on Facebook in relation to social media. We set out some of the wider consumer services provided by Facebook in Appendix E.

Barriers to entry and expansion in social media

3.202 Having considered current sources of competitive constraint on Facebook, we now discuss barriers to entry and expansion that may prevent other platforms from acting as an effective constraint.

Network effects

3.203 In general, social media platforms are characterised by same-side and cross-side network effects. Here we set out how social media platforms are affected by network effects and discuss the extent to which these impose a barrier to entry and expansion for a platform seeking to compete with Facebook.

3.204 All of the social media platforms we contacted as part of the study agreed that network effects are important to their services in some way. However, the nature and importance of network effects varies between different platforms. This reflects the platforms' differentiated strategies and the different purposes for which consumers access their services. In particular, the Facebook platform is unique in the extensive nature of its consumer network.[178]

3.205 We found that network effects act as a barrier to entry and expansion for social media platforms and prevent smaller competitors from imposing a

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[175] Facebook (2019), 'It's Facebook Official, Dating is here', accessed 22/05/2020.
[176] Facebook (2020), 'Facebook Gaming App Launching Worldwide on Google Play', accessed 25/06/2020.
[177] Facebook (2016), 'Introducing Marketplace: Buy and sell with your local community', accessed 22/05/2020.
[178] YouTube has a similar number of active users to Facebook but lacks a social graph capturing connections between users.

strong competitive constraint on the Facebook platform. As a result of their less developed consumer networks, smaller competitors are unable to fulfil the same range of consumer needs as Facebook. Therefore, consumers' ability to switch away from its services is restricted and Facebook experiences limited direct competition from competitors.

Same-side network effects

3.206 Social media platforms, particularly those focussing on communication, become more valuable to consumers if other consumers with whom they want to interact join the platform. Consumers access social media platforms for different reasons and need to interact with different (groups of) people for each of these reasons. For example:

- Snapchat is primarily used to communicate with close friends and family members. Snapchat's services will become more valuable to a given consumer if more of their close friends join the platform. In this case, the network effects are 'identity-based' because Snapchat only becomes more valuable to the consumer if specific people join the platform. As people tend to only have a few close friends, each consumer's network is small, but every connection is highly valued.

- LinkedIn's services are used to interact with consumers' professional networks. Consumers will likely have a larger professional network than network of close friends. To offer a valuable service, LinkedIn must be able to offer its users access to this wider network. Consumers may value the presence of specific individuals, but generally value that their wider industry is represented on the platform.

3.207 YouTube is used to consume and share video content. Consumers do not tend to access YouTube to interact with people they know personally before watching their videos.179 Therefore, these same-side network effects do not appear to be strongly 'identity based'. Instead, the presence of other consumers may be valued to the extent that they contribute either content or reactions.

[179]Ofcom (2019), Online Nation, page 152.

Box 3.5: Myspace

Strong same-side network effects lead to feedback loops. More users joining the platform leads to still more user joining, whilst users leaving the platform leads to still more users leaving. The decline of Myspace, which was once the largest social media platform, is an example of this.

Launched in 2004, Myspace was overtaken in 2008 by Facebook. Myspace then quickly lost its user base, with numbers falling from its peak of 100 million users to 73 million users by January 2011, and then to 63 million users in February 2011.[180] This rapid and increasing decline in users shows the power of the network effects affecting social media platforms.

Facebook told us that Myspace lost a significant proportion of users due to its focus on maximising short-term revenue through advertising rather than delivering long term value to its users. Facebook has argued that this shows that the largest social media platforms' competitive positions are not unassailable.

However, we consider that Myspace's position in the early 2000s was materially different to Facebook's current position:

- Facebook's current scale of two billion global monthly active users is far greater than Myspace's peak of 100 million global monthly active users. This implies that Facebook is currently much further away from a 'tipping point' in its user base than Myspace was at its prime.
- It is not clear that the market had fully 'tipped' to Myspace in the first place. Myspace was the most popular platform for only a couple of years, at which time the social media market was growing rapidly and monetisation of social media was in its infancy. By contrast, Facebook has been the most popular social media platform for over a decade in a far more mature market.[181]

3.208 Facebook told us that in social media it is not necessary for new platforms to replicate Facebook's extensive user base to be attractive to consumers. Rather, Facebook submitted that network effects in social media are 'localised' with users most highly valuing the presence of their close connections on social media platforms. Therefore, Facebook submitted that '[l]ocalised network effects enable platforms to easily attract and retain users by reducing the number of available connections that a platform needs in order to entice a user to join'.

[180] The Telegraph (2011), MySpace loses 10 million users in a month, accessed 28.11.19.
[181] Furman Review (2019), Unlocking digital competition, paragraphs 1.101-1.102.

3.209 As shown in box 3.6, whilst we have observed some examples of successful entry to social media, this has only been achieved by platforms with highly differentiated offerings.

Box 3.6: Recent entrants

In the last ten years only Instagram, Snapchat and TikTok have entered the social media sector and grown to account for a share of more than 5% of consumer time spent on social media platforms in the UK. Each of these platforms entered by offering consumers differentiated experiences and features:

- **Instagram** began as a photo sharing app in 2010 and differentiated itself to consumers through its emphasis on visual content. Though Instagram has the second largest consumer base it is not a competitive threat to the Facebook platform, having been acquired by Facebook in 2012. As well as growing its user base, Instagram has been successfully monetising its services. However, it is unclear whether Instagram would have been as successful in monetising without Facebook's wider resources. Facebook told us that it has experienced economies of scope resulting from Instagram using Facebook's advertising infrastructure, but that these do not serve as a barrier to entry.

- **Snapchat** entered in 2011 with a then-unique offering that allowed consumers to send contacts photos that would disappear after a specified period of time. Snapchat has been successful in generating consumer engagement and is particularly popular with younger demographics. However, Snapchat has been less successful than Instagram at monetising its services, despite achieving comparable levels of consumer engagement in terms of consumer time spent on the platforms.[182] This is suggestive of Facebook's wider resources having contributed to Instagram's success.

- **TikTok** is an even more recent example of entry into the social media sector, having launched in the UK in 2014.[183] Similarly to Instagram and Snapchat, TikTok entered with a differentiated strategy, by allowing consumers to create and share short-form videos of up to 15 seconds.[184] TikTok has grown quickly, but remains small with a share of 6% and only began displaying digital advertising in the UK in July 2018.

We note that each of these platforms remains significantly smaller than the Facebook platform.

3.210 Consistent with this, platforms told us that the most important 'input' to a new social media platform is a compelling idea.[185] This may persuade consumers

[182] See Figure 3.8.
[183] TikTok was formerly called musical.ly. It was rebranded as TikTok in August 2018.
[184] Slate (2018), 'A guide to TikTok for anyone who isn't a teen', accessed 04/11/2018.
[185] Google told us in relation to YouTube that 'Offering a popular and innovative service that attracts users is more important than a pre-existing user database'.

to sign-up despite the new service having a relatively limited consumer base, thereby mitigating network effects as a barrier to entry. However, there are some limitations to this strategy:

- existing platforms, such as Facebook, may experience an incumbency advantage through their ability to copy the innovations of new entrants and deliver those new services to a more developed consumer network. As a result of their pre-existing reach amongst users, they are likely to be better able to monetise the new innovation than the entrant. In turn, this may reduce incentives for new entrants to innovate;[186] and

- entering by providing consumers with a specialised service may limit the scale of the consumer base that new entrants can develop in the long-term and may also result in consumers developing networks of connections on the platform specific to a particular need.[187]

3.211 Indeed, internal documents observe that the Facebook platform fulfils a much broader set of consumer needs compared to other social media platforms, with its ability to do so being reliant, in part, on it having the '[l]argest network'. Another document observes that '[w]hile intimate ties are critical, non-intimate ties are critical to Facebook's unique value'. Facebook is 'the network for everyone you know', with its UK audience being roughly 1.8 times greater than Twitter's, the next largest social media platform not owned by Facebook.[188,189,190] This asset allows Facebook to fulfil a broader spectrum of consumer needs, compared to smaller competitors with more specialised, differentiated offerings.

3.212 Entrants and competitors with smaller networks (and less extensive coverage of consumers' closer and more distant contacts) will not be able to act as close substitutes for Facebook's services. Individual consumers may therefore be unable to entirely replace the services they receive from Facebook by switching to a new entrant. In this way consumers may be 'locked in' to Facebook. In particular:

- consumers may be unable to communicate with a comparable network by accessing a different platform; and

[186] A possible example of this dynamic is when Facebook introduced a feature similar to Snapchat's 'Stories' feature on its platforms.
[187] For example, on LinkedIn users develop networks of their professional connections.
[188] As of February 2020.
[189] Excluding YouTube. YouTube lacks a social graph and appears to compete with Facebook with respect to the provision of content rather than providing services to communicate with a user's network.
[190] The top four platforms ranked in order of user base are: Facebook; WhatsApp; Instagram; and Twitter.

- consumers may not have access to a similarly extensive or high-quality body of 'user-generated-content' by accessing a different platform.

3.213 In this way, same-side network effects and the associated difficulties with developing a consumer network, restrict direct competition to Facebook.

- *Overcoming same-side network effects*

3.214 In markets characterised by network effects, consumer multi-homing can help smaller platforms develop their customer base, increase the competitive pressure faced by incumbents such as Facebook and prevent the market from 'tipping'.

3.215 Many consumers do use more than one social media platform, as shown by the 'cross-visiting' statistics above. However, this does not constitute multi-homing behaviour that acts as a genuine competitive constraint on Facebook, because the platforms that users cross-visit with are not close substitutes to Facebook.

3.216 There also appear to be some barriers to consumer multi-homing in the social media sector, especially when it comes to multi-homing between platforms that are relatively closer substitutes. Potential barriers include:

- Limited interoperability between social media platforms. As discussed below, in many cases, friends on one platform cannot be contacted from another platform, nor can the content from one platform be consumed on another platform. As a result, consumers have less of an incentive to 'multi-home' with smaller platforms.[191]

- The time cost to consumers of setting up an account on a new platform and (re)creating their networks of connections.

3.217 Platforms may be able to use certain strategies to help address these barriers and encourage user multi-homing. For example, social media platforms' submissions set out the following as being potential options:

- Use of **single sign-on tools** – these allow consumers to sign-in to multiple platforms using the same username and password.[192] By removing the need for consumers to remember multiple usernames/passwords, the

[191] Furman Review (2019), Unlocking digital competition, paragraphs 1.84-1.88.
[192] Where these services are provided by a platform with an existing social media presence they are referred to as 'social login'. These are most commonly provided by Google and Facebook ie Google and Facebook offer services whereby consumers may sign-in to other platforms using their Google or Facebook username and password.

service encourages consumers to access multiple platforms. We discuss potential concerns associated with single sign-on tools in the 'Interoperability and competition' section below.

- **'Cross-posting' features** – in some cases, consumers can post content from one social media platform to a different social media platform. Competitors to Facebook told us that this feature encourages consumers to create and share content on platforms where they do not have developed networks of 'friends', as it allows them to share the content with networks outside of the platform. In this way, cross-posting mitigates the barriers to consumer multi-homing imposed by platforms' lack of interoperability.[193] Cross-posting may also increase the quantity and diversity of content available on social media platforms, making them more attractive to consumers. We discuss potential issues with current cross posting functionality below.

- **Importing contacts from user devices –** this helps consumers find friends or invite friends to the platform, for example through their phone numbers or email addresses. However, this strategy seems limited to platforms that seek to enable consumers to interact with close friends. Consumers are unlikely to have access to wider networks on their devices.

- **Importing contacts from existing platforms** – this can give users of new social media platforms the ability to access the network of connections they have developed on incumbent platforms. For example, a 'social graph API' could allow users to export lists of 'friends' from an existing platform and invite them to join the new platform. In this way, a new entrant could gain access not only to potential users, but also pre-existing user networks.[194] We discuss potential issues around such APIs and interoperability more widely below.

3.218 Though these strategies may be helpful in supporting the growth of platforms in the social media sector, no entrant has been able to use these to develop a platform that directly competes with Facebook.

3.219 In principle, entrants that have already developed a digital audience in an adjacent market to social media may be able to use this user base to overcome the barrier to entry imposed by network effects. In this case, the

[193] One social media platform submitted that this functionality allows users to increase their reach and helps drive traffic to their platform. Another submitted that this ability allows users to efficiently reach more people and also overcomes or shares the benefits of network effects.
[194] However, these users must decide to switch to the new platform.

platform will already have access to an audience of potential users upon entry. However, the new platform may lack a social graph, such that consumers will not be linked as 'friends' or 'connections' on the platform. In this case, consumers will have to develop this network of connections themselves over time. See Box 3.7 for a discussion of Google+, one of the most prominent examples of attempted entry from an adjacent market.

Box 3.7: Google+

In 2011, Google tried to launch its own social media platform 'Google+' as a direct competitor to Facebook. Google+ offered its users a range of features including: video chat; photo sharing; 'circles', a feature for connecting with social groups; a '+1' feature similar to Facebook's 'like' button; and a 'check-in' feature allowing users to log their location.

However, ultimately Google+ failed to engage users, with the vast majority of consumers' sessions on Google+ lasting less than five seconds. Google told us that its users 'spent many more minutes on Facebook than they did logged into Google+'.

The failure of Google+ to successfully enter the social media sector is particularly notable given the extensive resources that were available to it through Google, and Google's track record of success in the tech sector. Specifically, we consider that Google+'s failure:

- demonstrates that access to a wide base of potential users and consumer data, as held by Google, is not determinative of successful entry to the social media sector; and
- indicates that entry with a service similar to that provided by Facebook is very difficult indeed.

Cross-side network effects

3.220 As well as depending on the number of other consumers active on the platform, the value of a social media platform to its users may also depend on the number of customers active on another 'side' of the platform. Other types of customer include:

- **Content providers** – social media platforms often feature content created by third-party providers. This content is often displayed alongside the 'user generated content' and is typically of a similar format. Content providers can include businesses, celebrities or users that acquired mass audiences on the platform.[195] The platforms we contacted explained that

[195] These users are subsequently treated as content providers by the platform eg YouTube's revenue sharing arrangements.

content is a 'key input' for their services and vital to gaining consumer engagement.

- **Third-party developers** – platforms may allow third-party developers to develop apps, such as games, that consumers may use within the platform. This increases the features available on the platform and can make it more valuable to users.[196] Social media platforms may also provide tools allowing third-party services to 'interoperate' with the social media platform eg by allowing consumers to 'cross-post' from the developer's app to the social media platform.

3.221 Facebook offers consumers access to third-party games and apps embedded in the social media platform. As well as this, the tools available on Facebook's developer platform ('Platform') give third-party developers the ability to integrate their services with Facebook's social media platform.[197] Facebook told us that these capabilities allow third-party developers to 'build and create valuable content for Facebook's users', thereby enriching users' experience on Facebook.

3.222 We have also seen some evidence suggesting that third-party developers receiving access to Facebook's developer platform are reliant on its services to promote user growth. As discussed below, in some circumstances Facebook may have the ability and incentive to exclude third-party services.

3.223 Small platforms may struggle to assemble a wide array of third-party content or an active developer community if they are unable to provide a large enough consumer audience. However, consumers may be less interested in accessing platforms that cannot provide access to this diverse content. Therefore, cross-side network effects can reinforce the positions of large platforms and act as a barrier to entry and expansion for smaller platforms.

3.224 A further cross-side network effect operates between the consumer and advertiser sides of social media platforms. Social media platforms that offer access to a greater number of consumers will generally be more valuable to advertisers. In addition, larger platforms with higher revenues have greater scope to invest in their platform, further reinforcing their positions. Issues related to advertising are discussed further in Chapter 5.

3.225 We consider that the cross-side network effects above further reinforce Facebook's position and act as a barrier to expansion for smaller platforms.

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[196] Social media platforms also exhibit cross-side network effects with respect to users and advertisers.
[197] We discuss 'Platform' and interoperability with Facebook further in Appendix J.

Interoperability and competition

3.226 Social media platforms sometimes allow their services to interoperate with those offered by third parties. For example, through Facebook's developer platform, third-party developers can integrate their products with Facebook's services.[198] Such products include mobile apps, websites, messaging bots, games and Page management tools. Interoperability between third-party products and Facebook is generally achieved through open source APIs. Facebook submitted that it operates in a largely open source environment, and that this has 'unlocked innovation and enriched users' online experiences significantly'.

3.227 The products created by third-party developers can include other social media platforms. Through interoperating, platforms may be able to improve consumers' experiences by increasing the range of services available through social media platforms. Interoperability can also promote competition by mitigating the barriers imposed by network effects. For example, as discussed earlier, cross-posting and social graph APIs may encourage consumers to access multiple platforms and single sign-on tools may encourage consumers to try new platforms.[199]

3.228 However, by controlling the interoperability that is available, incumbents can affect the competitive threat they face. For example, Facebook is able to worsen smaller competitors' offerings to consumers by degrading the functionalities enabled through interoperability or removing the service entirely. As shown by the examples below, this may be done as part of a general policy change or on a targeted basis, where Facebook revokes access to its APIs to specific third-party developers.

3.229 When Facebook removes capabilities as part of a general policy change, it describes this as the 'deprecation' of the capability.[200] As explained in Appendix J, the deprecation of two particular functionalities appear to have harmed the ability of other platforms to grow and improve user experiences:

- 'Find Friends' – which enabled the users of third-party developers to invite their Facebook friends (including friends not using the relevant app) to use an app through tools such as App Invites.

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[198] We note that Facebook is not the only social media platform which offers such developer tools.
[199] We note that Facebook's 'Login' functionality, available through Platform, is a 'business tool' rather than an API.
[200] The term 'deprecation' is used by Facebook to refer to the removal of software, technology or APIs, as part of implementing updates to its platform. See for example: New Facebook Platform Product Changes and Policy Updates, Facebook (2018), accessed 02/12/2019. It is also used in computer science more generally to describe functionality and/or syntax that is no longer supported by a software developer.

- ‘Publish Actions’ – which enabled third-party applications to publish posts to Facebook as the logged in user so that users could easily share content that they have created on Facebook.

3.230 Facebook said that its decision to deprecate certain APIs has been driven, in large part, by the changing policy and regulatory landscape, evolving user preferences, and the impact of data leaks and the misuse of user data by Cambridge Analytica in December 2015.[201]

3.231 Facebook can also modify the interoperability that it offers in a way that is targeted at specific platforms. For example, in 2013 Twitter acquired a video sharing platform called Vine. Prior to the acquisition, Vine users were able to find friends they already knew on the Facebook platform through Facebook’s ‘Find Contacts’ feature. However, following its acquisition by Twitter, Facebook removed Vine’s access to this API. In doing so, Facebook was able to degrade consumers’ experience of Vine and reduce the platform’s competitive threat. Vine was discontinued by Twitter in 2016.[202, 203]

3.232 Facebook submitted that the open nature of its developer platform means that third-party developers can access Facebook’s infrastructure and data without paying any monetary fees. Facebook expressed concerns that this may lead to developers of third-party applications that ‘replicate’ Facebook’s functionality free riding on its investments. To prevent this from occurring, Facebook said that it previously adopted a ‘non-replication’ principle in its terms of access, under which some targeted restrictions were made. This principle was removed in 2018.[204] Facebook submitted that such clauses are common across many digital platforms, such as eBay, Google, Pinterest and Snap.

3.233 The single sign-on functionalities described earlier in this chapter are another example of a tool offered to third-party consumer services by Facebook (as well as other large digital platforms such as Google).[205] We heard specific concerns from social media platforms regarding the potential for the discontinuation of these services to lead to a decline in consumer

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[201] See further Appendix J.
[202] Twitter axes Vine video service, BBC (2016), accessed 02/12/2019.
[203] We discuss additional examples of this behaviour in Appendix J.
[204] Facebook submitted that with respect to this non-replication principle it primarily regarded Facebook’s core functionality to comprise of its newsfeed and messaging services.
[205] Facebook’s ‘Facebook Login’ is one of the services that Facebook offers to developers.

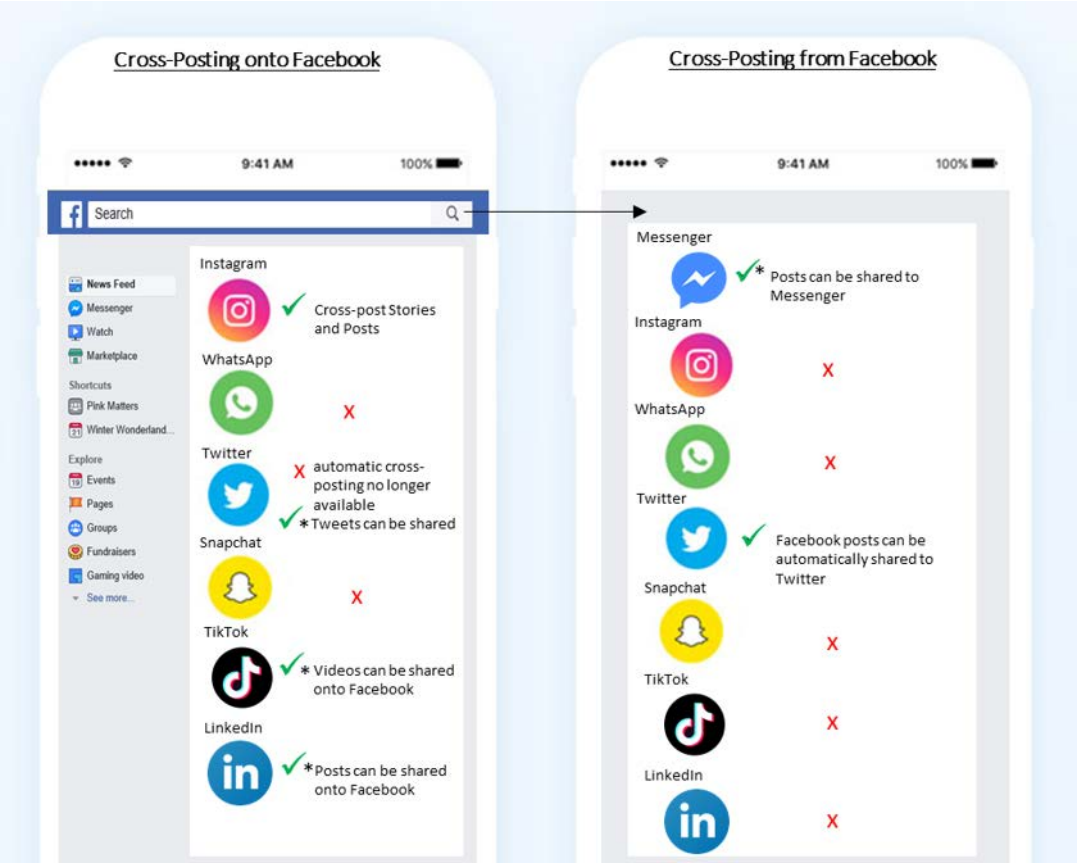
engagement for these platforms. This could reduce the competitive threat that these platforms pose to Facebook.[206]

3.234 We further note that social media platforms may not offer APIs on a reciprocal basis. For example, when Facebook featured the 'Publish Actions' API, which allowed consumers to post content onto the Facebook platform from other social media platforms, consumers were unable to post content from the Facebook platform onto other social media platforms. This asymmetry in consumers' cross-posting abilities may have favoured Facebook by leading to greater and more varied content being shared on Facebook compared to the social media platforms from which content is shared.[207]

3.235 Cross-posting capabilities between Facebook and other social media platforms remain asymmetric, as shown by Figure 3.11. Facebook allows users of many other social media platforms to post content onto the Facebook platform.[208] However, the ability for Facebook users to post content from Facebook to other social media platforms is limited.[209]

[206] We have also heard concerns that platforms providing access to these tools may be able to use them to gain access to data that subsequently allows them to compete with the service provided by the platform receiving access. We discuss this issue further in the section on Facebook's expansion into related markets below.
[207] This API has since been deprecated by Facebook.
[208] Instagram, Twitter, TikTok and LinkedIn users can share content onto the Facebook platform. WhatsApp and Snapchat users cannot.
[209] Facebook users can share posts to Messenger and Twitter. Facebook users cannot share posts to Instagram, WhatsApp, Snapchat, TikTok and LinkedIn.

Figure 3.11: Current Facebook cross-posting functionality



Source: We created this image by taking a screengrab of the Facebook platform for the background and adding logos of other social media platforms, along with ticks or crosses based on whether cross-posting functionalities are possible from and onto the Facebook platform.

Access to data for personalisation and targeting

3.236 Successful social media platforms feature a vast quantity of content that may be shown to users. To prevent content congestion and maintain user attention, platforms determine the most relevant content for a given user and help users to locate this content quickly, using algorithms. For example, platforms may: select and rank the content shown in each user's feed; make recommendations as to what content the user may wish to consume next; or suggest new connections they may wish to make.[210,211]

3.237 By providing better recommendation and personalisation functionalities, platforms may become more appealing to consumers and lead them to spend more time on the platform.

[210] Some platforms submitted that device and/or connection data may also be used to personalise content.
[211] Certain functionalities offered by social media platforms may require further data, eg Snapchat's 'geo-filters'.

3.238 Smaller platforms source the vast majority of the data they hold about consumers' likely demographic attributes, preferences and behaviours from consumers' interactions with the platforms. It includes data submitted by users, data on users' interaction with a platform, and inferred data.[212]

3.239 By contrast, Facebook has the ability to source data from a range of third-party providers, in addition to the data it collects from consumers' interactions with its own platforms. As discussed in Appendix F, Facebook's ability to collect a greater quantity and variety of high-quality data gives it a competitive advantage.

3.240 Platforms also use data to target advertising. Social media platforms that offer greater targeting capabilities are more valuable to advertisers. Platforms with greater quantities of consumer data are better able to target advertising and may be better able to successfully monetise their services. See Chapter 5 for further detail.

Facebook's expansion into related markets

3.241 As set out above, Facebook has expanded from social media into related markets, for example through its Marketplace and Gaming services and its Portal devices. We set out below several concerns related to exclusionary behaviour that have been raised by third parties in related markets.

Facebook's ability and incentive to engage in exclusionary behaviour

3.242 Where Facebook enters markets related to social media, in the short run this may improve consumer welfare, for example by reducing the cost of accessing services and by providing consumers with an additional option in related markets.

3.243 However, we are concerned that Facebook has the ability and incentive to engage in exclusionary practices in related markets. If it does so, existing services may be forced to exit as their businesses cease to be financially viable, reducing both consumer choice and innovation in the sector. Consumer harm from weaker competition over innovation could outweigh any short run benefits, leading to a reduction in consumer welfare overall.

3.244 Facebook's position in social media, in particular its very extensive reach and social graph, make it an important partner for businesses in related markets, including those that rely on its 'free' developer tools and/or its advertising

[212] Inferred data refers to additional information about a user, not directly provided by or observed from the user, but which is derived or deduced from this information. See further Appendix F.

services. This means that Facebook may have the ability to exclude competitors in related markets. It may also have the incentive to do so, for example to protect its position in social media, or to gain additional profits from the most lucrative related markets by offering these products itself. In the following section we consider concerns that have been put to us that Facebook has acted in an exclusionary way in certain markets.

Concerns raised by competitors

3.245 We have heard concerns that, in the course of providing developer tools and advertising services to other businesses, Facebook is able to obtain access to data on these businesses' customers, which it can then use to replicate the consumer-facing service of the business receiving access. Given the importance of Facebook's services, we heard that some businesses had been unable to negotiate restrictions in the purposes for which Facebook can use their data. For example:

- [A mid-sized tech company] told us that Facebook's position in social media means that its use of Facebook's marketing tools is unavoidable. It suspected that Facebook used data acquired from [mid-sized tech company] through these tools to develop [✂] and compete with [mid-sized tech company's] consumer offering. [Mid-sized tech company] has unsuccessfully sought agreements that would restrict Facebook's ability to use [mid-sized tech company's] data as an input to Facebook services that compete with [mid-sized tech company].

- [A mid-sized tech company] told us that its use of Facebook's single sign-on functions and advertising services give Facebook access to data on [mid-sized tech company's] user base. It alleged that this data was used by Facebook to build [✂].

3.246 We also heard that Facebook's market power in social media may allow it to offer consumer services in related markets that other businesses are unable to compete with. For example:

- Facebook can use its existing advertising revenues to cross-subsidise new services in related markets. Whereas other competitors may require customers to pay for access in order to be financially viable, Facebook may be able to provide these new services for no immediate monetary cost to consumers. In the long-run, this may mean that incumbent services cease to become financially viable and exit, reducing consumer choice in these markets.

- Facebook is able to integrate new services into its pre-existing social media platform, with this 'bundling' promoting the new service amongst Facebook's extensive user network and driving usage. By contrast, competitors cannot bundle in this way and may have to pay for advertising to promote their businesses. In this way, Facebook may be able to 'leverage' its existing position in social media to enter other markets and exclude rivals in those markets.

3.247 When asked about this alleged use of the data extracted through Facebook's single sign-on features and through the Facebook Pixel,[213] Facebook told us that it did not recognise the conduct.

3.248 We have not sought to conclude on the merits of these specific concerns as part of this study. However, these are examples of potentially concerning practices that could be investigated under a new pro-competition regulatory regime, of the type envisaged by the Furman Review, and as proposed in Chapter 7.[214] Appendix U sets out our assessment of potential practices to be tackled under a new code of conduct.

Findings in social media

3.249 Consumers access social media platforms to interact with each other and with engaging content. However, social media platforms are differentiated in important ways, including in terms of the user needs that they attend to. This limits the degree of substitutability between social media platforms for consumers.

3.250 The evidence shows that Facebook has significant and enduring market power in social media. Facebook initially grew through its innovative social networking service and has now had a much larger network than other platforms for many years. Facebook's large scale, and same-side and cross-side network effects, mean that Facebook benefits from positive feedback loops. For example, its large network of connected users helps it to attract and retain more consumers, while also attracting developers and content providers, which further increases its value to consumers.

3.251 Interacting with close contacts remains the most important reason for which consumers access Facebook. However, Facebook's extensive social network has helped it to develop many additional features and services. No other platform can address a similarly broad set of consumer needs and consumers are unlikely to be able to replace Facebook's services entirely with another

[213] Facebook Pixel is used to support Facebook's advertising services.
[214] Furman Review (2019), Unlocking digital competition''.

platform's. In particular, third-party platforms are not close substitutes to Facebook when it comes to networking with a wide range of close and distant connections. Cross-visiting statistics demonstrate that, while consumers do access other social media platforms, they nearly always do so in combination with Facebook.

3.252 The competitive threat to Facebook from the entry and expansion of other platforms is limited by several self-reinforcing barriers to entry and expansion.

3.253 Same-side network effects act as a barrier to entry and expansion in social media, because the extent to which consumers value a social network increases with the presence of more users. Entrants have responded to this by differentiating and building different types of services and consumer networks, rather than networks that compete more directly with Facebook's 'network for everyone you know'. Cross-side network effects also support Facebook's position.

3.254 The result of competitors' differentiated strategies is that the constraint placed on Facebook, and the competitive threat that it faces, is limited. We note that there has been no successful entry in the last 10 years by a direct competitor with a comparable set of services to those provided by Facebook, with Google's attempt having failed.

3.255 The Facebook 'family' of apps (which includes WhatsApp and Instagram) further insulates Facebook from competitive pressure, because consumers that switch some of their time away from the Facebook platform may remain within the Facebook 'ecosystem' of apps.

3.256 Facebook is also able to affect the competitive conditions it faces. By restricting other social media platforms' ability to interoperate with Facebook's services, Facebook is able to reduce the competitive threat from new entrants and smaller rivals. We are concerned that Facebook also has the ability and incentive to leverage its market power from social media into related markets. Facebook's entry into related markets may provide some benefits for consumers, but if Facebook does so in a way that excludes efficient rivals, then over time consumers may be left with worse services, both in related markets and in social media. Harm to consumers from weaker competition over innovation could outweigh any short run benefits, leading to a reduction in consumer welfare overall.

3.257 In combination, we consider that the factors above limit the competitive pressure on Facebook, and the nature of these factors is such that this will continue to be the case. This is likely to have several negative impacts for consumers. First, Facebook has weaker incentives to innovate and to develop its platforms in ways that are valued by consumers, compared to a more

competitive scenario. Second, Facebook can extract more consumer data or worsen the terms that it offers consumers for this data. We discuss consumer control over data in Chapter 4. Third, consumers are harmed indirectly through higher prices for other goods and services if Facebook is able to use its market power over consumers to raise the prices it charges for display advertising above competitive levels. We discuss competition in digital advertising in Chapter 5.

4. Consumer control over data

- For many consumers the major platforms have become 'must haves' – 37% of the total time spent by UK users online in February 2020 was on sites owned by Google or Facebook – and there has been a notable rise in their use during the current COVID-19 pandemic.

- It is important that consumers can make informed decisions about whether to agree to their personal data being used to target advertising, and that they can control the use of their data and decide whether to provide access and share it with others if they wish. Equally, it is important that consumers receive the right level of protection when they do not, or cannot, engage.

- Consumers want more control over their data: most say they value their ability to control access to their data, and only a small minority (13%) say they are happy to share their data in return for relevant advertising. Despite this, we have found consumer engagement with platforms' privacy policies and controls is generally very low – for instance only a very small percentage of new users who registered with Facebook in February 2020 engaged with the ad preferences page over the 30 days from registration. We consider that the platforms themselves are largely responsible for this situation.

- Platforms have strong incentives to maximise the amount of consumer data they collect by limiting consumer engagement and control. The largest are very profitable, and their users' personal data is highly valuable to them for personalised advertising and developing user services. Some social media platforms, such as Facebook, give consumers no choice but to accept personalised advertising if they wish to use the service. And platforms' choice architecture is likely to amplify the effect of natural behaviours that limit consumer engagement through poor accessibility and clarity, unbalanced presentation and barriers to making choices. Many of our findings on platform design are similar to Google's own research – confirming how hard consumers can find it to navigate and understand controls.

- As a result, people find themselves being signed up to the default settings of the platform. The impact of this is that the terms by which personal data is being used are determined largely by the platforms themselves rather than by consumers.

- Several harms arise from this lack of control and barriers to engagement. In particular, many consumers are likely to be sharing more data than they would otherwise have decided to and not receiving a fair return for the data they provide. If there were more choice for consumers over control of their data, there would be scope for platforms to compete actively to persuade them of the benefits of personalised advertising or to adopt alternative business models offering different options in respect of privacy choices and services. The loss of competition and its benefits for consumers and their lack of effective control may also mean that they have lower trust in digital markets. These harms may be magnified for more vulnerable consumers.

Introduction

4.1 Many consumers use a range of online platforms every day. They may use Google to find a local restaurant, or access Facebook to see what their friends are doing. When consumers use these services, platforms collect and use information about them to serve personalised advertising. In return, these services are typically free of charge for consumers to use and allow consumers to do a range of things such as search the web, connect with friends, share content and receive more relevant advertising.

4.2 While platforms provide services that are free to consumers when they use them, some also generate very large revenues – and are extremely profitable. Their business model relies on attracting consumers' attention and gathering data about them, which they use to sell personalised advertising.

4.3 Whereas some newspapers and commercial broadcast services have been provided free to readers for many years, covering their costs by advertising revenues, what is new is that digital platforms are much more able to collect and use personal data. This allows them to target adverts – or indeed provide other services – based on what they know about the particular circumstances of the individual consumer. Because personal data is highly valuable to platforms for personalised advertising and developing user services, there is a considerable incentive for them to maximise the volume of data they collect from their users.

4.4 We recognise that, if consumers want high quality content and services without paying money directly for them, platforms need to be able to generate enough revenue from other sources to fund them – and that revenue is typically derived from being able to offer advertisers the ability to advertise to those consumers. This means that there is an important trade-off for consumers to make in terms of sharing their data for personalised advertising in return for access to the online services: how much do they value the service and how much do they value control over their data?

4.5 It is important that consumers can make an informed decision over whether to accept the terms of this exchange offered by platforms. This is essential both for people to be able to safeguard their privacy and in order to foster healthy competition that benefits consumers.

4.6 Consumers' attitudes towards privacy and personalised advertising are not uniform. Some consumers will be content to provide their data in return for being served personalised adverts. In contrast, other, more privacy-conscious consumers would choose not to share their data and instead prefer to receive contextualised advertising (ie relating to the content they were viewing). At

present a number of platforms do not offer consumers this choice: it is simply a condition of signing up to the service that their data is used for personalised advertising.

4.7 To enable consumers to express a choice, it is important that they have up-front and ongoing control over the use of their data, so that they can decide whether to provide or deny access to their data and share it with others if they wish.

4.8 Ensuring that consumers have more control over the use of their data will not only protect them but could also offer them benefits by increasing the potential for competition between platforms. That is, firms could compete on the basis of the extent of control and choices over privacy they offer to consumers and compete more actively to encourage consumers to allow their data to be used for personalised advertising by explaining the benefits to them. Firms could also differentiate themselves more in the range of services and benefits that they offer according to the extent to which consumers agree to allow their data to be used for personalised advertising. We consider these issues in Chapter 8.

4.9 In the rest of this chapter, we:

- Consider how consumers use and benefit from online platforms;
- Address how and why consumers' data is used in digital advertising;
- Set out the relevant regulatory framework;
- Consider consumers' awareness, understanding and attitudes towards the use of their data;
- Provide evidence of low engagement with current controls;
- Set out our concerns about barriers to effective consumer control – in particular:
    - platforms' restrictions on choice;
    - the impact of platforms' choice architecture; and
    - the implications for consumer welfare and competition.

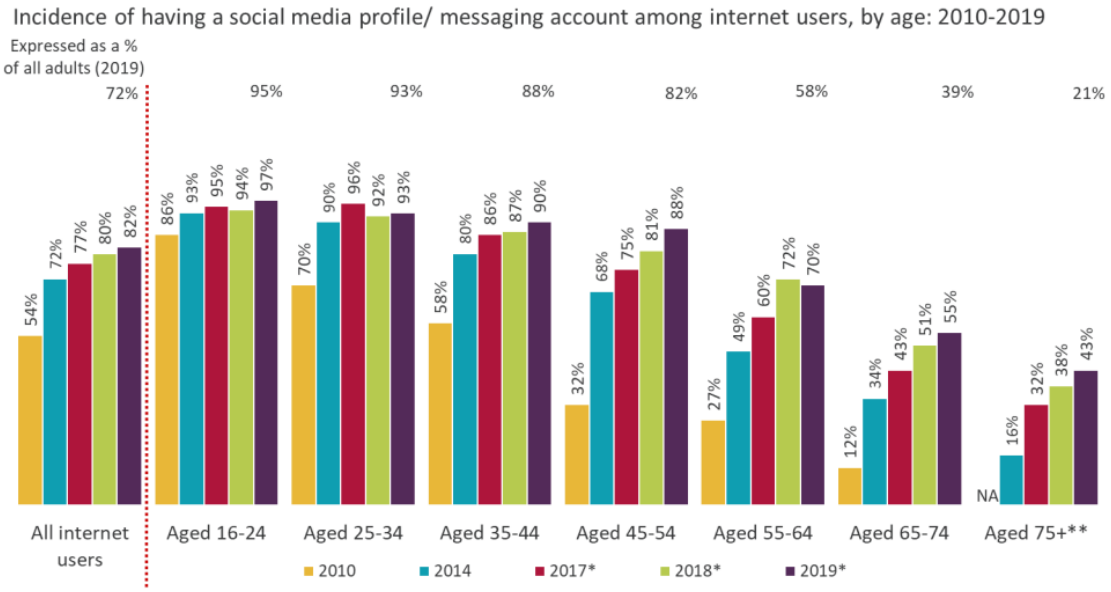
Consumer use of online platforms

4.10 The online platforms we have considered in our market study have become an important fixture of everyday life for many people. For instance, Ofcom

reported in 2019 that 98% of adult internet users had used a search engine such as Google or Bing in the last year.[215]

4.11 In 2019, Ofcom reported that 82% of all adult internet users had a social media or messaging account – up from 54% in 2010. Usage was particularly high for those aged 16 to 44, although proportionately the largest increases in the last decade have been in the 45 to 74 age range (Figure 4.1).[216] Figure 4.1 also shows that 21% of all adults over 75 had a social media profile or messaging account and separate Ofcom research reported that by the age of 13 (the minimum age restriction on most social media platforms) more than half of children have a profile; and by the age of 15, almost all have one.[217]

Figure 4.1: Incidence of having a social media profile / messaging account



Source: Ofcom

4.12 As noted in Chapter 2, social media platforms and search engines – especially Facebook and Google sites – are important to many consumers on a daily basis. For example:

- Even before the COVID-19 pandemic (which increased usage), UK internet users were spending an average of 3 hours 24 minutes each day online,[218] with the majority of this time spent in a relatively narrow set of sites and services, including social media, information, news, shopping,

[215] Ofcom, Adults' Media Literacy research, 2019.
[216] Ofcom, Adults' Media Use and Attitudes Report 2020.
[217] Ofcom, Children and parents: Media use and attitudes report 2019, February 2020.
[218] Comscore, MMX MP, Total Digital Audience, Desktop aged 6+, Mobile aged 13+, February 2020, UK.

and entertainment. We also note reports of an increase in the use of search and social media since the pandemic.[219]

- As regards reach, during February 2020, 96% of the total UK internet population accessed a Google site; and 87% accessed a Facebook site.[220]
- Of the total time spent by UK users online in February 2020, 37% was on sites owned by either Google (including YouTube) or Facebook (including Instagram and WhatsApp).[221]
- We found that in total in 2019, Facebook served [400 to 500] billion personalised ads and Google served [400 to 500] billion search ads. Facebook users on average see [50 to 60] ads per hour.[222]

4.13 These latest developments illustrate the significant and growing importance of search and social media to users – particularly in difficult circumstances where physical restrictions can mean many people rely on them for information and networking.

4.14 The substantial volume of overall usage of online platforms reliant on digital advertising across all age groups, coupled with the persistent share and high profile of Google and Facebook, also underlines the importance of considering consumers' engagement with them, the extent to which they may lack control over the use of their data and whether harms may arise.

How consumers can benefit from social media and search

4.15 Platform services that are funded by digital advertising bring substantial benefits to consumers, while being provided free of direct monetary costs for the consumer.

4.16 Consumers benefit from many of the services provided by the platforms – including search, social media, information and entertainment. Some respondents to our interim report noted that such digital services have created large gains in wellbeing and consumer surplus – enabling users to find information, connect, communicate and share relevant information in ways

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[219] For instance, survey findings suggest 21% of UK internet user respondents were spending longer on social media in March 2020. Source: Statista in-home media consumption online survey of 16 to 64 years old, March 2020.
[220] Source: Comscore MMX MP, Total Digital Population, Desktop aged 6+, Mobile aged 13+, February 2020, UK. In regard to Google, this represented 49,531,604 unique viewers and for Facebook 44,561,582 unique viewers.
[221] Ibid.
[222] These figures are based on Facebook and Google responses to CMA requests for information. The Google numbers refer to Google search. The Facebook numbers exclude Instagram.

that did not exist two decades ago. We acknowledge, as discussed in Chapter 2, that consumers benefit substantially from the range of services offered by platforms.

4.17 Some respondents to our interim report also suggested that digital advertising itself benefits consumers because it enables them to discover relevant content and find products and services that are likely to be more meaningful and engaging to them.

4.18 As we discuss below, digital advertising can be targeted at consumers in two ways and there are important differences between these types of advertising:

- **contextual ads** that reflect the contents of the page the consumer is viewing and require no or limited personal data; and
- **personalised ads** that require the processing of the consumer's personal information.

4.19 For consumers, personalised ads may be more relevant to them, which may make them less irritating and more likely to provide genuinely useful information about products and services that they may be interested in. For advertisers, personalised advertising offers benefits in terms of better targeting / less wastage. This should mean more efficient delivery of advertising which in turn should result in a greater return on their investment as their adverts are likely to be viewed more often by their intended audience or they can achieve campaign goals for a lower amount of advertising expenditure.[223] This is discussed in more detail in Chapter 5. Consumers may also benefit from more efficient advertising spending, which may ultimately be reflected in lower prices for advertised products.

4.20 Overall, more relevant and better targeted adverts, through personalisation, can be expected to result in more purchases, increasing consumer and producer welfare as a result. Respondents also suggested that they can result in lower product prices for consumers because more effective targeting lowers firms' costs which are, at least to some extent, passed onto consumers.

4.21 However, as we discuss below, these potential benefits rely on consumers sharing their data for use in personalised advertising in a transaction that some consumers may be unaware of, or lack control over.

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[223] The evidence available to us indicates that advertisers are willing to pay higher prices to be able to target consumers, which would tend to imply higher costs. However, to the extent that this targeting of consumers is more efficient and less wasteful, then that could offset the higher costs. As a result, it is difficult to determine what the overall impact on advertising expenditure might be. We recognise that some part of these advertising costs could ultimately be reflected in the prices consumers pay for the products being advertised.

The role of consumer data in digital advertising

4.22 We consider below the role of data for online platforms funded by digital advertising – in particular, what data is collected, how and why. Appendix G provides further background on how consumers and their devices are tracked for personalised advertising.

What consumer data is collected?

4.23 Data is collected online by a wide range of market participants, including platforms, advertisers, publishers and data brokers. The data collection by some platforms can be extensive. Google collects consumers' names, contact details and passwords volunteered when they create an account. It also collects data that consumers may be unaware of, such as device and browser information, IP address, operating system; and information on the consumer's activity such as preferences, interaction data (eg clicks and mouse hovers), search history and location data.

4.24 The individual level data collected by platforms such as Google and Facebook remain under the control of these platforms and is generally not shared with other market participants.[224] However, outside of these 'walled gardens',[225] publishers and advertisers share data through a large number of intermediaries to identify consumers and provide personalised advertising.

4.25 Advertisers, publishers, online platforms and data brokers can also collect and share data once an ad is placed, such as: personal data (eg device and browser information; contextual data (the context in which the ad is served, such as the page contents); campaign data (information on the reach and success of an ad campaign); and search data (eg the search request, the number of clicks and purchases generated).

How is data collected?

4.26 Platforms such as Google and Facebook can collect large datasets directly from their many users.[226] Google can also gather data, such as a consumer's

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[224] Appendix F explains how platforms share aggregate-level data with other market participants.
[225] 'Walled gardens' are a closed ecosystem in which a platform provides a complete end-to-end technical solution for advertisers and publishers, and advertisers and publishers are restricted in their ability to choose other technical solutions. These ecosystems can be very large – for instance Google's includes Android and Chrome operating systems; YouTube, Gmail and Google Maps. Facebook's ecosystem includes WhatsApp, Instagram, Messenger and Marketplace. See Chapter 2 and Appendix E.
[226] For example, Google collects data from more than 50 consumer-facing services, including Google Search, and Android phones. Facebook collects data from Facebook, Instagram and WhatsApp. However, Facebook said that it does not use WhatsApp account information in the European Region to improve consumers' Facebook product experiences or provide a more relevant Facebook ad experience. See also ICO WhatsApp undertakings, given 12 March 2018.

location, from mobile devices running its Android operating system. Platforms also collect data through services they offer on other websites and apps about how consumers interact with these sites (Box 4.1).

Box 4.1: Platforms' processing of data via other websites and apps

- Advertisers, publishers and data brokers can provide data they collect about consumers visiting their sites to enable a better targeting of digital advertising. Advertisers can also provide offline data on their customers.
- Advertisers and publishers can allow platforms to collect observed and volunteered data from their own online services through a range of technologies such as tags, cookies and Software Development Kits (SDKs) – enabling platforms to add it to information they already possess about the consumers.
- Platforms receive and process data when consumers sign into an app or website using their sign in functionality, whereby consumers can securely sign into third-party apps without having to create, authenticate and remember new usernames and passwords.
- Platforms collect information such as device and browser information, bid information and event information (impression, click or conversion data) from the ads placed on publisher websites.

4.27 As we set out in more detail in Appendix F, compared with Google and Facebook, other platforms' data capabilities, which focus on user data from their own services and limited reach on third-party websites and apps, are limited in comparison.

How do platforms use consumer data?

4.28 The platforms we have considered in this market study collect consumer data for a variety of reasons – but the primary purposes are to deliver and improve their consumer-facing services and to serve and measure digital advertising to consumers.[227]

4.29 Platforms use consumer data to deliver their own consumer-facing services:

[227] Platforms also collect data from users to, for instance, enable functionality (eg data on the device being used) and to improve their service, or to detect abuses.

- The larger search engines collate click and query data to train their algorithms – including what consumers search for, the results they select, and the time spent on a page. They also use data on the context in which the consumer is making a search – such as the time, date and location.[228]
- Social media platforms rely on consumers sharing posts, comments and 'likes'. The platforms can also improve their services to consumers on the basis of content data (consumer-generated information such as photos, videos and posts), profile data (consumer information provided when setting up an account) and interaction data (such as likes, shares and comments).

4.30 Platforms that fund their services through digital advertising[229] also use consumer data to target advertising and provide measurement and attribution services to advertisers.

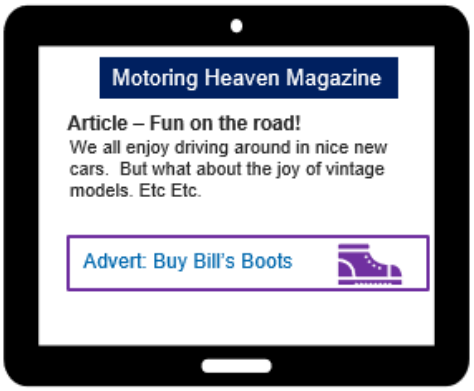
4.31 Targeted advertising can be broadly divided into contextual and personalised, of which the latter is considerably more reliant on historic and real-time consumer data (Box 4.2).

[228] As we note in Appendix K, some search engines offer consumers the ability to set up an account. To create an account, consumers need to provide more information such as their name, email address and date of birth. However, being logged-in gives consumers additional controls over how their data is used.
[229] In its response to our interim report, Facebook stated: '…Facebook's valuable services are funded entirely by advertising revenue. Accordingly, advertising (and in particular, personalised advertising) is not an "add-on" service for consumers. Rather, it is an integral foundation for the multi-sided economic business model which allows Facebook's services to be offered to consumers at all.' Source: Facebook's response to the CMA's Interim Report, February 2020.

Box 4.2: Types of targeting in digital advertising

- **Contextual advertising** reflects the content of the page viewed and requires no or only limited consumer data such as device, location and language.
- **Personalised advertising** targets adverts on the basis of consumers' personal data, including demographic and interest-based data alongside data inferred from other consumers. The main types of personalised advertising are audience segmentation (the grouping of consumer profiles into 'audiences' characterised by intent, demographics and interests) and retargeting (the serving of targeted ads to specific individuals whom advertisers identify as customers or potential customers).

Contextual advert: reflecting the content of the page viewed.



Personalised advert: reflecting the consumer's data, such as search history.

4.32 Platforms also use consumer data as part of the attribution process – tracking what users do after being exposed to advertising, whether they make a purchase, register on a website etc – which is an important part of evaluating the effectiveness of advertising.

4.33 The importance of personal data in digital advertising depends on the type of advertising used and the campaign objectives that advertisers want to meet. In general, we have heard that personalised advertising is more important in display than in search advertising[230] – because in search, the most valuable data for selecting which ads to show is the search query itself, so that contextual advertising performs very well without much need for additional consumer data. The use of consumer data in the attribution process is likely to

[230] Search advertising is where an advertiser pays for its advert to appear next to the results from a consumer's search query, based primarily on the keywords entered. Display advertising enables advertisers to place ads in space sold by publishers (inventory) on websites or apps in a variety of formats, including banner-style adverts, 'native' advertising, sponsored content, and video advertising.

be important to both search and display advertising in terms of tracking what action consumers take after being exposed to the advertising.

4.34 Personalised advertising is sometimes considered more 'relevant' to the consumer in the sense that the advertising they see is based on a profile about the individual that has been compiled from information such as previous browsing history, location etc and so should reflect the individual consumer's likely interests. However, contextual advertising can also be 'relevant' if it reflects the contents of a page that a consumer has decided is interesting enough to spend time reading. In the case of social media, if advertising reflects the content of the page, such as a newsfeed, then it may effectively be more 'personalised' simply by virtue of the fact that the page contents themselves are likely to reflect the personal interests of the consumer.

4.35 As we discuss in Appendix X, we have also heard that contextual advertising is becoming more sophisticated – for instance through the application of sentiment analysis that uses Artificial Intelligence (AI) to analyse site contents and optimise placements for advertisers on the basis of more detailed assessment of the likely readership. This has the potential to improve how effective it is compared to personalised advertising.

The relevant legal and regulatory framework

4.36 The use of personal data in digital advertising is governed by a data and ePrivacy protection framework that addresses how and when personal data can be used (Box 4.3).[231] Competition and consumer authorities are increasingly considering competition and consumer law implications arising out of the use of consumer data,[232] reflecting the close links between consumer control over data, competition and consumer concerns more generally.

4.37 The regulation of data protection and privacy in the EU is the responsibility of national data protection authorities (DPAs) such as the ICO (Information Commissioner's Office) in the UK and the DPC (Data Protection Commission) in the Republic of Ireland. Under the UK's Withdrawal Agreement with the EU,[233] setting out the terms of the UK's exit from the EU, at the time of this market study we are in a transition period until the end of 2020 to allow time to negotiate a new relationship with the EU. After the transition period ends, the

[231] See Appendix A for more information on the legislative data protection framework.
[232] For example the Bundeskartellamt prohibition decision B6-22/16 Facebook Inc. and others dated 15 February 2019 (currently under appeal),and the decision of the Autorità Garante della Concorrenza e del Mercato, dated 29/11/2018, against Facebook for violations of the Consumer Code.
[233] New Withdrawal Agreement, October 2019.

ICO will remain the independent supervisory authority for the UK's data protection legislation.[234]

Box 4.3: Data protection legislation

The role of data protection legislation is to protect consumers' fundamental rights and freedoms including their right to the protection of their personal data, in a system that enables the free flow of personal data. The General Data Protection Regulation (GDPR), the Data Protection Act 2018, and the Privacy and Electronic Communications Regulations 2003 together provide the framework for the lawful, fair and transparent processing of personal data, setting overarching data protection principles and data protection rights.

The ICO explain that 'Data protection is about the fair and proper use of information about people. It's part of the fundamental right to privacy – but on a more practical level, it's really about building trust between people and organisations. It's about treating people fairly and openly, recognising their right to have control over their own identity and their interactions with others, and striking a balance with the wider interests of society. It's also about removing unnecessary barriers to trade and co-operation. It exists in part because of international treaties for common standards that enable the free flow of data across borders. The UK has been actively involved in developing these standards'.[235]

Integral to this framework is enabling consumers to have effective control over the processing of their personal data and to be empowered to make informed and granular choices over its processing (who, what, when, for what purpose(s), for how long, etc.) which includes rights like data portability, so that in certain circumstances they can transfer their data to another service provider if they want.

In the context of personalised advertising, this means that there needs to be an appropriate legal basis for processing personal data about consumers, consumers need to be appropriately informed about the choices available to them, and to be able to exercise their rights so as to have appropriate control over how their data is used.

[234] The government intends to incorporate the GDPR into UK data protection law from the end of the transition period – so there will be little immediate change to the core data protection principles, rights and obligations in the GDPR. During this transition period the ICO will engage in the co-operation and consistency mechanism under GDPR and continue to be a lead supervisory authority. Following transition, the Data Protection Act 2018 (DPA 2018), which currently supplements and tailors the GDPR within the UK, will continue to apply.
[235] What is data protection?, Introduction to Data Protection, in the ICO's Guide to Data Protection.

4.38 For processing of personal data to be lawful under the GDPR, it requires a lawful basis. Under the GDPR, the lawful basis applies in the context of generally applicable prescribed 'data protection principles' such as fairness, transparency, purpose limitation and data minimisation which apply to all processing of personal data. The main lawful basis identified by market participants for the lawful processing of personal data in this market study have been consent, contract and legitimate interests (Box 4.4).[236]

Box 4.4: Potential lawful bases identified by market participants

- **Article 6(1)(a) Consent** – which means a freely given, informed, specific and unambiguous indication of the consumer's wishes by way of a statement or clear affirmative action, which signifies agreement to the specific processing of their personal data, and is as easy to withdraw as to give.[237] For consent to be valid it has to be a genuine, free and appropriately granular. It must be 'opt-in' not 'opt-out' and the consumer must have ongoing control over the specific processing of their personal data which is taking place.

- **Article 6(1)(b) Contract** – which means the processing is necessary for the performance of a contract with the consumer. The processing must be objectively necessary to deliver the purpose of the contract. The fact that processing may be covered by a contractual term does not automatically mean that the processing will fulfil this requirement.

- **Article 6(1)(f) Legitimate interests** – means processing can be lawful if it is necessary for the legitimate interests pursued by the controller or a third party. To rely on this basis the controller must properly carry out a three-part legitimate interests assessment that includes a balancing exercise to establish whether the interests and fundamental rights and freedoms of the consumer override the legitimate interests in that situation.

4.39 The GDPR does not specify a 'hierarchy' within these types of lawful basis. The ICO's guidance clarifies that no single basis is 'better' or more important than the others – the one that is most appropriate depends on the controller's

[236] See Appendix A for more information on the legislative data protection framework. Article 6 of the GDPR also provides for processing where necessary (c) for compliance with a legal obligation (d) to protect vital interests and (e) for the performance of a task carried out in the public interest or in the exercise of official authority. These bases were not identified as the basis for operating an online platform or for digital advertising.
[237] As explained in Appendix A, consent is a defined term in the GDPR (Art. 4 (11)), with further provision made throughout the GDPR for example Art.7 'Conditions for consent'.

purpose and its relationship with the individual. However, in some circumstances it will be appropriate to rely on one lawful basis over another.

4.40 We note that in the context of real time bidding the ICO's view is that where personalisation of advertising involves the placing of cookies or similar technologies, consent is likely to be the most appropriate lawful basis. This is due to the requirements of the Privacy and Electronic Communications Regulations 2003. This is explained in the ICO's Update Report into AdTech and RTB[238] and its guidance on consent.[239] Where personalisation does not involve the placing of cookies other lawful basis can be considered on a case by case basis.

4.41 However the ICO, EDPB (European Data Protection Board) and other third parties who responded to our study, have questioned whether contract or legitimate interests are likely to provide appropriate legal bases for the processing of personal data for personalised advertising as currently practised. For a contractual basis, clauses about advertising are likely to be ancillary to the main purpose of the contract and therefore would not be necessary for the performance of the contract.[240]

4.42 In relation to legitimate interests, the ICO's view is that in the context of the intensive processing of personal data involved in personalised digital advertising, it is unlikely that the legitimate interests of a data controller to process consumers' data to serve personalised advertising would override the rights and freedoms of the consumer.[241]

Consumers' understanding and attitudes about the use of their data

4.43 Information about how data is used is critical to consumers being able to make effective decisions about how much data to share, which enables them to play an active role in the process of competition. Consumers may not choose the most suitable products or services for their needs if they do not have all the relevant information or technical knowledge they need when making decisions. If consumers are engaged, this should enhance firms'

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[238] ICO update report into adtech & RTB, 20 June 2019.
[239] ICO guidance on consent.
[240] The ICO's 'Guide to the general data protection regulation', page 65, example of online targeted advertising, which is consistent with the EDPB, 'Guidelines 2/2019 on the processing of personal data under Article 6(1)(b) GDPR in the context of the provision of online services to data subjects', version 2, 8 October 2019, paragraphs 51 to 56.
[241] ICO update report into adtech and RTB, 20 June 2019, page 18, which is consistent with the EDPB/Article 29 Working Party guidance, eg pages 46 and 47 of Opinion 06/2014 on the notion of legitimate interests of the data controller under Article 7 of Directive 95/46/EC, 9 April 2014 and page 68 'Example 26', and references therein.

incentives to compete to serve these customers and in turn drive up value for money and innovation.

4.44 In this section we start with a discussion of the challenges facing consumers when it comes to making decisions involving privacy and the use of their personal data. We then move on to review the evidence – in terms of both academic and consumer survey research – on the extent of consumers' knowledge, understanding of, and attitudes to, data processing; and whether consumers are likely to be in a position to make informed decisions about sharing their data with online platforms. In particular, we consider the evidence on knowledge and attitudes towards personalised advertising.[242]

4.45 Our overall finding is that consumers face significant challenges in choosing the best course of action for them. These challenges can be exacerbated by the actions of the platforms they are dealing with, especially if those firms have market power.

Privacy decisions – the challenge facing consumers

4.46 Decisions about sharing personal information typically involve a trade-off for the consumer. In order to access a service or to benefit from a price discount etc, the consumer has to disclose some data about themselves to the firm. It is therefore up to the consumer to decide how much they value a service and whether those benefits outweigh the costs that arise from that loss of privacy. All other things being equal, we might expect that the more valuable the service, the greater the privacy 'cost' a consumer would be willing to accept and the more data they would be prepared to share.

4.47 We note that academic research on privacy-related decision-making (eg Brown (2001), Acquisti (2004), Barnes (2006), Acquisti et al (2016), Kokolakis (2017), Barth and de Jong (2017)) has discussed the existence of what has been termed a 'privacy paradox' in relation to the consumers in an online environment. That is, in surveys consumers will report that they are very concerned about their privacy but they then behave in a way that contradicts this clearly stated preference eg by not taking advantage of privacy controls that are available to them. There is a debate as to whether this is in fact a genuine paradox (eg consumers could be acting in a rational way and properly evaluating the costs and benefits), or whether there are factors at work which prevent consumers from being able to make effective choices. This is explored below.

[242] Appendix L provides a fuller review of the consumer survey and academic research in relation to consumers' understanding, attitudes and behaviour in respect of the use of their data.

Consumers acting rationally

4.48 One argument is that consumers may be behaving rationally in the face of the scale of the transaction costs associated with fully evaluating the costs and benefits associated with signing up to use an online service provider. When it comes to not reading privacy policies,[243] consumers may be making the rational calculation that the cost of reading the policy (in terms of the time it would take to read it) exceeds the benefit of doing so and so choose to accept the terms and conditions without reading the privacy policy to avoid incurring that cost.

Consumers' ability to act rationally is impeded

4.49 Another argument is that there are a range of factors which make it difficult for consumers to make effective choices.

4.50 Decisions about privacy and the disclosure of personal information tend to be heavily context-specific. Decisions about privacy can be influenced both by the nature of the personal information being shared and the organisation to whom that personal information is disclosed. For example, research indicates that consumers are more willing to share data with public authorities than they are with private businesses. The upshot is that general statements about privacy preferences may be of limited significance when it comes to trying to predict privacy decisions in specific circumstances.

4.51 There are also other factors which will make it difficult for consumers to make properly informed decisions relating to privacy trade-offs. One key factor is that it is difficult for consumers to anticipate what the long-term implications might be of sharing their data with platforms and so they are having to make decisions based on imperfect or asymmetric information. The large amount of information available online can make it difficult for consumers to identify information that is most relevant to them and, in particular, the way in which online services curate information may not be fully transparent.

4.52 In addition, behavioural biases and cognitive limitations can also impact on consumers' decision-making. Acquisti et al (2015) have argued that uncertainty and context dependency mean that people may not be able to navigate the complex trade-offs involving privacy in a self-interested fashion.

4.53 Research suggests that consumers with privacy concerns can be reluctant to take the necessary steps to become more informed, even when the

[243] A 'privacy policy' is the statement or legal document which sets out the ways in which a firm will collect, use, disclose and manage a consumer's data. It informs the consumer what specific information is collected, and whether it is kept confidential, shared with partners, or sold to other firms or enterprises.

information to protect their privacy is made readily available (Acquisti and Grossklags, 2005). Other research has also found that where securing privacy requires additional effort or comes at cost of a less smooth user experience, consumers were quick to abandon technology that would offer them greater protection (Athey et al, 2017).

4.54 There is also research which indicates that some consumers believe that a privacy policy means that their privacy is protected as the default (Turow et al, 2007, Martin 2015). A majority of consumers believed that the term 'privacy policy' described a baseline level of information practices that protected their privacy.[244] When consumers saw the term 'privacy policy, 'they believed that their personal information would be protected and, in particular, they assumed the website would not share their personal information.

4.55 The factors set out above would mean that making decisions involving privacy considerations is challenging at the best of times. However, the same factors also mean that consumers can be influenced in the decisions they make about what data they share and how much information they disclose on an on-going basis. How platforms choose to make use of default settings, how the choice of privacy setting is presented to consumers and what language is used to describe the privacy settings (the 'choice architecture') all have an influence on consumer choices.

4.56 Thaler et al (2014) have pointed out that choice architects may not always have the best interests of the people they are influencing in mind. In an online environment, choice architecture can be employed to shift consumers towards behaviours that primarily benefit data collection organizations (Acquisti et al, 2015). Because personal data is highly valuable to platforms for personalised advertising and developing user services, there is a considerable incentive for them to maximise the volume of data they collect from their users. We consider these issues further below.

Consumers are not in a position to make active choices

4.57 There is also an argument that consumers may simply not be making any assessment of the risks involved in sharing their data. For instance, a consumer may feel that they have no agency or control and have little choice but to accept terms that are presented on a 'take it or leave it' basis. This will be a particular issue where platforms have become 'must haves' for many users and have substantial market power.

4.58 In the case of decisions about privacy in an online setting, it is difficult a priori to determine which of these explanations is most relevant. Barth and de Jong (2017) suggests that all three explanations (ie consumers acting rationally; consumers' rationality being impeded; and consumers not being in a position to make active choices) are likely to be relevant to explaining consumer behaviour with respect to privacy in an online environment. We assess each of these factors in our discussion of concerns below and our assessment of potential interventions in Chapter 8.

Consumers' understanding and attitudes about the use of their data

4.59 Given the challenges facing consumers in making privacy-related decisions outlined above, we set out some of the key findings from our review of the consumer survey evidence on consumers' knowledge and understanding about the use of their data.

4.60 We recognise that consumer survey evidence can involve consumers stating preferences for particular positions or outcomes and that these stated preferences might then differ from consumers' actual behaviour. We base our findings on a range of available consumer surveys and look to identify those findings which are supported across a number of different surveys. We use this review to inform our analysis of the issues facing consumers.[245] As set out in more detail later in this chapter we also then take into account information from a range of other sources including data on the levels of consumer engagement and our analysis of the way in which platforms have actually structured their privacy policies and controls.

Consumers have limited knowledge and understanding about the use of their data

4.61 Most consumers are not sure what information online platforms hold about them, but there is a higher recognition for information that consumers actively provide compared to information that is passively collected (eg IP addresses).

4.62 There is a common perception that platforms collect a large amount of data, but few consumers are aware of the true volume of the data that is or can be collected.[246] Moreover, consumers generally appear only to have a basic

[245] We note that many of the findings set out below echo the findings of the CMA's 2015 report, 'The Commercial Use of Consumer Data' which assessed a large number of survey findings and found that consumers lacked awareness of how and why their data was collected and were unhappy with how well firms explained this. Many consumers felt they lacked control over the collection and use of their data and wanted more control; but many also did not actively engage with these mechanisms and, where they did, were not always sure what they were agreeing to. Many consumers shared data despite their concerns, possibly because they felt they had no choice.
[246] Ipsos MORI (2016a). Digital footprints: Consumer concerns about privacy and security.

understanding of what is involved in the processing of their data[247] and that understanding may be shallow.[248] Few consumers are aware of the extent to which data sharing occurs or that data can be combined to form profiles before being shared.[249] Given advances in data processing and computing power, it seems unrealistic that consumers can anticipate how their data will be used.[250]

Consumers have concerns about data processing

4.63 Most consumers say they are either uncomfortable with data processing or have concerns about their privacy.[251] For example, consumers say that they are concerned about their data being shared and this concern is magnified when the data sharing is perceived to be happening without their consent.[252] These concerns are not assuaged when consumers find out what is really happening with their data – the evidence suggests that as consumers learn more about data processing, they become increasingly concerned.[253]

4.64 In addition to concerns about how their data is used, consumers also report that they lack trust in the platforms they use, with only a minority stating they trust the platforms they use with their data. Social media platforms in particular are consistently ranked as the least trusted platform in surveys – as low as 9% stating that they trust them in one survey.[254]

4.65 Consumer attitudes and concerns about the use of their data may change depending on the use of the data – for example, consumers may be happy for their data to be shared for public health reasons, but less so for commercial products and services.

Consumers have concerns about the data processing involved in personalised advertising

4.66 In terms of consumers' attitudes to personalised advertising, consumers generally report that they prefer to receive advertising that is relevant to them and their interests. However, as they learn more about the data processing

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[247] Which? (2018). Control, Alt or Delete? Consumer research on attitudes to data collection and use.
[248] DotEveryone (2020) People, Power and Technology: The 2020 Digital Attitudes Report.
[249] Which? (2018). Control, Alt or Delete? Consumer research on attitudes to data collection and use.
[250] Stigler Center (2019). Stigler Center committee on digital platforms – Market structure and antitrust subcommittee.
[251] The European Commission (2016c). Special Eurobarometer 447: Online platforms; and Ipsos MORI (2016a). Digital footprints: Consumer concerns about privacy and security.
[252] Ipsos MORI (2016a). Digital footprints: Consumer concerns about privacy and security.
[253] Which? (2019). Data dozen segmentation update; and Harris Interactive (2019). Adtech – Market research report.
[254] Information Commissioner's Office (2018). Information Rights Strategic Plan: Trust and Confidence; and Ipsos MORI (2016a). Digital footprints: Consumer concerns about privacy and security.

that is involved in serving personalised advertising, they become more uncomfortable with the use of their data for this purpose.

4.67 It is important to note that not all consumers are aware of the role that advertising plays in the business models of online platforms. A survey by Ofcom found that only about half (53%) of all adults identified advertising as the main source of funding for search engines.[255] This suggests that not all consumers will be aware that their data is used in a way that helps fund these services.

Consumers prefer relevant advertising until they understand it involves their data

4.68 When asked about their attitudes to digital advertising, a majority of consumers report that they prefer advertising to be 'relevant' to them. For example, in a report for Ofcom and the ICO, Harris Interactive found that 54% of participants reported that they prefer advertising that was relevant to them rather than seemingly random ads.[256] Focus groups run for Which? also found that most participants preferred targeted advertising and personalised discounts to non-targeted advertising and generic discounts.[257] However, we consider that this stated preference for 'relevant' advertising does not reflect the full picture of consumer attitudes. In particular:

- Research by Ipsos MORI found that only 5% of respondents felt that they benefited greatly from companies using their personal information to send personalised adverts and marketing material. In addition, only a small minority of all consumers say that they are happy to share their data in order to receive relevant advertising. For example, Ofcom found that only 13% of respondents said that they were happy for online companies to collect and use their data to show more relevant adverts or information.[258]

[255] Ofcom, Online Nation 2020.
[256] Harris Interactive (2019). Adtech – Market research report.
[257] Which? (2018). Control, Alt or Delete? Consumer research on attitudes to data collection and use.
[258] Ofcom, Online Nation 2020.

- Furthermore, surveys indicate that once consumers understand more about how targeted advertising works, they become more concerned about the data processing that is involved and can potentially be less willing to receive advertising that is personalised. For instance, the Harris Interactive research for ICO and Ofcom referred to above found that after providing a description of how 'real-time bidding' in advertising worked, the percentage of respondents who said they did not prefer relevant ads increased from 20% to 61% and they felt less in control of their data. The research for Which? also found that the more consumers understood about how targeted advertising works, the more they became uncomfortable with. In addition, consumers could then become less willing to receive personalised advertising.

4.69 The surveys of UK consumers that we have reviewed tend to focus on issues of consumers' knowledge, understanding and attitudes to data processing and privacy issues in general. The number of surveys which specifically deal with attitudes towards online advertising is limited and we have reported all the recent evidence that we are aware of.

4.70 Facebook has argued that this evidence is insufficient to support the proposals set out in our interim report, but it has not provided us with any evidence which contradicts the evidence set out above. As indicated above, we do not rely just on evidence from consumer surveys to inform our analysis of the issues facing consumers but we have also considered various metrics on the levels of user engagement and reviewed the way in which choices are presented to consumers.

Consumers do not feel they have control

4.71 Given the concerns outlined above, we consider the extent to which consumers feel that control over their data is important to them and that they are able to exercise control over the use of their data.

4.72 Consumers place importance on their ability to control access to their data: a 2016 survey by the European Commission found that 96% of UK consumers thought that it was important that their personal information on their computer, tablet or smartphone could only be accessed with their permission.[259]

4.73 Many people see data collection as a part of modern life: both Which? and the Direct Marketing Association (DMA) found that the majority of respondents in

[259] European Commission (2016). Flash Eurobarometer 443: e-Privacy.

their qualitative interviews believed that data processing was a part of everyday life.[260]

4.74 At the same time, the majority of people feel that they have little control of the data collected about them. For instance, Ipsos Mori found that 69% of consumers felt they had little or no control over their online data.[261] Similarly, in 2019 a survey by the European Commission found that 84% of UK respondents felt that they had only partial or no control over their online data.[262]

4.75 Consumers have also reported that it was hard to effectively engage with companies who collect and use their data because of a perceived lack of alternatives if they want to stop using specific companies whose data collection they are concerned by.[263]

4.76 Other evidence indicates that a significant majority of consumers would like more control – for instance the DMA found that 86% of respondents wanted more control over the personal information they give companies.[264] We consider that the available evidence supports the conclusion that consumers want more control over the use of their data.

Consumer attitudes differ according to demographic and other factors

4.77 Within these overall results, the survey evidence suggests that consumer attitudes towards data differ according to a range of factors. In particular, consumers' acceptance of data processing is heavily influenced by demographic factors, the nature of the data involved, and with whom the data is being shared.

- Overall, younger consumers and those who describe themselves as confident internet users are more likely to be comfortable with data processing. In 2019, Ofcom found that 33% of respondents aged between 16-24 were unhappy with companies collecting and using personal information for any reason, compared to 55% of those between 55-64.[265]

- Consumers tend to be reluctant to share sensitive personal information. The Open Data Institute found that while 53% of respondents were

[260] See Data and Marketing Association and Acxiom (2018). Data privacy: What the consumer really thinks; and Which? (2018). Control, Alt or Delete? Consumer research on attitudes to data collection and use.
[261] Ipsos MORI (2016). Digital footprints: Consumer concerns about privacy and security.
[262] European Commission (2019). Special Eurobarometer 487a: The General Data Protection Regulation.
[263] Which? (2018). Control, Alt or Delete? Consumer research on attitudes to data collection and use.
[264] Data & Marketing Association and Acxiom (2018), GDPR: A Consumer Perspective.
[265] Ofcom, Adults' Media Literacy research (2019).

comfortable sharing their name with an organisation they knew, only 22% were comfortable sharing their medical records.[266]

- Consumers say that they generally trust public organisations more than many private sector organisations. The European Commission asked UK respondents who they trusted to protect their personal information and found that 81% trusted health and medical institutions compared to 32% that trusted online businesses.[267]

Consumer engagement with privacy policies and controls

4.78 As indicated above, consumers express concerns over privacy and a lack of control over the use of their data. In this section we look at the evidence we have gathered from the platforms, and from third party research, on how consumers actually behave when it comes to engaging with privacy policies and the privacy controls and settings that are available to them.

4.79 We have considered a range of metrics, including numbers of users who access privacy policies or who engage with different privacy controls and settings and time spent on privacy policies. Taken together we consider that this information points to the fact that consumer engagement with privacy policies and settings is very low.

There is limited data on consumer engagement

4.80 We found it surprising that most of the platforms we contacted[268] were only able to provide limited data about consumer engagement with privacy policies or controls. In some cases, platforms do not collect data. In other cases, such data is only retained for a very short period of time. For instance, none of the twelve platforms we contacted could tell us how many consumers accessed their privacy policy during registration.

4.81 Moreover, only a limited number of platforms (Facebook, Google, Verizon Media and TikTok) could provide data about how consumers use the settings and controls that are available to them. Even then, that data was often limited in detail or deleted after a short period of time. For example, Google was unable to provide historic data as it usually only maintains this data for 28 days before being deleted.

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[266] Open Data Institute (2018). Attitude towards data sharing – Europe.
[267] European Commission (2015). Special Eurobarometer 431: Data protection.
[268] We requested information from 12 leading platforms.

4.82 The lack of data collected by platforms stands in stark contrast to the substantial collection of data in other parts of their business and means there is very little evidence on how consumers behave in practice. This makes it hard to determine how much consumers care about privacy and whether an online platform's approach to privacy is effective in promoting consumer engagement.

4.83 Further, this lack of evidence suggests that understanding consumers' engagement with privacy controls is less of a priority for these platforms than other aspects of their business. This approach does not appear consistent with ICO guidance issued to platforms which suggests that collecting such data 'will help you improve the effectiveness of your delivery of the information'.[269]

Few consumers engage with privacy policies or controls on a regular basis

4.84 As we noted above, survey evidence suggests that consumers want to control the use of their data, but their engagement with information about how their data is used or the controls that are available to them is very low.

Engagement with privacy policies

4.85 Despite their concerns with how their data is used, few consumers report engaging with privacy policies, settings and controls[270] on a regular basis. For instance, research by the ICO found that only a small minority of consumers reported that they always read privacy policies or terms and conditions.[271]

4.86 Academic research supports the proposition that consumers do not typically access privacy policies and suggests that the actual levels of engagement may be very low indeed. Bakos et al (2014) found that only 0.05% of agreements were accessed by consumers before they consented to them. More recently in an experimental study, Obar & Oeldorf-Hirsch (2018) found that 74% of respondents did not open the privacy policy.

4.87 When consumers sign up to a service, they are asked to review the privacy policy. However, no platforms were able to tell us the proportion of consumers who accessed their privacy policy when first using their service or creating an account.

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[269] ICO general guidance on GDPR – 'how should we draft our privacy information.
[270] By privacy settings and controls, we mean the tools by which consumers can control or restrict the data which firms collect about them, such as whether or not they receive personalised advertising and what location information is collected about them.
[271] Information Commissioner's Office (2019). Information Rights Strategic Plan: Trust and Confidence.

Consumers' time spent on privacy policies

4.88 As well as indicating that consumers do not typically access or read privacy policies, academic research has also measured the amount of time that those consumers who do access privacy policies spend reading them. The Bakos et al (2014) study referred to above found that the consumers who did access an End User Licensing Agreement ('EULA') spent an average of just over one minute on the EULA page (with the median time being just over 30 seconds). Similarly, the Obar & Oeldorf-Hirsch (2018) study found that of the users who accessed the privacy policy, the reading time was 73 seconds.

4.89 We have limited data available on the time spent by consumers on privacy policies but it appears to be in line with the findings of the academic research that the time consumers spend on privacy policies is very short.

4.90 Data provided by Google for a 28-day period across September and October 2019 showed that the average visit to the Privacy Policy Web page lasted 47 seconds with 85% of visits lasting less than 10 seconds and only 0.4% of visits lasting over 30 minutes. Given that for UK consumers Google's privacy policy totals over 4,500 words this is a very short time for reading the policy and indicates that consumers are not able or willing to engage with privacy policies of this length or complexity.

4.91 To explore this further, we also asked Google for information on the 'bounce rate' for its Privacy Policy page. A bounce is defined as a single-page session on a website. In Google Analytics,[272] a bounce is calculated specifically as a session that triggers only a single request to the Analytics server, such as when a user opens a single page on the website and then exits without triggering any other requests to the Analytics server during that session. The bounce rate is defined as the percentage of all sessions on the site in which users viewed only a single page and triggered only a single request to the Analytics server as opposed to clicking through to view other linked pages. The bounce rate for Google's Privacy Policy page for users in the UK for the 28-day period to the end of 28 February 2020 was [over 75%]. This suggests that most viewers only looked at the page and did not follow up any links or engage with the additional material there about how their data is used.

4.92 We note that Google considers that the bounce rate is not an adequate way of measuring engagement with the Privacy Policy, given that the metric does not distinguish between sessions in which users i) read the entire Privacy Policy; and ii) sessions where users navigate from the Privacy Policy page to external

[272] See: Google analytics help – bounce rate.

controls. However, we note – from internal documents – that the bounce rate is a metric which Google has itself taken into account when considering the design of its Privacy Policy.

4.93 Taken together with the data on the amount of time that consumers spend on the Privacy Policy web page, we consider that this indicates that consumers do not spend time further investigating information – in particular where this is presented in a 'layered' form that requires them to click through to find out more. As a result, consumers are not engaging in a meaningful way with Privacy Policies.

Engagement with privacy settings and controls at sign-up

4.94 We also wanted to understand the choices consumers make about specific privacy controls and settings when they sign up to platforms.

4.95 From the data that platforms were able to provide, it is clear that consumer engagement with privacy settings is very low at registration: very few consumers change the default settings at registration or within 30-days of registering.

4.96 For example, Table 4.1 below sets out data from Google which indicates that only a very small percentage of consumers engage with privacy settings during the account creation phase.[273] Where consumers do engage with privacy controls at this stage, they are more likely to disable features than enable them.

Table 4.1: settings changed by Google's UK consumers during account creation[274]

Change	Percentage of total user accounts who make this change during account creation
[✂]	[0–5]%
Enable location history	[0–5]%
[✂]	[0–5]%
Enable voice and audio activity	[0–5]%
Disable ads personalisation	[5-10]%

Source: Submitted to the CMA by Google in response to a request for information.

4.97 We asked Facebook for similar data for new users over a broadly comparable 28-day time period. The data from Facebook, in Table 4.2, shows a similar picture in terms of a very low proportion of new users engaging with a setting or tool.

[273] The data in this and the following tables have all been rounded to the first decimal point.
[274] The data provided spans a 28-day period across February and March 2020.

Table 4.2: Facebook UK users who view a settings page or control within 30 days of creating an account

Privacy setting or control	New users who registered over 28-day period to 28th February 2020 and viewed a setting or tool within 30 days of creating an account
Facebook ad preferences	[0–5]%
Facebook privacy check-up	[0–5]%

Source: CMA calculations based on data submitted by Facebook in response to a request for information.

Engagement with privacy settings and controls across all active users

4.98 Consumer engagement with privacy settings and controls varies between different controls. Data provided by Google indicates that in a 28-day period across February and March 2020:

- [0-5]% of its active UK customer base engaged with their Google Account (Data & Personalisation tab).
- [0-5]% engaged with Privacy Checkup.
- Overall, [5-10]% of its active UK customer base accessed at least one of the following privacy controls or settings over a 28-day period:[275] Privacy Checkup, Privacy Advisor, My Activity, Activity Controls, Ads Settings, Google Dashboard, Takeout, Google Account (Data & Personalisation tab) or Privacy Policy.

4.99 For Facebook, over the 28-day period (to 28 February 2020) [0-5%] of its overall active UK user base engaged with the Ad Preferences setting and [0-5]% engaged the Privacy Checkup tool. The tool with the highest level of engagement over this period was the 'Why Am I Seeing This Advert' tool with [0-5]% of users engaging with it. We note that engagement with the Privacy Check-Up tool is broadly similar to the data reported by Google for a comparable period.

4.100 We also note that Facebook introduced an 'Off-Facebook Activity' feature for its users in 2019, allowing users to: (i) view a summary of their off-Facebook activity; (ii) disconnect this information (ie in relation to past data) from their Facebook account; and/or (iii) disassociate this data from their Facebook account going forward (disconnected or disassociated data is not used to target an ad to a user). Users were required to opt-out on their settings page if they wanted to exercise this option, and we found that [0-5]% of users who were given this option at the end of 2019 exercised it.[276] This is a clear example of the power of defaults in influencing decision making. We note also

[275] The 28-day period was the period to 6th March 2020.
[276] The feature was only rolled out to a sample of users towards the end of 2019.

that recent qualitative research by Which? that none of the participants in that research were aware of this tool despite being selected on the basis that they were regular users of Facebook. Furthermore, the participants in that research reported a clear preference for opting-in, rather than opting-out, to data collection for targeted advertising.[277]

Parties' views

4.101 Google has argued that it does not consider that user engagement statistics are, on their own, generally a good proxy for the degree to which users are engaging with their privacy options and feel in control of how their data are used. It argues that there are many other factors that determine user engagement and that it uses a range of tools to bring privacy settings to users' attention – for example, regular emails reminding users to check their settings or in-time product notices.

4.102 Google has also argued that when assessing user engagement with privacy controls, we should give consideration to an organisation's adoption of this type of layered transparency and steps taken to bring users' attention to information about data collection and controls at the most opportune times when they interact with services and features. This reduces the need for users to visit underlying account settings and controls

4.103 We invited Google to suggest other metrics that would better measure user engagement. Google has responded to say that it is actively considering new metrics. One example of such a metric that Google has recently generated is the percentage of users who have visited the Google Account (or Android Me Screen) in the previous year out of those users who have been active in the previous 28 days. Google reports that around 64% of users have done this.

4.104 Similarly, Facebook has argued that considering figures on user engagement in isolation would underestimate overall user engagement with Facebook's privacy tools. It has argued that the data on user engagement:

- do not account for users who engaged with Facebook's other numerous privacy settings, such as those available in every post on News Feed;
- do not include users who provided limited information to Facebook at sign-up and therefore had no desire to engage with their privacy settings subsequently; and

[277] Which?, Are you following me? - Consumer attitudes towards data collection methods for targeted advertising, June 2020.

- do not account for the fact that many users may have reviewed the Facebook Data Policy prior to registration and, being content with this, have not had an interest in further engaging with Facebook's privacy settings, controls and tools.

4.105 However, Facebook has not provided any data on overall user engagement with these other privacy tools to support its arguments above.

4.106 We recognise the argument that any one specific statistic on user engagement on its own may not be a good proxy for the actual levels of consumer engagement. However, when taken together the various statistics presented above do point towards a consistent lack of meaningful engagement with privacy policies and privacy controls and settings on the part of UK consumers.

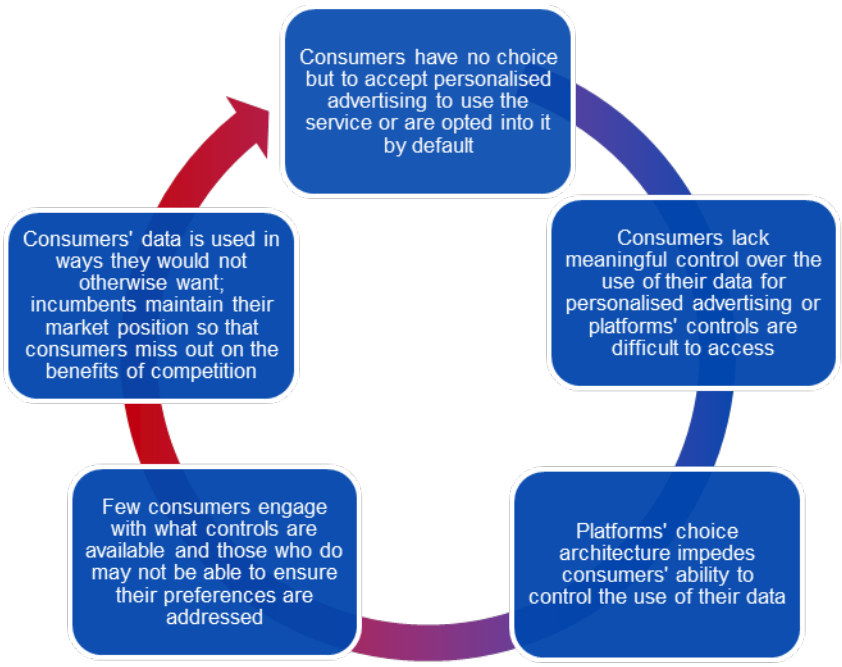
4.107 As before we recognise that these results are only for two online platforms – albeit the major ones – and that consumers may engage with policies or settings on other platforms differently. However, consumer survey and academic research suggests that consumers do not generally engage with privacy policies so this behaviour is likely to be common across other platforms as well.

4.108 Given consumers' expectations and concerns, we address below platforms' practices in terms of the level of control they provide over the use of their users' personal information.

Our concerns about consumer control

4.109 We are concerned that consumers have limited control over how their data is used, and are often compelled or nudged to agree to their data being used for personalised advertising when many may prefer a different option. As a result, people can find themselves being signed up to the default settings of the platform. The impact of this is that the terms by which personal data is being used are largely determined by the platforms themselves rather than by consumers – with negative implications both for consumer welfare and competition. This is set out in Figure 4.2.

Figure 4.2: Factors driving a lack of consumer control



Source: CMA assessment.

4.110 Platforms could give clearer up-front explanations of how they use consumers' data as well as providing their users with choice and control, but instead have tended to limit consumer engagement and control by:

- Setting a requirement such that **consumers often have no choice but to accept personalised advertising** if they wish to use the service at all (this is the case for many social media platforms) or by **using primary default settings** that require consumers to make the effort to opt out.
- Using **wider choice architecture** that has the effect of discouraging easy engagement – through poor accessibility and clarity, unbalanced presentation and barriers to consumer action.

Consumer harm from barriers to engagement

4.111 Several harms are likely to arise from the lack of control and barriers to effective engagement we have identified. In summary, consumers may:

- Use a platform that, with greater knowledge or ability to make choices about the use of their data, they would not have used.
- Share more data than they might otherwise choose to.
- Not receive a fair return for their data (which platforms can monetise through advertising).

- Not experience the benefits of competition, such as more choice and innovation.
- Have lower trust generally in the internet and digital service providers.

4.112 These harms may be magnified for more vulnerable consumers, who may have more constrained capacity to make informed decisions and be more susceptible to techniques which nudge them; and who in some cases may be particularly reliant on services such as social media.

4.113 A recent study by the Centre for Data Ethics and Innovation specifically addressed the issue of online targeting.[278] This found that although the public appreciated the benefits from targeting, it also identified that there was a '…deep concern about the potential for people's vulnerabilities to be exploited; an expectation that organisations using targeting systems should be held to account for harm they cause; and a desire to be able to exercise more control over the way they are targeted'. The report noted that whilst most people did not want targeting stopped, they did want to know that it is being done safely and ethically; and they wanted more control.

4.114 The complex ecosystem around digital advertising means that data has to be shared in order to target advertising and platforms are incentivised to collect personal data in order to target ads as well as delivering their core services. However, by restricting consumers' ability to exercise effective choice or control over the amount of data they share and the purposes that this will be used for, we consider that platforms are preventing consumers from making active choices between different services on the basis of amount of data processing that the firms are undertaking. This will undermine competition in online markets.

4.115 Where platforms do allow consumers to opt out of personalised ads, we found that almost all the platforms we reviewed did not make it clear to consumers whether their data may continue to be collected and processed as before.

Firms with market power

4.116 *For firms with* market power, consumers will be in less of a position to switch away to use other services, so it is even more important that consumers can engage effectively with decisions about how their data is processed. Due to network effects, the largest platforms are 'must haves' for many people

[278] Centre for Data Ethics and Innovation, Review of Online Targeting, February 2020.

wanting to stay in touch with friends and family. Other survey evidence suggests that consumers feel:

- reliant on data-driven services which they do not believe they can give up;[279] and
- a perceived lack of alternatives if they want to stop using specific companies whose data collection they are concerned by.[280]

4.117 This suggests that many consumers who sign up are likely to feel that they do not have the choice of switching away to an alternative platform to avoid their data being used in personalised advertising. As we note above, recent research found that nearly half of respondents (47%) felt that they had no choice but to sign up to services despite concerns. The same research found that 45% of respondents felt that there was no point reading terms and conditions because companies would do what they wanted anyway.[281]

4.118 The net effect in terms of consumer harm is that a large proportion of consumers may make decisions about platforms that they might not otherwise make – that is they may use platforms despite their concerns because they feel they have little choice. In doing so, they will be sharing more data than they might otherwise wish to – particularly where this enables personalised advertising rather than improving the core service.

4.119 Giving consumers more agency and control over the use of their data could mean that platforms have to do more to persuade them of the benefits of continuing to receive personalised advertising. As set out in Chapter 2, the largest platforms are very profitable and so it is possible that consumers are not receiving a fair return for their data, where it is being monetised by the platforms through advertising. For example, in 2019 Facebook made [£50-60] of revenue per user of its platform in the UK.[282] We recognise that if consumers were aware of their value to social media platforms, then many may well consider this a fair exchange given the benefits they derive from social media. However, other consumers might not consider it reasonable. At present, however, consumers are unable to reach a judgement because they are not made aware.

4.120 Given the must-have status of the largest platforms, our concern is that consumers do not have an effective choice about using their platform or not

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[279] Miller, C., Coldicutt, R., & Kitcher, H. (2018). People, Power and Technology: The 2018 Digital Understanding Report.
[280] Which? (2018). Control, Alt or Delete? Consumer research on attitudes to data collection and use.
[281] DotEveryone (2020). People, Power and Technology: The 2020 Digital Attitudes Report.
[282] See Appendix C.

and so are not in a position to make a choice about having their personal data used for personalised advertising. These platforms benefit in terms of the amount of consumer data that they can collect and the resultant value of their services to advertisers.

4.121 If there were more choice for consumers, then there could be scope for more competition between platforms as platforms would need to compete more actively to persuade consumers of the benefits of personalised advertising. There would also be scope for other platforms to compete for consumers on the basis of alternative business models offering different options in respect of the privacy choices and the services that they offer. At present, consumers do not experience the full benefits of competition in terms of more quality, choice and innovation. Given the sheer scale of social media and Facebook, as well as the prevalence of Google as a search engine, the extent of potential consumer harm is considerable.

4.122 In turn this may contribute to the wider potential harms identified in the CMA's 2015 report on 'The Commercial Use of Consumer Data' – including data loss; low trust; and the potential for discrimination.[283]

4.123 As noted above, we also recognise that there could be potential costs to the platforms if consumers choose not to allow their data to be used for personalised advertising and the platforms have to rely on other contextual forms of digital advertising instead. We consider these trade-offs in our discussion of potential remedies in Chapter 8.

Consumer choice over personalised advertising

4.124 We are concerned that platforms often limit consumer engagement and control through either:

- **a requirement for users of social media platforms** that they accept personalised advertising if they wish to use the service; or
- **primary default settings for users of search engines** that can mean consumers need to make the effort to opt out.

4.125 The controls available on search engines and social media platforms differ greatly because of their respective business models. Furthermore, although consumers can also use other controls via the browser or operating system, we find that this is potentially confusing and may not meet consumers'

[283] CMA (2015), 'Commercial use of consumer data' (2015).

expectations of what controls will do. We consider these issues in more detail below.[284]

Search engines

4.126 Unless consumers actively opt out, the most popular search engines serve them personalised advertising. In the case of Google, the user's search query is a key driver of the targeting of advertising, but consumers' data is also used in serving personalised advertising. This typically involves the use of previous activity such as searches and site visits,[285] demographic information and interests, as well as other information such as location, time of day and interactions (for example agreeing to receive updates from an advertiser). As we note above, search engines can process additional data for logged-in consumers.

4.127 Search engines also use location information by default. For example, a non-logged in consumer on Google will receive ads based on their location whether or not they have chosen to see personalised advertising.

4.128 Search engines, including Google and Bing, do allow consumers to turn off personalised advertising, irrespective of whether they are logged in or not, but this requires the consumer to take action. As discussed below this requires considerable effort by consumers and results in most accepting the default chosen by the platform.[286]

4.129 Not all search engines use consumer data for personalised advertising or set that as the default; for example, DuckDuckGo (DDG) does not use personalised advertising at all and instead serves contextual ads based on consumers' search queries.

Social media

4.130 In almost all cases across the social media platforms that we reviewed[287] including Facebook and Instagram, consumers automatically have their data used for personalised advertising. With the exception of TikTok, all other

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[284] Appendix K provides further and more detailed information on the consumer journey. We reviewed the experience consumers may have when using a range of search and social platforms. We looked at the control they have over the collection and use of their data, how easy it is to exercise those choices and how the platforms treat the data of those consumers that do not engage with these. We also considered the wider controls available to consumers, including at device and browser levels.
[285] This includes visits to non-Google websites and apps that have serve ads using Google's ad services (AdSense and AdMob).
[286] We note that Google and Bing provide consumers who have accounts more granular controls over the use of their data for personalised advertising but, in return, this requires the consumer to volunteer information in order to create an account.
[287] Facebook, Instagram, Pinterest, Snapchat, TikTok and Twitter.

social media platforms make this a pre-condition of using their services and consumers are unable to turn off personalised advertising (Box 4.5).

Box 4.5: Social media default settings for personalised advertising

Consumers must accept personalised advertising to access most social media platforms we examined.

- **Facebook** and **Instagram** users cannot turn off personalised advertising. Consumers' activity is used to personalise ads on Facebook and third-party websites and apps. Device-based location settings and facial recognition is turned off by default.
- On **Snapchat**, consumers are opted in by default to being shown 'Audience-Based Ads', 'Activity-Based Ads', and 'Third-Party Ad Networks'.
- **Twitter** always uses information from consumers' activity on the platform, including the location where they signed up and current location, to personalise the ads they see and their experience on the platform.
- **Pinterest** uses information regarding a consumer which has been provided by its partner organisations to personalise that consumer's experience on the platform, including to show them personalised ads.
- By default, personalised ads are not shown to consumers on **TikTok**. Consumers are prompted to review this setting the first time they use the app.

Platforms' granular controls

4.131 For Google and Bing, logged-in consumers volunteer additional information in order to open an account, but also receive more granular controls over the use of their data. For example, logged-in consumers can adjust the interests, and in some cases demographic information, that the platforms assign to them and which are used to tailor ads.

4.132 Social media users typically have no option other than to have their personal data used for advertising in order to use the service. However, consumers do have some controls over the more detailed use of their data.

- On Facebook and Instagram, consumers can see what interest segments they are placed in and manually switch these off, such as removing ads based on a football team. Consumers can opt out of seeing ads on other websites and apps that are based on their Facebook activity and are not

shown ads based on data provided by Facebook's partners but can opt in via Facebook's Ad Preferences. Device-based location settings and facial recognition is turned off by default but can be turned on.[288]

- On Snapchat, users can turn off ads based on information collected about them on third-party services.[289]
- Twitter users can adjust their settings to prevent Twitter from combining their platform activity with personal information obtained by Twitter from its partner organisations.

Other non-platform controls available to consumers

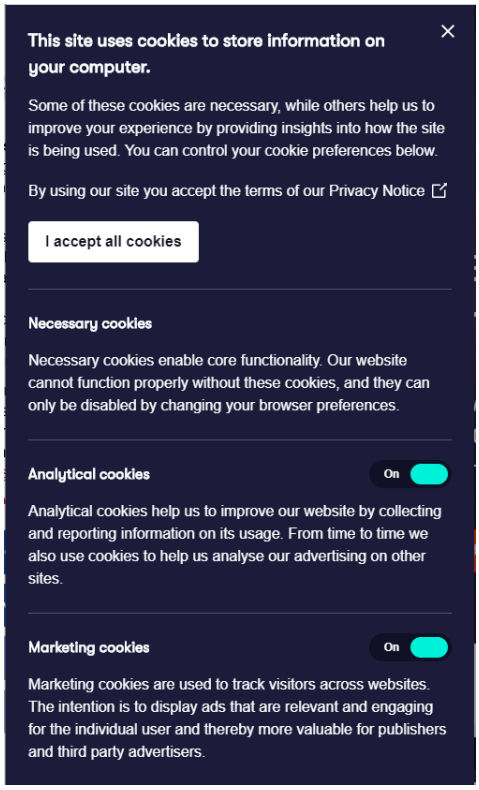
4.133 In addition to platform controls, consumers can control the use of their data in other ways – notably through the browser they use and their device.[290]

- **Mobile device / operating systems**: Most mobile devices use either the Apple iOS or Android operating systems (OS). Both provide consumers with some options to control the collection of their data and its use for personalised advertising.
- **Browsers**: The most widely used web browsers allow consumers varying amounts of control over the collection and use of their data, including for the purposes of personalised advertising. For example, Chrome, the web browser developed by Google, which is generally the default browser for Android devices, offers some of the same functions and privacy settings as those available to consumers using Google's products elsewhere (if the user chooses to sync Chrome with their Google Account).

[288] As we note above, Facebook has also recently introduced an 'Off-Facebook Activity' tool.
[289] These include: 'Audience-Based' ads, based on third-party advertisers' audience lists; 'Activity-Based' ads , based on consumers' activities outside of Snapchat; and 'Third-party Ad Networks', where ad networks are sent data by Snap on consumers which the ad networks then use to provide ad targeting and measurement for Snapchat.
[290] These issues are considered in more detail in Appendix G.

- **Consent Management Platforms (CMPs)**: These are an advertising tech tool which normally appears as a pop-up on a website at the point a consumer visits it. Their primary purpose is to help publishers collect and manage consumer consents via a menu interface, and to pass these on to downstream advertisers and other ad tech intermediaries, to ensure consent is secured for processing data in support of real time bidding (RTB). Compliant websites and apps need to obtain valid user consent before setting cookies and triggering tags or pixels to send bid requests.[291] Consumers are typically asked if they are willing to accept all cookies or to adjust their settings (Figure 4.3). Many sites use the IAB Transparency and Consent Framework (TCF) to collect and share consent.[292]

Figure 4.3: Consent Management Platform



Screenshot: IAB

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[291] Consent must always be obtained before the controller starts processing personal data for which consent is needed. See Article 29 Working Party, Guidelines on Consent under Regulation 2016/679, pp.17-18.
[292] The TCF is a framework, developed by IAB Europe with the digital advertising industry, to help publishers, technology vendors, agencies and advertisers meet GDPR and ePrivacy transparency and user choice requirements, by collecting and transmitting signals of consent from an individual to third party vendors. Site and app operators provide disclosures and seek consumers' consents through a CMP and pass this through the supply chain. IAB Europe maintains a list of registered and compliant CMPs and a Global Vendor List (GVL), of all registered and approved third parties ('Vendors') participating in the TCF. IAB told us that TCF v2.0 enables consumers to grant or withhold consent and exercise their 'right to object' to data being processed on the basis of legitimate interest. In addition to signalling a user's consent choices, the TCF will signal whether a vendor's legitimate interest has been disclosed and whether the user has exercised their right to object. We consider CMPs in more detail in Appendix G.

4.134 These controls can provide additional ways for consumers to address the use of their data. For example, the iOS and Android OS give controls to their users to let them decide about certain data deemed sensitive by the OS permissions models,[293] such as location data.

4.135 Browsers have also taken measures to counter tracking for example, by allowing consumers to clear cookies. Apple and Mozilla have recently started to block third party cookies by default for their Safari[294] and Firefox[295] browsers respectively. Google has announced that it plans to phase out support for third-party cookies for its Chrome browser within two years.[296] We return to discuss this development and its possible impacts in Chapter 5.

4.136 However, there are limits on the controls provided to consumers even via these routes. For instance, Facebook encourages publishers and advertisers to implement its tracking Pixel using first-party cookies instead of third-party cookies, which circumvents browsers blocking third-party cookies.[297]

4.137 To take another example, mobile users are issued with a mobile advertising ID (MAID)[298] which makes cookies unnecessary for mobile in-app advertising and which consumers cannot remove. The controls are also 'uneven' across the different mobile OS and devices – for instance, on iOS, the user can remove their IDFA (the MAID for iOS) by turning on 'Limit Ad Tracking'. Android gives the option to reset the AAID (the MAID for Android), but not to turn it off completely.

4.138 Furthermore, in Appendix G, we note some concerns we have about how effectively CMPs may work for consumers. In particular, some of the choice architecture concerns we set out below are also likely to be relevant to CMPs and thus the extent to which consumers engage and make informed decisions about the use of their data for digital advertising.

4.139 Finally, the ways in which these different controls can interact is varied and complex, depending on device manufacturers and how developers have

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[293] Permissions models are provided to app developers by the iOS and Android OS and describe how the developer should request user data from the device. Depending on the data the OS may require the app to get user consent or just grant the permission automatically. Permission models are discussed in Appendix G.
[294] WebKit, Intelligent Tracking Prevention (ITP). WebKit is the browser engine developed by Apple and primarily used in its Safari browser. ITP also detects usages of first party cookies used in a third party context, as discussed in Appendix G.
[295] Mozilla, Enhanced Tracking Protection.
[296] Chromium Blog, 'Building a more private web: A path towards making third party cookies obsolete'
[297] Digiday, WTF are Facebook's first-party cookies for pixel?, October 2018.
[298] Identifiers are pieces of data which help identify an individual, or their device. Advertising Identifiers, also known as IDFAs on devices running Apple's iOS and more widely as mobile advertising IDs (or MAIDs) are unique and available to all mobile apps (without the need for asking the user's permission) and advertisers or other third parties who embed code in those apps.

designed their software. There is no 'hierarchy' in the sense that setting a control in one level necessarily overrides another. For instance, opting out of personalised advertising in Android settings would not stop Facebook or other apps accessing user data from the device.[299]

4.140 In practice, there appears to be no clear way to use either device or browser settings to prevent Facebook from personalising ads on Facebook:

- Blocking third-party cookies and switching off the MAIDs (in the case of the 'Limit Ad Tracking' setting on iOS mobile devices) does not affect the personalisation of ads on Facebook, regardless of browser or device. This is because Facebook uses first-party cookies and the fact that the consumer is logged in to record their activity on Facebook's properties, and select personalised ads.
- Furthermore, whilst blocking third-party cookies does disrupt Facebook's ability to track and use consumers' off-Facebook activity for some websites (eg Facebook Audience Network websites and apps) to personalise ads, for many other websites in practice the Facebook Pixel can be implemented using first-party cookies – a feature which Facebook introduced following recent moves by browsers to block third-party cookies. Facebook told us this was 'to maintain choice for third parties to be able to share data with Facebook, similar data to which may otherwise not be available from browsers blocking third-party cookies'.

4.141 On Android, apps pre-installed by the device manufacturer may write their own custom permissions to access user data, and Facebook has done so as discussed in Appendix G. However, custom permissions in pre-installed software may circumvent the controls of Android's permissions model. Device manufacturers do not require Google's approval to add pre-installed software with custom permissions.

4.142 There is some evidence that consumers engage with other controls, but still only to a limited degree – for instance 17% of UK iOS10 users were reported as having enabled its Limit Ad Tracking feature in its first month;[300] and more recent research found that 30% of respondents said they used an ad blocker in their browser most or all of the time, to stop organisations from being able to target advertising to them.[301]

4.143 Overall, we think the picture is complex for consumers, particularly when they use multiple devices and browsers. Consumers that do not wish to have their

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[299] Although Android asks apps not to use consumer data for personalised advertising in its Developer Guidelines, it makes compliance with this the responsibility of the apps.
[300] Adjust, 28 days later: What happened to Limit Ad Tracking?, October 2016.
[301] DotEveryone (2020) People, Power and Technology: The 2020 Digital Attitudes Report.

data used for personalised advertising face a wide range of options, some of which are unclear or do not work in the way they would expect, and that it is not reasonable to expect them to navigate.

4.144 In Chapter 8, we consider some alternative consumer control mechanisms, such as PETS and PIMS that may, in part, help consumers to manage their data across devices, browsers and platforms and address the complexity we have identified.

Concerns with consumer control

4.145 We are concerned that some platforms do not give consumers any choice about the use of their data for personalised advertising. That is, consumers cannot use services without agreeing to the use of their data for personalised advertising – there is no alternative option of being shown non-personalised advertising. We are also concerned that, where platforms do offer a choice to consumers, the way it is done is not transparent to consumers and has the effect of promoting the interests of the platform. We set these out below and consider the issue in more depth, with examples, in Appendix X.

Platforms that provide no control over receiving personalised advertising

4.146 We are concerned about requirements that mean consumers cannot use a service at all without agreeing to the use of their data for personalised advertising. This is a particular issue for social media platforms.

4.147 Potential users of social media typically have only one choice in relation to whether their data can be used to serve them personalised advertising – they can either agree to this or they have to decide not to use social media at all.[302]

4.148 Only a small percentage of consumers are happy for online companies to collect and use their data for personalised advertising[303] and there is extensive survey evidence that shows that consumers' concerns about data sharing are magnified when it is perceived to be happening without the consumer's consent.[304]

4.149 Where platforms have achieved a 'must-have' position and have market power, we think that consumers should have the option of not having to

[302] TikTok prompts consumers to make a selection regarding personalised advertising during the sign-up process.
[303] Ofcom, Online Nation 2020.
[304] Ipsos MORI Digital Footprints: Consumer concerns about privacy and security.

receive personalised advertising. Platforms in this position would still be able to serve contextualised advertising or to introduce additional or alternative funding mechanisms, but consumers would have a range of options and so could make a more informed decision about the trade-off between the value of their privacy and the value of the service.[305]

Platforms that provide some control over receiving personalised advertising

4.150 Where platforms do offer a choice to consumers, we are concerned that this is not made sufficiently prominent to users.[306] Although the search engines we reviewed inform consumers that their services are supported by advertising, the prominence of this information varied, with users having to actively want to know about and to navigate to it.

4.151 A consumer visiting Google's search page for the first time, and who is not signed into an existing Google account, will see a prominent statement on privacy, the 'Privacy Reminder', as well as less prominent privacy, terms and settings links available on each page. The Privacy Reminder can temporarily be ignored; postponed; or reviewed. Once a consumer engages with the Privacy Reminder section, there is summary information about the processing of information by Google, why it is processed (including to 'Deliver ads based on your interests') and a link to 'Adjust the types of ads you see from Google'.

4.152 This immediate high-level information does not clearly state up front what types of personal information might be shared and that this will be used for personalised advertising. Furthermore, the positive framing of the language and choice architecture encourages acceptance and to set up an account, which although providing more functionality such as control over preferences, involves volunteering more information.

4.153 A consumer visiting Bing's search page for the first time will see an initial cookie notice displayed. The notice is more prominent in mobile displays than on desktop, but on both disappears without active engagement from the consumer as the site is used. Consumers are able to access privacy information via a menu button or a 'Privacy and Cookies' link available on each page. Bing collects consumer's information by default and, while a control to opt out of personalised Ads is provided, it does not seem likely that consumers will know of its existence.

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[305] In the case of Google and other search engines, if a consumer chooses to opt-out of receiving personalised advertising, they will continue to receive contextualised advertising. Google also suggests that the consumer may see more adverts if they choose to opt-out of personalised advertising on Google Search.
[306] We discuss this in more detail in Appendix K.

4.154 Whilst there are some prompts, therefore, consumers will need to hunt to find and amend their settings. Again, it is our view that in these cases the lack of effective, upfront, control is likely to cause consumer harm – for instance in terms of consumers sharing more data than they might otherwise have shared because they are unaware of the nature of the exchange they are entering into.[307]

The use of 'click wrap' agreements and aggregating consents within a platform

4.155 We are also concerned about how some platforms can combine important information and require consumers to agree to significant use of their data as part of their initial use of the platform – in particular through the use of 'clickwrap' agreements and consent which does not provide sufficiently granular choices (inappropriately aggregating consent). We consider these in turn below.

- *The use of 'clickwrap' agreements*

4.156 All of the social media platforms we looked at require consumers to accept 'clickwrap' agreements', which effectively make acceptance of the platform's terms implicit in the act of signing up.

4.157 Some platforms directly bundle together agreement to their Terms and Conditions, Privacy Policy, Data Policy and Cookie Policy; whereas Facebook-owned platforms state that by signing up the consumer has agreed to their Terms, and they can 'learn' about the platform's data and cookie policies by clicking on separate links (see Figure 4.4).[308]

[307] Whilst our focus in this section is on the limitations placed on consumers' up-front choices about whether to use a platform given that it may involve the processing of their data, we also note that the issues we set out here are also relevant more generally to our concerns about choice architecture in the next section.
[308] Facebook told us that, unlike its Terms of Service, as its Data Policy is a privacy notice and relies on a number of legal bases under the GDPR to process consumer data, and as the privacy policy is also not a contract, Facebook is not required to obtain consent from consumers to this policy, either on creation of an account or following any changes to the policy once they had created an account.

Figure 4.4: Clickwrap agreements

Source: screenshot, Facebook.

4.158 We are concerned that this practice does not give sufficient prominence to the terms consumers are signing up to. The practice is likely to enhance the impact of not presenting any choice to consumers, by failing adequately to alert consumers that they are signing up to the use of their data.[309]

4.159 The examples we looked at presented the existence of the terms the consumer was signing up to in far smaller and fainter text than the prominent buttons to 'sign up' that must be clicked to continue the process.[310] For platforms which are either only accessible via a mobile app, or most likely to be accessed via a consumer's mobile device, it is even more unlikely a consumer will read the relevant terms of service and privacy policies in full before agreeing to sign up. For these platforms, a consumer would either need to review the platform's terms and privacy policy on the small screen of their mobile device or access them via a separate laptop or desktop computer for review there, whilst in the process of signing up.

4.160 We are also concerned that the effect of wrapping acceptance of terms into a sign-up process may risk consumers overlooking the importance of what they are agreeing to. At the point of sign-up, many consumers are likely to be

[309] We also note that we have also concerns about how effectively the clickwrap agreements are presented. We address our concerns about presentational practices in the section below on platforms' choice architecture.
[310] See Appendix K on the consumer journey; and Appendix Y on Fairness by Design.

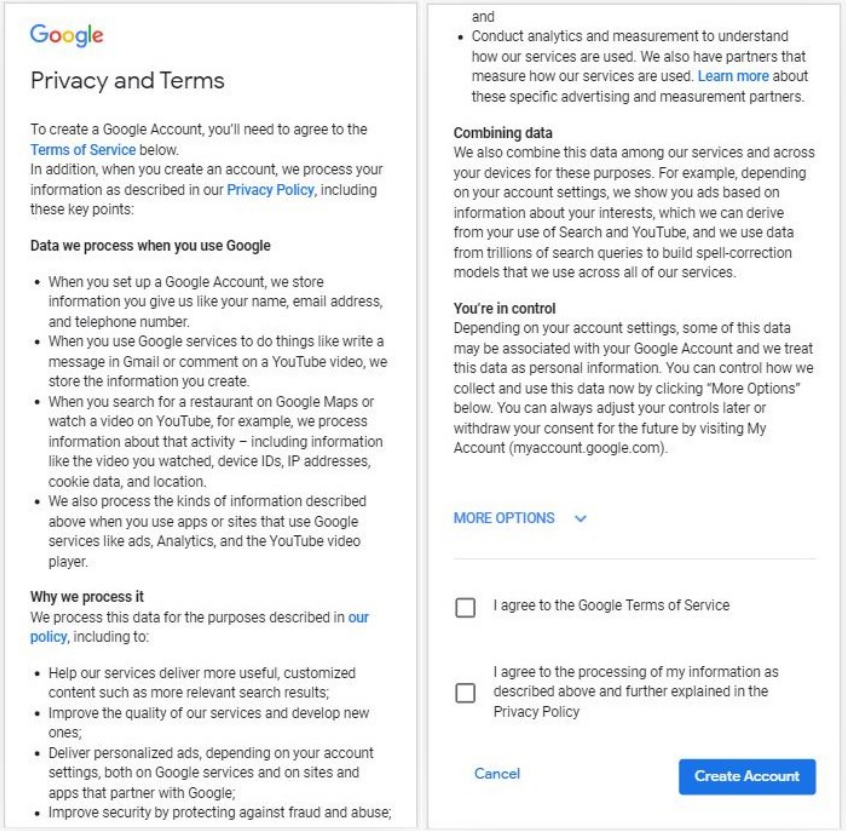
focused on completing the process of registration so that they can quickly use the service.

- *Aggregating consents within a platform*

4.161 As part of their registration process, some platforms require consumers to agree to the use of their data across other parts of their business. For example, Google and Microsoft aggregate consents across all their services should a consumer choose to sign up to one of their individual services. Both companies confirm in their privacy policies that they combine data across their services and products.

4.162 Figure 4.5 is a screenshot of Google's Privacy and Terms, displayed during the sign-up process via a mobile device. This sets out that Google will combine consumers' data among its services and across their devices for the purposes described.

Figure 4.5: Google's Privacy and Terms as viewed on a mobile device



Source: Screenshot of Google's sign-up process captured on a mobile device.

4.163 Similarly, Facebook allows consumers with an existing account for one of its products to log in and use this account on another of its products (for instance, a Facebook account holder can use their existing account details to access Instagram). Facebook's same terms of service, data and cookie

policies apply for all of their products however some actions, such as the management of a consumer's ad preferences, can only be conducted in the primary Facebook product, Facebook.com.

- *The impact of 'clickwrap' agreements and aggregated consent*

4.164 We acknowledge that there can be benefits for consumers in being able to exercise control only once and have their preference adopted across the platform or a number of the platform's businesses. Essentially, this reduces hassle costs, and can therefore reduce overall 'consent fatigue' (ie the annoyance at having to click on multiple consents in order to access a product or service). We are concerned however that this is only beneficial if:

- it is clear to the consumer how their data will be used (ie the way in which the sign-up is presented makes it very clear what the consumer is agreeing to); and
- consumers also have granular controls so they can choose to not have their data used for some parts of the platform's business if they so wish and are made aware of any consequences.

4.165 The use of clickwrap agreements and aggregated consent without the option of using granular controls is likely to mean that consumers do not engage in consideration of the terms and other requirements they are signing up to when they register. For instance, in the case of Pinterest, consumers are simultaneously signing up to three sets of policies (with a combined length of 8,500 words).

4.166 These issues are common across platforms, but are a particular concern for informed consumer decision-making at the point of first contact – in effect magnifying the concerns we have in relation to requirements for consumers to accept personalised advertising if they wish to use the service; or primary defaults that mean consumers are likely simply to accept personalised advertising. Consumers may as a result use a platform that they might not otherwise have used; and share more data than they might otherwise have shared or share information that does not align with their preferences.

4.167 In relation to the question of 'aggregated' consents, aggregating the processing to which a consumer consents needs to be deployed in a way that allows sufficiently granular control over the purposes for which their data is used. Where data will be used for several purposes the consumer should be able to consent to some but not others. In Chapter 8, we return to the issue of how to give effective control to consumers, by balancing the need for specific, informed and granular consent, against the risk of consent fatigue.

Platforms' choice architecture

4.168 It is important that consumers are not put off from engaging in decisions about the use of their data and that, for those consumers who would like to engage actively, they are able to access and understand information easily and face low transaction burdens in the course of their engagement.

4.169 As we note above, however, there is a considerable incentive for platforms to maximise the number of users and the volume of data collected from them. We are concerned that platforms' wider choice architecture encourages consumers to agree to the use of their data for personalised advertising, by effectively inhibiting informed choice – through poor accessibility and clarity, unbalanced presentation and barriers to consumer action.

Consumer behaviour

4.170 Making decisions about privacy settings in the online world is likely to be subject to the same sorts of behavioural biases as are present in the offline environment. However, the online environment may exacerbate the impact of behavioural biases because consumers have to deal with more information and face more decisions. Consumers can find it hard to process substantial volumes of information; be sensitive to how information is presented or framed; and find it difficult to enact their intentions. Consumers naturally and unconsciously tend to rely on heuristics (mental shortcuts) to process information quickly but with the risk that they reach the wrong conclusions.

4.171 More specifically, academic research has identified a range of consumer behavioural biases that can impact on consumers' decision-making in an online context. These include consumers' inclination to stick with default settings that are presented to them (status quo bias); and tendency to focus more on the near-term implications of their decisions and discount the long-term implications (myopia).[311]

4.172 Putting aside choice architecture, therefore, natural consumer biases and behaviours are likely to mean that many consumers do not engage in the control of their data – to the advantage of the platforms.

[311] Appendix L and Appendix Y consider the academic literature on behavioural biases and their implications for choice architecture respectively.

Choice architecture and consumer engagement

4.173 Choice architecture can be designed to help mitigate and overcome consumers' natural biases by providing clear, balanced information and choices as well as smooth processes. However, we have found that the platforms' choice architectures are instead more likely to exacerbate biases. We consider this below, as well as the consumer harms that can arise.[312]

4.174 As we note above, academic literature has identified how choice architecture design may affect human decision-making. Some examples of these include:

- Defaults – when one option within a choice setting is pre-selected, consumers tend to stick to the pre-selected option. This is most strongly observed when an option is pre-selected or opted in for a user and then implemented by a platform.

- Framing – when information is framed in a certain way (eg personalised advertising is framed as relevant advertising), consumers interpret the information in the context of how it is framed, and not purely on the presented facts.

4.175 While examples of how choice architecture can affect engagement are numerous and evolving, they can all be evidentially grounded in the overarching finding that it can influence people because it interacts with how people naturally process information and especially with their naturally occurring biases.[313]

4.176 We consider that, overall, the choice architectures adopted by the platforms we have addressed in this market study can have the effect of restricting active, informed engagement to levels below what we would expect given the evidence that consumers value having control. Table 4.3 offers examples of overarching categories of choice architecture observed on platforms and specific illustrations of these categories.

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[312] It is important to note that choice architecture is not only relevant to consumers who use platforms, but also other users. In Chapter 5 we note how business users of the advertising self-service tools provided by the main platforms we have considered in our study can also be influenced by how information and options are presented. For further discussion of the choice architecture of Google and Facebook's advertising interfaces and views expressed by advertisers, see Appendix N.

[313] Appendix Y explains in more detail how choice architecture interacts with consumers' biases and subsequently affects their engagement.

Table 4.3: Examples of platform choice architecture and consumer behaviour

Platforms' choice architecture	The likely effect on consumers	Examples of choice architecture that may restrict consumers' engagement
Platforms may present more information on privacy than other topics.	The volume of information can exceed consumers' abilities to filter out what is relevant.	• Privacy settings that incorporate non-essential information • Long and dense Terms and Conditions, in multiple locations.
Platforms frame / present information about personalised advertising that has the effect of steering consumers towards specific interpretations of the information.	When making a choice, consumers are likely to be influenced by frames / presentation.	• Personalised advertising is described as 'relevant' whilst contextual advertising is not.
Platforms' design may have the effect of focusing the consumer's attention on immediate benefits and discounts the future consequences of data sharing.	This may encourage consumers to be myopic: ie value immediate. consequences much more than future ones.	• Attention is directed towards direct benefits. • Consequences are indirect and intangible to the average user.

Source: CMA analysis

4.177 We have also considered how platforms' choice architecture may have the effect of hindering consumer engagement in a way that in part helps to explain the 'privacy paradox' referred to above. Overall, as we set out below, we have found that there are numerous potential ways by which platforms may effectively hinder consumers' engagement and ability to take control of their data. We consider these specific choice architecture features and the potential consumer harms that may arise below. Further information can be found in Appendix Y.

- **Lack of accessibility and clarity**:
  - Requiring consumers to navigate a complex route to find information about the use of their data and the ability to change their settings;
  - Providing consumers with complex sets of options and controls;
  - Presenting long, complex privacy policies and terms, which consumers are unlikely to read; and
  - Using unclear language and links that do not match reasonable expectations.
- **Lack of balance**:
  - Providing limited up-front explanations of their use of consumers' personal data to serve them with personalised advertising;
  - Presenting information and choices in ways that could 'nudge' consumers to make decisions favourable to the platforms;

- Setting defaults that are more likely to benefit the platform than the consumer, and which most consumers are unlikely to change;[314] and
- Using language that focuses on the benefits; and phrasing that may nudge consumers in a particular direction.

- **Lack of consistency and not enabling consumer choice**:
  - Providing insufficient opportunities to review choices and withdraw consent; and
  - Designs that can encourage consumers to revert to agreeing to personalised ads.

Lack of accessibility

4.178 Lack of accessibility refers to where the platforms' choice architecture makes it difficult for consumers to access relevant information and options regarding personalised advertising. In general, accessibility of information and options is particularly affected by factors such as their volume and complexity, as well as lower prominence. We set these out below, and we consider the issue in more depth, with examples, in Appendix Y.

Complex navigation

4.179 For consumers to engage with the privacy settings that platforms provide they need to be able to locate them easily. We found that this was more straightforward with search engines than social media platforms, although the format varied according to the device.[315]

4.180 For example, all social media platforms that we reviewed purported to provide consumers with easy access to their privacy settings, but we found that it was not obvious how to access these settings and the settings themselves might only be visible after navigating through multiple menus.

4.181 A recent survey found that most consumers reported that they did not find it easy to access and change the personal information held by businesses,[316] and that a feeling of a lack of control arose out of difficulty with navigating to the choices available and exercising them.

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[314] Using defaults, and the way in which they are presented, can also be relevant to our concerns about accessibility and not enabling effective consumer choice.
[315] Bing included a privacy option in a top-of-the-screen menu on mobile and desktop, while Google did this only on mobile.
[316] Information Commissioner's Office (2019). Information rights strategic plan: Trust and confidence.

4.182 The effect of navigation towards privacy settings and the selection of alternative options to the default being a multi-stepped and partially obfuscated process is likely to mean fewer consumers engage with the settings and as a result some may share more data than they might otherwise have shared.

Complex options and controls in multiple locations

4.183 On some platforms we examined, consumers are presented with a large number of options in relation to their privacy settings – sometimes in multiple locations.

4.184 For example, Google told us that consumers can 'access privacy settings in a number of ways, including via Google Account (available in the header of Google services), Privacy Checkup, My Activity, Activity Controls or via product-specific settings'. We found that 'Privacy Checkup' provides settings across five themes, with around 15 options in total. Bing's 'Privacy Dashboard' offers 10 areas where consumers can express a choice in relation to data processing with a further eight options provided on other settings.

4.185 Firms need to comply with data protection requirements, but it is important to get the balance right so that consumers are empowered. Presenting multiple options can overwhelm consumers' abilities to process information, filter out what is relevant and assess large numbers of choices. There is a risk that users are put off from engaging in the options presented, with the effect that they leave settings as they are. As we note below, these default settings may not always reflect consumers' actual preferences and mean that they share more data than they might otherwise want to.

Length and complexity of Privacy Policies and Terms and Conditions

4.186 As we note above, from the evidence available to us, it is clear that few consumers engage with privacy policies on sign-up to platforms. We consider the same is likely to be true for consumer engagement with terms and conditions. As well as ease of access to this information, a critical factor is likely to be the length and format of these documents.

4.187 As demonstrated by Table 4.4, we found that platforms' terms and conditions were long and typically located in several places. Bing had the longest set of terms and conditions, totalling 19,200 words, in two separate places on its platform.

Table 4.4: Overview of social media platforms' terms of service and privacy/data policies

	Social Media				Search		
	Facebook	**Snapchat**	**Twitter**	**Instagram**	**Google**	**Bing**	**Duck DuckGo**
Terms/policies visible on front/main page?	Yes	Yes	Yes	Yes	Yes	Yes	No[317]
Approx. length in Words	10,100 in 3 parts	8,200 in 2 parts[318]	11,300 in 3 parts	9,100 in 3 parts[319]	8,100[320]	19,200 in 2 parts[321]	2,200[322]
Flesch reading ease score[323]	44.1 ('Difficult to read')	48.7 ('Difficult to read')	38.7 ('Difficult to read')	41.6 ('Difficult to read')	44.1 ('Difficult to read')	41.8 ('Difficult to read')	58.6 ('Fairly difficult to read')
Clickwrap	Yes	Yes	Yes	Yes	No[324,325]	Yes[326,327]	N/A[328]

Source: CMA analysis.

4.188 All of the platforms we examined had terms of services and privacy/data policies that were 'difficult to read' in terms of the widely-used Flesch reading-ease test, with one exception that was 'fairly difficult to read'.

4.189 Faced with this level of text on multiple platforms that may be used every day, it is not surprising that consumer engagement with privacy policies is low. A consistent finding in many surveys is that only a minority of consumers claim always to read privacy policies and academic research has shown that very few consumers read privacy policies when signing up to an online service.

Unclear language and presentation

4.190 We found examples of language that could be considered hard to read, unclear and ambiguous, and which in some circumstances could lead consumers to draw erroneous conclusions and make decisions they might not otherwise make.

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[317] On desktops this is behind a pop-up encouraging the download of DuckDuckGo to Chrome.
[318] Snap Inc. updated its Terms of Service and Privacy Policy, with effect from 30 October 2019.
[319] Instagram shares Facebook's Data Policy but has its own Terms of Service and Platform Policy.
[320] Google includes four short videos in their Privacy page and an alternative pdf page.
[321] The Bing figure is based on the most relevant parts of Microsoft's 32,000-word privacy and cookie statement (excluding products other than Bing) plus the 15,000-word legal statement.
[322] The DuckDuckGo (DDG) figure is not directly comparable: the 2,100 words are in its Privacy statement but much of this is commentary on how Search works and how it does not collect information that others do.
[323] We calculated the Flesch reading-ease scores for each of the platforms' policies by importing their text into Microsoft Word and using the 'Readability Statistics' tool. The Flesch scale ranges from 0.0 to 100.00 and is divided into seven bands each assigned a (US educational system equivalent) level of education that is typically required to understand the material. For example, material scoring 90.00 to 100.00 is described as 'very easy to read' and easily understandable by an average 5th grade (11-year-old school pupil), whilst material scoring 0.0 to 30.0 is described as 'very difficult to read' and most likely to be understandable only by university graduates.
[324] The Google signup process breaks out permissions beyond a single 'accept and use' approach.
[325] Google can be used without creating an account, which would not involve a clickwrap agreement.
[326] Creation of a Microsoft account includes a clickwrap agreement to Privacy and cookies statement and Services Agreement. Bing displays a Browsewrap agreement for cookies for non-logged in use.
[327] Note that Bing can be used without creating an account, which would not involve a clickwrap agreement.
[328] It is not possible to create a DDG account so there are no terms to agree.

4.191 Unclear language and presentation as well as lengthy and complex terms and policies, could have implications for vulnerable consumers who may be less likely to engage or find it harder to engage with complex navigation and information than others; and may be more susceptible to techniques which nudge them.

4.192 As noted above, by the age of 15 almost all children have a social media profile;[329] as do one in five people aged 75 or over.[330] Furthermore, Ofcom reported in 2019 that although most social media sites including Facebook, Twitter, Instagram and Snapchat have a minimum age requirement of 13, 21% of 10-year-olds and 34% of 11-year-olds say they have a profile.[331]

Unclear links

4.193 We found examples where links did not clearly indicate the nature of the content they linked to. For example:

- Facebook's Settings webpage, which itself can only be reached via a menu whose location is not prominently displayed, contains multiple links to other areas of the website at the bottom of the page. These include a link entitled 'Privacy' which, when clicked, directs consumers to Facebook's Data Policy, an extremely long and dense document describing the information processed by Facebook's products, rather than Facebook's consumer controllable privacy settings.

- Options in Snapchat's Settings within its app are numerous and it may not be clear to consumers where certain controls are located within this. For example, controls relating to consumers' preferences regarding advertising are located via the 'Manage' button in the Additional Services section of the Settings menu.

Lack of balance

4.194 Even if consumers are able to access information and options, the platforms' choice architecture may still make it difficult for them to process and assess the information independently without being unduly influenced. In particular, how information is presented and framed can sway how consumers interpret it. We set these out below and consider the issue in more depth, with examples, in Appendix Y.

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[329] Ofcom, Children and parents: Media use and attitudes report 2019, February 2020.
[330] Ofcom, Adults' Media Use and Attitudes Report 2020.
[331] Ofcom, Online Nation 2019.

Limited up-front explanations

4.195 Ofcom research shows that only just over half (53%) of adults are aware that the major search engines offer their services at no monetary cost because they gain consumers' attention and data,[332] to monetise by selling advertising.

4.196 We found that most platforms promoted the benefits of their service, rather than the nature of the exchange between the platform and the consumer. While information about the funding relationship could be found, it was not presented prominently to casual users of platforms and only rarely referred to as part of the account creation process.

4.197 Although platforms do provide explanations of how they are funded, these typically require consumers to click on relevant links (that do not themselves prominently explain that they address how the platform is funded). Few consumers click on such links. Consumers are therefore only likely to encounter this information if they actively look for it or 'stumble' across it. As a result, it is likely that at least some consumers sign up to platforms and share data when they might not otherwise have done so had they been informed of the consequences.

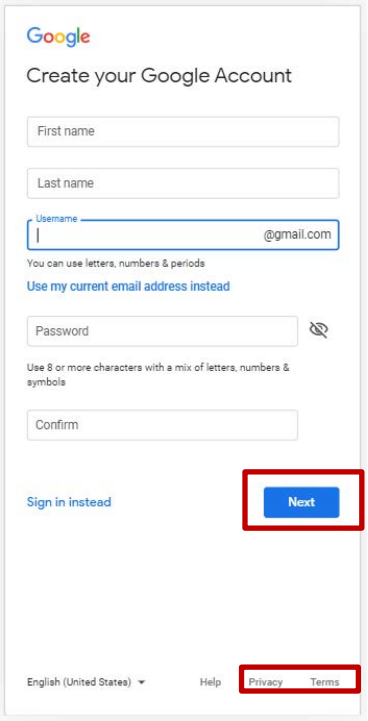
'Nudge' techniques

4.198 'Nudge techniques' are another example of choice architecture that may sway how consumers behave. It is well documented that platforms can have choice architecture that has the effect of giving some options more emphasis than others.

4.199 We have identified instances where consumers may be 'nudged' to make particular decisions. For example, Google's Android sign up uses a blue button which is visually more prominent than any other buttons or links (such as to Privacy or Terms) and thus likely to encourage the consumer to click 'next' rather than consider privacy policy and terms. This is illustrated in Figure 4.6 below.

[332] Ofcom, Adults' Media Literacy research (2019).

Figure 4.6: Screenshot of Google's Android sign-up process



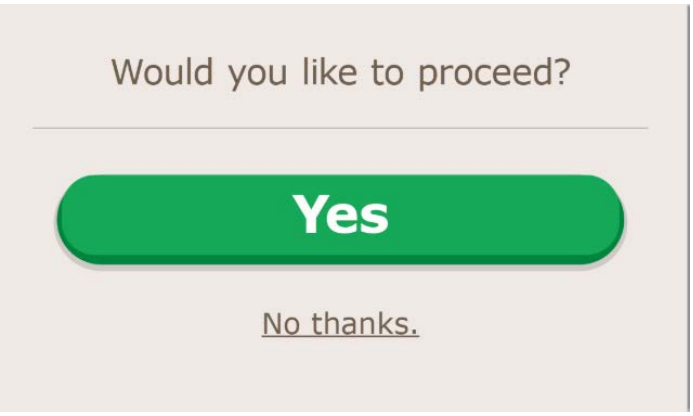
Source: screenshot, Google.

4.200 Platforms may not be the only part of a consumers' journey where they may be nudged into sharing data. Some qualitative features of the CMPs we examined also appeared to be designed to encourage consumers to make choices which may not reflect their actual preferences. For example, as we note in Appendix G, several CMPs allow the size and/or prominence of an 'accept all' button to be significantly greater than an equivalent 'reject all' button.

4.201 Authorities have undertaken work in this sector. For instance the ICO's Age Appropriate Design Code, which is awaiting Parliamentary approval, is a statutory code of practice setting out standards for age appropriate design of online services which are likely to be accessed by children in the UK.[333] The code includes a standard that firms should not use nudge techniques to lead or encourage children to provide unnecessary personal data or turn off privacy protections. It provides examples, such as in Figure 4.7, and states that using techniques based on the exploitation of human psychological bias in this way goes against the 'fairness' and 'transparency' provisions of the GDPR as well as the child specific considerations set out in Recital 38.

[333] See: ICO, Age Appropriate Design: A code of practice for online services, 2019.

Figure 4.7: Example of a 'nudge' technique



Source: ICO.

Language that may 'nudge' consumers

4.202 We have seen evidence that platforms use language that promotes the benefits of using them and may prompt users to make specific choices that are likely to be beneficial to the platform. For example:

- Google's Privacy Reminder, which summarises what consumer data Google processes and why, utilises noticeably positive language to describe these processes before providing consumers links to some of the controls available to them. For example, the first four of the five reasons Google gives for processing consumer data are all presented as beneficial to consumers.[334]

- Facebook's ad settings in its ad preferences menu use more positive language to frame the consumer selections which involve sharing and permitting the use of a greater amount of their personal data. For the setting regarding 'Ads based on data from partners', Facebook states that 'to show you better ads, we [will] use data that advertisers and other partners provide us about your activity off Facebook Company Products', if consumers allow this.

4.203 We have also seen examples of how platforms can present information in ways that may dissuade consumers from making choices that could mean they share less information. For instance, Google presents a warning to users before they proceed with turning off personalised advertising that employs negative language – including a warning that they will 'still see ads, but they'll be less useful', and they 'may see more ads'. The warning does not include a

[334] In summary, these are: to help Google's services deliver more useful and customised content; improve the quality of Google's services; deliver adverts based on consumers' interests; and improve security by protecting against fraud.

direct reference to the platform no longer using the consumer's data for advertising, which some users could consider a positive benefit.

The use of defaults

4.204 We found many examples of platforms setting defaults that will primarily work in the interests of the platform. For instance:

- Bing collects consumers' information by default and, while a control to opt out of personalised ads is provided, it does not seem likely that consumers will know of its existence.
- In Snapchat's 'Advert Preferences' section of a consumer's settings, users are opted in by default to being shown 'Audience-Based Ads', 'Activity-Based Ads', and 'Third-Party Ad Networks'.
- Twitter enables personalised ads for consumers using the platform for the first time by default. Consumers must visit Twitter's 'Personalization and data' settings and make an active choice to adjust these.

4.205 There is a general recognition that consumers' 'status quo bias' means that individuals generally stick with the default choices they are presented with. From a policy perspective, this bias can be used for beneficial purposes,[335] but studies have also suggested that firms may exploit it so that consumers make decisions they might not make with fuller consideration – including in relation to their privacy.[336] There is also some evidence that users may assume that default settings are configured to protect them and so do not review the actual settings.[337]

4.206 The evidence above suggests that consumer engagement is very low at registration, which means that most consumers accept the default settings which are likely to be set to favour the platforms.

Not enabling or respecting consumer choices

4.207 These examples reflect where platforms' choice architecture may have the effect of making it harder for consumers who want to engage with the privacy settings to actually do so and to do so consistently. In general, consumers' ability to act upon their intentions may be inhibited through friction, and where

[335] For example, the Behavioural Insights Team report that the change in pensions defaults, from opt-in to an opt-out system, has led to 10 million people in the UK newly saving for retirement – see Nudge 2.0 blog, April 2019.
[336] Goldstein et al (2008)
[337] Leon et al (2012) used a lab experiment to study how well users were able to make use of tools to control data sharing. As part of that study they found that a number of participants assumed that the default configurations of those tools were designed to protect them without reviewing the settings.

consumers may be encouraged to revisit and amend settings in ways that may not meet their original and ongoing preferences. We set these out below and consider the issue in more depth, with examples, in Appendix Y.

Limiting or hindering consumer review and consent withdrawal

4.208 We found that, based on the platforms we reviewed, search engines provided more prompts and reminders to users that they could adjust their settings than did social media platforms. Both Google and Microsoft have procedures for consumers to delete their accounts and download their data, although for Google it takes a minimum of 5 clicks to reach the relevant page and 3 clicks to enact the decision to delete; and 7 and 13 clicks respectively for Bing.

4.209 Furthermore, as we note above, the level of consumer engagement with tools that enable them to disable search and location history is very low. During the sign-up process (a time when consumers might be expected to engage with their settings) none of the social media platforms we reviewed prompted consumers to engage properly with their privacy settings, beyond providing a link to their respective polices. They often however prompted consumers to provide additional personal information to the platforms.

4.210 As we note earlier in this Chapter, where consent is the legal basis, it should be as easy for consumers to withdraw their agreement to the specific processing of their personal data as it is to give it.[338] However, as we note above, navigation can be complex and unclear. In our view, platforms could do more to prompt users' review of their settings and enable them to vary what they consent to. Where consumers are hindered in their ability to vary their consent, many will through inertia stick with the status quo. This means that some may continue to use platforms and share data when they might not otherwise do so.

Designs that can encourage consumers to revert to agreeing to personalised ads

4.211 We also identified examples where after consumers have made choices in relation to their privacy settings, they are prompted potentially to reverse them, or the timescales for how long their choices are maintained is unclear.

4.212 For example, Google asks an Android user to turn on Location History on a number of instances, even after they have made their choice. This includes when the consumer is setting up the Android device, when using Google maps and when accessing photos. Every instance of the request lists the

[338] As explained in Appendix A, consent is a defined term in the GDPR (Art. 4 (11)), with further provision made throughout the GDPR for example Art.7 'Conditions for consent'.

benefits of turning this function on, but does not explicitly state that the data collection may be used for personalised advertising, unless the consumer chooses to click on a small arrow to see further details. Conversely, we did not observe similar prompts asking whether users wish to turn off Location History when it is on and noting that their data may be being used for personalised advertising.

Examples of better practice

4.213 We have heard from platforms that they work hard to ensure their services are easy to use and consumers are clear about what data they collect and the controls available. For example, Facebook emphasised that their terms and conditions have 'been specifically designed to be clear'.[339] As recommended by the EDPB, they said they adopted a layered approach to their terms and conditions. Google also noted that they used 'clear, plain language' in their terms and conditions explanatory videos and infographics, and periodically reminded consumers that they could undertake a privacy check-up.[340]

4.214 We accept that it can be difficult for platforms to communicate a large amount of complex information to consumers, although we have seen some elements of better practice where platforms for instance present content in a visual as well as text format and use plain language. For instance, in our interim report, we noted that Google's 'Privacy Reminder' is prominent and provides information in short summaries with links to further detail. TikTok prompts consumers to make a selection regarding personalised advertising during the sign-up process, however they can complete the process without doing so and personalised advertising will remain switched off by default if so.

4.215 And we have seen some evidence of improvements following research by platforms – for instance, Google added a button to promote the account settings and other options when research participants responded in 2015 that they felt they only had the option to agree.

4.216 However, overall, we consider that platforms could do more to enable effective consumer engagement and we return to this point in Chapter 8.

Summary of our assessment of choice architecture

4.217 Even where they are given a choice about the use of their data for personalised advertising, consumers are only able to judge whether they are content to share their data if they are provided with clear and fairly presented

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[339] Facebook's response to the Statement of Scope, para 6.6.
[340] Google's response to our Statement of Scope, page 15.

information and options about the implications for them. Moreover, they can only truly make an informed choice if they can act on their preferences and withhold or share data as they wish.

4.218 Platforms are incentivised to maximise the use of consumer data for advertising. Consumers are often time poor and have natural behavioural biases that are likely to limit their engagement. Our study has found that platforms also do not give consumers the right information in a consumer-friendly way and frequently have platform designs that are likely to impede consumer engagement and favour the collection and use of data for advertising.

4.219 We are therefore concerned that platforms' choice architecture can have the effect of inhibiting effective consumer engagement rather than assisting it – so that some consumers are likely to share more data than they might otherwise wish to.

4.220 Some of the designs we have identified could be expected to have particular impacts on the vulnerable, who may find it harder to engage or process information. Furthermore, in some circumstances, such as the current COVID-19 pandemic, people may be particularly reliant on services such as social media and thus be more likely to be affected by the issues we have identified.

Evidence of trialling and testing choice architecture

4.221 We expressed surprise in our interim report over how little trialling and testing was carried out by platforms in relation to consumer control over data and use of privacy settings. This was in contrast to the very extensive trialling done on a daily basis in other parts of the business.[341] For example, in 2019 Google ran over 464,000 experiments when looking to make improvements to Google Search.[342]

4.222 Further CMA requests for information and discussions with platforms have indicated that some do carry out more research than the initial evidence provided to us. Various parties have now submitted evidence of the use of different types of user research, including moderated usability testing, contextual research and A/B testing.[343]

4.223 We note that the findings of research carried out by Google echoed the findings from our review of the consumer survey and academic research.

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[341] Para 6.117 CMA Online platforms and digital advertising: Market study interim report.
[342] How Google Search Works.
[343] A/B tests are randomised control trials of alternative design patterns in the live platform.

Google found that in navigating Privacy Policies generally, users faced issues such as: complex and ambiguous language; difficulty in knowing what matters and navigating there; no clear incentive to read; and, perception of power asymmetry.

4.224 It is also notable from this evidence that what users want from platforms on these issues is consistent with the concerns we have set out above. The following common themes emerge from platforms' own research findings provided to us:

- Clarity: Users often reported the importance of having clarity when being asked to make decisions. Having opt-out options upfront on main pages rather than in later pages further down the user journey would also aid users. Further, platforms' own research acknowledges privacy controls can be complex for users.

- Transparency: platforms' own research identified a need for transparency on default settings and that ideally, they should be presented upfront in any sign up or reminder process. The need for transparency in how personal data would be shared with third parties and vice-versa in exchange for platform access was also reported. Users were sometimes surprised and concerned when they discovered in usability studies that this was happening without their knowledge.

- Choice: research indicates that including more granular levels of choice when presenting data sharing options could lead to a more informed choice by users. Users were critical when only one choice 'I agree' was obvious in specific designs of platform access pages. Further, asking consumers to make an active opt-in choice, for example on data retention settings, encouraged them to 'stop and think' about their privacy and led to increased engagement.

- Control: wider contextual research provided by the platforms reported that consumers value having control over their data even more than data transparency – although both were important. Examples from usability testing on some platforms re-enforced this, with certain user groups seeing control over their privacy as a major part of feeling safe on the platform.

4.225 Even though platforms have provided more evidence of the extent of the trialling and testing that they carry out, we do note some limitations of this research. For instance, in the submitted research studies, sampling appears to be generally focussed towards frequent users and more 'tech savvy' consumers, as opposed to attempts to research more representative or

inclusive samples. We also note that research objectives are not always clearly defined and commercial goals (eg brand perception) can be conflated with other objectives.

4.226 It is not clear the extent to which the findings of the research then translate into changes to privacy policies or privacy controls / settings but there are certainly some examples where platforms have clearly responded to research findings. We note that some platforms have started to put more emphasis on what would be in the interests of consumers and to develop user focused policies and settings.

4.227 Our findings on the evidence of trialling and testing is set out in more detail in Appendix Y dealing with the Fairness by Design Duty remedy.

Conclusions

4.228 It is particularly important that platforms give consumers the opportunity, if they want it, to make informed choices about whether to allow their personal data to be used for advertising. Survey evidence is clear that consumers want to be able to control the use of their data and that they feel that they lack this control.

4.229 We recognise that, if consumers want high quality content and services without paying money directly for them, platforms need to be able to generate revenue, such as through advertising, and that the use of consumers' data can increase the value of this advertising. However, consumers should be in control of how their data is used.

4.230 Some platforms do not allow consumers to turn off personalised advertising at all. For these consumers there is no choice but to provide their personal data for advertising if they wish to use the service. Even where they are given a choice about the use of their data, consumers are only able to judge whether they are content to share their data if they are provided with clear and fairly presented information and options about the implications for them. Moreover, they can only truly make an informed choice if they can act on their preferences and withhold or share data as they wish.

4.231 Because personalised advertising is an important revenue stream for these platforms, there is a considerable incentive for them to maximise the volume of data they collect from their users by limiting consumer engagement and control.

4.232 This market study has found that platforms do not give consumers the right information in a consumer-friendly way and frequently rely on choice

architecture that is likely to impede consumer engagement and which favour the collection and use of data for advertising.

4.233 In addition, consumers tend to behave in ways that the platforms can turn to their advantage. In particular, consumers are often ‘time-poor’ and have natural behavioural biases that affect their decision making. The largest platforms have therefore effectively taken control of consumers’ data on their behalf – through requirements that users share their data to be able to access the service; and platform designs that nudge consumers to share their personal information.

4.234 We consider that the low levels of actual consumer engagement reflect to a great extent the limitations and choice architecture put in place by platforms; and thus contrast with the clear survey findings that consumers want to control how their data is used. As a result, we think that many consumers may use services and share more data than they might otherwise have decided to.

4.235 More indirectly, because of the incumbents’ market power, consumers may not experience the benefits of competition; and may have lower trust generally in the internet and service providers. These harms may be magnified for more vulnerable consumers.

4.236 In Chapter 8, we set out how we propose that this situation be remedied, with a number of practical interventions that the proposed Digital Market Unit could implement.

5. Competition in digital advertising

- Google and Facebook monetise their user-facing services by selling digital advertising. As a result of their scale and unique position in search and display advertising they have market power, earning significant revenues and reinforcing their market power on the user side. This makes it very difficult for platforms offering innovative new services to enter and compete. Lack of competition in digital advertising can result in substantial detriment to consumers, through increasing the price of goods and services across the economy, and through undermining the sustainability of news media.

- Google has significant market power in search advertising. It accounts for over 90% of search advertising revenues and faces limited competitive constraints from other forms of advertising. Its rivals face significant barriers to attracting advertisers, in addition to the barriers on the consumer side. Google's market power has allowed it to charge higher prices to advertisers than its competitors. On a like-for-like basis, Google's prices are on average [30-40]% higher on desktop and [30-40]% higher on mobile than those of Bing.

- Facebook has significant market power in display advertising. It accounts for over half of display advertising revenues and is seen as a 'must have' platform for many advertisers because of its reach. It has a significant data advantage over smaller platforms and publishers, which both increases the value of its advertising inventory and creates additional barriers for its competitors to overcome. This has allowed Facebook to earn significantly higher revenues per user than its competitors, increasing from an average of [£0-5] in 2011 to £[50-60] in 2019.

- Online publishers such as newspapers sell their inventory through the open display advertising market. This market relies on a complex chain of intermediaries to auction advertising in real time. Google holds a strong position at each stage of the intermediation chain, particularly as a publisher ad server. In acting simultaneously on behalf of publishers and advertisers, Google faces strong conflicts of interest. It has been able to leverage the market power from its owned-and-operated advertising inventory into the open display market and within the ad tech stack, making it harder for third-party intermediaries to compete.

- Advertisers and publishers face a lack of transparency over key aspects of market functioning, including the quality and effectiveness of advertising, the way auctions are carried out and prices determined, and the remuneration of intermediaries. We estimate that intermediaries capture, on average, at least 35% of the value of advertising bought through the open display channel; greater competition and transparency would put downward pressure on these fees and help ensure that publishers can get a better deal.

Introduction

5.1 This chapter sets out our analysis of competition in the digital advertising market. Digital advertising plays a crucial role in funding online content – not just for large platforms such as Google and Facebook, but also for smaller publishers such as news websites and app providers. Competition in digital advertising matters because it can drive down costs to advertisers, and hence final consumers, and enable platforms and publishers to use advertising to fund the services that consumers value.

5.2 Google and Facebook between them accounted for around 80% of total UK digital advertising revenues in 2019. In part this reflects their scale in user side markets – search and social media respectively, as outlined in Chapter 3. The more user attention a platform or publisher has, the more advertising it will be able to show, and the more revenue it will earn.

5.3 However, Google and Facebook's collective share of digital advertising revenues is significantly greater than the share of time spent by users on these platforms, suggesting that their ability to monetise through advertising is not simply a function of scale. This chapter shows how a lack of competition in digital advertising, combined with other features of the market including lack of transparency and the role of data, creates an ability for Google and Facebook to exercise market power and leads to worse outcomes for advertisers and publishers.

5.4 The remainder of the chapter sets out our research and findings in relation to:

- key characteristics of digital advertising markets, including how advertisers buy advertising and how advertising is sold;
- competition in search advertising and Google's market power;
- competition in display advertising and Facebook's market power;
- competition in open display, including the role of Google as an intermediary providing services for publishers and advertisers; and
- cross-cutting market concerns that have been prominent in the public debate around digital advertising, relating to: data advantages of the large platforms and the interaction with competition concerns and data protection regulation; lack of transparency; and the relationship between platforms and publishers.

Characteristics of digital advertising markets

5.5 This section identifies the key characteristics of digital advertising markets which are relevant to our assessment of competition. It describes how advertisers buy digital advertising. It then describes the main functions involved in the sale of digital advertising.

Types and sources of digital advertising

5.6 As described in Chapter 2, there are three main types of digital advertising:

- search advertising – where advertisers pay online companies to link their company website to a specific search word or phrase so that it appears in relevant search engine results;
- display advertising – where advertisers pay online companies to display advertising using a range of advertising content types shown within defined ad units on web pages or mobile apps; and
- classified advertising – where advertisers pay online companies to list specific products or services on a specialised website serving a particular market segment.

5.7 Search advertising is the largest category of digital advertising, with total ad spend of around £7.3 billion in 2019 based on data gathered from market participants. Search advertising is sold predominately by two leading search engines – Google and Bing.

5.8 Total spend in display advertising was around £5.5 billion in the UK in 2019. Over half of display expenditure is generated by Facebook, which owns both the Facebook platform and Instagram. YouTube has the second highest share of display advertising and is owned by Google. The open display market, in which advertisers buy inventory from many publishers of smaller scale (for example, newspapers and app providers) comprises around 32% of display expenditure.

5.9 Google and Facebook are active in display advertising both through their owned-and-operated platforms (YouTube in the case of Google, Facebook and Instagram in the case of Facebook) and through activities providing various intermediation and technology services, which are discussed in more detail within our assessment of open display advertising.

5.10 The CMA considered the role of classified advertising previously in the its 2017 market study on Digital comparison tools.[344] In our analysis for the present market study we have focused on competition in search and display advertising. In doing so, we have considered the role of classified advertising and specialised search in providing competition to other forms of digital advertising and have examined the broader relationship between general search and specialised search providers.

Demand for digital advertising

Characteristics of advertisers

5.11 Digital advertising is bought by a diverse range of businesses, with very different rates of spend and levels of sophistication in their approach to ad buying. The total number of UK-served parent entities (ie advertisers) in 2019 was [200,000-250,000] for Google Ads.[345] The total number of UK-based advertisers who targeted exclusively UK-based users in 2019 was [over 1 million] for Facebook.[346] In broad terms, the demand side can be characterised as consisting of a small number of large advertiser buyers, and a long tail of smaller advertisers.

5.12 For example, for both Google and Facebook, a relatively small number of large advertisers account for a high proportion of overall revenues. The largest [5-10]% of advertisers account for over 85% of Google and Facebook's advertising revenues, while the remainder of the revenue is made up of a long tail of smaller advertisers.[347] Further details of our analysis of the parties' advertiser customer data is set out in Appendix N.

5.13 Larger, more sophisticated advertisers often use media agencies and technology tools to purchase inventory from multiple sources. The large five media agencies[348] directly account for approximately one quarter of overall expenditure on digital advertising, though this is higher for display advertising (44%) than for search advertising (13%).[349]

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[344] CMA (2017) Digital comparison tools market study. From the consumer's perspective, classified advertising is very closely associated with digital comparison tools, defined by the CMA previously as 'digital intermediary services used by consumers to compare and potentially to switch or purchase products or services from a range of businesses'.
[345] CMA calculations based on data provided by Google on Google Ads. See Appendix N for discussion of the Google dataset and its limitations, including why this dataset may not uniquely identify advertisers.
[346] CMA calculations based on data provided by Facebook. See Appendix N for more detail.
[347] Facebook's data only includes UK-based advertisers who target exclusively UK-based users.
[348] Publicis, Interpublic, Dentsu Aegis, Omnicom, WPP.
[349] CMA calculations based on data provided by suppliers and media agencies. See Appendix C for more detail.

5.14 Almost all the larger advertisers which responded to our questionnaire use a media agency and highlighted the following benefits of doing so:[350]

- best practice advice and external expertise in designing campaigns and allocating budget across advertising channels;
- greater economies of scale and scope in resource requirements (manpower, technology and expertise); and
- preferred trading arrangements, eg volume discounts, negotiated by the agency.

5.15 Larger advertisers told us that the benefits of using multiple platforms to purchase advertising from various sources was that this provided them with a greater variety of audience and more flexibility in optimising targeting capability and cost effectiveness. Some advertisers also mentioned that a multi-platform approach avoided them being overly reliant on a single platform. Most suggested that, while there were some issues in comparing advertising performance across platforms, these were not sufficient to stop them multi-homing.

5.16 Smaller, less sophisticated advertisers are less likely to multi-home across platforms or use media agencies, due to the proportionally greater transaction costs in doing so. Instead, they more commonly go directly to Google and Facebook due to their wide reach and their simple self-service interfaces, eg Google Ads or Facebook Ads Manager.

5.17 Evidence from the qualitative survey of advertisers[351] was consistent with the finding that multi-homing by small advertisers is relatively rare – of the sample of 24 advertisers, only a minority multi-homed on platforms aside from Google or Facebook. The survey explored some of the reasons for single homing. These included a perceived feeling that they had no need to advertise elsewhere, as they viewed their current situation as 'good enough', with acceptable return on investment and value for money. However, some advertisers acknowledged that they single-homed due to a lack of knowledge of effective alternatives, or that they had already put in the time to learn to use one platform and did not want to spend additional time learning to use a new one.

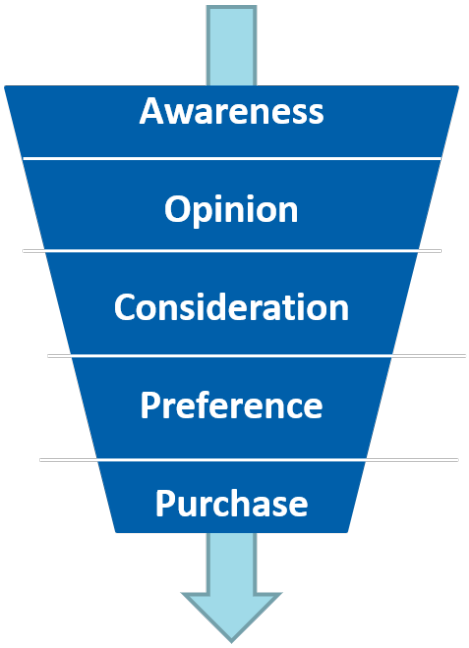
[350] See Appendix N for further detail.
[351] The qualitative research report is published under the CMA Online Platforms and Digital Advertising Market Study case page.

Advertiser objectives and decision-making

5.18 Advertising campaigns are typically planned by first defining the business's objectives (for example, to increase sales or raise awareness) and available budget to achieve these objectives. Advertisers then determine a series of metrics, or key performance indicators (KPIs), relating to the outcomes the advertising campaign is hoping to achieve.

5.19 KPIs can relate either to the impact of the advertising on brand awareness at one extreme or to driving specific consumer actions (eg sales or enquiries) at the other. Several advertisers and media agencies referred to the 'marketing funnel' or 'purchase funnel'. At the top of the funnel, KPIs relate to improving the awareness of consumers that are 'out-of-market' and are not currently aware of the product or service. At the bottom of the funnel, KPIs relate to selling to those customers who are 'in-market', in that they may have expressed some preference for the product or service but have not yet bought it.

Figure 5.1: The purchase funnel



Source: CMA.

5.20 KPIs may often relate to specific audiences that advertisers target using user data, as described in Chapter 4. The choice of appropriate digital advertising inventory is largely based on optimising the KPIs being targeted. In order to assess this, advertisers or their agents need to be able to measure outcomes. This means that, in addition to the performance of media in meeting KPIs

efficiently (at low-cost), principles of accountability[352] and measurability[353] are also important in driving advertiser choice. Advertisers and their agents will choose the media that best meet their specific objectives, but may face diminishing returns in each media channel they use.

5.21 In some cases, choice of inventory is driven by attributes that are exclusively available within a certain advertising channel. Certain channels may have access to inventory, data or technology that allows for the targeting of specific audiences not available elsewhere. Advertisers can also be motivated by various distinct factors in their choice of platforms, for example commercial agreements or restrictions due to the nature of their products (eg gambling and pharmaceuticals).

Substitutability between advertising media

5.22 We sought the views of advertisers and media agencies on how decisions to allocate budget between different types of media are made and what this implied for substitutability. We also commissioned a qualitative survey to understand better the views of smaller advertisers. While media agencies said that substitutability between different media depends on the nature of each advertiser and the specific objectives of their campaign, both agencies and advertisers identified some areas where substitutability is likely to be more limited.

5.23 As discussed in more detail in Appendix N and below in relation to search and display advertising, we have found that:

- **There is limited substitutability between digital advertising and traditional advertising media** – Although some platforms have argued that advertisers can choose between any advertising media for their campaigns, the ability of advertisers to use data to target specific audiences through digital (or online) advertising substantially distinguishes digital from traditional advertising media. We have found that advertisers may treat offline and online advertising as complementary channels within their campaigns to achieve certain objectives, rather than substitutes.

- **There is limited substitutability between search and display advertising** – All media agencies and most advertisers told us that search

[352] The ability to track and report back on the delivery of marketing investment against delivered media granular targeting.
[353] The ability to report back on the success and effect on a client's business at broad reach awareness campaigns and down to highly targeted performance media buys looking at online sales.

and display advertising are not substitutable, mainly because they perform different roles within the customer purchase journey. Search is primarily intent-based advertising designed to provide immediate answers to consumers who have already shown interest in buying the product and are at the end of the purchase funnel ('in-market consumers'), whereas display is suitable for raising brand awareness and reaching new audiences that might not yet have shown interest ('out-of-market consumers'). Most advertisers set budgets for search and display advertising independently and do not allocate them interchangeably. These findings were also reflected in the qualitative survey of smaller advertisers. We note, however, that there is some evidence that display advertising, particularly on Facebook, is increasingly being used for targeting in-market conversions. We consider the nature of these constraints in our analysis of search and display advertising below.

- **There is limited substitutability between video and non-video display advertising** – Media agencies told us that decisions between video and non-video advertising were typically likely to be driven by the need to convey the advertiser's message in the best way. These decisions were likely to be taken at an early stage of the planning process, driven by input from the creative agency. This would limit substitutability between video and non-video advertising.

- **There is substitutability between owned-and-operated and open display** – Media agencies told us that similar advertising formats and audiences are available on owned-and-operated platforms and in open display advertising and that the targeting techniques available are also roughly the same. Consequently, advertisers would largely see these channels as substitutable and decisions would be driven by the ability of the inventory chosen to meet specific KPIs.

5.24 Given these advertiser views, we have carried out a separate substantive assessment of competition in search and display advertising and considered the extent to which other forms of advertising impose a competitive constraint as part of these assessments below.

How advertising is sold

5.25 A key characteristic of digital advertising is the real-time nature of the technology involved in showing an advert. An advert is shown when a user opens a web page or submits a search query. In some cases, the decision on which advert to show may be determined before the web page is accessed, for example when an advertiser has agreed a direct deal with a publisher. However, in most cases the decision is made in real time, either in response

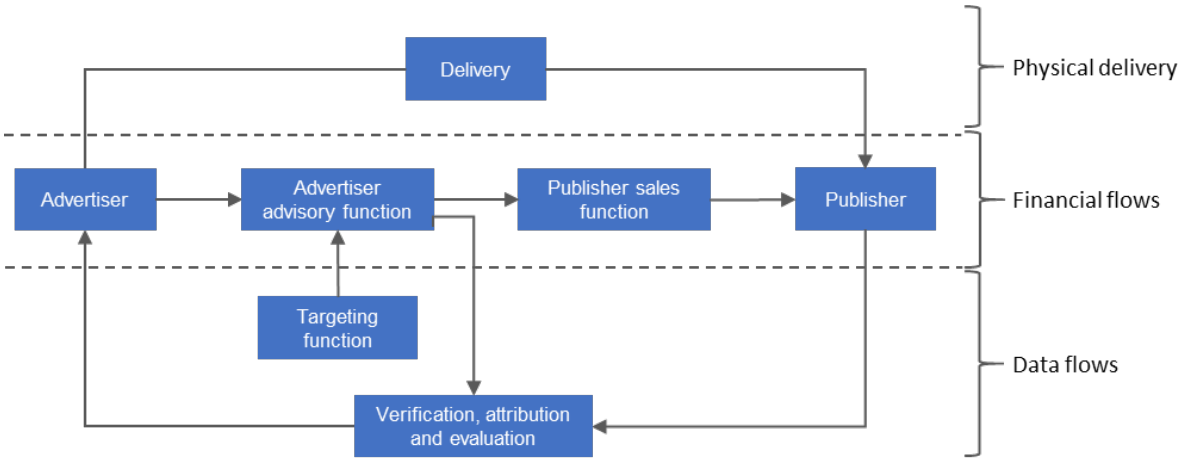
to the search term entered by the user (in the case of search advertising) or in response to information about likely characteristics of the person viewing the advert (in the case of display advertising) or the context of the page being viewed.

5.26 This process of allocating ad inventory, showing an advert and verifying that the advert has been shown requires several different functions to be carried out, which we have defined in the following way:

- advertiser function – commissioning and supply creative content and paying the publishers for the opportunity to display an ad;
- publisher function – selling inventory (space on their site) to advertisers;
- targeting function – targeting adverts at particular users or groups of users (particularly in the case of display advertising);
- advertiser advisory function – determining buying and bidding strategies, based on the advertiser's objectives and the available information;
- publisher sales function – setting the rules for the selling process, contacting potential buyers, collecting and ranking their offers, determining who the inventory is allocated to and the price to be charged;
- verification, attribution and evaluation – verifying that advertisers received what they paid for and evaluating the performance of their campaigns; and
- delivery – the basic task of serving the ad in real time.

5.27 Figure 5.2 illustrates how these functions fit together in a typical digital advertising sales process.

Figure 5.2: Illustration of core functions in digital advertising



Source: CMA.

5.28 The way these functions are carried out varies across different parts of the digital advertising market, depending partly on the type of advertising being sold and partly on publishers' and advertisers' choices about how they wish to organise the sales process.

5.29 Owned-and-operated platforms are able to integrate several of the functions within their 'walled gardens'. For example, large social media platforms such as Facebook operate self-service interfaces for programmatic trading. These allow an advertiser to set its bidding strategies directly, with the platform effectively running the process to decide which advert to show, managing the physical delivery of the bid and providing verification and attribution data back to the advertiser. Similarly, in relation to search advertising Google runs its own auction to decide which adverts to show in response to a given search query and places the advert on its search results page.

5.30 At the other end of the scale, a small publisher wishing to sell advertising inventory without having its own infrastructure for carrying out the physical delivery and financial sales functions will rely on intermediaries to perform these roles. Broadly a publisher has two options:

- sell its inventory through the ad networks of one of the owned-and-operated platforms, such as Google AdSense or Facebook Audience Network – in this case the platform takes on most of the core functions and serves advertising directly on the publisher's website; or

- sell its inventory via ad tech intermediaries, enabling advertisers to bid directly for publishers' inventory.

5.31 We include both these routes within our definition of 'open display'. The ad tech ecosystem is described in more detail in the section on competition in open display below, and in Appendix M.

5.32 From the advertiser perspective, advertisers have the option of buying directly from the large platforms' self-service interfaces. However, larger or more sophisticated advertisers will often use other intermediaries to help with the advertiser advisory function, ad targeting, and verification, attribution and evaluation. These intermediaries include media agencies, demand-side platforms (DSPs) and data management platforms (DMPs), which are defined in the discussion of open display below. The chain of specialised providers

that perform these various functions for both publishers and advertisers is known as the 'ad tech stack'.[354]

The role of auctions

5.33 Within the sales process outlined above, auctions have developed as a key mechanism for making real-time allocation decisions. Auctions are used both in the sale of owned-and-operated inventory and in open display. Auctions enable advertisers (or their agents) to place bids for a given ad impression, and for the inventory owner (or its agent) to decide which bid to accept, and hence which ad to show. The outcome of the auction also determines how much the winning advertiser pays to show the ad. Pricing decisions are therefore made on an impression-by-impression basis, rather than being set by the inventory owner in advance.

5.34 Auction outcomes typically do not depend only on price. In most ad auctions, measures of ad quality also play a part in determining the outcome. Parameters of quality might include an assessment of the quality of the ad content and its relevance to a given context or the person viewing the ad.

5.35 The role of auctions has important implications for the way the market works. In particular, the complexity of the real-time bidding process has added to the information asymmetry between advertisers and publishers on the one hand, and the large platforms and other intermediaries on the other. Outcomes for advertisers and publishers are heavily dependent on the precise way in which the auctions work. Particularly where auctions take account of quality factors as well as price, and where auction operators themselves submit bids on advertisers' behalf, bidders typically do not have full transparency over exactly how the winning bid is determined. We have considered the issue of lack of transparency further in our assessment of competition in different parts of the digital advertising market below.

5.36 Another important implication of the use of auctions is that prices are set independently for different advertising inventory. This means that the competitive constraints faced by advertising platforms may differ for the inventory sold to different customers. This is relevant both to search advertising, where competitive conditions may vary for different search queries, and to display advertising, where competitive conditions may vary depending on the audience being targeted. An advertising platform may have market power over certain groups of customers, even if it faces strong

[354] This is described in more detail in the section on competition in open display below (see Figure 5.19) and in Appendix M.

competition for other groups. This is important when we consider the competitive constraints on Google and Facebook below.

Competition in search advertising

5.37 This section sets out our findings on competition in search advertising. It covers:

- our understanding of the competitive process, including how advertisers choose between search engines and how search engines may respond to competition;
- evidence on market outcomes in search advertising;
- the competitive constraints on Google search advertising, including from specialised search;
- barriers to entry and expansion;
- how Google is able to exploit its market power; and
- how Google leverages its market power in search into other advertising-related markets.

Competitive process

How search advertising is sold

5.38 In search advertising, advertisers bid to link their company website to specific keywords so that the links appear in relevant search engine results. In the vast majority of cases, advertisers will only pay when a consumer clicks on their link (cost-per-click).

5.39 Search engines use second-price auctions to set prices for advertising inventory, where the price paid by the advertiser that wins the auction (and so the right to display the link in relevant search results) is determined in part by the value of the second-highest bid. A key feature of the auctions used in search advertising is that outcomes are also determined by the relevance to the search query of the underlying content of the advertiser website to which the advertising links.[355] Search engines assess relevance directly and use this

[355] Both Google and Bing both refer to the 'quality' of the consumer experience when describing the relevance of search advertising.

assessment to weight bids from different advertisers on a real-time, in-auction basis.

How search engines compete for advertisers

5.40 Search engines are two-sided platforms that compete for both consumers and advertisers. Search engines attract consumer attention through offering high-quality, relevant search results and then monetise this attention by offering the opportunity for advertisers to incorporate relevant advertising into these results.

5.41 Search engines compete over quality to attract users and increase the number of searches carried out. This allows search engines to sell a greater quantity of advertising inventory and generate more revenue. As set out in Chapter 3, we have identified five main dimensions of quality: the relevance of results; ease of use; the attractiveness of the interface; privacy and trust; and user rewards and incentives.

5.42 Search engines also compete more directly for advertisers, through various mechanisms. They compete through the quality of the interface offered to advertisers and through the use of data to offer higher ROIs, more granular audience targeting and better measurement of advertising outcomes.

5.43 An important trade-off faced by a search engine is between the number of ads shown, known as the 'ad load', and the quality of search results to users. Showing a greater proportion of ads relative to organic search results can increase the propensity of users to click on ads, driving up the quantity of ads sold and generating revenues for the search engine. However, the more ads are shown, the more likely it is that some will be less relevant to the user search query, compromising the quality experienced by the user. This results in an important mechanism for competition to occur. Users may respond to increased ad load by switching to rival search engines where quality is perceived to be higher, limiting the ability of the search engine to generate revenue.

5.44 While search engines use auctions rather than setting prices directly, we have identified various levers at their disposal to influence advertising revenues. We discuss these levers in more detail in the section on exploitation of market power in search below.

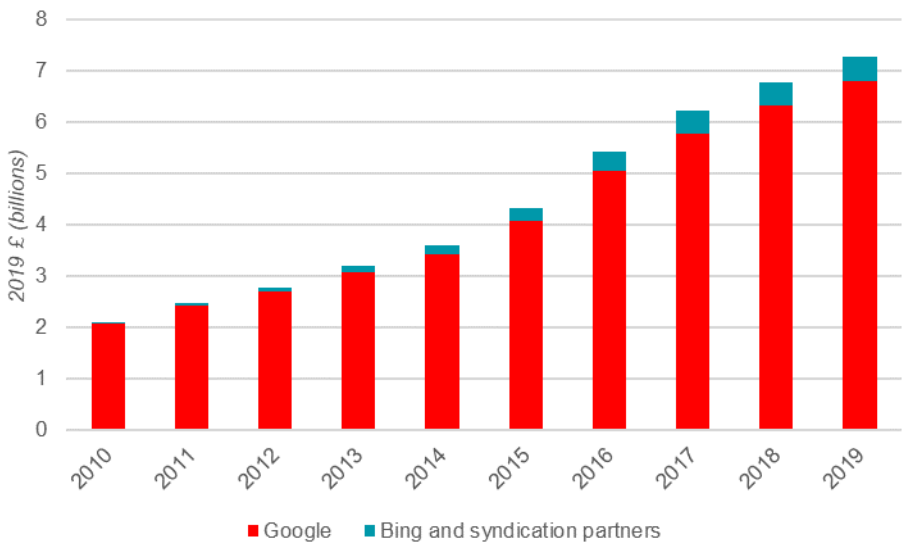
Market structure and outcomes in search advertising

5.45 In addition to shares of consumer attention and search traffic described in Chapter 3, we have looked at evidence on various market outcomes in search

advertising. This evidence and the supporting data are set out in more detail in Appendix C.

5.46 Figure 5.3 below shows that UK search advertising revenues have grown steadily over the last few years. Google's UK search revenues grew from £2.1 billion in 2010 to £6.8 billion in 2019, reflecting a compound annual growth rate of around 14%. Google has continued to account for more than 90% of search advertising revenues, an order of magnitude greater than its next closest rival, Bing. In our view this evidence strongly suggests that Google benefits from market power, particularly when interpreted in the light of the scale advantages discussed in Chapter 3 and further below.

Figure 5.3: Estimated UK search advertising revenues by year (2010-2019)



Source: CMA analysis of parties' data.

5.47 Our analysis of market outcomes also shows that there has been a substantial shift over time from advertising delivered to consumers on desktop to advertising delivered to consumers on mobile. This is consistent with other market reports we have seen[356] and reflects the underlying increased usage of mobile devices. We note that this shift may benefit Google over its rivals, due to Google's default status on nearly all mobile devices and higher share of mobile searches The continuation of this trend would mean that Google is able to gain an increasing overall share of search queries and advertising revenues as well as gain an advantage over rivals from the data it can gather from mobile devices.

[356] For example, IAB UK & PwC Digital Adspend Study 2019.

5.48 We discuss other market outcomes, including revenues and prices, in the section on exploitation of market power in search below.

Competitive constraints on Google

5.49 This section sets out our assessment of the current competitive constraints on Google and the extent to which it has market power in relation to search advertising. We consider in turn the competitive constraints from:

- other general search providers – notably Bing and its syndication partners;
- specialised search providers – such as Amazon and Booking.com; and
- display and other forms of advertising.

Competition from other search providers

5.50 Google competes in a duopoly with Bing and its syndication partners, though Google accounts for more than 90% of search advertising revenues, an order of magnitude greater than Bing. This reflects that Google has been more successful in attracting user attention through the quality of its search engine to users. Since advertisers need to access user attention, the difference in scale suggests that the competitive constraint imposed by Bing on Google is very limited.

5.51 Evidence from advertisers we contacted suggested that this is one of several advantages Google has over Bing. Several advertisers said that they use Google due to it having a better scale and reach achievable than Bing. They pointed to a range of other advantages, including better targeting options, better analytics capacity and earlier release of new features. Some told us that Bing had some benefits, in particular that it was useful for targeting older, less tech savvy audiences. All advertisers we received evidence from viewed Google as being comparatively better overall than Bing in satisfying their objectives.

Competitive constraint from specialised search

5.52 The advertisers we contacted all said that specialised and general search advertising are not substitutable but are used in tandem to achieve advertisers' goals. This is because they perform different functions at different points of the purchase funnel and can be used to reach different audiences. General search has a higher reach, is cheaper and is best used to attract traffic from a wider audience that has demonstrated general intent, while

specialised search is more expensive, has lower reach and is used to directly make sales to a narrower audience that are engaged in actively researching and comparing specific products or services. All of the specialised search providers we contacted also told us that they see general and specialised search as performing two different functions for advertisers. Further evidence on the competitive constraint from specialised search is set out in Appendix P.

5.53 Based on this evidence, specialised search does not appear to compete with Google's general search engine directly for advertisers. Further, as set out in Chapter 3, we have found that specialised search providers provide only a limited competitive constraint to Google Search on the consumer side of the platform.

Competitive constraints from display and other forms of advertising

5.54 Evidence from advertisers we contacted suggests that there is little competitive constraint from display advertising on search advertising. As set out in Appendix N, all the major media agencies and most large advertisers told us that search and display advertising are not substitutable, mainly because they perform different roles within the customer purchase journey. Specialised search providers, who are some of Google's largest customers, considered Google to be an essential source of user traffic and did not consider display advertising to be an alternative.

5.55 There is some evidence that display advertising, particularly on Facebook, is increasingly being used for targeting in-market conversions. This suggests that Facebook may become an increasing competitive constraint on Google in the future. However, based on the advertiser views we have received, this competitive constraint currently does not appear to be significant for most advertisers. For many, display advertising is unlikely to be an option given that it is not shown in response to user intent. For example, we note that specialised search providers rely heavily on accessing user traffic from search engines. Given that prices for advertising inventory on Google are set by auction for different search queries, the competitive constraints faced by Google for certain search queries do not extend to other queries where it faces less competition.

Barriers to entry and expansion

5.56 In this section we assess the barriers to entry faced by potential competitors to Google in general search. We find that there are several material barriers giving Google a significant incumbency advantage, such that there is a weak constraint on Google from potential entry into general search.

User-side barriers

5.57 In order to sell search advertising, potential entrants need to be successful in attracting search queries from consumers. This means that the barriers to entry on the consumer side of the market, derived from the need for access to a search index, from economies of scale and scope in click-and-query data and from defaults as described in Chapter 3, are also relevant to potential entrants wanting to supply search advertising.

Advertiser behaviour

5.58 Transaction costs faced by advertisers in using multiple search engines appear likely to benefit Google and create a barrier to entry for smaller rivals. Most of the larger advertisers we contacted did not suggest there was a difficulty in multi-homing across multiple search engines and they used tools such as SA360, or those provided by third parties such as Marin and Kenshoo, to do so. However, a minority of the larger advertisers who responded to our questionnaire choose to single-home as Google had a sufficiently large market share and reach to meet all their needs. Based on evidence from the qualitative research set out in Appendix N, many smaller advertisers choose to single-home, using the simple interface provided by Google Ads and benefiting from its broad reach.

5.59 Access to demand from a significant proportion of advertisers that single-home may also provide Google with greater advertiser density, allowing it to run more competitive auctions that generate higher prices and more relevant ads. This is likely to be of particular benefit for more specific keywords relating to the 'tail' of less common search queries. These keywords (which for example might include more detail on product characteristics desired by the consumer) tend to be preferred by advertisers as they can allow for more specific targeting, resulting in higher conversion rates and returns on investment.[357]

Data advantages

5.60 Google's extensive first-party data[358] is likely to give it a substantial advantage over smaller rivals, creating a barrier to entry and expansion. As a result of Google's first-party data, advertisers on Google can target search advertising to particular audiences (and have confidence in the composition of those audiences), allowing improved performance for their advertising. Google also

[357] Our analysis of pricing for search queries on Google and Bing, set out in Appendix C, suggests that less common monetised search queries tended to have higher CPC than more common monetised search queries.
[358] First-party data is information that a business collects directly from its users rather than via a third party.

has access to extensive data on user location, including through Android phones, on which half to two thirds of users have location services activated; this allows search advertising to be more effectively targeted based on location.

5.61 Google's data further allows it to offer more accurate attribution services to advertisers. Google has tags (including as a third-party) on over 80% of websites and over 85% of apps on the Play Store, which allows it to form a more complete picture of users' ad exposures, across its own properties and a substantial proportion of other non-Google websites. This allows Google to attribute conversions more accurately to the multiple ad exposures. Its location data also creates the potential to monitor some offline as well as online activity – for example by tracking whether someone is in a particular store.

5.62 Several advertisers highlighted Google's first-party data as an advantage over Bing. The large platforms' advantages in data are discussed further below.

Exploitation of market power in search

5.63 This section sets out the evidence on Google's ability and incentive to exploit its market power. Our analysis is set out in more detail in Appendix Q.

Google's ability and incentive to exercise market power

5.64 Search advertising prices are set by auction, based on the bids submitted by advertisers, rather than being set directly by the search engine. However, this does not mean a seller's market power does not affect prices paid. Where a search advertising platform has market power, the lack of substitutable alternatives will mean that advertiser bids in its auctions are higher, resulting in higher prices.

5.65 In addition, within the auction framework, Google has several levers through which it can influence market outcomes such as the quantity of advertising and advertising prices. These fall into three broad categories:

- levers over the quantity and presentation of ads shown;
- levers over the quality/price trade-off; and
- levers over auction mechanisms and bid prices.

5.66 Google's incentives over how it flexes these levers are affected by its market power both on the user side of the platform (ie in search) and on the digital advertising side.

- *Quantity of ads shown and ad presentation*

5.67 Search engines can determine the overall limit on the number of ads that appear in search results and how these ads are presented alongside organic search results. Showing a greater proportion of ads relative to organic search results can increase the propensity of users to click on ads, driving up the quantity of ads sold. Both text ads[359] and product listing ads (PLA) can be shown at the top of the search engine results page (SERP) where consumers are more likely to click, resulting in organic search results appearing further down the SERP.

5.68 In a competitive market, a search engine's incentive to increase ad load is constrained by the fact that this reduces quality of the search engine to users. As a result, users may respond to increased ad load or reduced relevance by reducing their propensity to click on or interact with ads over the long term, a phenomenon known as 'ad blindness'. Based on this, we would expect users to respond to increased ad load by switching to rival search engines where quality is perceived to be higher.

5.69 Overall, it appears likely that Google's market power on the user side results in an incentive for it to promote more ad clicks than it would in a more competitive market. Although it is still constrained to some extent by the need to maintain the quality of its search product, at the margin it has less risk of users switching away because it faces weaker competitive alternatives. Increased ad clicks are likely to lead to higher costs to advertisers because it will tend to reduce the proportion of clicks going to organic search, which advertisers receive for free, rather than paid advertising. Therefore, businesses that rely on accessing consumers through general search will need to pay increased advertising costs in order to maintain the same volume of overall traffic.

5.70 In addition to ad load, the presentation of advertising can influence the propensity for users to engage with it, for example by affecting the click-through rate. For example, if the distinction between ad links and organic links is not clear, consumers may be more likely to click on the ads rather than organic content.

[359] Google currently allows a maximum of eight text advertisements to appear on every SERP, four at the top of the page and four on the bottom of the page. These limits and the way search advertisements are presented have changed over time

- *Price/quality trade-off*

5.71 Google and other search engines can also control the balance between price and quality or relevance of search adverts shown to users by choosing how much weight to place on quality metrics in determining the winning bid. Putting a higher weight on quality metrics compared to price is likely to improve the quality of the platform for users, because the search adverts will be more relevant and salient. A lower weight on quality metrics is likely to result in higher prices and generate more revenue in the short term as advertisers compete more directly on price in search auctions (though potentially at the expense of losing users in the long run).

5.72 In a more competitive market, platforms will have an increased incentive to put more weight on quality relative to price. This is because users would switch away to another platform if the relevance and quality of the ads were low, so the platform would lose revenue even if it were able to charge a higher price for each advert.

5.73 However, Google's market power is such that Google is less constrained by this user-side competition. It therefore has a greater incentive to reduce the importance of the quality or relevance score in determining the winning bid, thus increasing its revenue.

- *Auction mechanisms and bid prices*

5.74 Finally, Google and other platforms control several other auction parameters which can affect prices, which are explained in more detail in Appendix Q. The auction mechanism provides an efficient way for Google to take advantage of its market power without having to set prices directly. In addition, it has levers within the auction which can further influence prices paid. These include setting the minimum reserve price at which individual auction impressions can be sold; and setting bid prices on bidders' behalf through automated bidding tools.

5.75 In auctions where only one bid exceeds the reserve price, the reserve price, which is set by Google, directly determines the price paid by the winning advertiser. This is the case in 60% of Google's auctions, representing 20% of its revenues.

5.76 With automated bidding, advertisers provide the search engine with a performance goal and then allow the search engine to use algorithms to dynamically set cost-per-click (CPC) bids to meet the advertiser's stated performance goals. In 2019, [40-50] % of Google's UK search advertising revenue came from advertisers using automated bidding, while the remainder

set maximum CPC bid limits. While automated bidding can be used to benefit advertisers, due to its opaque and complex nature it could also be implemented by the search engine in a way that results in equilibrium auction outcomes that are worse for advertisers collectively, ie where prices are higher.

5.77 Although any use of these levers to increase prices would not necessarily be transparent to advertisers, their impact would be felt in a lower returns on investment for advertisers, who, in so far as they were able to track this accurately, could then decide to switch to another search platform. Google's market power in digital advertising increases its ability to use these levers to increase price, because it is less constrained by the threat of advertisers switching away.

Evidence of exploitation of market power

5.78 In the following section we set out evidence of the impact of Google's market power in search advertising. We have assessed: the changes over time in Google's monetisation of its search content; comparisons with Bing; evidence from advertisers and other third parties; and evidence of the use of defaults to influence advertisers' behaviour.

5.79 To assess the extent to which Google has exploited market power, we would ideally want to compare Google's behaviour today against a situation in which Google faced strong competition from other search engines. However, it is not possible to do this as this 'competitive counterfactual' is unobservable. Instead we have assessed changes over time in Google's monetisation of its search content and compared prices between Google with Bing for overlapping search queries. These are not perfect proxies for the competitive counterfactual, but they are illustrative of the extent to which Google has been able to exercise market power.

5.80 Our analysis of changes in Google's monetisation over time illustrates how Google can use the levers described above to generate additional revenues. Increases in monetisation over time would be consistent with increasing market power, although changes in monetisation may also be driven by other factors, such as changes in advertiser demand. While our analysis comparing Google's prices to Bing's is not equivalent to comparing Google's prices against prices in a competitive counterfactual, we would expect Google's prices to be higher to the extent that it has market power.

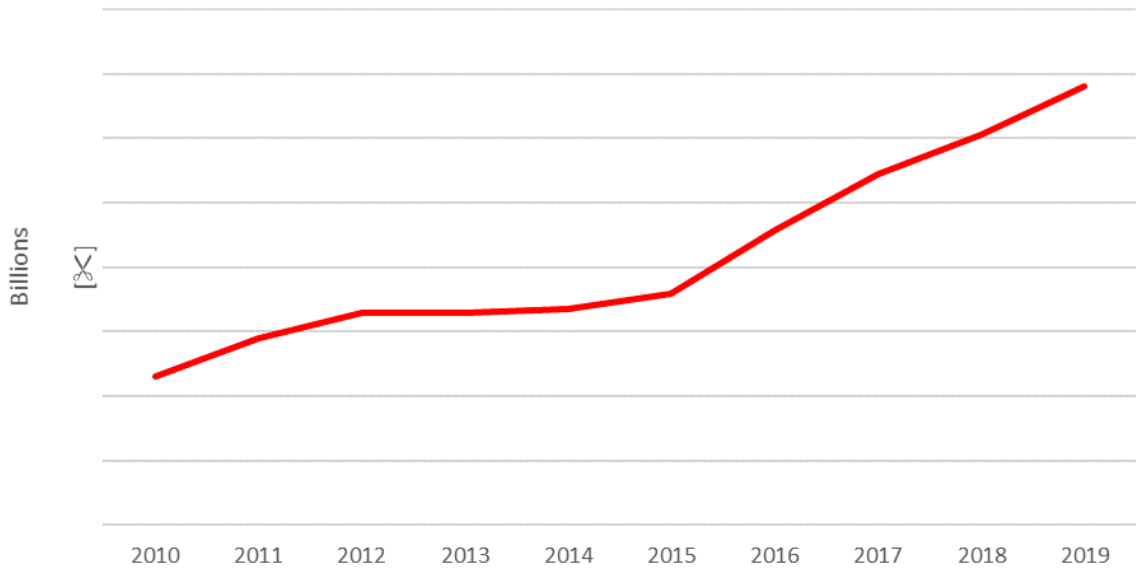
- *Trends in search advertising revenues over time*

5.81 Google's search advertising revenues have been steadily increasing over the past 10 years, from £2.1 billion in 2010 to £6.8 billion in 2019. This growth has been significantly faster than the growth in the number of searches. Revenue per search has increased from £[0.02–0.03] in 2011 to £[0.04-0.05] in 2019 in real terms.

5.82 The total number of searches on which Google shows adverts has remained broadly constant over the past ten years, and Bing shows adverts on a higher proportion of searches, as discussed below. However, the total number of advertising impressions[360] has increased significantly, particularly since 2016, reaching [400-500] billion impressions in 2019 when specialised product listing ads (PLAs) are included. We note that Google submitted data which shows that, when broken down between text ads and PLAs, the increase since 2017 has been primarily driven by an increase in PLA ads.

5.83 Google predominately uses a cost per click pricing structure to sell its inventory. This means that only impressions that result in a click generate revenue for Google. Figure 5.4 shows that the total number of ad clicks in 2019 (including both text ads and PLAs) was around 300% higher than its level in 2010.

Figure 5.4 Total UK Ad clicks on Google Search



Source: CMA analysis of Google data.

[360] An impression is where a search ad is displayed in the SERP, regardless of whether it is clicked on.

5.84 This increase in ad clicks has coincided with several key changes to Google's presentation of ads and an increase in the maximum number of ads eligible to appear above the organic search results:

- In 2016, Google removed right-hand side ads and increased from three to four the number of ads eligible to appear above the organic search results.
- Later in 2016, Google introduced 'Expanded Text Ads', which allows advertisers to enhance their creative with a third headline and a second description.
- In 2019, Google altered visual elements of ads for mobile and in 2020 for desktop.

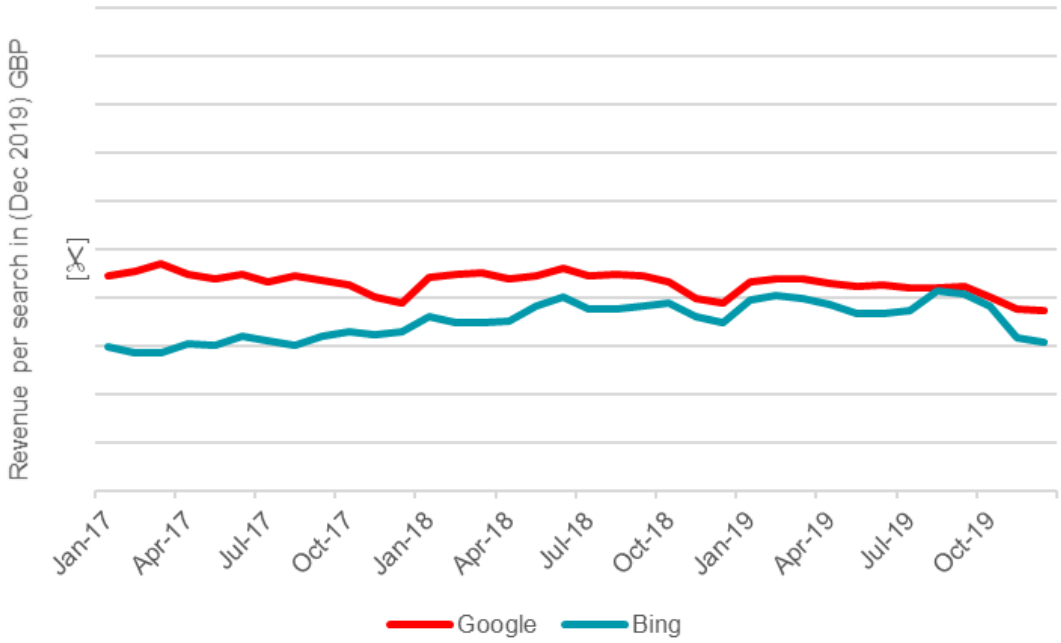
5.85 Internal documents discussing these changes illustrate that Google has been able to generate higher click-through rates and revenue per impression, through increasing ad load.

5.86 Google's average prices (measured in cost per click) have not changed significantly over the past ten years, but have increased somewhat over time, by [20-30]% from [✂] in 2012 to [✂] in 2019.

- *Comparison of prices and ad load between Google and Bing*

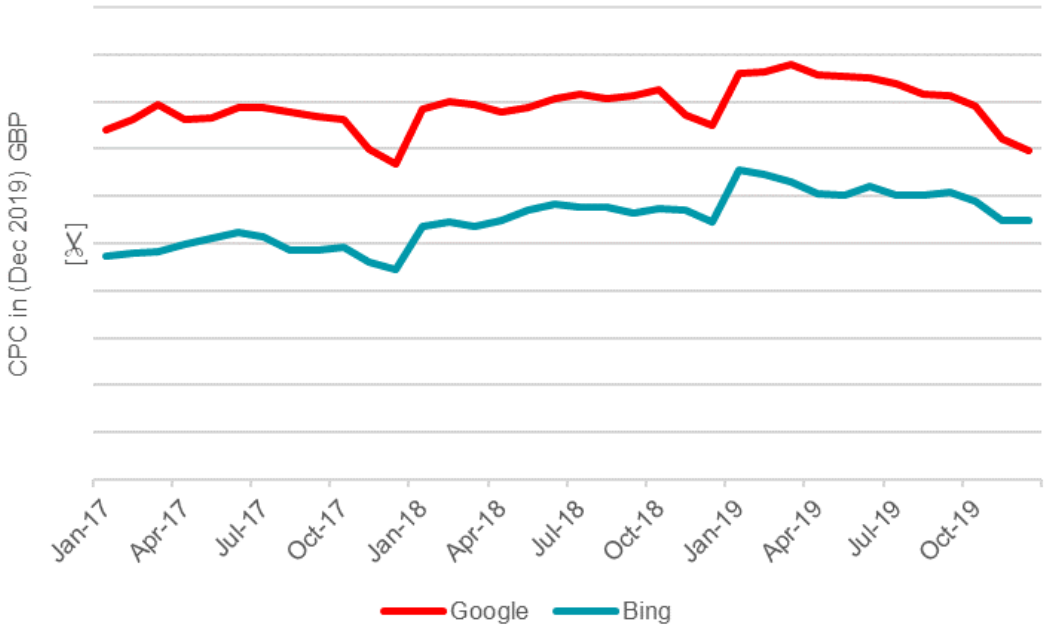
5.87 We have looked at evidence from Google and Bing on average prices, or cost-per-click, from January 2017 to December 2019, split between prices charged for searches on desktop and prices charged for searches on mobile devices. This is shown in Figures 5.5 and 5.6 below. Average desktop prices are higher than mobile, because consumers are more likely to purchase higher value items or are more likely to complete purchases when using desktops.

Figure 5.5: Monthly average cost per click for mobile search advertising from July 2017 to December 2019



Source: CMA analysis of parties' data.

Figure 5.6: Monthly average cost per click for desktop search advertising from July 2017 to December 2019



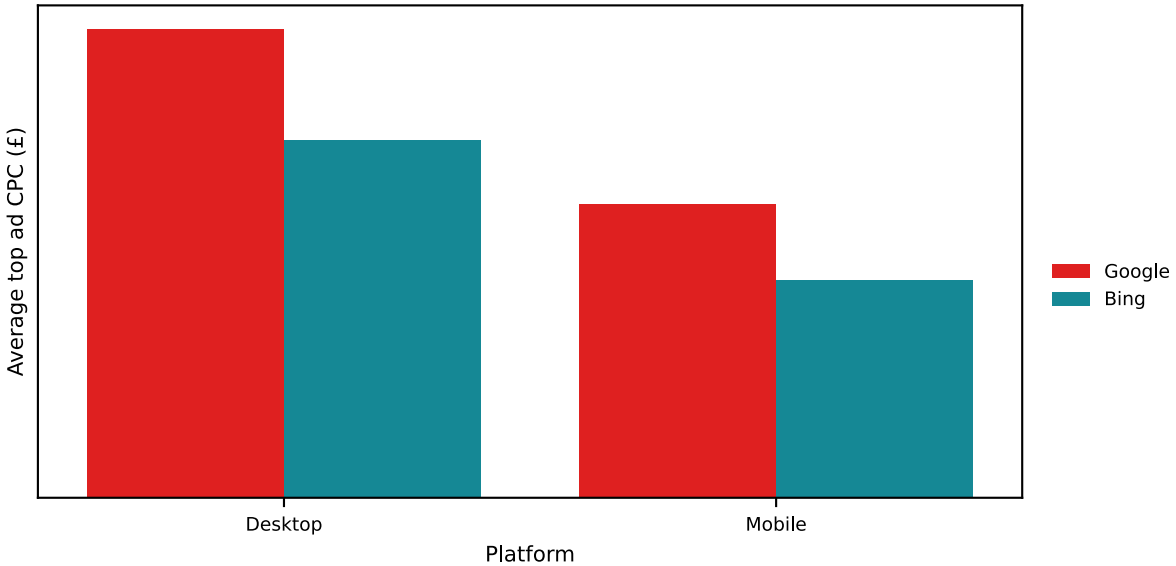
Source: CMA analysis of parties' data.

5.88 We note that Google has achieved somewhat higher prices on average than Bing over the period. However, this comparison does not account for differences in the distribution of queries across Google and Bing. To account for this, we have collected data on all the search queries submitted to Google and Bing in the UK in a single week in 2020 (several billion queries in total)

and compared the prices for 'overlapping' queries, that is search events for queries observed by both Google and Bing.[361] This analysis is set out in more detail in Appendix C.

5.89 Figure 5.7 shows the average cost per click of top ads for overlapping queries, weighted by volume. As set out in Appendix C, we note that prices unweighted by volume are higher than when weighted by volume. This indicates that ads on less common queries tend to be more expensive than ads on more common queries.

Figure 5.7: Average cost-per-click for top ad cost per click on Google and Bing



Source: CMA analysis of parties' data.

5.90 Figure 5.7 shows that, for the same search queries across our one-week dataset, Google has higher prices than Bing on average. Google's prices are on average [30-40]% higher on desktop and [30-40]% higher on mobile for the sample of queries that we analysed. This is consistent with Google exploiting market power in its search auctions. It is also consistent with Google benefiting from data or scale advantages arising from its market power on the user side.

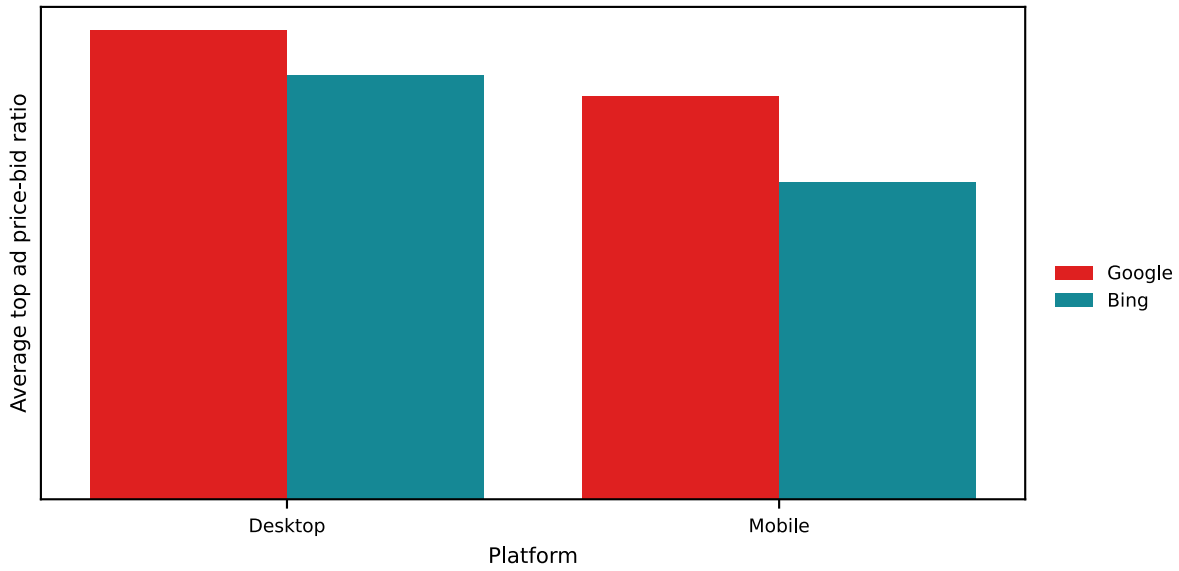
5.91 We have also compared the price-bid ratio across Google and Bing. The price-bid ratio measures the difference between the winning bid and the price paid.[362] To the extent that advertiser bids reflect willingness to pay, the price-bid ratio provides a measure of the ability of the search engine to extract advertiser surplus. A higher price-bid ratio implies lower advertiser surplus.

[361] Owned-and-operated only.
[362] Google and Bing both use adjusted second-price auctions, where the winning bidder pays the quality-adjusted second-price bid.

This is because the price the advertiser has paid is closer to their bid. If the bid captures the true valuation by the advertiser, this means that less surplus went to the advertiser. The price-bid ratio should also help to control for any difference in the value of a click to an advertiser on Google as opposed to Bing.

5.92 Figure 5.8 shows the difference in price-bid ratio between Google and Bing for top ads. It shows Google has a higher price-bid ratio for like-for-like queries on average, by [10-20]% on desktop and [20-30]% on mobile for the sample of queries that we analysed.

Figure 5.8: Average price-bid ratio for top ad for Google and Bing on a like-for-like basis



Source: CMA analysis of parties' data.

5.93 Google's higher average price-bid ratio suggests that Google is able to extract more advertiser surplus than Bing. This could be caused by Google exercising market power. It could also be a result of greater bid density, arising from the propensity for some advertisers to single-home on Google.

5.94 Our comparison between Google and Bing also shows that, compared to Bing, Google has a lower ad load both in terms of the number of search events which show an ad and the number of ads shown on each of these events. These comparisons do not include other specialised search adverts, such as Google Shopping ads, which contribute to Google's overall ad load. This suggests that there is currently little competition between Google and Bing to attract users via setting lower ad loads.[363] We still consider that Google's

[363] We note that when comparing Google and Bing we are not observing the competitive counterfactual. Bing's higher ad load may reflect that it has little incentive to attract customers through setting lower ad load, given the

ability to increase its ad load over time, including specialised search ads, is an indicator of its market power.

- *Views of advertisers and other third parties*

5.95 We have heard a range of concerns from Google's customers about practices that are consistent with the exploitation of Google's market power. Several advertisers, including both specialised search providers and other advertisers, submitted to us that recent changes to Google's policies on ad load and the presentation of search advertising had the effect of increasing the propensity for users to click on ads rather than organic links.

5.96 Specialised search providers told us about other specific changes to Google's policies that had allowed Google to exploit market power over its customers to a greater extent. For example:

- Google has recently changed its 'Exact Match' keyword matching algorithm, no longer allowing advertisers to specify that the keyword should exactly match with the search term but also allowing for 'close variants'. Advertisers told us that this limited their ability to determine which auctions to bid into and their ability to optimise bidding across multiple keywords. This could lead to advertisers participating in auctions for search terms that are less relevant to them and where their bids might have a reduced quality weighting, resulting in increased prices.

- Several specialised search providers expressed the concern that Google had reduced the transparency of reporting of outcomes in its search advertising auctions. These concerns related in particular to Google deciding to no longer provide information to advertisers on the average position in which their ads were shown in search auctions. This made it more difficult for advertisers to implement bidding strategies focusing on lower ad positions.

- Several specialised search providers expressed the concern that changes to the autocomplete function in the Chrome 'Omnibox' had the effect of diverting user traffic to Google's search engine results instead of directly to the advertiser's website.

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large scale and quality differential between Google and Bing discussed in Chapter 3. In practice it appears that Bing's ability to attract customers may be more closely associated with its defaults on desktop devices rather than its perceived quality.

5.97 Overall, we found that specialised search providers paid around 25% of their total revenues to Google for search advertising, indicating the significant impact that Google's advertising prices have on specialised search providers' costs.[364]

- *Use of defaults to change advertiser behaviour*

5.98 We have also reviewed Google's advertiser interface, Google Ads, to assess whether it is exploiting behavioural biases to nudge advertisers into behaviour which might allow it to earn higher revenues. This analysis is set out in more detail in Appendix N.

5.99 One example is that the option to allow advertisers to set maximum CPC is not selected by default. Instead, the default is for advertisers to allow Google to set their bids through one of its automated bidding strategies. Advertisers that do not set maximum CPC run the risk that they buy advertising where the cost is higher than the amount they would be prepared to pay. For 2019, [40-50]% of Google's UK search advertising revenue came from advertisers using automated bidding, while the remainder set maximum CPC bid limits.[365]

5.100 Some advertisers contacted as part of our qualitative research said that the advertising interface defaults did not match the objectives or needs of the advertisers, thereby producing less relevant results and wasting the advertiser's money. The default options were also seen as more expensive than non-defaults, with some advertisers viewing this as a deliberate strategy by Google to get them to spend more.

- *Google's views*

5.101 Google submitted[366] that the provisional finding in our interim report in this market study that concentration in search advertising may lead to higher prices for users across the economy is not consistent with the evidence. It provided evidence that the price of digital advertising has fallen by more than 40% since 2010.[367] It argued that it is inherently difficult to compare Google's prices with those of third parties on a like-for-like basis and that a full profitability analysis would have to disentangle those revenues that arise from market power from those which arise from genuine value-adds and competition on the merits. Finally, Google argued that any transmission mechanism between alleged concentration in search and the price of final

[364] See Appendix P for further detail of the impacts of Google's market power on specialised search providers.
[365] Google response to our request for information.
[366] Google's response to our consultation on the Interim Report, paragraph 19.
[367] See 'The Declining Price of Advertising: Policy Implications'.

products is likely to be complex given the two-sided nature of the market, the fact that advertisers pay for search ads on a per-click basis and the existence of an auction among advertisers.

5.102 In relation to these submissions, we note that the evidence of falling digital advertising prices since 2010 relates to the United States and is not limited to Google's search advertising. As such, it has little bearing on Google's market power. Our analysis of Google's actual UK prices shows that they have increased somewhat since 2010. Our analysis also shows that Google's prices are higher than Bing's on both mobile and desktop, even when controlling for overlapping search queries. We have set out the transmission mechanism for how competition may affect the incentives for a search engine to use the 'levers' at its disposal to generate additional revenues at the expense of higher advertising costs.

5.103 Google also submitted that it is not plausible for it to use market power to increase the number of search ads shown on its search engine results page (ie the ad load). Google notes that it already applies an eight-ad limit for text search ads on its SERP,[368] but it is quite rare that it ever shows eight text ads. In fact, most search queries return no ads at all. Google told us this is because it only shows ads when they meet its strict relevance criteria and quality thresholds. In addition, Google argued that if it 'crowded out' organic search results with less-relevant ads, it would degrade the quality of its search service, harm user experience and trust, and damage the ad ecosystem as a whole. Similarly, Google submitted that it does not have an incentive to adjust the way it weights relevance, the Ad Rank Threshold, or how it matches keywords to search queries in order to generate more revenues, because these changes would compromise the quality of Google's SERPs and not be in its long term commercial interest.

5.104 In our view these arguments are inconsistent with the evidence we have reviewed, both from Google and third parties. In a more competitive market consumers would have greater ability to switch to alternative search engines based on quality, resulting in a constraint on Google from increasing ad load. This same logic applies to the various other levers Google has at its disposal to increase revenues. With regard to prices, our analysis shows that Google charges significantly higher prices than Bing for overlapping search queries.

[368] Search Engine Results Pages.

Exclusionary behaviour

5.105 One of the most significant sources of consumer harm is likely to come through the impact of Google's market power and the high barriers to entry and expansion in search advertising on dynamic competition and the extent of innovation. In addition to exploiting its market power directly in relation to search advertising, Google may also have the ability and incentive to behave in a way that raises barriers to entry further or leverages its market power in related markets.

5.106 In Chapter 3 we highlighted complaints in relation to specialised search. In this section we describe some of the concerns that have been expressed in relation to wider parts of the digital advertising market: self-preferencing through SA360 and leveraging into open display advertising.

Self-preferencing through SA360

5.107 Microsoft explained that Google Search benefits from greater interoperability between SA360 (a Google-owned tool used by many advertisers for automatic optimisation of their expenditure across keywords and platforms) and Google Search, compared to that between SA360 and Bing. Microsoft has stated that this benefits Google in two ways:

(a) Data on bids from Google Search is fed back to SA360 and combined with conversion data in real time, while bidding data from Bing comes back only periodically. This can make it appear to advertisers that Google Search is performing better on SA360 because conversion information for Google appears before Bing and automatic budget allocation rules will correspondingly allocate it more budget.

(b) New functionalities of Google Ads are introduced on SA360 quickly while Bing has often had to wait significant periods of time for innovations in the functionality of its search engine to be adopted by SA360.

5.108 Microsoft submitted that it generally implements advertising features that are also implemented by Google and tries to do so in a manner that is consistent with Google. Because of this, the engineering necessary to support Bing features in addition to Google features is not significant in Microsoft's opinion. In its responses to our request for information, Microsoft identified 33 relevant Bing features, 24 of which have never been adopted by SA360. The remainder took varying times to be adopted, ranging from a few months to a few years.

5.109 In response to these concerns, Google has submitted[369] that (a) misunderstands how SA360's automated bid strategies work. SA360's automated bid strategies do not use 'data on bids'[370] from integrated search engines but rely on conversion data that SA360 processes itself agnostically across engines. In relation to (b), Google submitted that, among other factors such as resource availability and engine requirements, it objectively assesses advertiser demand across all search engines and integrates the features for which there is most demand: this is a consistent and reasonable approach that is not intended to give any supported search engine a material competitive advantage over others.

5.110 We have not reached conclusions on the merits of these specific concerns during the market study. However, we consider that Google could have the ability and incentive to engage in this type of practice and that this could reduce the competition faced by Google's search engine.

5.111 Google's ability and incentive to engage in these practices stems from the market power of its search engine and SA360's substantial share of demand on Google's overall search advertising ([30-40]%[371] based on 2018 data). It appears that the lack of adoption by SA360 of valuable Bing features could have the effect of diverting some of this demand from Bing to Google. It also appears that Google's search engine would benefit directly from SA360 reducing interoperability with Bing at little cost to Google. Google additionally would benefit from protecting the market power of its search engine in the long term. It does not appear likely that a lack of interoperability with Bing would materially reduce advertiser demand for purchasing search advertising via SA360.

5.112 Even if Google's behaviour is justified by the need to prioritise the integration of innovations according to the scale of advertiser demand, in our view this would still contribute to the scale advantages Google benefits from in search. This is likely to lead to higher barriers to entry in search and result in a loss of innovation, both from reduced ability of third parties to enter the market and have innovations adopted by intermediaries and from the resulting reduction in competitive pressure on Google itself. This provides a rationale for acting to keep the behaviour under review through a code of conduct as described in Chapter 6, even if it is justified by relative scale of advertiser demand.

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[369] Google Response to third-party concerns, 19 May 2020.
[370] Meaning data about the performance of each bid within each auction.
[371] This figure is calculated using multiple databases which are not wholly consistent. It is therefore an approximation.

Leveraging into open display

5.113 Google may also be able to leverage its market power in search into the open display market. Smaller advertisers often choose to single-home to minimise transaction costs. Advertisers that wish to single-home have a strong incentive to use Google Ads as they can use it to access Google search advertising and YouTube inventory as well as the open display market. This is discussed in more detail in the section below on open display.

Competition in display advertising

5.114 This section sets out our findings on competition in display advertising. We consider competition between suppliers of display advertising, including both owned-and-operated platforms and publishers who sell via the open display market. Issues specific to the open display advertising sector are covered in the following section. This section covers:

- our understanding of the competitive process, including how advertising is sold, how advertisers choose between suppliers of display advertising and how suppliers compete;
- evidence on market outcomes in display advertising;
- competitive constraints on Facebook;
- barriers to entry and expansion;
- how Facebook is able to exploit its market power; and
- how Facebook leverages its market power in display advertising into other advertising-related markets.

Competitive process

How display advertising is sold

5.115 The display advertising sector can be segmented into two channels: owned-and-operated platforms and the open display market. Owned-and-operated platforms typically provide social media, which they use to attract consumer attention and create advertising inventory, which in turn they sell to advertisers using proprietary interfaces. They gather data on these consumers to enable advertisers to target specific audiences.

5.116 In the open display market, many publishers (for example, suppliers of news media and app providers) also attract consumer attention through providing

content. However, they sell advertising inventory in an open market using a complex chain of intermediaries, who often run real-time auctions and typically supply the data used for audience targeting. The open display market is described in more detail later in the chapter.

5.117 In both these channels advertising is either sold using real-time auctions to allocate inventory, or through direct deals with a price agreed directly between the advertiser and publisher. Direct deals can either be hosted using the same programmatic advertising technology used to run auctions or alternatively can be organised separately. Stakeholders have told us that the vast majority of display advertising inventory is now sold using programmatic technology.

5.118 Compared with search advertising, there is significantly greater differentiation in the types of display inventory that can be bought by advertisers. In particular, display advertising can be further segmented by:

- ad format – for example, whether advertising content is in video or non-video format; and
- type of platform or publisher on which the ad is shown – for example, 'social' display, where the ad is shown on a social media platform, is sometimes treated as a separate segment.

5.119 We consider below the extent to which conditions of competition vary across these different segments.

Demand for display advertising and substitutability of different formats

5.120 Our evidence on advertiser demand for display advertising is set out in Appendix N. In summary, we have found that advertiser choice in display advertising is primarily driven by the objective of targeting increased brand awareness for specific audiences. KPIs for display advertising tend to be focused on the reach achieved with a specific audience group. This means that the use of data to identify target audiences is key for display advertising. However, there is also some evidence that advertisers are increasingly using display advertising for in-market conversions as well as for more general brand awareness.

5.121 Media agencies and advertisers have told us that advertisers are generally agnostic in their choice across different platforms that sell display advertising and between using owned-and-operated platforms and the open display market. Rather, decisions are made primarily based on effectiveness of meeting KPIs against cost. However, we have found that some smaller

advertisers that do not use media agencies may prefer to rely solely on Google's or Facebook's ad buying platforms.

5.122 We have also gathered evidence on the extent to which advertisers view different display ad formats as substitutes. The most important distinction is between video and non-video formats.

5.123 Facebook argued that there is no strong evidence of segmentation between video and non-video advertising. It submitted that video and non-video advertising are substitutable from an economic and functional characteristic perspective. It also pointed to evidence showing that advertisers on Facebook choose to target high-level objectives and sub-objectives using both video and non-video advertising.[372]

5.124 Media agencies told us that the decision to use video or non-video within display advertising was typically made early on in the planning process and may be driven by the decision of how best to convey the advertiser's message. Some advertisers stated that choice of format for display will affect the KPIs of the campaign, which would limit the substitutability between video and non-video advertising. However, one advertiser told us that both video and non-video display advertising can be used for both performance and brand advertising, indicating some limited degree of substitutability depending on the campaign KPIs.

5.125 On the other hand, we noted that the decision on whether to run a video or non-video display advert is made very late on in Facebook's self-service interface, during the final 'Ad' stage which deals with the final ad visualisation and configuration.[373] This may indicate that the interface treats video and non-video adverts similarly, as all choices related to campaign objectives, budget and targeting amongst others are made before the decision on whether a video or non-video advert will be run.

5.126 Overall, the evidence of substitutability between video and non-video advertising is mixed. We have therefore considered the position of the main platforms in each of these segments as part of our competitive assessment.

[372] Facebook argues that from an economic perspective, advertisers do not face barriers to switching spend across these two ad formats and, from a functional characteristic perspective, they can use the same marketing objectives and tools to target the same audience with both video and non-video advertising. Facebook carried out some analysis that it argues supports this statement.
[373] For further discussion on this, see Appendix N.

How suppliers of display advertising compete for advertisers

5.127 Compared to search advertising, in which advertising is shown when relevant to a specific search query, user data plays a much more significant role in display as it provides the ability for advertisers to target audiences that might be interested in the content of the ads. Consequently, access to valuable user data that enables more granular audience targeting is a key dimension of competition.

5.128 In addition, suppliers can compete directly for advertisers through the quality of the advertising interface and associated technology.

5.129 Suppliers of display advertising also have flexibility in the extent to which they monetise consumer attention through the creation of advertising inventory. They have direct control over the quantity of advertising shown or ad load. Suppliers of display advertising face a trade-off in deciding how much inventory to create. A higher ad load may mean greater immediate financial reward. However, this can come at the expense of the consumer experience to some extent. Unlike search advertising, which is shown in response to specific consumer queries, display advertising is typically unwanted by consumers. This suggests there may be a greater imperative for publishers of display advertising to limit the quantity of advertising shown so as not to harm the consumer experience.

Market structure and outcomes in display advertising

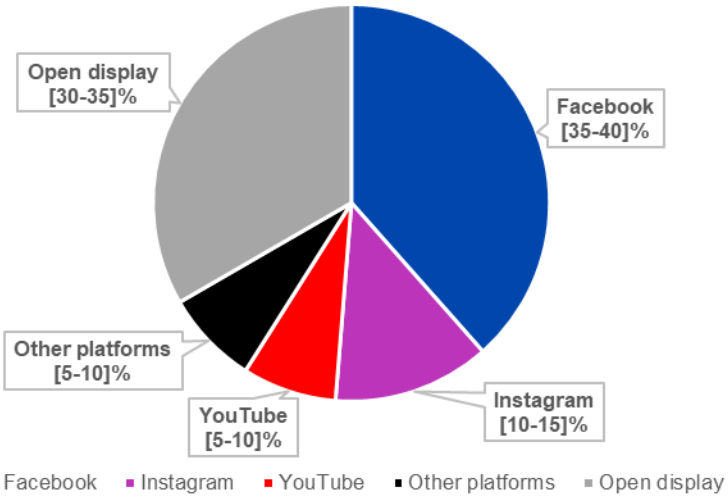
5.130 In addition to the market outcomes on the consumer side in social media described in Chapter 3, we have looked at evidence on various market outcomes in display advertising. This evidence and the supporting data are set out in more detail in Appendix C.

5.131 The fragmented nature of the open display market and the fact that advertising is sold via intermediaries makes the estimation of overall expenditure shares in display advertising difficulties, shown in Figure 5.9, suggest that Facebook (including Instagram) is by far the largest supplier, with a share of [50-60]% of online display advertising expenditure. Facebook has considerably greater scale than the second largest supplier, YouTube, which has [5-10]% of advertising expenditure.[374] In our view this evidence suggests that Facebook has market power; we consider below the extent to which Facebook faces

[374] Facebook submitted that, on the basis of industry estimates of total UK advertising expenditure and including all advertising channels (digital and non-digital), its market shares in 2018 were between [5-10]% and [10-20]%. Considering just digital advertising spending (ie search and display advertising combined), its market shares were between [10-20]% and [20-30]% of UK digital advertising.

competitive constraints and potential competitors are subject to barriers to entry and expansion.

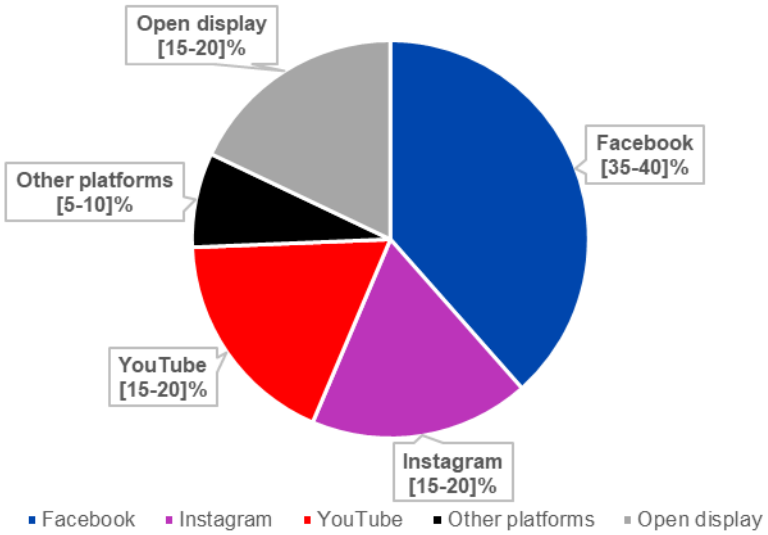
Figure 5.9: Shares of expenditure in UK display advertising (2019)



Source: CMA analysis based on parties' data.
Note: Segments shown in the chart are illustrative, based on mid-points of the stated ranges rather than actual revenue figures. The 'other platforms' segment includes: Amazon, LinkedIn, Pinterest, Snapchat, TikTok and Twitter, each of which have shares in the range [0-5]%.

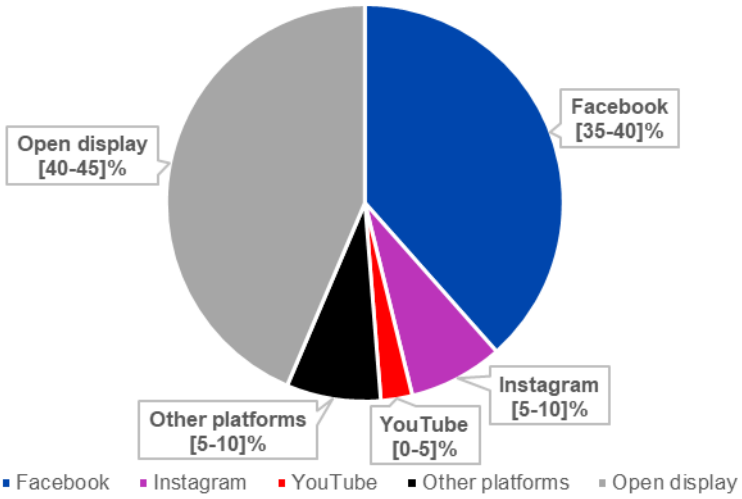
5.132 Given that, as noted above, some advertisers may have limited ability to substitute between video and non-video formats, it is informative to look at shares of expenditure separately for these two segments. As shown in Figures 5.10 and 5.11 below, Facebook (including Instagram) has a [50-60]% share of online video display advertising and a [40-50]% share of online non-video display advertising. YouTube is the second largest supplier in video display advertising, with a [15-20]% share of expenditure. We estimate that the open display market accounts for around [15-20]% of video and [40-45]% of non-video display advertising. Our analysis also shows that there has been a small shift over the last three years towards video advertising, which is taking an increasing share of overall expenditure.

Figure 5.10: Shares of expenditure in UK video display advertising (2019)



Source: CMA analysis based on parties' data.
Note: Segments shown in the chart are illustrative, based on mid-points of the stated ranges rather than actual revenue figures. The 'other platforms' segment includes: Amazon, LinkedIn, Pinterest, Snapchat, TikTok and Twitter, each of which have shares in the range [0-5]%.

Figure 5.11: Shares of expenditure in UK non-video display advertising (2019)



Source: CMA analysis based on parties' data.
Note: Segments shown in the chart are illustrative, based on mid-points of the stated ranges rather than actual revenue figures. The 'other platforms' segment includes: Amazon, LinkedIn, Pinterest, Snapchat, TikTok and Twitter, each of which have shares in the range [0-5]%.

5.133 We consider other market outcomes, including revenues and prices, in the section on exploitation of market power in display advertising below.

Competitive constraints on Facebook

5.134 In this section we assess whether Facebook has market power resulting from its high share of display advertising revenues. We consider the competitive

constraints that it faces from other sellers of display advertising, and from wider advertising including search.[375]

User side constraints

5.135 Facebook submitted that it competes with other social media platforms and any other platform or content provider seeking to 'capture the finite supply of users' time'.[376] The greater the time users spend on a platform, the more attractive it is for advertisers, who will spend their budget where their target customers are spending their time. Therefore, Facebook argues that it faces a significant constraint from the user side such that, if ads were excessive or not relevant, users would switch their time and attention to other platforms.

5.136 Although we recognise that Facebook is to some extent constrained by user responses, as set out in Chapter 3, Facebook has significant market power in social media. None of the platforms currently active in the UK's social media sector addresses a similarly broad set of user needs and therefore users are unlikely to be able to replace Facebook's services entirely with another platform if its services were degraded or not improved as expected. Moreover, barriers in social media primarily arising from network effects mean that the threat of entry and expansion is a limited constraint on Facebook's behaviour. As discussed further below, we note that Facebook monetises user attention to a much greater degree than its rivals.

Competition between display advertising platforms

5.137 Most advertisers told us that they used a range of platforms to buy display advertising and that different platforms had different relative advantages in achieving advertising KPIs. The platforms most commonly mentioned and ranked highest were Facebook, Google DV360 (Google's demand-side platform for purchasing advertising in open display) and Twitter. Several advertisers mentioned YouTube and the Video-on-Demand offerings of ITV, Channel 4 and Sky, and a few mentioned Amazon, Snapchat, Pinterest and other demand side platforms for purchasing advertising in open display.

5.138 Advertisers and media agencies were consistent in what they saw as the relative advantages and disadvantages of different platforms. Facebook and Google (DV360 and YouTube) were consistently identified as benefiting from

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[375] Facebook submitted that advertisers switch their spend between channels to maximise their ROI and continue to do so until the ROI of the marginal unit of advertising is equal across channels. Facebook also stated that there are businesses and services (eg DSPs, Trading Desks) that help advertisers reallocate spend across various online and offline advertising channels. We note that there are differences between small and large advertisers' behaviours as set out in Appendix N.
[376] Facebook's s.174 response dated 13 September 2019.

greater reach and ability to target specific audiences, allowing advertisers to generate greater return on investment from using these platforms. Advertisers also highlighted various disadvantages of these platforms resulting from a lack of transparency: in the case of Facebook relating to viewability, measurement of advertising outcomes and brand safety, and in the case of Google relating to transparency over its auctions and concerns about fraud and brand safety.

5.139 Advertisers submitted that some rival platforms had idiosyncratic relative advantages. Twitter was highlighted by several advertisers as being especially effective for direct customer engagement and reactive advertising. Snapchat was highlighted for the flexibility of its creative assets and Amazon for its first-party data and for its proximity to the point of sale.

5.140 Rivals similarly saw Google and Facebook as the strongest competitors in display advertising. All of the display advertising rivals we contacted identified Facebook as a competitor and most of these platforms specified that Facebook was one of their top two competitors. These businesses also identified Google as a major competitor, some referring to its ownership of YouTube, and some also referring to its search advertising or its total scale across digital advertising as a whole.

5.141 Although all the platforms identified Facebook and Google as their closest competitors, this does not imply that they impose a significant competitive constraint on Google and Facebook. For example, LinkedIn noted that competition was asymmetric, whereas Facebook and Google compete with LinkedIn for most of its advertising revenue, LinkedIn only competes for a small subset of Facebook's and Google's advertising revenue. Google and Facebook also identified each other as key competitors for advertising spend, but also a wider set of competitors including social media channels (like Snapchat and Twitter), TV channels, Video on Demand and Amazon.

5.142 Facebook suggested that one of its strengths was in making the advertising experience as easy as possible for advertisers to use, so that advertisers of any size can use it. We found that the vast majority of advertisers on Facebook are small, although the largest advertisers make up a large share of Facebook's total revenue.

5.143 Facebook's internal documents refer to a range of rivals. All the rivals are differentiated from Facebook, but they all compete for consumer attention, advertising, or both. The competitors which are monitored most frequently are Google, YouTube, Pinterest, Twitter and Snapchat. Other rivals Facebook monitors include Amazon, traditional TV and smaller platforms, which are monitored less frequently.

5.144 YouTube is active primarily in video advertising and, as we have shown above, Facebook has a significance presence in this ad format. They may therefore be closest competitors in video advertising.

5.145 Overall, the views of advertisers, media agencies and suppliers support the view that Facebook has market power in display advertising. However, they also suggest that Google (including YouTube) is likely to be Facebook's closest competitor. Both Google and Facebook benefit from greater scale and access to user data than their rivals. Both platforms face a degree of competition from a range of sources. While Google's and Facebook's internal documents suggest that they are likely to be each other's closest competitors, a number of other competitors are also mentioned.

Competitive constraint from other forms of advertising

5.146 Facebook submitted that in addition to the display advertising platforms discussed above, it competes with providers of search advertising and traditional (online and offline) advertising media to attract advertising spending.

- *Competitive constraint from search advertising*

5.147 As set out above and in more detail in Appendix N, all media agencies and most advertisers told us that search and display advertising are not substitutable, mainly because they perform different roles within the customer purchase journey. Search is primarily intent-based advertising designed to convert into sales consumers who have already shown interest in buying the product, whereas display is suitable for raising brand awareness and reaching new audiences. Most advertisers set budgets for search and display advertising independently and do not allocate them interchangeably. These findings were also reflected in our qualitative survey of smaller advertisers.

5.148 However, an analysis of campaign objective types[377] chosen on Facebook shows that the majority of impressions and revenue come from action-based objectives that advertisers use to target specific user actions such as clicks or purchases (more detail in Appendix C). Facebook also argues that there has been significant convergence in the characteristics of search and display

[377] Campaign objective types include Awareness, Consideration and Conversion and relate to the KPIs the advertiser is targeting.

advertising and that search can, equally to display advertising, be used to raise brand awareness.[378]

5.149 We note evidence that display advertising, particularly on Facebook, is increasingly being used for targeting in-market conversions. This may imply a degree of competition between Google and Facebook for those advertisers wishing to target in-market conversions. However, despite this similarity, important differences between search and display still exist in that search advertising is targeted in response to intent while display is targeted to specific audiences. In addition, search advertising is unlikely to be a viable alternative for those advertisers targeting brand awareness. Facebook drew our attention to some studies showing that search advertising can build brand awareness, but we consider that this limited evidence does not indicate that this competitive constraint is significant at present for most advertisers, given the evidence we received directly from advertisers as set out in Appendix N.

- *Competitive constraint from traditional advertising media*

5.150 Some platforms have argued that advertisers can choose between any advertising media for their campaigns. Facebook pointed to evidence on increasing shares of advertising expenditure on the internet (to the detriment of TV and newspaper advertising) and to some academic studies as evidence of substitutability between these channels.

5.151 Facebook also argued that traditional advertising media, such as TV and cable companies, are becoming increasingly capable of targeting specific audiences effectively and, as a result, Facebook increasingly competes with offline channels for advertising revenue, and this competition is likely to intensify further in the future. Although this may be the case, we have found that this constraint is very limited at present.

5.152 Overall, the evidence we have assessed suggests that there is a long-term shift from traditional media to display advertising driven by growing use of online channels by consumers, rather than a substitution effect in response to changes in competitive dynamics. In addition, as described above, competitive constraints are likely to be asymmetric, such that traditional advertising may be constrained by display advertising, without the reverse being the case.

[378] Facebook argues that a distinction between different intermediate objectives in display and search advertising is artificial and that these overlap between search and display advertising. For example, display advertising can target consumers that have already shown an interest in buying the product.

Barriers to entry and expansion

5.153 As discussed in Chapter 3, there have been several recent examples of entry by display advertising platforms. However, with the possible exception of Instagram (following its acquisition by Facebook), we note that these platforms are yet to reach a very significant scale in the supply of display advertising. This raises the question of whether these platforms face barriers to expanding to a scale sufficient to impose a material competitive constraint on Facebook. Suppliers have identified several barriers that need to be overcome for a provider to be able to compete effectively in display advertising.

User side barriers

5.154 The need for suppliers of display advertising first to grow their user base in order to gain access to consumer attention and data means that the most important barriers to entry are faced on the consumer side of the market. Several suppliers of display advertising told us that the way to enter display advertising was to first offer a compelling platform which captures consumer attention. Therefore, generating an innovative or engaging product or service for consumers is the first barrier that needs to be overcome. To maintain the attention of consumers, platforms then need to offer improvements to their consumer product position or to offer personalised relevant content. As described in Chapter 3, the consumer services relevant for supporting digital advertising, such as social media, are typically characterised by strong network effects. These network effects result in very high barriers to entry that also restrict competition in display advertising.

5.155 Current rivals to Facebook are likely to be limited in their ability to monetise through digital advertising, as this may hamper their ability to compete effectively on the consumer side. This dynamic is supported by Facebook's earlier experience of competing with Myspace.[379] As noted in Chapter 3, Facebook has submitted that its early success in competing with Myspace was due to Myspace's focus on maximising advertising revenue, to the detriment of the consumer experience. By contrast, Facebook has now reached a much larger scale of users and consequently benefited to a greater extent from consumer-side network effects.

[379] Launched in 2004, Myspace was overtaken in 2008 by Facebook.com. Myspace then quickly lost its user base, with numbers falling to 73 million users by January 2011 and then to 63 million users in February 2011.

Advertiser behaviour

5.156 Transaction costs faced by advertisers in using multiple display advertising platforms appear likely to benefit Facebook and create a barrier to entry for smaller rivals. As set out above and in Appendix N, the vast majority of Facebook's advertisers are small and typically use the platform's self-service interface, rather than media agencies, to buy advertising inventory. Through the Facebook interface advertisers can access both Facebook and Instagram inventories, including the smaller Facebook Advertising Network. As discussed in Chapter 3, Facebook, including Instagram, has a very extensive reach on the user side and therefore allows advertisers to access a large pool of users who spend lots of time of these platforms.

5.157 We spoke to a range of advertisers during the qualitative research, many of which are smaller advertisers. Some of the reasons mentioned for using Facebook as the main or only platform were related to its reach on the user side and lack of knowledge of effective alternatives. Some advertisers mentioned that learning to access and use another interface was also a barrier to multi-homing.

5.158 We have also heard from larger advertisers, who are more sophisticated in their digital advertising spending, who did not suggest there was a difficulty in multi-homing across multiple display advertising platforms. We have found that large advertisers are more likely to use media agencies and can more easily switch spending across platforms. However, in many cases advertisers told us that other display platforms were used as complements to Facebook, for example to target particular demographics (eg Snapchat was seen as a good way of reaching younger consumers).

Economies of scale

5.159 There are several inputs required to support a display advertising platform. In particular, investments need to be made in technology, such as developing a website/app and back-end functionality to support the platform and technical equipment (eg servers); facilities, such as offices; and equipment and marketing, such as launch and brand awareness campaigns. The investments and fixed costs required to develop and maintain these inputs are likely to give rise to economies of scale. Economies of scale create a cost advantage for larger rivals over smaller potential entrants, giving rise to barriers to entry.

5.160 Facebook submitted that no minimum scale is required for entrants to compete effectively. Facebook submitted that its income statements indicate that while it experienced some economies of scale in its early years, its costs have grown at a faster rate than its user base over the last decade (from

2009-2018). This suggests that, in aggregate, any economies of scale which Facebook has benefited from appear to have been largely exhausted in its early years of development.

5.161 In our view, this evidence does not suggest that no minimum scale is required. The economies of scale experienced by a display advertising platform are determined by the interaction of both the advertiser and consumer sides of its platform. While user growth on Facebook has slowed, its advertising revenues per user have continued to grow as it has further monetised its platform to benefit from historic investments on the consumer side. Facebook submits that it did generate economies of scale in its earlier stages, which is most relevant for assessing the prospects of a potential entrant. Further, other platforms told us that significant scale is needed for an entrant to be viable in the long term.

Data advantages

5.162 The academic literature and the evidence we have collected through this market study show that consumer data has a significant value to advertisers in that it allows them to better target audiences. Access to higher quality or more granular data allows for more precise targeting of more specific audiences. Granular data is particularly valuable when combined with high reach among different audience types using the platform, as this allows for relatively large numbers of very specific audiences to be targeted. These factors can allow platforms with better data to sell their advertising inventory at higher prices. This creates a substantial competitive advantage for Google and Facebook, both of which have access to much richer and higher quality datasets and benefit from much greater scale and reach than their rivals.

5.163 Facebook submitted that platforms do not require access to large volumes of data to enter and expand, with any data needed being readily obtainable from consumers themselves (when they choose to engage with an online platform) or from a host of other third-party data aggregation providers.

5.164 This view, however, was in contrast with that of many advertisers and media agencies. Several told us that Google and Facebook offer more granular personalised targeting compared to other platforms. Google offers in-depth targeting options, driven by its unique and vast sources of data. Facebook has the advantage of offering the ability to target specific audiences based on demographic characteristics, interests and location. Some advertisers also singled out Facebook's remarketing capability. Facebook's scale allows it to reach a large proportion of advertisers' known customers, using the advertiser's first-party data.

5.165 The use of data or better targeting of relevant audiences is of direct benefit to advertisers. However, the inability for smaller platforms and publishers to access equivalent user data to Google and Facebook may raise barriers to entry, as it reduces the ability for these rivals to compete on a level playing field and realise the full value of their advertising inventory.

5.166 Suppliers of display advertising told us that consumer data was a key input required to target audiences. The more data and the higher the quality of the data a platform holds, the better equipped it is to provide advertisers with exactly what they want. The majority of these platforms offer free analytics tools and metrics to advertisers to create and tailor content and to analyse campaign effectiveness of ads.

5.167 Some rival platforms suggested that accessing consumer data was not an insurmountable barrier to entry. Some submitted that monitoring consumers on their platform provides enough data to compete effectively, where sufficient activity can be tracked across different consumers. Generating scale on the consumer side of the platform is particularly important because effective analysis of this data is heavily dependent on gaining enough scale in user-generated content. However, many publishers we spoke to highlighted the importance of user data for targeting and attribution and the advantage of the large platforms with extensive first-party user data. These issues are set out further in the section on open display advertising.

5.168 Overall, the evidence suggests that Facebook's superior access to first- and third-party data gives it a significant competitive advantage in targeting advertisers. This allows it to earn higher revenues from advertising than smaller platforms, as shown in the following section.

Exploitation of market power in display advertising

5.169 This section assesses the impact that Facebook's market power has on outcomes in digital advertising. We first discuss Facebook's ability and incentive to exercise its market power to increase the revenue it receives from advertisers. We then set out our evidence of the impact of Facebook's market power in practice, which allows it to earn higher revenues from advertisers.

Facebook's ability and incentive to exercise market power

5.170 Facebook has several levers through which it can affect market outcomes such as the quantity of advertising and advertising prices. These fall into three broad categories:

- levers over the quantity and presentation of ads shown;

- levers over the quality/price trade-off; and
- levers over auction mechanisms and bid prices.

5.171 Facebook's incentives over how it flexes these levers are affected by its market power both on the user side of the platform (ie in social media) and on the digital advertising side.

Quantity of ads shown and ad presentation

5.172 In relation to quantity of ads shown, Facebook can directly set the ad load by determining the ad gap – the ratio of advertising to organic content users see when interacting with the platform, for example on the Facebook News Feed.

5.173 Facebook and other platforms face countervailing incentives when setting ad load. In a competitive market, platforms have an incentive to raise ad load in order to earn revenue on the advertising side, but also have the opposite incentive to reduce ad load in order to attract and retain customers on the user side.

5.174 Market power can affect these incentives in two ways. First, Facebook's market power on the user side strengthens its incentive to increase ad load. This is because users are less likely to switch away, given the absence of alternative platforms providing a comparable service to Facebook and the presence of strong network effects, even if the increased number of ads worsens the quality of the platform from users' perspective. Second, Facebook's market power on the advertising side could create the opposite incentive to limit ad load in order to limit quantity and increase price to advertisers.

5.175 In addition, the presentation of advertising can influence the propensity for users to engage with it, for example by affecting the click-through-rate. Higher click-through-rates will improve the performance of the advertising and its value to advertisers, increasing advertising prices.

Price/quality trade-off

5.176 Facebook and other display platforms can also control the balance between price on the advertising side and quality or relevance of adverts shown to users by choosing how much weight to place on quality metrics in determining the winning ad. Putting a higher weight on quality and relevance metrics compared to price is likely to improve the quality of the platform for users, while a lower weight is likely to result in higher prices and generate more

revenue in the short term as advertisers compete more directly on price in auctions.

5.177 For example, Facebook selects the winner by ranking ads according to what it calls 'Total Value', which is derived through a combination of three main components: (i) the advertiser bid: which reflects the value the advertiser is willing to pay to achieve their desired outcome; (ii) the estimated action rate: an estimate of whether a particular person engages with or converts from a particular ad; and (iii) the relevance and quality component: a measure of the quality of an ad, determined from many sources including feedback from people viewing or hiding an ad and assessment of low quality attributes in the ad.

5.178 If they face greater competition to attract users, platforms will have an incentive to put relatively more weight on quality rather than price. This is because users would switch away to another platform if the relevance and quality of the ads were low, so the platform would lose revenue even if it were able to charge a higher price for each advert. In turn, the value of advertising to advertisers would also decrease.

5.179 However, Facebook's market power entails that it is less constrained by competition on the user and advertiser sides. It thus faces a greater incentive to reduce the importance of the quality or relevance score in determining the winning bid, thus increasing its revenue.

Auction mechanisms and bid prices

5.180 Finally, Facebook and other platforms may exploit market power through advertising auctions. Where a display advertising platform has market power, the lack of substitutable alternatives will mean that advertiser bids in its auctions are higher, resulting in higher prices.

5.181 In addition, Facebook and other platforms control several auction parameters which can affect prices. These include setting bid prices on bidders' behalf through automated bidding tools such as pacing.

5.182 Facebook's market power in digital advertising increases its incentive to use these levers to increase price, because it is less constrained by the threat of advertisers switching away if they achieve a lower than expected return on investment. This might particularly be the case for smaller and potentially less sophisticated advertisers; we note that the vast majority of Facebook's UK-based advertisers who targeted exclusively UK-based users in 2019 ([over 1 million] in total) spent less than £5,000 a year.

Evidence of Facebook's exploitation of market power

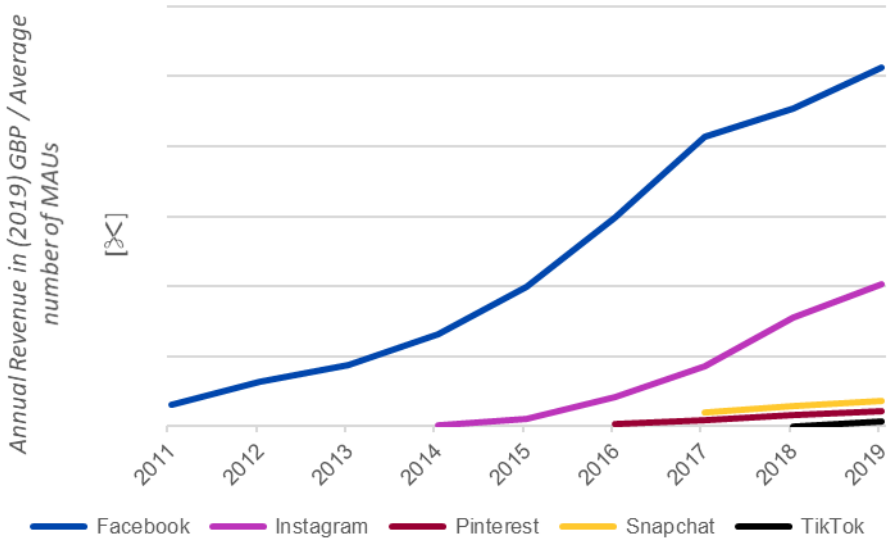
5.183 In the following section we set out evidence of the impact of Facebook's market power in display advertising. We have assessed: the changes over time in Facebook's monetisation of its display platforms and how this compares with other platforms; evidence from advertisers and other third parties; and evidence of the use of defaults to change advertisers' behaviour.

Trends in Facebook's advertising revenues

5.184 Facebook's revenue is significantly higher than that of other social media platforms and has steadily increased in the past nine years. Over this time Facebook's UK revenues have increased from [around £100 million] in 2011 to [more than £2 billion] in 2019.

5.185 This increase in revenue can be partly explained by an increased number of users. However, Facebook's annual revenue per user has also increased very strongly from [£0-5] in an early growth stage in 2011 to £[50-60] in 2019, as shown in Figure 5.12. It is now more than ten times higher than those competitors for which we have been able to obtain robust UK data.[380] The revenue per user for Instagram (owned by Facebook) is lower than that of Facebook but has also risen rapidly since the introduction of ads in the UK in 2014 and was around £[20-30] per user in 2019.

Figure 5.12: Average annual revenue per user for selected platforms (2011-2019)



Source: CMA analysis based on parties' data.

[380] Note that we have not presented revenue per user hour for LinkedIn and Twitter in Figure 5.12 as their revenues were attributed to the UK on the basis of (believed) advertiser location, while user numbers are recorded on the basis of user location.

Note: Users have been accounted by monthly average users (MAU).

5.186 Even taking account of the increasing time spent by users on its platform, Facebook has been able to almost double the rate at which it monetizes user attention over the past three years. Similarly, Instagram's average revenue per hour of consumer time spent on the platform has increased more than threefold over five years, in the period since Instagram introduced ads in the UK in 2014.

5.187 In our view, Facebook's substantially greater revenue per user and per time spent compared to rival platforms is consistent with Facebook exploiting its market power.

Ad load and presentation of ads

5.188 One driver of the revenue figures we observe is the number of ads served to users. The number of impressions served per hour on Facebook has increased from [40-50] in 2016 to [50-60] in 2019. This increase in ad load partly explains why Facebook's revenue per hour is greater than other platforms and has increased in the past four years.

5.189 In the past five years Facebook has also introduced new types of ads such as the slideshow video ad format, click to Messenger ads in Newsfeed and Facebook Marketplace, and ads in Stories. In addition, Facebook can change different features of the presentation of its ads such as height, dimensions of buttons and text and image aspect ratio.

5.190 Documents discussing research assessing the impacts of these changes show that even small changes in presentation may have a significant impact on ad performance and revenue. For example, one document shows that removing the 'Suggested Post' label from ads in Feed on mobile increase click-through-rates for mobile feed ads by [✂] and revenue for mobile feed ads by [✂]. Another document shows that increasing image aspect ratio from 1.91:1 to 1:1 on the Facebook Feed leads to a [✂] increase in user's' click-through-rates for event-based ads and [✂] increase in Facebook's event-based ad revenue.

Evidence on advertising prices

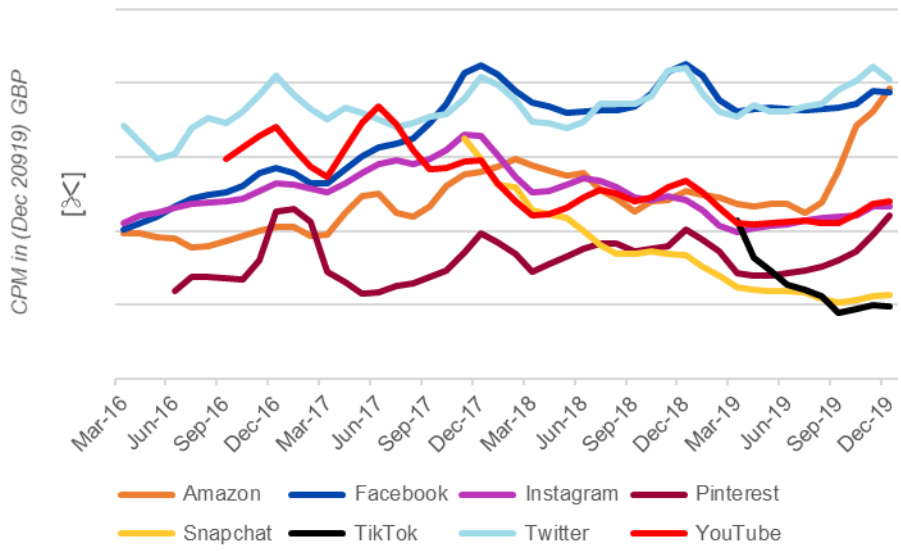
5.191 One of the main ways that Facebook's market power could manifest itself on the advertising side is through higher prices to advertisers. In display advertising, advertisers can target a range of objectives, from raising brand awareness to increasing user consideration and triggering user conversions. Prices can therefore be measured in different ways depending on the

objectives targeted – cost per impression (CPM), cost per click (CPC) or cost per action (CPA).

5.192 As shown in Figure 5.13 below, platforms' average prices on a CPM basis vary significantly. Comparisons of CPM across platforms need to be interpreted with caution as they do not necessarily compare like with like. Differences in prices may be driven by various factors, including differences in advertising format, user base or advertising customers.

5.193 Facebook's average CPM has increased over the last four years at a significantly greater rate than its rivals. It is higher than that of most other platforms over the same period, with the exception of Twitter which has similar prices to Facebook. On the other hand, Instagram's average CPM has only risen slightly over the period and is broadly in line with the average of other platforms.

Figure 5.13: Average monthly CPM for selected platforms, 2016-2019



Source: CMA analysis based on parties' data.
Note: Three-month moving average shown in the chart for confidentiality reasons.

5.194 Facebook submitted that CPM is not an appropriate measure of price to use in our assessment as it does not accurately reflect return on investment (ROI), which is the objective that advertisers ultimately care about. It said that a better proxy for measuring ROI is CPA, which measures the cost of achieving a given action, eg a sale, or CPC. Facebook submitted that, on a CPA basis, its prices have remained broadly flat over the past four years. It told us that Facebook's increasing CPM reflects improvements in Facebook's ability to generate clicks and conversions, which mean that its advertising has become more valuable on a per-impression basis.

5.195 We agree that, where advertisers are seeking to generate specific user actions, CPA or CPC will be a more relevant measure of price from the advertiser perspective. We also note that Facebook is increasingly being used by advertisers for conversion targeting. However, Facebook appears to be an outlier in this respect; advertisers told us that they generally use display advertising for more general brand awareness. Where advertisers have broader objectives, CPM continues to be a more appropriate measure of price. Overall, we consider there is merit in considering each of the different pricing measures in combination, and that CPM remains informative, as well as being the basis on which most display advertising is sold.

5.196 We have carried out our own assessment of trends in Facebook's CPA over the past four years and have found that there has been no clear trend over time. For example, the price per action of 'offsite conversions' has decreased over the past four years, whereas the CPA for 'offsite clicks' has increased. We have not been able to compare Facebook's CPA prices with those of other platforms on a like-for-like basis because, as explained in Chapter 3, social media platforms are differentiated, so users' actions differ between platforms.

5.197 We have also analysed trends in CPC, as described in Appendix C. Facebook's average CPC has increased over the past four years, while the CPC of Instagram has been falling. We have not been able to gather evidence from other platforms on a comparable basis, so we cannot conclude on whether Facebook's prices measured in CPC are higher or lower than its competitors.

5.198 Overall therefore, the evidence on prices is somewhat mixed. Facebook is able to charge significantly higher prices on a CPM basis than most rival platforms, but we interpret this comparison with some caution as it may not compare like with like. More significantly, we note that Facebook's prices have risen to a considerably greater extent than other platforms on a CPM basis. This may reflect the benefits of its superior ability to target users and achieve conversions, or its ability to exercise market power on the advertising side, or some combination of the two.

Views of advertisers and other third parties

5.199 Advertisers we spoke to during the market study broadly confirmed the trends in prices and monetisation outlined above. The qualitative research carried out by Jigsaw found that some advertisers believe that their ROI (return on investment) on Facebook has been falling over time and that to achieve the same results they need to increase their spending on Facebook compared to the previous year. This suggests that, at least for some advertisers, prices have increased without corresponding increases in ROI.

Use of defaults to change advertiser behaviour

5.200 We have also reviewed Facebook's advertiser interface, Facebook Ads, to assess whether it is exploiting behavioural biases to nudge advertisers into choices which might allow it to earn higher revenues. This analysis is set out in Appendix N.

5.201 We have found that there are ways in which Facebook can influence advertisers' choices when setting up and running campaigns on Facebook Ads, for example through default settings. For example, we note that [90-100]% of UK advertisers on Facebook keep the default auto-bidding feature, which does not allow advertisers to specify a maximum bid.[381] In principle, this may allow Facebook to influence advertiser choices in a way that results in greater revenue for Facebook at the expense of higher costs for advertisers.[382] Moreover, small advertisers who spend relatively little on platforms are likely to be less sophisticated in their bidding strategies and more inclined to stick to default and pre-settings. We note that the vast majority of advertisers on Facebook are small advertisers, although they account for a minority of Facebook's revenue.

Competition in open display

5.202 This section sets out our analysis of competition in open display advertising, where publishers sell inventory via ad tech intermediaries. The section covers the following:

- We first briefly describe the roles of the different intermediaries in the ad tech stack and summarise how publishers' inventory is sold.
- We then set out our findings on competition in different parts of the intermediation chain. We show that Google has a high market share in the key stages of the intermediation chain, and in most cases faces limited competitive constraints. We also present evidence on the level of fees paid by advertisers and publishers.
- Third, we assess the concerns that integration between advertiser and publisher-facing intermediaries can lead to conflicts of interest. We describe the conditions under which conflicts of interest are more likely to be problematic.

[381] CMA calculations based on Facebook data.
[382] It is possible that advertisers who do not specify a cost control may in certain circumstances pay for advertising where the cost is higher than the amount they are prepared to pay and may in fact lead to negative ROI.

- Finally, we set out the issues relating to Google's position in open display. We show how Google has been able to build a position in advertising intermediation through acquisition and by leveraging from its owned-and-operated digital advertising business. We also consider whether the provision of advertiser and publisher-facing services can lead to conflicts of interest and allow Google to reinforce its market power within the ad tech stack.

5.203 Issues relating to lack of transparency in the ad tech stack are considered further in the later section on cross-cutting issues. The evidence and analysis supporting the findings in this section of the chapter are set out in more detail in Appendix M.

How digital advertising intermediation works

5.204 From the perspective of advertisers, open display forms part of the display market described in the previous section – it provides an alternative channel for buying display advertising inventory alongside the 'owned-and-operated' platforms. In contrast to the walled gardens of Google, Facebook and other platforms, in the open display market a wide variety of publishers, such as newspapers and other content providers, compete against each other in real time to sell inventory to advertisers. To achieve the complicated task of selecting an ad to be served to an individual in real time and establishing the price to be paid for doing so, advertisers and publishers rely on a range of intermediaries.

5.205 The intermediation ecosystem has evolved into a complex chain of specialised providers fulfilling the functions described above.[383] On the demand side, the main participants in the ecosystem include:

- Advertiser ad servers – used by advertisers and media agencies to store the ads, deliver them to publishers, keep track of this activity and assess the impact of their campaigns by tracking conversions.

- Demand Side Platforms (DSPs) – provide a platform that allows advertisers and media agencies to buy advertising inventory from many

[383] This section deals with intermediation in display advertising. The European Commission, in the context of its Google Search (AdSense) case, has defined a market for online *search* advertising intermediation, where intermediaries provide search adverts to publishers whose websites have a search function embedded. The European Commission found Google to have a dominant position in that market and to have abused it by imposing a number of restrictive clauses in contracts with third-party websites which prevented Google's rivals from placing their search adverts on these websites (see the Press release). We do not analyse the market for online search advertising intermediation in this report.

sources. DSPs bid on impressions based on the buyer's objectives and on data about the final user.

5.206 On the supply side, several intermediaries perform activities included in the 'publisher sales' function:

- Supply Side Platforms (SSPs) – provide the technology to automate the sale of digital inventory. They allow real-time auctions by connecting to multiple DSPs, collecting bids from them and performing the function of exchanges.[384] They can also facilitate more direct deals between publishers and advertisers.

- Header bidding solutions – allow publishers to send ad requests to, and receive bids from, multiple SSPs simultaneously, making SSPs compete against each other for each impression.

- Publisher ad servers – manage publishers' inventory and are responsible for the decision logic underlying the final choice of which ad to serve, based on the bids received from different SSPs (possibly through header bidding solutions) and the direct deals agreed between the publisher and advertisers.

5.207 The advertising ecosystem also includes further participants involved in the provision and management of data and in advertising analytics:

- Data suppliers – provide data that can be used to augment the user data already possessed by advertisers and publishers and enhance the ability of targeting advertising to specific types of audiences.

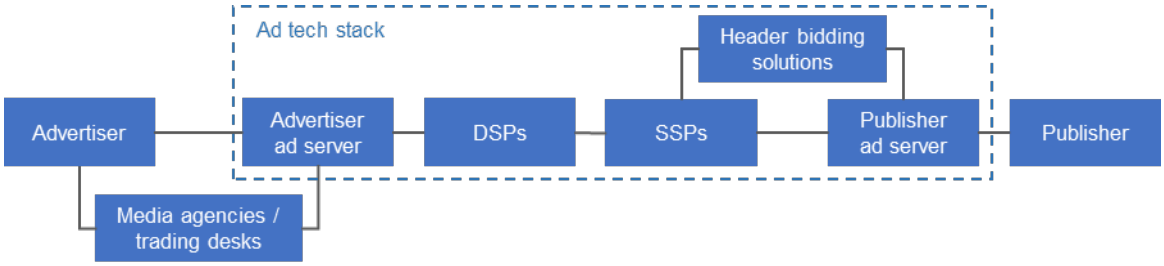
- Data Management Platforms (DMPs) – allow other participants along the value chain (advertisers, DSPs, SSPs and publishers) to manage and analyse their data, integrate it with third-party data, and use it to create audiences that can be used for targeting purposes.

- Measurement and verification providers – their specialist services are used by advertisers to measure the performance and impact of advertising campaigns.

5.208 A simplified version of the supply chain is provided in Figure 5.14.

[384] Advertising exchanges used to be separate from SSPs. The two functions, however, have largely been merged into the same operators.

Figure 5.14: Simplified scheme of the intermediation value chain



Source: CMA.

5.209 Table 5.1 maps the various functions listed above to the intermediaries that perform them in the current open display ecosystem.[385]

Table 5.1: Intermediation functions and providers

Function	Providers
Targeting function	DMPs, DSPs
Advertiser advisory function	Media agencies, DSPs
Publisher sales function	Publisher ad server, SSPs
Verification, attribution and evaluation	Measurement and verification providers, advertiser ad server
Delivery	Advertiser ad server, publisher ad server

Source: CMA.

5.210 In broad terms, the process of selling inventory works in the following way. When a user opens a webpage (or uses an app), the publisher's ad server sends a bid request to SSPs for the advertising space available on the web page. In turn, the SSPs send bid requests to multiple DSPs. DSPs evaluate the advertising opportunity based on the objectives of the campaigns of their advertisers and send bids to the SSPs. SSPs then rank the bids received based on price and on priority levels that may have been set by the publisher and send their winning bids to the publisher. Finally, the publisher ad server compares bids received from SSPs, together with any pre-existing direct deals between the publisher and specific advertisers, and decides which ad to serve on the webpage.

5.211 While this general process applies to all programmatic transactions, there are many variants which differ in the ways in which SSPs are contacted and submit their bids and in the type (if any) of pre-existing agreements between the publisher and advertisers. One important development was the emergence from around 2015 of header bidding solutions, allowing the publisher to compare bids from multiple SSPs simultaneously. The evolution of the open display ecosystem is described in more detail in Appendix M.

[385] These intermediaries may also perform additional ancillary functions not included in the list.

Market structure and outcomes in open display

5.212 There is no single market for advertising intermediation, but rather a series of vertically related markets providing different complementary functions. The following paragraphs provide an overview of competition among providers of advertiser ad servers, DSPs, SSPs, header bidding solutions and publisher ad servers, including our estimates of market shares and the fees charged.

5.213 We have found that the industry has been consolidating in recent years, with supply increasingly concentrated in a small number of large providers at each level of the value chain. Google has the strongest position at each part of chain, particularly in publisher ad serving (where it accounts for [more than 90]%[386] of display ads served in the UK). There appears to be relatively stronger competition at the DSP and SSP level, but Google has significant shares in these markets as well ([50-60]% of the value of ads purchased through DSPs, and [50-60]% of the value of ads sold across SSPs and ad networks).[387] Finally, there has been an increasing trend towards vertical integration, with providers fulfilling more than one function; Google is the most obvious example, but several other providers are also vertically integrated across different parts of the chain.

5.214 Our evidence on aggregate fees suggests that on average publishers receive around 65% of initial advertising revenue that is paid by advertisers (ie the overall 'ad tech take' is around 35%). In practice, this is likely to be an underestimate and publishers' share may be lower than this.[388]

Competition at different stages of the ad tech stack

Advertiser Ad Servers

5.215 The market for advertiser ad serving is very concentrated. The main provider is Google, through its Campaign Manager service; we estimate that this accounts for [80-90]% of the ads served in the UK. Other competitors include Adform, Flashtalking, Innovid and Sizmek (acquired by Amazon in May 2019).

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[386] We exclude ads served by ad networks and consider only those providers that have been mentioned to us as possible alternatives to Google Ad Manager.
[387] We include Google AdX, Google Ad Sense and Google AdMob in our definition of SSPs and Google DV360 and Google Ads in out definition of DSPs. Share estimates at SSP and DSP levels have been computed based on data from the intermediaries we received information from. As our coverage is not complete, Google shares may be over-estimated.
[388] Our analysis of ad tech fees is described in Appendix R.

Table 5.2: Estimated shares of supply for advertiser ad servers (2019)

Advertiser ad server	*Market share (as % of the total impressions served)*
Google	[80-90]
Flashtalking	[10-20]
Sizmek (Amazon)	[0-10]
Adfrom	[0-10]
Innovid	[0-10]

Source: CMA analysis of advertiser ad servers' data.

5.216 Advertisers typically use a single 'primary' ad server. However, a 'secondary' ad server is sometimes used to execute specific creative management functions. According to some stakeholders, switching costs can be significant, especially for advertisers with complex ad serving and reporting needs. There are, however, recent cases of large UK advertisers switching provider in a matter of weeks.

5.217 One of the main functions of advertising ad servers is analysing the performance of campaigns and the role that specific channels play in conversions. This is currently done through the use of identifiers (eg cookies) and requires sharing data with other intermediaries in the ad stack. It has been argued by one provider that data protection regulations may incentivise advertisers to remain within Google's ad stack, as sharing data between multiple intermediaries becomes more difficult. Google's decision to end support for third-party cookies in Chrome within two years might have a major impact on third-party ad serving, if Google can utilise its logged-in user base as an alternative to cookies, not available to competitors.

DSPs

5.218 There are many DSPs operating in the UK. Some of the largest include Google's DV360 and Google Ads, The Trade Desk, Xandr DSP, Amazon DSP and Criteo. As indicated in the Table 5.3, Google operates the two DSPs with the largest share of supply, in terms of value of ads purchased, with a combined share of [50-60]%. DV360's share has been increasing between January 2018 and December 2019.

Table 5.3: Estimated shares of supply of DSPs (2019)

DSP	*Market share not including Google Ads (as % of value of ads purchased)*	*Market share including Google Ads (as % of value of ads purchased)*
Google DV360	[40-50]	[30-40]
Google Ads	N/A	[10-20]
The Trade Desk	[10-20]	[0-10]
Xandr	[0-10]	[0-10]
Criteo	[0-10]	[0-10]
Amazon DSP	[0-10]	[0-10]
Others (Quantcast, Verizon Media, Adobe, DataXu, Adform)	[10-20]	[0-10]

Source: CMA analysis of DSPs' data.

5.219 Although larger advertisers and media agencies often use multiple DSPs across advertising campaigns, typically a single DSP is used for a given campaign, as this allows the advertiser to manage frequency caps[389] over the entire campaign and facilitates audience management and reporting. Some of the large advertisers we engaged with during this study told us that they used a single main DSP across all their campaigns – typically Google's DV360. The main reasons given for single-homing on Google were: access to inventory, and in particular unique access to YouTube inventory; the possibility of cross-channel optimisation across search, display and YouTube advertising; and holistic data integration with Google Analytics and the ability to de-duplicate data from across the Google stack, allowing a more accurate picture of effectiveness.

5.220 Smaller advertisers, on the other hand, especially those which mainly advertise on Google Search, are likely to single-home on Google Ads for display advertising, as Google Ads includes both Search and Display Network by default when an advertiser sets up a campaign on Google Ads.

SSPs

5.221 SSPs can be broadly divided into three groups: generalist SSPs, such as Google AdX (part of Google Ad Manager), Index Exchange, OpenX, PubMatic, Rubicon Project and Xandr SSP; specialist providers, such as TripleLift, Sharethrough and Teads, which specialise in particular ad formats such as native display or video; and 'content discovery platforms', such as Taboola and Outbrain, which are given exclusivity over some space on the publisher's webpage to recommend sponsored content, articles and videos.

5.222 We have computed two estimates of shares of supply: one including all publisher-facing intermediaries (SSPs and ad network) and one for 'pure' SSPs only. In both cases, Google is the largest provider in terms of value of

[389] 'Frequency' refers to the number of times a user is shown an ad over a period of time. As there are decreasing benefits for advertisers in repeatedly exposing a user to same message, frequency caps are typically imposed.

ads sold in the UK, with a share of approximately [50-60]% for publisher-facing intermediaries and [50-60]% for SSPs alone. The analysis in Appendix C shows that the proportion of ads sourced from AdX has been increasing year on year between 2017 and 2019.

Table 5.4: Estimated shares of supply of across all publisher-facing intermediaries (2019)

SSP/Ad network	*Market share (as % of the total value of ads sold)*
Google AdX	[20-30]
Google AdMob	[10-20]
FAN	[10-20]
Google AdSense	[0-10]
Xandr	[0-10]
Teads	[0-10]
Taboola	[0-10]
Others (Rubicon Project, Index Exchange, Outbrain, OpenX, Pubmatic, Triplelift, Smart, Freewheel, Verizon Media)	[10-20]

Source: CMA analysis of SSPs' and ad networks' data.

Table 5.5: Estimated shares of supply of across all SSPs (2019)

SSP	*Market share (as % of the total value of ads sold)*
Google AdX	[50-60]
Xandr	[10-20]
Rubicon	[0-10]
Others (Index Exchange, OpenX, Pubmatic, FreeWheel, Smart, Verizon Media)	[10-20]

Source: CMA analysis of SSPs' data.

5.223 Since the introduction of header bidding, which, as we saw above, allows publishers to simultaneously send ad requests to multiple SSPs, all major SSPs have access to much the same inventory and compete head-to-head for each single impression. Header bidding has arguably lowered barriers to entry for new SSPs, and has also led to increasing commoditisation of the SSP function, making price and service the key differentiators (rather than access to unique inventory) and putting downward pressure on SSPs' margins.

Header bidding solutions

5.224 Header bidding solutions can be divided into open-source and proprietary. Several providers offer header bidding services built on Prebid's open source technology. The main providers of proprietary header bidding services are Google, Amazon and Index Exchange; the most widely adopted solution is Google's Open Bidding, which was introduced by Google as an alternative to other header bidding solutions and is integrated with its publisher ad server.

5.225 One of the main advantages of Google's Open Bidding is the close integration with the rest of Google's ad stack. The ease of integration of SSPs through Open Bidding results in publishers often wanting to test smaller SSPs via Open Bidding before dedicating the resource to integrate them through a Prebid solution. If an SSP using Open Bidding wins the final auction for the ad

impression, Google charges it 5% of its bid, which increases to 10% for app and video inventory.

5.226 Some stakeholders submitted that header bidding solutions may increasingly offer ad server-like functionalities, competing against the ad server as the primary publisher technology solution.

Publisher ad servers

5.227 The market for publisher ad serving is very concentrated, with Google Ad Manager accounting for [more than 90]%[390] of the display ads served in the UK. Other providers include Freewheel and Smart, but their presence as publisher ad servers in the UK market is marginal, as shown in Table 5.6.

Table 5.6: Estimated shares of supply for publisher ad servers (2019)

Publisher ad server	*Market share (as % of the total impressions served)*
Google Ad Manager	[90-100]
Freewheel	[0-10]
Verizon Media	[0-10]
Smart	[0-10]

Source: CMA analysis of publisher ad servers' data.

5.228 The number of alternative providers has decreased recently with OpenX, Open Ad Stream, and Verizon Media deciding to stop providing a publisher ad server product.

5.229 Publishers typically single-home on one ad server, although it is possible to have a secondary ad server in addition to the main one. This appears to be the solution adopted by some publishers whose primary ad server is not Google Ad Manager in order to have access to Google's demand.

5.230 Publishers generally told us that switching ad server is a complex and lengthy process which takes several months to complete and involves significant risks of revenue loss. In addition to the direct costs of switching, there are operational risks and the possibility of demand losses resulting from the transition.

Vertical integration

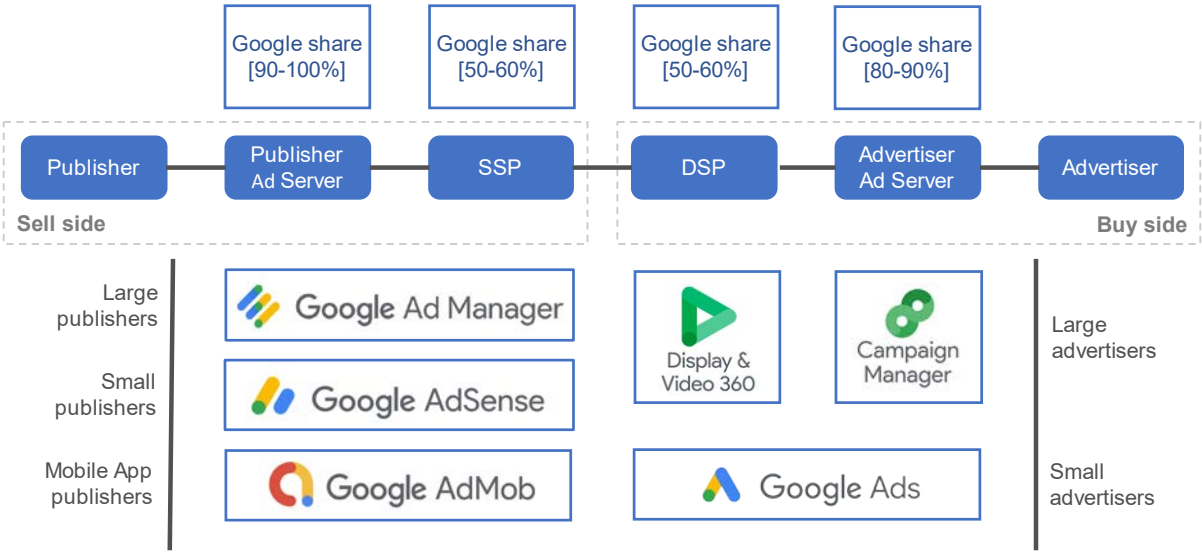
5.231 Several operators in the advertising intermediation ecosystem provide more than one service along the value chain. One industry participant told us that vertical integration has become the preferred method for rapid growth in the digital advertising industry. The largest companies are either acquiring smaller

[390] We exclude ads served by ad networks and consider only those providers that have been mentioned to us as possible alternatives to Google Ad Manager.

companies along the supply chain or building extensions of their own platform stack into new parts of the supply chain. Recent examples include FreeWheel's expansion from ad serving into SSP through the acquisition of StickyAds in 2016; Adobe's expansion into the DSP market through the acquisition of TubeMogul in 2017; and Amazon's launch of a header bidding solution in 2018.

5.232 The case of Google is noteworthy because not only does it operate along the entire value chain, but it also has the largest shares of supply among providers at each level of the chain.

Figure 5.15: Google's roles in advertising intermediation



Source: CMA.
Note: We include Google AdX, Google Ad Sense and Google AdMob in our definition of SSPs and Google DV360 and Google Ads in our definition of DSPs. Share estimates at SSP and DSP levels have been computed based on data from the intermediaries we received information from.

5.233 Google's presence across the ad tech stack was initially driven by a series of acquisitions, as set out in Box 5.1. Google's suite of products has developed significantly over time; it is notable that Google integrated several existing products rather than developing its position organically.

Box 5.1: Google's acquisitions in ad tech

Google's most significant acquisitions in ad tech include:

- DoubleClick (April 2007) – Publisher ad server and ad exchange; formed the basis of Google's ad server and AdX (now Google Ad Manager).
- AdMob (November 2009) – Technology for serving ads on apps; formed the basis of Google's AdMob product.
- Invite Media (June 2010) – Media buying optimization technology for the display advertising market; evolved into Google's main DSP product, Google DV360.
- AdMeld (June 2011) – Supply Side Platform; integrated into Google AdX.
- Adometry (May 2014) – Analytics and attribution provider; integrated into Google Analytics to provide improved attribution services.

Google has also made more recent acquisitions in the ad tech space, including mDialog, Directr, Toro and Famebit.

5.234 Vertical integration can give rise to technical efficiencies. For example, vertical integration between advertiser ad server and DSP can result in a more streamlined workflow and more seamless data sharing. Integration between DSPs and SSPs can improve the matching of data on users between the advertiser and publisher side, reducing the reliance on imperfect cookie-matching.[391] And integration of publisher ad servers with an SSP can improve reporting capabilities and reduce publishers' operational overheads. However, integration can also raise concerns about conflicts of interest and leveraging of market power, as discussed below in the context of Google's position in ad tech intermediation.

Ad tech fees

5.235 One of the concerns frequently raised by publishers and advertisers relates to the proportion of advertising revenues in open display which go to the providers of intermediation services. These concerns were highlighted by various public bodies who called on us to undertake this study. We have

[391] As cookie IDs are specific to each provider, if the DSP and SSP are operated by different providers a process of cookie matching is required in order for the DSP to identify the relevant consumer information to associate to a given impression. This process is prone to failure and can result in approximately 30% failed matching.

gathered data on ad tech fees from several sources, described in more detail in Appendix R.

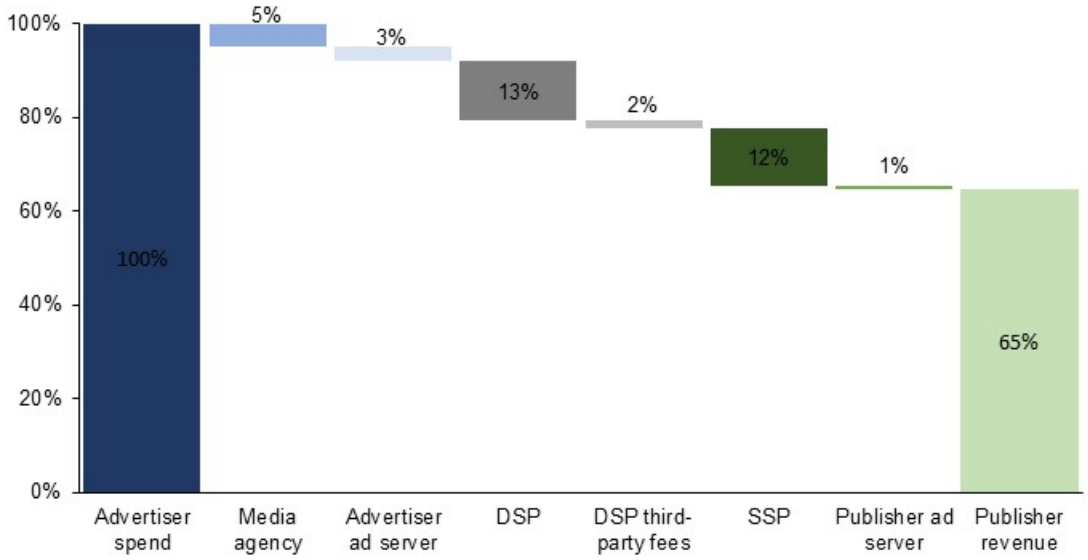
5.236 We have received data about fees and charges from most of the major intermediaries that operate in the UK. These intermediaries reported to us aggregated data for 2019 on all fees they charged for the provision of intermediation services, as well as the amount of open display advertising expenditure that passed through them. We used this data to estimate the average take rate by intermediaries at various levels of the open display advertising supply chain as a percentage of the initial expenditure by advertisers. The results of this analysis are presented in Figure 5.16 below.

5.237 Based on this evidence, we estimate that on average publishers receive around 65% of initial advertising revenue that is paid by advertisers (ie the overall 'ad tech take' is around 35%). However, in practice publishers' share may be lower than this on average because:

- There may be additional charges by categories of intermediaries other than those covered by our analysis. Most notably, our analysis does not cover fees charged by trading desks[392] or third-party providers of data or advertising verification services.[393]
- Where ads are sold through Google's Open Bidding, there will be an additional charge imposed by Google, typically 5% of the SSP's bid.
- There may be hidden fees such as post auction bid shading, not accounted for in our analysis.
- Our estimates do not take into account any revenue lost to publishers through digital ad fraud. However, a number of advertisers and agencies told us that the scale of ad fraud was less than 2% of impressions.

[392] Although we do not specifically isolate trading desk costs, our estimate for DSP charges will capture some element of trading desk charges as many of these offer these kinds of 'managed services'.
[393] In some cases, third-party data and ad verification services are purchased and though DSPs. Where this is the case, then the charges for these services will be included in the DSP element of our analysis.

Figure 5.16: CMA analysis of take rates across the open display supply chain



Source: CMA analysis of intermediary data.

5.238 Comparisons between our estimates of the take rate for the open display supply and the estimates from previous studies should be made with caution as those studies employ different methodologies and use very different samples. However, the results of our analysis are broadly consistent with those produced by other studies:

- The recent ISBA/PWC study finds that publishers receive on average a much lower percentage of advertising expenditure (51% compared to 65%). However the study was unable to attribute around 15% of advertising expenditure, as in many cases the winning bid recorded by the DSP did not match the gross revenue recorded by the SSP. The difference between our estimates is almost entirely explained by this so-called 'unknown delta'.[394]

- The Plum study commissioned by the Department of Media, Culture and Sport, published in January 2019,[395] found that publishers receive a similar amount of revenue on average (62% compared to 65%).

- A study commissioned by the US Association of National Advertisers (ANA) and published in 2017[396] found that, on average, buy-side charges equated to 28% of overall advertising expenditure. Our estimate is that buy-side fees are equivalent to 23% of overall advertising expenditure. One possible explanation for the difference in the estimates is that the

[394] As we explain in Appendix R, some of the categories that are suggested by the ISBA/PWC study as making up the 'unknown delta' may also not be reported in the fees/charges data provided to us.
[395] Plum, Online advertising in the UK, January 2019.
[396] ANA, Programmatic: Seeing Through the Financial Fog, May 2017.

ANA estimate includes an element equivalent to 9% of advertising spend for data fees, some of which will be charged by third-party data providers. Our analysis does not cover fees charged by third-party providers unless they are charged via a DSP.

5.239 Given Google's position in the ad tech stack, we carried out further analysis of its fees and how these compare with those of other intermediaries. At an aggregate level, we found that the fees charged by Google for its intermediation services, both on the buy- and on the sell-side, are similar to those of its competitors. This is the case also for Google Ads, which does not charge an explicit fee to advertisers

5.240 We also heard concerns from some publishers that Google (and other ad tech intermediaries) might be able to charge hidden fees, for example by taking an additional margin at points in the transaction chain.

5.241 To test this, we analysed a data set containing event-level information for all Google Ad Manager open auctions related to web traffic in the UK (based on user location) in the period from 8 to 14 March 2020.[397] The data covered around [✂] billion bids across [✂] billion auctions of individual ad impressions. For each winning bid, the data set included the amount paid by the advertiser into the DSP (only for Google DSPs) and the amount paid out to the publisher from Google Ad Manager. This allowed us to observe the end-to-end payments from advertiser to publisher where Google intermediaries were used – including any possible 'hidden' fees which would not be visible to either the advertiser or the publisher.

5.242 Our analysis found that, in transactions where both Google Ads and Ad Manager (AdX) are used, Google's overall take rate is approximately 30% of advertisers' spend.[398] This is broadly in line with (or slightly lower than) our aggregate market-wide fee estimate outlined above. We also calculated the margin between the winning bid and the second highest bid in AdX for Google and non-Google DSPs, to test whether Google was systematically able to win with a lower margin over the second highest bid (which might have indicated that they were able to use their data advantage to extract additional hidden fees). We found that Google's average winning margin was similar to that of non-Google DSPs. Overall, this evidence does not indicate that Google is

[397] See Appendix R for more detail of this analysis.
[398] Take rate is an issue we have engaged extensively on during the market study. Shortly before publication of this report Google published some analysis of their Google Ads take rates, similar to some of the analysis that we have undertaken in Appendix R. See: Google Ad Manager How our display buying platforms share revenue with publishers.

currently extracting significant hidden fees. As noted below, however, it retains the ability and incentive to do so.

5.243 Overall, we note that intermediaries are performing valuable functions, including targeting advertising and evaluating bids from multiple demand sources in real time. However, the fact that intermediaries are able to take more than a third of the total amount paid by advertisers raises legitimate concerns about whether the intermediation chain is operating efficiently. While it is difficult to estimate what overall fee levels would be in a more competitive market,[399] we anticipate that stronger competition would drive greater innovation and put downward pressure on fees.

5.244 We also note that many of the concerns about ad tech fees relate to the lack of transparency in the ad tech stack which makes it very difficult for advertisers and publishers to audit and verify the fees they are being charged; we consider the issues raised by lack of transparency later in this chapter.

Vertical integration and conflicts of interest

5.245 As described above, providers have increasingly been integrating different services within the advertising intermediation chain. While this integration might create some efficiency benefits, there are also concerns that integration could lead to the potential for conflicts of interest, particularly where an intermediary is operating on behalf of both advertisers and publishers. Some commentators have suggested that advertising intermediation should be treated similarly to financial markets, with stronger regulation to prevent intermediaries operating on both sides of the market.[400] In response to these concerns, we have considered the conditions under which integration might raise conflict of interest concerns.

How conflicts of interest can arise

5.246 Ad tech intermediaries typically act as agents for either an advertiser or a publisher, making decisions and taking actions on its behalf. In this context, conflicts of interest describe situations where the intermediary can potentially gain by taking actions that adversely affect the advertiser or publisher on whose behalf it is acting. Conflicts of interests can emerge when a single provider operates at multiple levels of the intermediation chain on both the buy

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[399] Arete Research has noted that the ad tech take is 'orders of magnitude more than sub-1% total trading costs in more transparent financial markets'. However, ad tech trades are much higher volume and lower value than typically financial trades, and on a 'per trade' basis, ad tech fees appear to be lower than financial trading execution costs. See Appendix R for further discussion.
[400] See Arete Research's response to our consultation on the Interim Report.

and the sell side, and where the advertiser and publishers on whose behaviour they act are unable fully to scrutinise their behaviour.[401]

5.247 Ad tech intermediary functions involve complex activities, where the advertisers and publishers have limited ability to fully evaluate the quality of the service they receive and where the providers have significant informational advantages. Conflicts of interest, therefore, cannot be fully avoided. However, the extent to which such conflicts may harm customers will depend on:

- the degree of information asymmetry between intermediary and customers;
- customers' sophistication, the ease with which customers can compare different providers, and switching costs;
- the extent to which the intermediary is subject to strong competition, in particular from non-conflicted competitors; and
- any efficiencies that compensate for conflicts of interest.

Forms of vertical integration that are more likely to lead to conflicts of interest

5.248 These general considerations allow us to assess what forms of vertical integration are more likely to give rise to harm to publishers or advertisers as a result of conflicts of interest.

5.249 In the current ad tech ecosystem there are multiple types of intermediaries involved in the publisher sales function – SSPs, header bidding solutions, and publisher ad servers. They differ in terms of the activities they perform and, crucially, on the degree of competition they are subject to. Intermediaries who have a 'final say' over how a publisher's inventory is allocated tend to be subject to more limited competitive constraints. In the current ecosystem, this is the role of the publisher ad server, which is responsible for the decision logic underlying the final choice of which ad to serve.

5.250 Once adopted by a publisher, a publisher ad server vertically integrated with a DSP may be able to favour its own source of demand in a way that potentially harms the publisher without significant risks, as:

- DSPs that are discriminated against cannot reach the publisher except through the ad server; and

[401] Conflicts of interest can also emerge when a provider of verification, attribution and evaluation services also operate in an advertiser advisory function, or is itself a publisher. These cases are discussed in Appendix M.

- publishers have limited visibility over how the ad server operates, while the integration of the ad server with the publisher's own systems results in significant switching costs.

5.251 As a result, the integration within a single provider of a DSP and of a publisher ad server is likely to be particularly problematic. Such a provider could favour its own advertiser advisory services with limited risk of publishers switching to alternative providers and limited countermeasures available to competing intermediaries. These concerns are more serious if the integrated provider has significant market power in the provision of at least one of the functions it integrates, as this would increase publishers' cost of switching provider.

5.252 The integration of only an SSP and a DSP (without a publisher ad server) appears less problematic in principle, as competition between SSPs significantly reduces their incentive to discriminate against competing DSPs. Following the widespread adoption of header bidding, many publishers multi-home with several SSPs which compete against each other for each single impression. Multiple SSPs therefore have access to the same inventory, giving DSPs alternative routes to reach the same publisher.

5.253 The ad tech ecosystem is not static: it has reached its current structure through sequential changes and innovations, and is likely to continue to change.[402] In particular, recent proposals envisage a future structure where auctions will be run on the user's browser (in particular, Google is considering removing third-party cookies from Chrome, as discussed further in the section on data below). In a scenario where browsers have a 'final say' over inventory allocation, the integration by the same provider of a browser and a DSP could be very problematic, as neither publishers nor competing DSPs would have any control over the browser chosen by the user, with the result that they will be unable to react if the provider favours its own DSP.

5.254 In relation to the possibility of vertically integrated DSPs favouring their own sources of supply to the detriment of advertisers, the incentive to do so is likely to be weaker where DSP customers are more sophisticated, since they will be aware of the potential for conflicts of interest, have tools to compare the performance of different DSPs and could switch between DSPs in the event of concerns. The assessment, however, would be different if a vertically integrated DSP serves many small customers, which tend to be less sophisticated, or has particular advantages in terms of data or exclusive access to inventory that make the services of competing DSPs not good alternatives. In this case, the market power deriving from these advantages

[402] For a description of the past evolution of the ad tech ecosystem, see Appendix M.

could shield a DSP favouring its own supply sources from countermeasures by its customers.

Implications for our assessment

5.255 Based on the analysis above, we do not believe that there is a case for intervention in all cases of vertical integration between advertiser and publisher-facing functions. Intervention is unlikely to be necessary where the intermediaries do not have market power. However, where an intermediary has market power in one part of the intermediation chain, conflicts of interest can lead to an incentive to self-preference between the advertiser and publisher-side functions. We consider the implications for Google's position in the open display market in the following section – in particular, in relation to Google's ability and incentive to leverage its market power within the advertising intermediation chain.

5.256 Finally, the perception of self-preferencing within vertically integrated intermediaries can create inefficiencies even if no actual self-preferencing takes place. For this reason, it is important to provide sufficient transparency to allow market participants to monitor the behaviour of intermediaries. We discuss transparency issues in the ad tech stack in a later section.

Issues arising from Google's position in open display

5.257 As set out above, Google has a very strong position in open display. This section considers the concerns that this might raise.

5.258 The first set of concerns relates to the way Google has leveraged its strong position in search advertising and its wider ecosystem into the open display market. Google has been able to use its market power in search to build its position as a DSP, including through leveraging its wider data and large base of advertisers, and through tying some of its owned-and-operated inventory (notably YouTube) to its DSP services. It has also built a position on the publisher side, initially through the acquisition of DoubleClick and other intermediary businesses.

5.259 The second set of concerns relates to Google's conflicts of interest within the ad tech stack and its ability and incentive to exploit its position on both sides of the intermediation chain to self-preference its own activities, thereby reinforcing its market power.

5.260 After setting out these two sets of concerns, we consider what impact Google's market power in ad tech might have and whether it could lead to worse outcomes for advertisers or publishers.

Leveraging market power from the wider ecosystem

5.261 This section describes how Google has been able to leverage its strong position in search advertising and its wider ecosystem into the open display market.

5.262 As set above, Google's presence across the ad tech stack was initially driven by a series of acquisitions of publisher-facing services including DoubleClick, which formed the basis for Google's publisher ad server, now part of Google Ad Manager. In addition to these acquisitions, Google has been able to leverage its position from its wider ecosystem into open display in several ways: through leveraging its owned-and-operated inventory and advertiser base; and by using data from its wider ecosystem to provide targeting and attribution services in open display.

Leveraging Google's owned-and-operated inventory

5.263 We concluded earlier in this chapter that Google has substantial market power in search advertising. It also has a strong position in in display advertising, particularly in the video segment, through its YouTube platform. YouTube accounts for around [5-10]% of total display advertising revenues and is the second largest supplier in the video segment with a [10-20]% share of expenditure.

5.264 Google can leverage the importance of YouTube for advertisers to increase its market power in the DSP market by allowing advertisers to buy YouTube inventory programmatically only through DV360. This restriction affects advertisers' choices of DSP for non-Google inventory as well because, as discussed above, a single DSP is typically used for a given campaign. As a result, advertisers who want to include YouTube inventory in their campaigns have a strong incentive to use DV360 for the entire campaign. As we have seen above, access to YouTube is one of the main reasons why advertisers choose DV360; several DSPs submitted that exclusive access to YouTube provides a very significant advantage to DV360 and creates a barrier to the growth of competitors.

5.265 Google submitted that restricting third-party access to YouTube inventory is the best way to maintain the privacy of user information and to ensure that the ads appearing on YouTube are of a consistently high quality. On user privacy, we recognise that third-party DSPs with access to YouTube inventory could build profiles based on users' viewing history, as currently happens for all publishers that rely on intermediaries to sell their own inventory. However, Privacy Enhancing Technologies (PETs) have been proposed by Google itself

to allow targeted advertising without user profiling;[403] similar solutions could be adopted for YouTube as well. As for Google's claim that widespread third-party ad serving could make it harder for Google to scan for 'bad' ads, we have received detailed submissions from other stakeholders, discussed in Appendix M, suggesting that Google would have the tools to address the issue, as is typically done by publishers.

5.266 Finally, Google told us that YouTube integration with third-party DSPs would be complex and expensive. YouTube auction dynamics are complicated: they do not only consider advertiser bid, but also optimise for campaign goals and consider user experience factors such as types of ads recently viewed and likelihood to watch a video to the end. It would be challenging to integrate real-time bidding in this context. No existing Google buying channels allow for real-time bidding. The costs of a third-party DSP integration are likely to be substantial and require significant engineering resources.

Leveraging Google's advertiser base

5.267 Google can also leverage its search advertiser customer base through Google Ads to strengthen its position in the DSP market. Google Ads is the main route through which advertisers, especially smaller ones, buy Google's search inventory. Advertisers using Google Ads for their search campaigns can easily extend the scope of their campaigns to display advertising. Indeed, Google Ads includes both Search and Display Network by default when an advertiser sets up a campaign on Google Ads, as explained in Appendix N. Moreover, Google Ads makes it extremely easy for small advertisers to build a display ad, offering a free tool for creating it and even providing pre-made images that can be added to text ads. By providing a one-stop shop solution for those advertisers who genuinely want to make use of both search and display advertising, and by nudging other small advertisers into using display ads through default settings, Google has managed to leverage part of its search advertiser base to increase its importance as a source of demand in open display.

Leveraging Google's data advantages

5.268 As discussed above and more fully in Appendix F, Google has exclusive access to a large amount of user data that can be used for targeted advertising and for measuring advertising outcomes, collected through its consumer-facing services. Data collected on its search platform is particularly valuable for targeting purposes in open display as it reveals users' purchasing

[403] See Appendix G for a detailed discussion of tracking technologies and PETs.

intent. Moreover, the availability of log-in data allows Google to identify all the computers and mobile devices associated with a user, associating all the data about the user to a single user ID. The use of Google's proprietary data and audiences was mentioned by advertisers and media agencies as one of the main strengths of DV360.

5.269 Google submitted that it is not the only platform with access to user data; for example, Facebook and Amazon have extensive user data that can be used for targeting purposes. However, we note that Facebook has a relatively small presence in open display through the Facebook Audience Network (FAN), which is typically offered to advertisers in addition to Facebook's owned-and-operated properties and not on a standalone basis. Conversely, Google's DV360 is the largest DSP and offers access to a very wide range of third-party inventory. Amazon's presence in open display is also much smaller than Google's. Amazon's DSP is likely to be an attractive solution for advertisers in the retail sector, but less so for those operating in other industries. On the other hand, Google's data is likely to be valuable to advertisers operating in a wide range of industries.

5.270 Overall, stakeholders' submissions suggest that the competitive advantage that Google's DSPs obtain from access to unique data is currently less significant that that resulting from exclusive access to YouTube inventory. This is because non-Google DSPs have alternative sources of data at their disposal: they can learn about users from their browsing activity, placing third-party cookies on publishers' websites, and can buy data from third-party data brokers. However, as a result of data protection regulation and increasing restrictions on the use of third-party cookies, we have concerns that Google's data advantage may become more significant in the future.

Google's ability and incentive to leverage market power within open display

5.271 The section assesses concerns that Google has the ability and incentive to exploit its position on both sides of the intermediation to self-preference its own activities, thereby reinforcing its market power. This relates both to concerns about conflicts of interest and to Google's incentives to engage in exclusionary conduct.

5.272 As we have seen above, Google is the largest provider at each stage of the ad tech stack. It satisfies all the conditions we have discussed above for conflicts of interests to be problematic:

- Google is overwhelmingly the largest provider in publisher ad serving, while at the same time operating the largest DSPs.

- DV360, one of Google's DSPs, has an advantage over competitors because of its exclusive access to YouTube inventory and, possibly, because of its access to data from Google's user-facing services.

- Google Ads serves a large number of small advertisers, either attracted by the possibility of buying both search and display inventory from the same platform or nudged into buying display advertising through Google Ads' default settings; these advertisers would find it costly or difficult to switch to different providers.

- In a future scenario where auctions are run by browsers, Google would be in the position of integrating the most commonly used browser (Chrome) with the largest DSPs.

5.273 In the following paragraphs we discuss how these conflicts of interest may manifest themselves in practice, and how Google may leverage its market power across the ad tech stack through various forms of self-preferencing behaviour, both harming its customers (especially publishers) and making it difficult for alternative providers to compete on the merits.

Leveraging market power from DSPs to the publisher ad server

5.274 Several stakeholders expressed the concern that Google has made it difficult to access its advertiser demand (especially from Google Ads) through alternative publisher ad servers, thereby increasing its market power in ad serving and making it difficult for other providers to compete on the merits. This concern relates to a possible manifestation of the conflicts of interest Google is subject to by operating on both the buy- and the sell-side: Google reduces its DSPs' ability to compete for the inventory of publishers using non-Google ad servers, in a way that potentially penalises its own advertiser customers but creates an incentive for the adoption of Google's publisher ad server. The concern can be divided into two parts:

- Google allegedly engages in self-preferencing behaviours between its DSPs and its SSP (AdX), therefore extending its market power from the DSP market to the SSP market; and

- Google then allegedly makes it difficult to access AdX from non-Google publisher ad servers, therefore increasing its market power at the ad server level.

5.275 On the first point, the evidence, discussed in Appendix M, suggests the existence of a degree of self-preferencing between Google's DSPs and SSP, although it is difficult to establish how significant its impact is. Nevertheless, it

is clearly the case that a lot of the demand from Google's DSPs, and particularly from Google Ads, is channelled through AdX. Data for the period September 2018 to August 2019 show that the aggregate value of the impressions won by Google Ads through AdX was [several] times that of impressions won through third-party SSPs. For this reason, and given the importance of Google Ads and DV360 as a source of demand, publishers place a high premium on being able to access AdX demand. Restrictions on publishers' ability to access AdX through non-Google ad servers would therefore have a substantial impact on their choice of provider.

5.276 On the second point, although AdX can receive requests from, and submit bids to, other ad servers, its demand cannot be easily placed in real-time competition with that from other SSPs. Unless an SSP is vertically integrated with the publisher ad server, the only way for it to compete with other SSPs with real-time bids is through a header bidding solution (or, if a publisher uses Google Ad Manager, through Google's Open Bidding). AdX, however, does not participate in header bidding. As a result, if the publisher uses a non-Google ad server, AdX would not participate in a real-time auction with other SSPs, but would compete with an 'expected' price, which determines the order in which SSPs are sent an ad request. This system is inefficient for the publisher.[404] While other publisher ad servers may provide a technical solution to integrate AdX demand, this is not as efficient as header bidding and presents several limitations, as discussed in Appendix M.

5.277 Google told us that its decision not to participate in header bidding had nothing to do with seeking to force publishers to use Ad Manager. Instead, AdX does not participate in header bidding for reasons that include latency, lack of transparency, user trust and privacy concerns. We address each of these reasons in Appendix M, showing that none of them appears convincing:

- Although it is true that header bidding, especially user-side header bidding, adds latency to a webpage, the participation of an additional SSP would not materially increase latency.

- Lack of transparency in header bidding should be a concern for the publishers, not for Google. If, despite transparency limitations, publishers still think that header bidding allows them to better monetise their inventory, there is no reason why AdX should not participate.

- None of the DSPs or media agencies responding to our request for information was particularly concerned by the risk of disclosure of their bid

[404] For a discussion of the 'waterfall' system in which SSPs are contacted sequentially, see Appendix M.

data in header bidding, indicating that buyers do not see header bidding as raising particular privacy concerns.

5.278 Google has argued that its proprietary version of header bidding, Open Bidding, minimises the issues listed above. Although this may well be the case, this is not a reason for AdX not to participate in other forms of header bidding if publishers still want to use them.

5.279 The effect of channelling most of Google's demand through AdX and linking AdX to Google's publisher ad server is to increase the barriers publishers face in switching from Google to a different ad server, reducing competition in ad serving. The main concern some publishers expressed around switching to a non-Google ad server was not related to the costs and risks discussed above, but to the risk of not being able to access demand from AdX in an efficient manner.

Self-preferencing between Google's publisher ad server and its demand sources

5.280 Several publishers and intermediaries have expressed concerns that Google may be able to use its position as the largest publisher ad server to favour its own demand from AdX and its DSPs. In this further manifestation of its conflicts of interest, Google would be potentially penalising its own publisher customers while incentivising the use of its own buy-side intermediary services.

5.281 In the following paragraphs, we first describe the advantage that AdX historically had over other SSPs (the so called 'last look'), before analysing whether current practices and recent changes to how Google's ad server works may still favour AdX over its rivals. The issues we analyse relate to the rules of Google's Open Bidding, the recently introduced unified pricing rules, and the sharing of auction data between Google's different intermediation services, with non-Google intermediaries and with publishers.

- *Last look*

5.282 Following the introduction of header bidding, AdX had a 'last look' advantage over header bidders, ie bid requests received by AdX included as a price floor the highest bid from the header bidding auction. This gave AdX an advantage

as it could win the impression by submitting a bid only slightly higher than the highest bid from header bidding.[405]

5.283 In 2019, Google made several changes to the way its publisher ad server works, introducing a unified first-price auction in which the highest bid from header bidding SSPs, the DSPs bidding into AdX, and the SSPs participating in Open Bidding all take part. As part of this transition, Google took the policy decision to remove AdX's ability to observe the bids submitted by header bidding SSPs before running its own auction. While the decision to remove AdX's 'last look' advantage should lead to a fairer competition between different SSPs, some publishers told us that the bidding information they receive from Google Ad Manager does not allow them to effectively verify that the auction is conducted fairly. They are therefore required to trust that Google operates the system in the way it has announced.[406]

- *Open Bidding*

5.284 Open Bidding is Google's proprietary version of header bidding. Google's documents show that a major reason for its introduction was to protect Google's revenues from the impact of header bidding, while providing a service that publishers could benefit from. Open Bidding was designed in a way to avoid creating an alternative route directly competing with AdX and to disadvantage third-party SSPs:

- Open Bidders are charged a fee when they win an impression (5% or 10% of the value of the winning bid, depending on the type of inventory). While this is a remuneration for a service that Google is providing, it places Open Bidders at a disadvantage compared to AdX.

- An SSP that also operates a DSP cannot submit through Open Bidding bids originated from its own DSP, but can only submit them through AdX. This restriction, which does not apply to AdX, may on the one hand disadvantage third-party vertically integrated SSPs and, on the other hand, avoid the risk that DSPs could bypass AdX by bidding directly into Open Bidding.

- Short timeouts might reduce SSPs' ability to submit a bid and compete with AdX, further encouraging DSPs to rely on AdX. However, the evidence we have received on this issue is mixed.

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[405] 'Last look' was not intentionally designed to give AdX an advantage when competing against header bidding; it was simply the result of the header bidding auction taking place before the AdX auction was able to run.
[406] See Damien Geradin and Dimitrios Katsifis (2020) 'Trust me, I'm fair': analysing Google's latest practices in ad tech from the perspective of EU competition law, *European Competition Journal*, 16:1, 11-54.

- *Unified pricing*

5.285 In conjunction with the transition to a unified first-price auction, Google introduced changes to the way publishers are allowed to set floor prices. Specifically, publishers using Google Ad Manager are no longer allowed to set different floor prices for different buyers (eg SSPs or DSPs). The new rules to setting floor prices are referred to as Unified Pricing. While is not strictly speaking a case of self-preferencing behaviour, as the new rules force publishers to treat all SSPs and DSPs in the same way, Google's documents show that one of the main motivations for this change was to increase AdX competitiveness and Google demand's win rate. This is because, before the recent changes, several publishers were setting higher floor prices for Google than for other sources of demand.

5.286 We have identified various reasons why it might be optimal for a publisher to set different floor prices for different sources of demand, and in particular for different DSPs. This strategy, for example, could be adopted by publishers (i) to limit bid shading[407] by DSPs that are known to have a larger mass of advertiser demand or to have an advantage in terms of user data; (ii) to reward relationships with longstanding partners; or (iii) to disadvantage lower-quality demand partners. Therefore, while we have seen limited evidence that this change has harmed publishers in the short term, it seems clear that restricting their ability to set differential floor prices is not in their interest.

- *Preferential use of data*

5.287 A recent change introduced by Google Ad Manager is the 'minimum bid to win' – a new piece of information sent to AdX and to Open Bidders after an auction is completed. These bidders receive information on the minimum bid that would have allowed them to win an auction (typically, if a bidder has lost the auction, the 'minimum bid to win' would be the winning bid; if a bidder has won the auction, the 'minimum bid to win' would be the second highest bid). Although this information cannot be used to bid on the same auction, as it is provided ex post, it is useful for training bidding algorithms for future auctions. Some stakeholders have argued that, since SSPs bidding through non-Google header bidding solutions do not receive this information, this provides an incentive for SSPs to use Open Bidding instead, and therefore be subject to the Open Bidding charge.

[407] Bid shading is the practice of submitting a bid lower than the bidder's willingness to pay. Bid shading characterises optimal bidding strategies in first-price auctions.

5.288 Our analysis suggests that Google's decision to provide 'minimum bid to win' information was based on a genuine intention of making the auction more efficient and did not reflect an exclusionary intent. Nevertheless, it has resulted in an advantage to AdX, which is the only SSP currently able to make full use of this information, compared to third-party SSPs and header bidding solutions, although we received contrasting views on the significance of this advantage.

5.289 Finally, some stakeholders told us that, due to Google's double role as publisher ad server and SSP, Google's SSP AdX could benefit from privileged access to bidding data. Based on the information we received in the course of the study, it appears that it would be technically possible for Google to use bidding data collected as publisher ad server to inform its bidding strategies, and that Google has an incentive to do so (at least in the short term). Google told us that it has adopted a policy not to take advantage of this possibility, at least since the move to a unified auction. Nevertheless, it would be possible for Google to reverse such a policy decision in the future. Moreover, the current lack of transparency over auction mechanisms makes it difficult to verify that Google is abiding to its own rules. Again, other market participants are required to accept these assurances on trust.

- *Restrictions to auction data shared with publishers*

5.290 Some publishers submitted to us that Google's recent changes to the bidding data they receive from Google Ad Manager limit their ability to compare the performance of non-Google SSPs versus AdX. As a result, SSPs will find it increasingly difficult to demonstrate how they add value for publishers, while publishers will have less incentive to sustain the costs of integrating non-Google SSPs through header bidding.

5.291 We analyse this concern in detail in Appendix M. The changes were made to avoid the disclosure of buyer data in connection with non-winning bids if that data can be tied back to individual users. They were motivated [✂], and by privacy considerations. The documents we have reviewed suggest that the changes introduced by Google were not motivated by a desire to penalised third-party SSPs but were the result of the necessity to balance the needs of publishers with the interests of advertisers. Google's engineers believed that these [✂].

5.292 Although publishers have still access to a lot of auction data, their inability to match bidding data with the outcomes of individual auctions may limit their understanding of the demand landscape. Moreover, alternative methods to compare SSP performance, such ad A/B testing, may not provide an

alternative to the insights that can be obtained from the full bid landscape data.

- *Conclusions on self-preferencing between Google's publisher ad server and its demand sources*

5.293 The transition to a unified auction in Ad Manager has levelled the playing field between AdX and non-Google SSPs, by making all of them compete in the same auction. Nevertheless, some current practices may still result in an advantage for AdX and Google's DSPs. In some cases, such as the 'minimum bid to win' data, the advantage appears to be a by-product of efficiency-enhancing innovations. In other cases, however, changes were introduced with the explicit purpose of benefitting Google.

5.294 Moreover, the lack of transparency and auditability of auction mechanisms makes it difficult for publishers and advertisers to verify that Google is abiding by its own rules.

Effects of Google's market power

5.295 In response to the concerns set out in our interim report, Google has argued that its presence in open display is beneficial to advertisers and publishers and that there is no evidence that it is exploiting its market power. It noted that open display represents a relatively small source of revenue for Google.[408] It also argued that its returns from intermediation are low compared with other parts of its advertising business, and there is no evidence that it is able to extract higher fees than its competitors.

5.296 A recent paper written by Google's advisers argues that it has a strong incentive to provide efficient and competitive services to publishers in open display because its core search services rely on the quality and diversity of online content across the web. It argues that any incentive to extract higher fees from publishers by exploiting its market power in intermediation would be offset by the detrimental impact this could have on the profitability of its search business.[409]

5.297 As noted above, our analysis of Google's ad tech fees suggests that they are broadly in line with those of other DSPs and SSPs. We have not found evidence that Google is systematically charging higher prices or is currently extracting significant hidden fees. However, we agree with publishers and

[408] In the UK in 2018, Google made net revenues of £[100-500] million from its advertising intermediation services in open display.
[409] Bitton and Lewis (2020), Clearing up misconceptions about Google's ad tech business.

advertisers that lack of transparency over fees makes it very hard to audit and verify outcomes; we consider this below in our discussion of transparency issues in digital advertising.

5.298 In some parts of the ad tech stack, namely in advertiser and publisher ad serving, there is anecdotal evidence that Google has adopted an aggressive pricing strategy, charging significantly less than its direct competitors and leading to an overall reduction in fees in those markets. This is indeed one of the reasons why Google managed to achieve very high shares of supply in ad serving. At least in the short term, therefore, Google's pricing strategy may have benefited publishers and advertisers, although it has led to a significant reduction in the number of competitors, especially in publisher ad serving.

5.299 However, Google's position and behaviour in open display is still a source of concern for three reasons. First, Google could decide to increase fee levels in future once its strong position is consolidated. As discussed above, Google has now achieved a leading role in publisher and advertiser ad serving in the UK and is the largest competitor at both SSP and DSP level, and has the ability and incentive to use this market power.

5.300 Second, the reduction in competition in parts of the ad tech stack could also have dynamic effects, with a reduction in pressure to innovate and create new products which could ultimately harm advertisers and publishers. In the long term, this effect is likely to be among the most significant impacts of Google's current behaviour.

5.301 Third, there is also the possibility that part of Google's reason for establishing a strong position in open display is to protect its position in other markets. For example, entry into open display could be a way to protect Google's search advertising business from potential competition if Google envisages a trend towards greater convergence of search and display advertising. In this case, gaining a powerful position in the open display ecosystem could pre-empt the emergence of a competitor in that space that could become a threat to Google's market power in search advertising. While advertisers and media agencies currently consider search and display advertising as largely complementary, Google has observed that advances in ad technology (such as remarketing) have made various ad formats more substitutable.

Cross-cutting issues: data, transparency and publisher relationships with the platforms

5.302 This section draws together and expands on some of the key cross-cutting issues described above, and which have featured prominently in some of the broader policy debate. It covers:

- the data advantages of the large platforms and the impact of data protection regulation;
- concerns around a lack of transparency in relation to the operation of auctions, fees and advertising verification and attribution; and
- publishers' wider relationship with the large platforms and potential exploitation of bargaining power.

5.303 The way in which data protection regulation is interpreted is likely to have an increasingly important impact on the structure and functioning of the digital advertising market over the next few years, while transparency issues and concerns around the ability of newspapers and other publishers to bargain effectively with large platforms were at the heart of the calls for us to undertake this market study.

Data advantages of the large platforms and impact of data regulation

5.304 One of the key themes in our analysis of search and display advertising markets is the role of data for targeting and attribution, and the competitive advantages that this gives to large platforms with extensive first-party sources of user data.

5.305 The use of data for targeting and attribution can create efficiency benefits and additional value for advertisers. However, it can also act as a barrier to competition if potential competitors do not have access to equivalent sources of data. Further, many people have concerns that the flows of data required for targeting involve an unacceptable degree of intrusion and disregard for people's rights to privacy.

5.306 This section highlights the sources of the large platforms' data advantages which can create barriers to entry in digital advertising. It then discusses the interactions between the platforms' data advantages and privacy regulation.

Sources of large platforms' data advantages

5.307 In the discussion of barriers to entry in search advertising, we noted that Google's extensive first-party data is likely to give it substantial advantage over smaller rivals, creating a barrier to entry for potential rivals. Advertisers on Google can target search advertising to particular audiences (and have confidence in the composition of those audiences), allowing improved performance for their advertising. Similarly, in relation to display advertising, the evidence suggests that Google's superior access to first- and third-party data gives it a significant competitive advantage over smaller platforms and

publishers. Data collected on its search platform is particularly valuable for targeting purposes in open display as it reveals users' purchasing intent.

5.308 Facebook also has access to valuable first-party data from users' interactions on its social media platform. It can infer users' likely demographic attributes, preferences and behaviours from their interactions on its leading social media platform, but also from their friends' and families' interactions as well. This enables Facebook to collect a greater quantity and variety of high-quality data that is useful for advertising to obtain insight on their audiences and to target advertising.

5.309 In addition, Appendix G sets out our assessment of the large platforms' advantages in user tracking. Currently, tracking is undertaken for many activities which enhance the efficiency of digital advertising, such as targeting, attribution and evaluation. Large incumbent platforms, such as Google and Facebook, have greater opportunities to track and collect data on users than other advertisers, publishers and ad tech providers as a result of the reach of their first-party platforms, and their extensive third-party data sources.

5.310 By contrast, it is generally difficult and costly for advertisers to assemble information on consumers from their own first-party data and other third-party data providers. Google and Facebook have extensive reach, and Google in particular has very valuable data (purchasing intent data from its search service) on consumers that can be used to target advertising. Google and Facebook do not provide access to this data on open data exchanges, so the only way for advertisers to get (indirect) access to it and use it for targeting is to use Google and Facebook's ad management tools.

5.311 As a result, third-party publishers are incentivised to use Google's, and to a lesser extent Facebook's, advertising services. Many publishers of websites and apps also include code (tags, pixels or SDKs) that allow Google and Facebook to track the behaviour of their users to target ads and measure ad effectiveness. In doing so, third-party publishers enable Google and Facebook to obtain even more data about consumer behaviour, including on non-Google and non-Facebook properties, which further reinforces their ability to target and deliver high performing ads.

5.312 Finally, both Google and Facebook do not allow advertisers and independent third-party providers of measurement and attribution services to collect user-level data from ads shown on their owned and operated inventory (ie in the walled garden). This hurts independent attribution providers and gives an advantage to Google and Facebook's own ad tech and analytics services (see the section below on 'Transparency in relation to verification and attribution').

Interpretation of data protection regulation by large platforms

5.313 In this market study we have heard concerns that large platforms use data protection regulations such as GDPR as an excuse to restrict access to valuable data for third parties, while retaining it for use within their ecosystems, thereby consolidating their data advantage and entrenching their market power.

5.314 The Furman Review (2019) made public that it had received concerns that GDPR was 'enabling large digital companies to impose unduly strict compliance duties on smaller firms, serving to reinforce their own dominance in the process'.[410] Similar concerns have been raised with us in the context of this study.

5.315 As discussed in Chapter 2, platforms have a vital gatekeeper function in the digital economy, mediating relationships between consumers and businesses in a wide variety of markets. We have found that, by virtue of this position and their market power, large platforms such as Google and Facebook increasingly appear to be acting in a quasi-regulatory capacity in relation to data protection considerations, setting the rules around data sharing not just within their own ecosystems, but for other market participants.

5.316 Our concern is that such platforms have an incentive to interpret data protection regulation in a way that entrenches their own competitive advantage, including by denying third parties access to data that is necessary for targeting, attribution, verification and fee or price assessment while preserving their right to use this data within their walled gardens.

Concerns we have heard

5.317 Professor Damian Geradin submitted that that GDPR 'effectively strengthened the position of the platforms on digital advertising markets to the detriment of other intermediaries, but also advertisers and publishers'[411] while the News Media Association submitted that publishers have struggled to resist attempts 'by global tech companies to force unfair terms on them through the new consents regime'.[412]

5.318 The Daily Mail Group told us that 'while the GDPR inter alia aimed at placing some limits on the way digital platforms collect and process personal data, these platforms turned this regulation to their advantage' and that GDPR has

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[410] Furman Review (2019), Unlocking digital competition, paragraph 4.42, page 124.
[411] Prof. Geradin's response to our consultation on the Statement of Scope, page 12.
[412] News Media Association's response to our consultation on the Statement of Scope, page 5.

given Google the 'freedom to do what they want with data collected through publishers, while threatening not to serve ads to any publishers which do not satisfactorily obtain consumers' consent on their behalf'.[413]

5.319 We have been told of multiple examples where the large platforms have stated, using privacy regulation as a basis, that they are not able to share or allow access to data. We have explored a number of these concerns above and in Appendix O, including recent concerns that Google has removed time stamp data from bid requests, which may harm publishers' ability to compete effectively in the open display market, and Google's decision to prevent the DoubleClick user IDs being accessed by ad buyers, which may impede advertisers' ability to make use of independent attribution modelling and cross-platform measurement of reach and frequency.

5.320 Whilst platforms may be reasonable in acting cautiously in setting rules for sharing data with third parties, the GDPR also imposes a test for sharing data within their own ecosystems. The evidence suggests that within these 'walled gardens' the platforms appear to take a more permissive view of data protection regulation, and choose to combine and share data between functions expansively. The browser company Brave submitted to us that 'Data protection law is inimical to internal data free-for-alls in vertically integrated platforms. Google and Facebook's data advantage arises from a lack of enforcement of data protection law by data protection authorities.'[414]

Chrome announcement on third-party cookies

5.321 Google announced in January 2020 that it intended to phase out support for third-party cookies in Chrome within two years. This is an important market development that is a further example of platforms' increasing role in deciding on the appropriate application of data protection regulation for other market participants.

5.322 The phasing out of support for third-party cookies in Chrome, which has a browser market share of approximately 50% in the UK in October 2019, may have significant implications on the availability of data and the targeting ability of its competitors. In Google's proposals, the demise of third-party cookies will be subject to the development of privacy-preserving and open-standard mechanisms to address the needs of users, publishers, and advertisers, called 'Privacy Sandbox'.

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[413] DMG Media response to our consultation on the Statement of Scope, pages 4 and 12.
[414] Brave's response to our consultation on the Interim Report.

5.323 As explained in Appendices F and G, third-party cookies are the current principal means of achieving common identification of users on websites, and are therefore a fundamental building block of the open display advertising used by publishers, making possible the flow of data about users through the digital advertising ecosystem needed to target advertising and measure conversions.

5.324 However, targeting using first-party data and authenticated user data does not require cross-site tracking and is unaffected by the demise of third-party cookies. Therefore, large incumbent platforms with leading consumer-facing services like Google and Facebook are significantly less dependent on third-party cookies for delivery of high-performing targeted ads and continued advertising revenues than, for instance, small publishers with free-to-read content that does not require log-in.

5.325 For instance, Google would still be able to use the insights it obtains from users' activities on Google Search and YouTube to select personalised ads on Google's properties.[415] In contrast, publishers, advertisers and intermediaries that are currently reliant on third-party data obtained via data management platforms and data brokers are likely to have less granular data with which to target personalised advertising. Therefore, to the extent that targeted advertising on open display inventory is less feasible or effective without third-party cookies, advertisers may substitute spending away from open display advertising and towards advertising on platforms' owned-and-operated inventory.

5.326 This potentially presents a fundamental challenge to the non-vertically integrated advertising business model used by newspapers and other online publishers. We have reviewed evidence that suggests that prohibiting publishers from serving personalised advertising in the open display market while allowing platforms to continue to offer personalised advertising would have a very significant impact on publishers' revenue. For example, a recent study indicated that UK publishers earned around 70% less revenue overall when they were unable to sell inventory using personalised advertising but competed against others who could.[416]

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play activities will also be affected by the deprecation of third-party cookies. Google stated that, once third-party cookies are no longer supported, it will generally not be able to associate ad requests from third-party sites with Google Account-level data for individual users. We note that it may be possible for websites and ad tech providers (including Google) to re-establish cross-site tracking without third-party cookies (see Appendix G for details).

[416] This analysis is described in more detail in Appendix F.

5.327 We note that, if successfully implemented, Google's main Privacy Sandbox proposals (described more fully in Appendix G) may still permit some third-party personalised advertising (interest-based advertising and remarketing), albeit at a greater level of coarseness of targeting and measurement. However, those proposals will also turn Chrome (or Chromium browsers) into the key bottleneck for ad tech. It is likely, therefore, that Google's position at the centre of the ad tech ecosystem will remain. Market participants may be concerned that, under these proposals, Chrome would have the ability to use its position to favour Google's own ad tech intermediation services and raise barriers to entry.

5.328 In respect of this and other changes Google has proposed, the ICO (Information Commissioner's Office) has stated that, from a privacy perspective, 'We are encouraged by this, and will continue to look at the changes Google has proposed'.[417] As the ICO observes, however, the detail of the proposals, and how they are implemented, will be important. Measures which enhance an aspect of consumer privacy in the near term, may have dynamic effects which risk a negative impact on consumer welfare, for example a concentration of personal data amongst fewer providers, so impacting consumer choices and control in the longer term.

Conclusion on platforms' interpretation of data protection regulation

5.329 We have not taken a formal view, for the purposes of this market study, on the correct interpretation of data protection regulation in the various cases that have been drawn to our attention by market participants. However, our concern is that Google and Facebook have a clear incentive to apply a stricter interpretation of the requirements of data protection regulation when it comes to sharing data with third parties than for the use and sharing of data within their own ecosystems. Further, if vertically-integrated platforms are successful in interpreting data protection regulation in this way, this may create an artificial incentive in the long run towards greater vertical integration, as a way of circumventing regulatory constraints.

5.330 We think there is a case for close cooperation between the CMA and ICO to consider the appropriate approach to such concerns in the future and set out, in Chapters 7 and 9, how we propose to work with the ICO following the completion of this study.

[417] https://ico.org.uk/about-the-ico/news-and-events/news-and-blogs/2020/01/blog-adtech-the-reform-of-real-time-bidding-has-started/

Transparency issues

5.331 A second group of cross-cutting issues relates to lack of transparency in the digital advertising market. In this section we highlight three areas where we have found that lack of transparency could affect negatively affect market outcomes:

- transparency of ad tech fees;
- transparency over auction rules and algorithms; and
- transparency in relation to ad verification (for viewability and brand safety) and attribution.

Transparency issues in the ad tech stack

5.332 Many advertisers and publishers commented on the lack of transparency in the digital advertising sector. This is partly a function of the technical characteristics of programmatic advertising where advertising is displayed in real time to a given consumer, making it difficult to verify exactly when an advert has been seen and by whom. This lack of transparency is particularly evident in the open display market, where publishers and advertisers rely on intermediaries to manage the process of real-time bidding and ad serving but cannot observe directly what the intermediaries are doing or, in some cases, how much they are being charged at different points in the supply chain.

5.333 Lack of transparency and asymmetric information can lead to inefficient outcomes – for example, advertisers may be reluctant to purchase advertising if they are unsure whether it will ultimately be viewed by a consumer. In some cases, we would expect market participants to have a shared interest in trying to overcome the problem, for example by investing in technology to improve ad verification. However, in other cases the interests of different market participants are not well aligned and where a lack of transparency might be exploited by platforms with market power. Our main concerns relate to the transparency of fees paid to different intermediaries and the opportunity for intermediaries to exploit such lack of transparency.

Transparency of fees along the supply chain

5.334 Market participants typically do not have visibility of the fees charged along the intermediation chain. This makes it very difficult to properly audit advertising sales. It could also limit firms' ability to make optimal choices on how to buy or to sell inventory, reducing competition among intermediaries.

5.335 Publishers have little visibility of fees charged by intermediaries, except for the commissions contractually agreed with SSPs. It may be difficult for publishers even to know which advertisers are bidding for their inventory, as many SSPs do not provide auction-level data. This is likely to have implications for competition between intermediaries. One source of competitive pressure for intermediaries such as DSPs is the possibility of publishers signing direct deals with advertisers. This is, however, a resource intensive activity. Publishers would be in a better position to engage with advertisers if they knew which advertisers were interested in their inventory and if they had a reasonable understanding of how much these advertisers were charged by intermediaries.

5.336 Some advertisers and agencies have expressed a concern about not being able to observe the fees that SSPs charge to publishers. Given that publishers decide which ad should be served based on net bids, visibility of these fees could make it easier for buyers to select the cheapest path to secure specific inventory and for DSPs to decide where to bid. Lack of transparency may therefore result in reduced competition between SSPs in attracting buyers.

Opportunities to exploit lack of transparency

5.337 In the context of an intermediation process involving sequential auctions, lack of transparency may also give rise to rent-seeking behaviour, such as the possibility for an intermediary (SSP or DSP) to buy impressions at one price and sell them at a higher one without its customers being aware of the magnitude of the difference.

5.338 Some evidence of this being an issue in the current intermediation ecosystem is provided by a study on programmatic supply chain transparency carried out by PwC on behalf of ISBA.[418] As seen above, the study was unable to attribute 15% of advertisers' spend (corresponding to approximately 30% of the difference between advertisers' spend and publishers' revenues for matched the impressions). While this could in part be due to limitations in the study's methodology and data, the result suggests the possibility that 'hidden fees' might account for a significant fraction of the cost of intermediation.[419]

5.339 In this regard, several stakeholders have expressed the concern that some SSPs, after running an auction among DSPs, may charge the winning DSP the amount of its bid but submit a lower bid into the publisher ad server, keeping the difference for themselves. While some SSPs have publicly

[418] ISBA's Programmatic Supply Chain Transparency Study, published in May 2020.
[419] We note, however, that the study was not intended to be representative of the entire open display market in the UK.

announced that they are no longer adopting these practices, stakeholders believe that other SSPs may still do so and submitted that this undisclosed 'buy-side fee' can amount to 10-15% of a DSP's bid.

5.340 We have been told that the prevalence of buy-side hidden fees is likely to have reduced since the advent of header bidding, as buy-side fees hurt the ability of an SSP to compete in the first-price auction taking place in the publisher ad server. This reduction, however, might not have affected advertising on mobile apps to the same degree, as header bidding is more rarely used, and it is more difficult for publishers to switch between SSPs. Greater transparency could increase competitive pressure on SSPs and substantially reduce rent-seeking opportunities if publishers and advertisers/media agencies had sufficient information to easily audit transactions along the entire intermediation chain.

Transparency over auction rules and algorithms

5.341 A key feature of digital platforms is the use of decision rules and algorithms to curate content and make allocation decisions in real time. For example,

- When a consumer enters a search query into Google, an algorithm decides what organic search results to show. At the same time, a real-time auction determines whether to show search ads alongside the organic search, and if so, which ads and how many.

- Similarly, when a consumer opens their Facebook news feed, an algorithm determines what content to show and in which order, based on the user's past activity and preferences. Facebook also runs an auction to decide which adverts to show, and an algorithm also decides the frequency with which ads will be shown in the news feed.

5.342 The precise decision rules underpinning these mechanisms are not transparent. In most cases there are good reasons for this lack of transparency. For example, if the decision logic behind Google's search algorithm was commonly known then it would encourage content providers to 'game' the algorithm in an attempt to improve their position in the search results page. In some cases, the decision rules may not be clear even to the platform, since they are based on learning algorithms rather than predetermined rules.

5.343 However, the lack of transparency around Google and Facebook's auction processes makes it very difficult for market participants to observe whether the auction rules are being exploited. For example, both Google and Facebook run adjusted second price auctions to allocate their advertising inventory,

where bids are adjusted to reflect a quality or relevance score. Although bidders may be given some indication of their quality score, the precise approach to making the quality adjustment is not transparent. Ultimately this means that the auction outcome is not verifiable by any party other than the platform running the auction.[420]

5.344 Several advertisers have raised concerns about the transparency of Google's search advertising auctions. As discussed in Appendix P, some advertisers have also expressed the concern that prices to advertise on their own brand names have risen substantially but that there is no transparency as to why this is the case. Others have suggested that Google may have incentives to penalise rivals that it competes with elsewhere, for example in specialised search, or publishers that it competes with in the sale of display advertising. Similar concerns could apply to Facebook's auctions, which operate in a similar way. As discussed above, concerns about auction transparency have been expressed also in relation to open display, where publishers told us they do not receive the data they would need to verify that auctions on Google's ad server are run fairly.

Transparency in relation to verification and attribution

5.345 To make informed choices that can drive competition, advertisers need to be able to assess and evaluate the quality of the product they are purchasing. Two important elements of this process are:

- verification: checking the viewability of the advert and the context in which it was displayed, including identifying potential ad fraud; and
- attribution: tracking what actions the consumer took after being exposed to the advert.

5.346 Access to the underlying data in a form that facilitates verification and attribution is likely to be key to the assessment of the quality of advertising.

Verification

5.347 Some advertisers raised concerns about restrictions on third-party verification of advertising on inventory owned-and-operated by Google and Facebook. Although both Google and Facebook work with a number of approved third-party verification providers, they restrict access to the detailed data in respect

[420] In a standard second price auction, if all the bid prices are known then the winning price can be validated externally – the winner (the highest bidder) will pay the price of the second highest bid. However, in Google and Facebook's auctions, the winning price depends on the quality-adjusted second highest bid, but the quality adjustment process is only known to the platform running the auction.

of verification for their owned-and-operated advertising inventory. In contrast, other display advertising platforms reported that they allow advertisers to use tracking tags for third-party verification of impressions served on their advertising inventory.

5.348 Several advertisers highlighted incidents in relation to the verification of viewability and brand safety in digital advertising. For instance, there have been issues with the misreporting of viewability on the Facebook platform and with brand safety on YouTube. These are set out in more detail in Appendix O. We are also aware of concerns about the level of ad fraud in relation to digital advertising, with a number of large scale, systematic frauds being discovered and widely reported.[421] There is a perception among advertisers that ad fraud is more of a risk in relation to the open display market because of volume of inventory and, in particular, a long tail of smaller publisher sites.

5.349 Both Facebook and Google told us that the way in which they compile data for the purposes of verification – for instance, on the viewability of impressions on their inventory – meets industry standards and is subject to external audit. Google also argued that it had reviewed the way in which it worked with third parties ahead of the implementation of GDPR. As a result, it had restricted the number of third-party measurement providers that it was able to support on Google Search and YouTube and had stopped accepting other third-party tracking pixels post GDPR.

5.350 However, we remain of the view that the large platforms could do more to improve transparency for advertisers and intermediaries. By not allowing full independent verification of their own inventory, third party verification providers are forced to rely on data collated by Google and Facebook. Assessing the quality of digital advertising is complex and imposing additional restrictions on access to data adds to the 'friction' in evaluating market outcomes.

5.351 We recognise that there could be potential privacy concerns in providing access to certain user-level data for the verification of viewability and brand safety purposes. However, it is not clear to us that the data involved in verification necessarily needs to involve personal data. For instance, we understand that the data collected for the verification of viewability only involves whether the ad was served, whether the ad appeared on the screen, how much of the ad appeared on the screen, for how long the ad appeared on the screen, whether the ad played (if it was a video), for how long it played (If

[421] In 2017, Adform reported that it had uncovered the 'Hyphbot' bot network which was estimated to be one of the largest bot networks discovered. Source: Wall Street Journal 'Fake-ad operation used to steal from publishers is uncovered'.

it was a video) and whether the sound was on (if it was a video). Similarly, data for brand safety verification does not need to involve personal data.

Attribution

5.352 Attribution is the process by which advertisers track consumers' exposure to their advertising across different websites and devices and link that exposure to specific actions taken by the consumer – for example, clicking through to the advertiser's website and purchasing a product. This requires complex analysis combining different sources of user data. For example, consumers often use several different devices, each with its own user ID, and the process of attribution is further complicated by cookie churn, that is cookies being deleted at periodic intervals.

5.353 'Walled garden' platforms can track users across different devices and sessions, enabling them to attribute consumers' actions more accurately than third parties. For instance, Google can track users across its user-facing services and has access to mobile data from Android which also gives it some ability to track the actions of consumers offline (eg to identify store visits). Facebook's single-user login feature gives it the ability to associate all exposures and conversions across devices and sessions with a specific user. Facebook also receives data from consumers activities across a wide range of other websites and apps when those services are using Facebook Business Tools.

5.354 Some actions of the large platforms have made third party attribution more difficult. For example, in 2018 Google made the decision to prevent DoubleClick user IDs being accessed by ad buyers. While Google made this change in response to privacy concerns, as discussed in the previous section, advertisers told us that the result was to make it more difficult to compare ad performance between ads purchased through the Google ad tech stack and ads purchased through other intermediaries. Stakeholders have also indicated that this change has made independent attribution (ie attribution using tools other than Google products such as Google Ads Data Hub or Google Analytics360) much more difficult.

5.355 Recently, both Facebook and Google have offered so called data 'clean room' services which enable advertisers to access more granular Facebook and Google campaign datasets under controlled conditions. In these settings it is possible for advertisers to combine their own first-party datasets with Google or Facebook datasets to generate reports on campaign performance and to carry out attribution analyses. However, at present the take-up of such services amongst advertisers and media agencies appears to be limited and

there are concerns that it is not possible to carry out analysis at the user level, and that advertisers cannot carry out cross-platform analysis.

5.356 Overall, we are concerned that platforms with substantial market power have an incentive to increase the reliance on their own measurement systems and to make it more difficult for third parties to implement their own independent means of assessing quality (eg by removing or preventing access to the underlying user data necessary to carry out independent attribution analysis). This may give them the opportunity to raise the effective price of advertising. Without the ability to carry out independent attribution there is also the risk that advertisers overpay for advertising purchased from Google and Facebook and mis-allocate their advertising expenditure relative to other sources of supply.

The relationship between large digital platforms and publishers

5.357 The final set of cross-cutting issues we have considered relates to the wider relationship between platforms and publishers, including newspapers and other content providers. These issues have been a key focus of several select committee reports and the Cairncross Review into the sustainability of journalism.[422] The analysis of open display above highlighted issues faced by publishers when they sell digital advertising via intermediaries in competition with walled gardens. In this section we examine the other relationships publishers have with Google and Facebook. These issues are covered in more detail in Appendix S.

5.358 Publishers of online content rely on Google and Facebook to host content or for referrals of traffic to their online properties, which they can then monetise by displaying advertising to these visitors. However, online publishers face an imbalance of bargaining power with Google and Facebook, which disadvantages their businesses in a number of ways.

Nature of publisher-platform relationships

5.359 Publishers typically identified Google and Facebook as being by far the most important digital platforms for their businesses. Apple, in its role as a supplier of a large mobile operating system and its Apple News service, was also mentioned as being important by a number of publishers, but its importance was generally rated as being significantly below that of Google and Facebook.

5.360 Publishers interact with the user-facing services of Google in several ways, including:

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[422] 'The Cairncross Review: A sustainable Future for Journalism', February 2019.

- Through Google Search – both via organic search and paid search advertising, as described above.

- Through the Google News website and app – which provides an additional channel for consumers to search news-specific content.

- Posting content on YouTube – both as a channel to reach consumers, and in some cases to earn additional advertising revenue. Publishers typically receive around 55% of any consequent advertising revenue. In some cases, publishers can arrange for their directly sold advertising to appear alongside their content. In addition, content publishers have the option to earn revenue from subscriptions.[423]

- Through Accelerated Mobile Pages (AMP) – AMP is an open-source publishing format for mobile devices that enables the fast loading of content in browsers. In order to enable fast page loading, AMP employs an optimised and restricted version of the code used to build web pages, and web pages are cached within the AMP ecosystem.[424] As pages are cached, usually by Google, consumers remain within the Google ecosystem whilst browsing an AMP page.[425]

5.361 Similarly, publishers can interact with Facebook's user-facing services in several ways:

- Posting content on their own Facebook pages – with the aim of generating awareness of their content and brand and of referring traffic back to their websites and apps.

- Using the Facebook News Feed – to post content in Facebook's News Feed, a number of publishers put their web pages into Facebook's Instant Articles (IA) format. Similar to AMP, IA is a publication format that has been designed to allow mobile pages to load faster,[426] but in the case of IA it is only in use on the Facebook mobile app.

- Several publishers also post content on Facebook's video hosting service Facebook Watch.

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[423] See Google.com 'How to earn money on YouTube'.
[424] This means that pages are effectively pre-loaded to the AMP system to enable faster upload to the consumer device. See how 'AMP pages are cached'.
[425] There are currently two operators of AMP caches – Google and Bing. Content publishers do not choose which cache to use, as this is selected by the platforms themselves.
[426] Facebook states that Instant Articles loads 4 times faster than standard mobile web articles.

The balance of bargaining power between online publishers and Google and Facebook

5.362 Publishers have told us that they view Google and Facebook as 'must have' partners. This is primarily due to a substantial proportion of the traffic referred to their websites coming from Google and Facebook properties and a degree of reliance on prominence on Google and Facebook properties for content discovery and brand awareness.

5.363 We have analysed website traffic data from a number of large publishers (The Independent, The Sun, The Times, The Daily Mail, The Telegraph, Reach PLC websites, Sky websites, and Vice websites). This data shows that in 2018 and 2019 these publishers relied on Google and Facebook properties for between 36% and 38% of total traffic to their websites on average, as shown in Table 5.7 below.

Table 5.7: Sources of website traffic for online publishers[427]

	All traffic			*Desktop/Laptop*			*Mobile*		
Year	*Google*	*Facebook*	*Direct*	*Google*	*Facebook*	*Direct*	*Google*	*Facebook*	*Direct*
2019	25%	13%	43%	26%	4%	55%	25%	17%	38%
2018	26%	10%	44%	29%	4%	52%	25%	14%	40%

Source: CMA analysis of publisher data (The Independent, The Sun, The Times, The Daily Mail, The Telegraph, Reach PLC websites, Sky websites, and Vice websites).

5.364 As a consequence of this reliance on Google and Facebook for traffic, publishers told us that they suffer from an imbalance of bargaining power when dealing with these platforms. This was an issue that was also raised as part of the Cairncross Review, which concluded that 'Google and Facebook also increasingly control the distribution of publishers' content online' and that as a consequence 'these platforms can impose terms on publishers without needing to consult or negotiate with them'.[428]

5.365 We gathered evidence on a range of concerns from publishers, which are set out in more detail in Appendix S. The most significant of these are:

- **Unexpected and unexplained changes to search algorithms –** We have seen evidence that even minor changes to Google and Facebook's algorithms can have substantial impacts on publishers' website traffic. This can make planning and financial decision-making more complicated and can lead to significant, potentially wasteful, expenditure on understanding how the algorithms work.

[427] Table 5.7 only shows traffic from Google. Facebook and direct visits. Other visits come from what are termed 'other third-party referrals', for example referrals from Snapchat or Instagram.
[428] See page 57, The Cairncross Review: A sustainable Future for Journalism, February 2019.

- ***De facto* requirement to use the AMP and IA formats –** Some publishers feel compelled to use the AMP publication format because only AMP pages appear in Google's News Carousel. When a consumer views material in the AMP format, Google can collect data on the consumer's browsing activity. Google emphasised that the AMP format is an open-source technology, rather than being part of the Google ecosystem, and that data on consumer activity is available to the platform providing the content as well as to Google. However, other mobile-friendly formats do not involve the same data sharing. Similar concerns were also raised about the Facebook IA format.

- **Giving up valuable data without reciprocation –** Google and Facebook are able to collect and use individual data from consumers who interact with content on the publisher's website through tags and pixels. However, this is generally not the case for publishers when their content is hosted on Google or Facebook's platform.

5.366 We consider that the last two examples indicate that Google and Facebook are able to use their bargaining power to extract terms in relation to content and data sharing which have the effect of reinforcing their market power. Although publishers are entering into a commercial relationship with the platforms and benefit from the user traffic that is generated through sharing their content on Google and Facebook's platform, we nevertheless agree with the publishers that they have very little choice but to accept the terms offered by these platforms, given their market power.

5.367 Similarly, we agree that platforms' changes to their algorithms, even if motivated purely by the desire to improve user experience, can have significant unintended consequences for publishers, and this uncertainty can have a detrimental impact on publishers overall.

5.368 In Chapter 6 we discuss how harm to publishers could have wider implications on the sustainability, quality, and accuracy of journalism, with an indirect impact on the effective functioning of our democracy. In Chapter 7 and 8, we consider potential interventions which might help prevent platforms from being able unfairly to exploit their bargaining position with respect to publishers.

Summary of findings

5.369 Digital advertising is driven primarily by competition for consumers' attention and data. Advertisers are attracted to online platforms and publishers that reach a large volume of consumers and can target advertising at individuals for whom their advertising is particularly salient. Where platforms have market power on the consumer side, this enables them to increase the rate at which

they monetise consumer attention by increasing the volume of advertising or by increasing advertising prices, leading to worse outcomes for consumers.

5.370 Advertisers use different forms of advertising for different, often complementary purposes. Search and display advertising serve distinct purposes, with only limited substitutability between them. There is also segmentation within display advertising between video and non-video advertising. Platforms that control a significant share of a particular type of advertising inventory are able to exercise a degree of market power over advertisers.

5.371 Google has significant market power in search advertising. It has had very high and stable shares of supply in search advertising in the UK of [over 90%] for at least the last ten years. It faces limited competitive constraints either from Bing and other general search providers, or from specialised search, display and other forms of advertising. Potential competitors face significant barriers to entry and expansion.

5.372 As a result of this market power, Google has been able to increase its search revenues significantly over time by increasing the number of adverts it shows in response to commercial searches. Our analysis suggests that it is also able to charge significantly higher prices than Bing, its main competitor, on a like-for-like basis. The overall impact has been to increase costs for advertisers. Google also has the ability and incentive to leverage its market power from search advertising into other markets, including open display and specialised search. In the long run, we believe there could be a substantial impact on incentives to invest and innovate.

5.373 Facebook has significant market power in display advertising. Facebook (including Instagram) is by far the largest supplier of display advertising, accounting for more than half of display advertising expenditure. It is viewed as a 'must have' by many advertisers because of its reach and extensive data on users and faces limited competitive constraints from other display advertising platforms, or from search and other forms of advertising. Display advertising is subject to significant barriers to entry that limit the actual or potential competitive constraint faced by Facebook. In addition, Facebook has been able to exploit its market power to earn significantly higher revenues per user than its competitors, increasing from an average of £[0-5] per user in 2011 to £[50-60] in 2019. Again, we believe there is likely to be a substantial long run impact on consumers and advertisers from a loss of innovation.

5.374 Other online publishers wishing to monetise their content can sell inventory through the open display advertising market. This market relies on a complex chain of intermediation to auction advertising in real time and provide data for

audience-targeting. The intermediation ecosystem has been consolidating and integrating in recent years. While vertical integration can generate technical efficiencies to the benefit of both advertisers and publishers, it can also give rise to conflicts of interest and allow companies with market power at one stage of the value chain to leverage it in other parts of the industry, potentially foreclosing competing providers.

5.375 Google holds a strong position at each stage of the intermediation chain, particularly as a publisher ad server where it has a share of supply in excess of 90%. In acting simultaneously on behalf of publishers and advertisers, Google faces strong conflicts of interest. It has been able to leverage its position from its wider ecosystem into open display including through limiting competitors' access to YouTube inventory. It has also taken advantage of its position on both sides of the intermediation chain to self-preference its own activities, by making it difficult to access its advertiser demand through alternative publisher ad servers; and by adopting several practices that have the effect of leveraging its position as the largest publisher ad server to favour demand from its own SSP and DSPs.

5.376 We did not find evidence that Google is charging higher prices than its competitors in the intermediation chain, or that it was extracting significant 'hidden' fees. However, intermediaries capture at least 35% of the value of advertisers' purchases across the open display market as a whole. Stronger competition would be expected to lead to greater pressure on fees and continued incentives to innovate and provide service that benefit both publishers and advertisers.

5.377 Across all the digital advertising markets we investigated, we found common issues in relation to data and lack of transparency. Google, Facebook and other large platforms have significant data advantages which allow them to target and measure the impacts of advertising. There is a risk that these data advantages may be exacerbated by the platforms' application of data protection rules; Google and Facebook have an incentive to apply a stricter interpretation of the requirements of data protection regulation when it comes to sharing data with third parties than for the use and sharing of data within their own ecosystems. We also found that lack of transparency – particularly in relation to ad tech fees, auction rules, and data required for verification and attribution – was leading to worse outcomes for advertisers and publishers.

6. Harm to consumers from weak competition

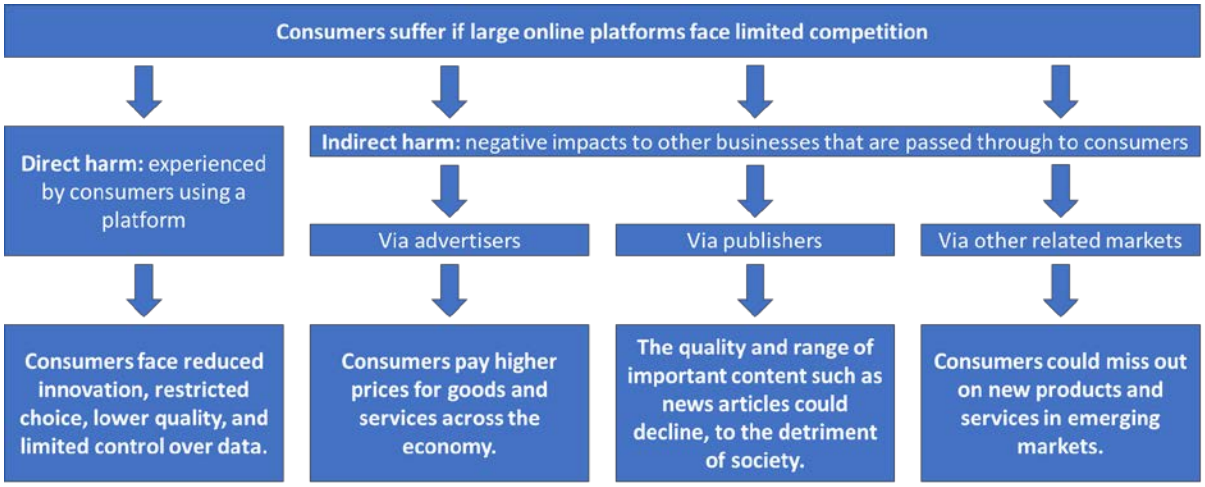
Introduction

6.1 We set out in Chapters 3 to 5 the issues we have identified in relation to online platforms funded by digital advertising. We have significant concerns that Google and Facebook are not facing sufficient competition in consumer-facing services or in digital advertising markets.

6.2 Consumers face harm as a result of this limited competition, either directly or indirectly – both now and over the longer term. This chapter explains the ways in which this harm can manifest itself and summarises the evidence we have gathered on the scale of the harm. It illustrates the potential benefits available to consumers from greater competition in these sectors, providing the basis for our proposals for regulatory reform in Chapters 7 and 8.

6.3 As we explained in Chapter 2, insufficient competition to Google and Facebook can result in harm to consumers through a variety of routes. This includes any direct effects on consumers resulting from their use of the platforms themselves, such as receiving a poor-quality service, seeing too many adverts, or having to give up too much of their own personal data. In addition, harm to consumers can come indirectly as a result of other companies such as advertisers and newspapers being made worse off by the platforms' market power. For example, through the prices that are charged for electronics, flights and hotels, and insurance, all of which make substantial use of digital advertising, or through a reduction in the quality of journalism. These potential mechanisms for consumer harm are illustrated by Figure 6.1.

Figure 6.1: Harm to consumers from a lack of competition



Source: CMA simplified assessment of consumer harm

6.4 Ultimately, whether the detriment is experienced through direct interaction with platforms or indirectly through other companies, there are five broad adverse outcomes for consumers and for society generally:

- reduced innovation and quality;
- higher prices paid for goods and services;
- poor returns for consumers;
- erosion of privacy and data protection; and
- broader social harms.

Reduced innovation and quality

Innovation

6.5 We have concluded through our analysis in Chapters 3 and 5 of this report that Google and Facebook have market power in their consumer-facing markets, as well as in associated markets for search and display advertising. Their market power stems from various barriers to entry in each market, which have a significant impact on the ability of existing rivals or potential new entrants to challenge their position.

6.6 It is clear from our assessment of the barriers to entry in these markets, the market dynamics over the last decade, and the extent of the protective 'ecosystems' that each platform has built around its core service, that the likelihood of a new entrant successfully displacing Google or Facebook in the foreseeable future is low.

6.7 We are concerned that the existence of such entrenched barriers to entry and expansion have dulled competitive pressures both in the core markets within which Google and Facebook operate and in adjacent markets in which they have been able to extend their market power, and that this in turn will inhibit innovation and the development of new, valuable services for consumers.

6.8 Although it is difficult to quantify this impact, we think it is likely to be among the largest sources of consumer harm among the concerns we have identified. It is the threat of being overtaken by rivals that provides the spur to companies to innovate and produce new products that consumers want. If platforms are insulated from this threat – or indeed if they can stop new alternative platforms from growing – consumers will suffer from reduced innovation and choice in the future.

6.9 Google and Facebook themselves were able to emerge, with limited resources, on the back of a good idea, producing new and innovative services that, as discussed in Chapter 2, are highly valued by consumers. We are concerned that, without reform, existing market dynamics will mean that the next great innovation cannot emerge to revolutionise our lives in the way that Google and Facebook have done in the past.

6.10 In addition to the reinforcing features of these markets which tend towards concentration, there are grounds for concern that market entry and disruptive innovation may also be stifled by the actions of the incumbents themselves. We have heard a range of concerns that both companies have engaged in behaviour that could constrain digital competition and innovation in online services. These come from many sectors that offer valuable products and services to consumers. We highlight some examples of such behaviour in Box 6.1.

Box 6.1: Types of behaviour that could limit competition and innovation

We have set out in Chapter 3 a number of concerns raised with us by other companies regarding the conduct of Google and Facebook, as well as a summary of the responses we have received from Google and Facebook.

We have heard concerns that Google and Facebook have taken steps that that restrict the ability for other products and services to interoperate freely with their own:

- Facebook has in recent years degraded the access that other platforms and services have to its application programming interfaces (APIs).[429] This has the effect of constraining the extent of interoperability between Facebook and other platforms, effectively shutting down the potential for competition.
- Sonos has raised a concern about contractual terms that restrict the concurrent use of Google Assistant and Amazon's Alexa on Sonos smart speakers.

We have also heard concerns that Google and Facebook have leveraged their market power in their core markets to develop a strong position in adjacent markets:

- In the case of Google, this has included specialised search providers such as online travel agents. These concerns focused on three broad areas: the potential for Google to self-preference its own services such as Google Flights; the potential for Google to exploit the data it collects from its wider ecosystem to gain a competitive advantage; and the ability of Google to demote rival specialised search engines further down in its organic search results.
- We have heard concerns that Facebook is able to collect data from its business customers when providing developer tools and advertising services that it can then exploit by gaining an advantage when entering those markets. The specific examples that have been raised with us relate to [✂].

Where they occur, these kinds of behaviour may serve to limit the competition that each company faces in their core markets, as well as in adjacent markets they choose to enter.

Quality

6.11 In competitive markets, incumbent firms face strong incentives to satisfy their customers with a good deal, or face losing their custom, and the associated revenue, to an existing rival or potential new entrant.

[429] See Chapter 3 and Appendix J for a full explanation of the role of APIs and the degradation of access by Facebook.

6.12 One way in which firms seek to achieve this is by offering a product or service that is of higher quality or better value, or by providing something new or different that consumers cannot yet get elsewhere. A firm will feel compelled to operate in this way if it either faces genuine competition from existing rivals in the market, or if there is a credible threat that a new company could enter the market and displace it. In either scenario, the firm will risk losing customers, and therefore revenue, unless it offers the better quality, better value or more innovative products or services.

6.13 We have concluded through this market study that both Google and Facebook face limited competition in their respective core markets and in digital advertising markets, and that substantial barriers to entry mean they do not face a credible threat of being displaced by a new entrant in the foreseeable future. We can therefore conclude that these companies have insufficient incentives to maximise the quality of their service in the best interests of consumers. We have seen some signs through the work of our market study that these effects are already emerging.

6.14 On Facebook, the average number of impressions served per hour has increased from [40-50] in 2016 to [50-60] in 2019. On Instagram, there were [60-70] impressions per hour in 2019, a more than 200% increase from 2016. This means that users of Facebook and Instagram are now seeing more ads than they were before. This increase in consumer attention devoted to ads can be expected to result in a reduction in the quality of the service for the user.

Price paid for goods and services

6.15 Google's and Facebook's market power in digital advertising markets can lead to higher costs of digital advertising, which is then passed through into higher costs of goods and services that use digital advertising. Although both Google's and Facebook's core services can be accessed by consumers at no direct cost, consumers therefore nevertheless suffer financially from the exercise of market power.

6.16 Our analysis in Chapter 5 showed that Google and Facebook have market power in search and display advertising respectively. Although it is difficult to compare Google and Facebook's revenues and prices with their competitors on a like-for-like basis, our analysis indicates that their market power has a significant impact on outcomes.

6.17 For example, in the UK, Google's revenue per search has roughly doubled since 2011, and our comparison of Google and Bing's search prices suggests that Google's prices are [30-40]% higher on desktop and on mobile when

comparing like-for-like search terms. Facebook's average revenue per user has increased from under £5 in 2011 to more than £50 in 2019, and our comparison with other social media platforms suggests that it is now more than ten times higher than those competitors for which we have been able to obtain robust UK data.

6.18 Some of these additional revenues may reflect the fact that Google and Facebook can use their data advantages to be better at targeting adverts towards the consumers for whom they will be relevant, and then monitoring consumers' subsequent actions. While these data advantages add to the barriers to entry and expansion faced by potential competitors, they can also make their advertising more valuable to advertisers.

6.19 However, we have also shown that the weak competition in both search and display advertising allows the large platforms to exploit their market power by earning higher prices in the advertising market than would be expected in a more competitive market. Where an advertising platform has market power, the lack of substitutable alternatives will mean that advertiser bids in its auctions are higher, resulting in higher prices. In addition, the platforms may be able to use levers including the use of reserve prices or mechanisms such as automated bidding to extract more rent from advertisers. Or, in search, it can be achieved by charging firms to advertise through paid search rather than relying only on organic search traffic.

6.20 Higher advertising prices matter because they represent increased costs to the firms producing goods and services which are purchased by consumers. We would expect these costs to be passed through to consumers in terms of higher prices for goods and services, even if the downstream market is highly competitive. This is particularly likely in the markets which make heavy use of advertising, since the majority of the firms in those markets tend to incur such costs. As a result, consumers will face higher prices for items such as books, games, smartphones and televisions, and for services such as flights, hotels, and home insurance.

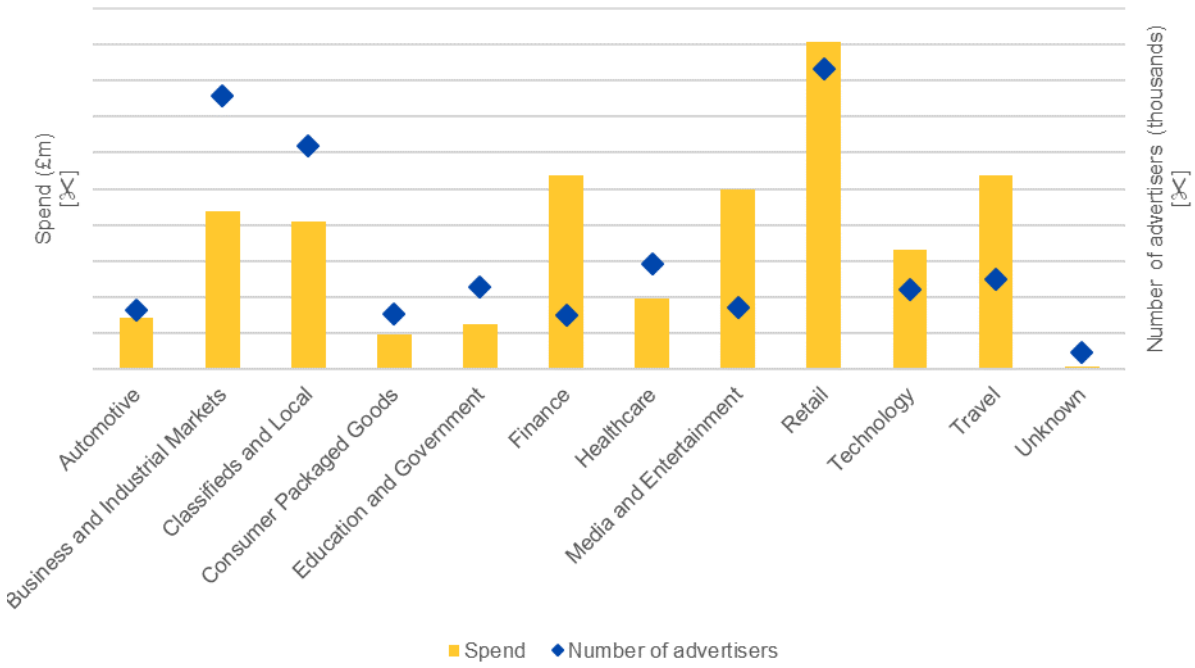
6.21 The impact of price increases will be significant, as they apply across large volumes of expenditure: we estimate that in 2019, total expenditure on digital advertising was around £14 billion, or around £500 per household.[430] Total search advertising revenues were around £7.3 billion and total display advertising revenues were around £5.5 billion.

[430] According to ONS data for Families and Households in the UK, there are around 28 million households.

6.22 Google and Facebook's advertising customers represent a very large and diverse set of firms encompassing virtually every sector of the economy, as illustrated in Figures 6.2 and 6.3. Important areas of expenditure include: the retail sector (for both companies); travel, finance, and local search and classifieds (for Google); and media and entertainment, and consumer goods (for Facebook).

6.23 Facebook has [over one million] UK advertisers using its services, of which the vast majority by number are SMEs or microbusinesses. At the other end of the scale, some of Google's largest advertiser customers are large firms in their own right, used by millions of consumers – for example, vast sums are spent each year on search advertising by online retailers, technology firms, travel firms, and financial providers.

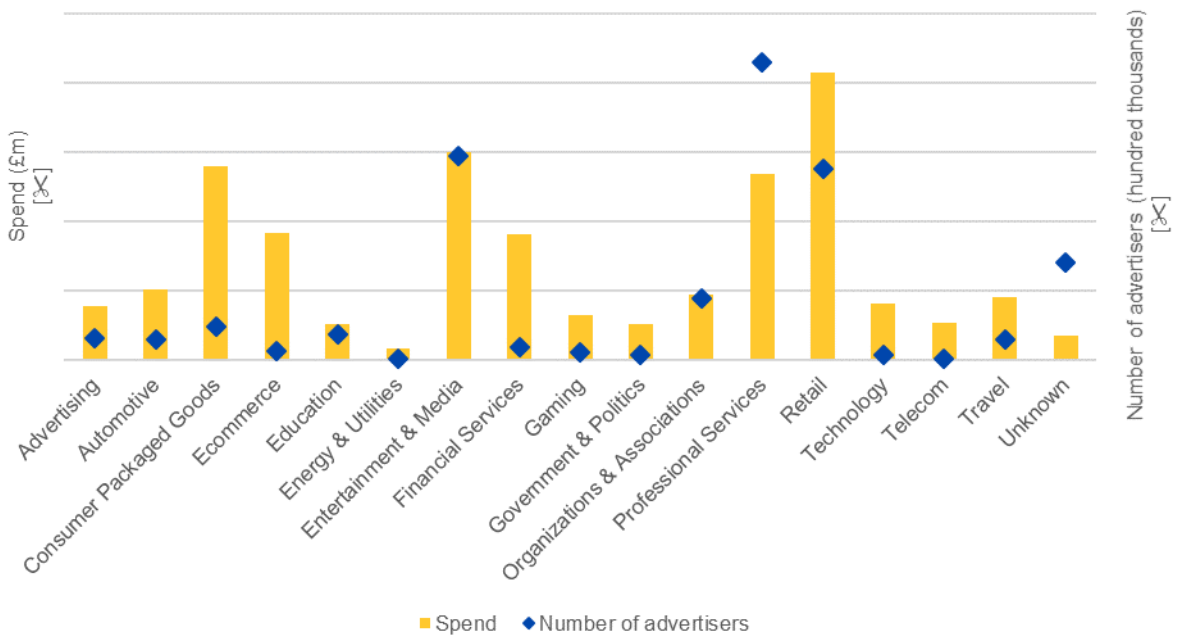
Figure 6.2: Number of UK-served advertisers using Google Ads and total spend in 2019, split by industry[431]



Source: CMA analysis based on Google data.

[431] See Appendix N for further discussion of the Google dataset and its limitations, and the limitations of this analysis. We note that the data provided on industries may not be an accurate representation of the actual industries in which the advertisers operate, and these are not provided by the advertiser directly.

Figure 6.3: Number of UK-based advertisers using Facebook to reach exclusively UK-based consumers and total spend, split by industry[432]



Source: CMA analysis of Facebook data.

Poor returns to consumers

6.24 Although typically the platforms' core services are offered ostensibly 'free of charge', in practice consumers are receiving the service in exchange for their attention and their data, which can then be monetised through digital advertising, notably personalised advertising. Lack of competition has a direct impact on the extent to which consumers have adequate control over how their data is used and, if they do decide to share it are adequately rewarded for the use of their attention and data.

6.25 The evidence we have gathered during this market study confirms that data creates additional value for advertisers. We have also shown that the data gathered by Google and Facebook from users and from third party sources is very extensive and gives them a significant competitive advantage over other competitors. However, as shown in Chapter 4, platforms have strong incentives to maximise the amount of consumer data they collect by limiting consumer engagement and control over that aspect of the service.

6.26 In a more competitive market, we would expect that it would be clear to consumers what data is collected about them and how it is used and, crucially, the consumer would have more control. We would then expect

[432] See Appendix N for further discussion of the Facebook dataset and its limitations. We note that the advertiser sectors provided by Facebook were based on its internal sector classification which may not be fully accurate.

platforms to compete with one another to persuade consumers of the benefits of sharing their data or adopt different business models for more privacy-conscious consumers. Platforms may reward consumers for their data through their products and services, perhaps serving fewer ads or offering rewards or additional services.

6.27 It is difficult to specify all the different forms in which consumers might derive greater value in a more competitive market. However, one broad indication of the value that could currently be shared to a greater extent with consumers across the economy (whether directly, through greater rewards and incentives, or indirectly, through the prices of goods or services being advertised) is the excess profits being earned by Google and Facebook as a result of their market power. If they were to face greater competition, we can expect that these substantial profits would be eroded, and consumers would be better off as a result.

6.28 As discussed in Appendix D, our profitability analysis has shown that both Google and Facebook are consistently earning profits well above what is required to reward investors with a fair return. We have demonstrated this by comparing our estimates for their return on capital employed (ROCE) – their actual profitability – with their weighted average cost of capital (WACC). The analysis using our most cautious set of assumptions suggests that, in the UK, Google earned £1.7 billion more profit in 2018 than the benchmark level of profits. For Facebook, the comparable figure for 2018 was £650 million.

6.29 Our analysis therefore suggests that between them, Google and Facebook were able to earn more than £2 billion of profits in 2018 over and above what was required to sufficiently reward investors with a fair return. These profits would be expected to decrease if the platforms faced greater competition.[433] This would be achieved through a combination of greater consumer benefits, as discussed in this section, and a reduction in advertising costs, resulting in reduced prices for a very wide range of everyday products and services.

6.30 This analysis is only intended to be a broad indication of the scale of static detriment, and does not include the potentially greater dynamic gains from innovation discussed above.

[433] We would not necessarily expect the market leader in online platform markets to consistently have a ROCE equal to its WACC, even if faced with more competition or more credible threat of entry. However, we also note that this analysis was based on our most cautious set of assumptions, and in practice the value may be an underestimate.

Privacy and data collection

6.31 The collection and use of personal data by Google and Facebook for personalised advertising, in many cases with no or limited controls available to consumers, is another indication that these platforms do not face a strong enough competitive constraint. We would expect that platforms, notably social networks, that faced a competitive constraint would not be able to rely on 'take-it-or-leave-it' terms that mean consumers have to share their data to use the service, and have no real option to leave the service because their family and friends use it.

6.32 Moreover, in a more competitive market, we would expect platforms to innovate and develop new ways to deliver advertising that meets the targeting needs of advertisers using less consumer data, thus protecting consumers' privacy to a greater extent.

Broader social harms

6.33 In addition to the implications for consumers discussed above regarding the quality they receive and the prices they pay, a lack of effective competition to Google and Facebook also has some very serious ramifications for society more broadly.

6.34 This includes a range of effects, most notably on:

- the sustainability of high-quality journalism; and
- consumer empowerment and tackling online harms.

6.35 The causes and impacts of the harms in these public policy areas are often interrelated, and are more closely connected to the competitive dynamics of online markets than they have traditionally been in offline settings.

Sustainability of high-quality journalism

6.36 As discussed in Chapter 5, many online publishers are reliant on Google and Facebook for traffic to their sites and their content. This is because a significant number of consumers that visit their websites click through from a platform owned by Google or Facebook. Because of this reliance, many publishers told us that they suffer from an imbalance of bargaining power when dealing with these platforms. This was an issue that was also raised as part of the Cairncross Review, which concluded that 'Google and Facebook also increasingly control the distribution of publishers' content online' and that

as a consequence 'these platforms can impose terms on publishers without needing to consult or negotiate with them'.

6.37 Publishers, including national and regional newspapers, have expressed a number of specific concerns to us about how this imbalance of bargaining power can manifest itself. One concern we have heard is that Google and Facebook are effectively able to 'free-ride' on publishers' content to draw in consumers and catch their attention, then monetising by serving those consumers adverts. This has the effect of reducing the incentive of publishers to invest in producing quality content in the future.

6.38 We have also seen that that these companies have a role in curating content on their platforms – effectively selecting what content consumers see, and in which order. The amount of traffic, and ultimately revenue, that each publisher receives is therefore heavily influenced by judgements made by the platforms. As such, a seemingly small and potentially well-intentioned change to an algorithm made by Google or Facebook can have very significant consequences for the ongoing viability of a particular publisher.

6.39 Content providers such as online newspapers are also reliant on digital advertising as an essential source of revenue. If such providers receive a lower share of advertising revenues than they should, this is likely to reduce their incentives and ability to invest in news and other online content, to the detriment of those who use and value it and to broader society. Issues such as a lack of transparency in the ad tech supply chain exacerbate issues with revenue shares received by publishers, and raise concerns about the long-term sustainability of high-quality and plural news content.

6.40 This is particularly relevant because, as discussed in Chapter 5, we estimate that intermediaries receive at least 35% of the value of advertising bought through the open display channel. We expect that greater competition and transparency would put downward pressure on these fees and encourage greater dynamic competition and innovation in ad tech services.

6.41 Similarly, changes to the digital advertising sector, such as the phasing out of third-party cookies in the Safari and (potentially) Chrome browsers,[434] may limit the monetisation options available to publishers and consequently their ability to invest in online content. These impacts could be very significant. For example, the planned changes to Chrome by Google will mean that

[434] Google announced its intention to end support for third-party cookies in Chrome by 2022. It is developing privacy-preserving alternatives to that can restore some of the functionality provided by third-party cookies in adtech, collectively called 'Privacy Sandbox', which (if successful) will be available as part of Chromium. Chromium is an open-source browser project, created by Google, that underpins Google's browser Chrome. Several other browsers rely on Chromium, including Microsoft Edge.

publishers are no longer able to use third-party cookies to offer personalised advertising to Chrome users. Using data from a Google experiment, we have estimated that UK publishers earned around 70% less revenue overall when they were unable to use third party cookies to sell personalised advertising but competed against others who could. Google is developing privacy-preserving alternatives to the third-party cookie, collectively referred to as 'Privacy Sandbox', which may restore some of the ability for market participants to target personalised advertising and measure their effectiveness, but it is uncertain whether these alternatives will be effective and be adopted by websites, the web standards community, and other market participants.

6.42 Greater competition to Google and Facebook can as a result be expected to improve the quality and accuracy of journalism, and see a decline in the prevalence of so called 'fake news'.

6.43 Together, adverse effects on the sustainability of quality journalism in the UK can have detrimental effects on the functioning of our democracy and the accountability of those in positions of power, at both a regional and national level. As others including Ofcom have noted, the health and plurality of the media industry is important for the contribution it makes towards a well-functioning democratic society. It does this by helping to encourage more informed citizens who can access and consume a wide range of viewpoints across TV, radio, online and print media from a variety of media organisations, and by preventing too much influence over the political process being exercised by any one media owner.

Consumer empowerment and tackling online harms

6.44 As the government's Online Harms White Paper notes, all users, children and adults, should be empowered to understand and manage risks so that they can stay safe online.[435] Empowering consumers to make effective choices is an important way of ensuring that users can protect themselves from a wide variety of harmful and illegal content.

6.45 Many of the concerns we have identified in this market study risk undermining consumer engagement and empowerment in online markets and in relation to large online platforms in particular. For example, consumers can feel locked in to large platforms due to network effects and the use of defaults, their choices

[435] Online Harms White Paper

and decisions are steered and nudged through the use of choice architecture, and in some cases, they have no effective choice at all.

6.46 A broader concern, therefore, is that this combination of factors can lead to a sense of passivity within consumers in their relations with online platforms, and a sense that they have to 'take it or leave it', undermining the very agency empowerment that is so important in the fight against online harms.

Conclusions on harm to consumers

6.47 We have identified a range of forms that consumer harm could take from the concerns we have identified in this market study, including reduced innovation and quality, higher prices of goods and services across the economy and broader social harms.

6.48 Our analysis of the revenues and prices Google and Facebook are able to earn from digital advertising, as well as their profitability suggests that consumers could see substantial financial gain from a more competitive market.

6.49 However, more importantly, we expect that a more dynamic and competitive market, with a more credible threat of new entrants displacing the powerful incumbents, will increase the chance of transformative disruptive innovation coming forward – the kind of innovation that led to platforms such as Google and Facebook in the first place.

6.50 Consumers would directly benefit from more competition, which they will experience through more choice, better quality, innovative products and services and real control over how their data is used.

6.51 We would also expect to see a range of other beneficial outcomes for society from more vibrant competition. In particular, we expect that improving the bargaining power of online news publishers will improve the health and sustainability of journalism in the UK, both nationally and regionally, and in turn contribute positively to the effectiveness and integrity of our democracy.

7. The case for a pro-competition regulatory regime

- The evidence set out in this market study shows there is an urgent need to develop a new pro-competition regulatory regime for online platforms. The CMA's existing powers are not sufficient to protect competition given the fast-moving, complex nature of the markets we have reviewed, and the wide-ranging, self-reinforcing problems we have identified within them.

- We are calling on government to create a new pro-competition regulatory regime with strong ex ante rules which can be enforced rapidly and updated as required. This is consistent with the type of regime envisaged by the Furman Review, the recommendations of which were accepted by the government in March 2020.

- A binding code of conduct with strong powers to sanction non-compliance would be an essential part of this regime, helping to address many of the concerns we have identified in search, social media and digital advertising.
  - The code would govern the behaviour of online platforms with strategic market status. This would include both Google and Facebook.
  - The code would be structured around the high-level objectives of: 'fair trading'; 'open choices'; and 'trust and transparency'.
  - A Digital Markets Unit (DMU) would be empowered to enforce the code, penalising firms for non-compliance where appropriate and developing the code over time, ensuring concerns can be dealt with swiftly.

- The DMU should also have powers to introduce 'pro-competitive interventions' to tackle sources of market power and increase competition, including powers to provide access to data, to support consumer choice and to order the structural or functional separation of platforms where necessary.

Introduction

7.1 In this chapter we present our recommendations to the government for the creation of a new regulatory regime to address the concerns identified in the previous chapters. These recommendations have been informed by the evidence we have gathered and the analysis we have conducted, as well as extensive engagement with stakeholders throughout the study, and in particular the responses to the consultation on our interim report.

7.2 Our proposals build on those set out in the Furman Review[436] for a strong ex ante regulatory regime to govern the behaviour of online platforms. Since our interim report, the government has announced that it has accepted[437] all six of the strategic recommendations of the Furman Review, the first of which was to 'establish and resource a pro-competition digital markets unit, tasked with securing competition, innovation, and beneficial outcomes for consumers and businesses'. The Furman Review stated that the Digital Markets Unit (DMU) would:

- establish a digital platform code of conduct, based on a set of core principles, that would apply to conduct by digital platforms that have been designated as having a strategic market status (SMS); and
- be empowered to deploy a powerful set of data-related tools to create new opportunities for competition, including data mobility, open standards and data openness.

7.3 This market study informs the legislation required to implement this regulatory regime by taking the discussion beyond high-level principles. It does this in two ways. In this chapter, we set out our views on the case for, and design of, the new regulatory regime, how the new tools within it would need to work in practice, and the interrelationship between them. In the next chapter, we apply this new regime to search, social media and digital advertising markets, by considering in detail which specific interventions are required to address the concerns we have identified this study, and how those interventions should be designed.

7.4 Our analysis has also informed our views set out in Chapter 10 on the further work the CMA will undertake in these markets in the near term, notably through the Digital Markets Taskforce, as well as the direct action the CMA may need to take in the future by using its existing powers.

7.5 The rest of this chapter provides:

- an overview of our approach to interventions in this area, based on the development of a robust pro-competitive regulatory regime;
- our views on the case for and design of the code of conduct to govern the behaviour of ad-funded platforms with strategic market status; and

[436] Furman Review (2019), Unlocking digital competition.
[437] Budget 2020: Delivering on our Promises to the British People, page 56.

- our views on the case for pro-competitive interventions in these markets, which are designed to promote effective competition and innovation.

Overview: development of a pro-competitive regulatory regime

7.6 On the basis of the evidence we have gathered in this study, we believe that there is a compelling case for the development of an ex ante regulatory regime to regulate the activities of online platforms funded by digital advertising.[438] We recommend that the government introduces legislation to establish such a regime, and in this chapter we set out our views of how it should be designed to maximise benefits to consumers and innovation.

7.7 This would be a 'pro-competitive' regulatory regime that would drive benefits for consumers. Its objectives would be: to promote competition by overcoming barriers to entry and expansion and thus tackling sources of market power; and to protect competition and consumers where online platforms have market power from the gatekeeper positions that they hold, by governing their behaviour to ensure they do not engage in exploitative or exclusionary practices, or practices likely to reduce trust and transparency.

7.8 At present, the digital advertising sector is subject to general laws including competition law, consumer law, and data protection law. The current laws and enforcement regimes are not tailored to these fast-moving digital markets. They do not deal adequately with the number and complexity of the issues arising within them. In view of the importance of the concerns we have identified for competition and consumers, we need to create a new regulatory regime with strong and clear ex ante rules which can be enforced rapidly by a dedicated regulatory body before significant harm to competition and consumers has occurred, and updated and refined as required. This will foster innovation and choice so that these markets continue to deliver benefits for society in the future.

7.9 Alongside addressing the specific concerns that we have identified in digital advertising markets and the consumer-facing services that are financed through digital advertising, we have aimed to inform the broader global debate about the need to regulate the behaviour of large online platforms. In this context, our study supports the high-level positions set out in the Furman Review and the Stigler Center Review[439] last year, both of which called for ex

[438] The Digital Markets Taskforce will consider the same for platforms not primarily funded by digital advertising.
[439] Stigler Center (2019), Committee for the Study of Digital Platforms: Report by the Market Structure and Antitrust Subcommittee.

ante rules to address the competition concerns arising from the increasingly important role that large online platforms play in the economy.

7.10 In this report, we have aimed to inform the government's response to the Furman Review and its thinking on how to unlock competition in online platform markets'. Although our study covers only a subset of online platforms, these include some of the largest global platforms, and this focus has allowed us to explore concerns and potential interventions in more depth. In the Budget earlier this year, the UK government accepted the six strategic recommendations of the Furman Review and announced that a Digital Markets Taskforce would be established within the CMA to advise on the practical implementation of the Furman recommendations, including the code and other powers for the DMU.[440] Part of the Taskforce's work will be to complement the work of this market study by analysing a wider range of digital platform markets than those we have considered in the context of the market study.

7.11 We welcome this decision by the government as a positive step towards developing a robust pro-competition regime for platforms. Alongside the publication of this report, the CMA is now launching a call for inputs for the Taskforce, which will take forward the next stage of our advice to government on a new regulatory regime for online platforms. Its conclusions will be published at the end of this year.

7.12 Internationally, we have also engaged extensively with competition authorities in several countries, many of whom are considering similar challenges to those we have identified in this study. These have included authorities in the United States,[441] Australia,[442] Germany,[443] Japan,[444] the Netherlands,[445] France[446] and Spain.[447] Chapter 10 describes this engagement in more detail, and sets out our plans for future collaboration with competition authorities abroad.

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[440] The Digital Markets Taskforce Terms of Reference.
[441] The FTC established a digital platform taskforce earlier this year, the DOJ is reviewing the practices of market-leading online platforms and a collection of US State Attorney Generals have initiated investigations into each of Google and Facebook.
[442] The ACCC has recently completed a market study into digital platforms, including effects on digital advertising.
[443] The Bundeskartellamt is currently undertaking a sector inquiry into market conditions in online advertising.
[444] The Secretariat of the Headquarters for Digital Market Competition has recently been established in Japan.
[445] The Netherlands Authority for Consumers and Markets is currently undertaking work in relation to online choice architectures for consumers.
[446] The Autorité de la concurrence published an Opinion in 2018 on data processing in the online advertising sector. The Autorité is also currently considering a complaint in this market.
[447] The Comisión Nacional de los Mercados y la Competencia is currently undertaking a market study into online advertising.

7.13 Given the fact that many of the issues we are considering are international in nature, we believe that it is highly desirable – particularly for any significant interventions that would have a major impact on a platform's business model – that there is a broad consensus on the case for intervention. We hope that this market study will help contribute to such a consensus.

Elements of the regulatory regime

7.14 The regulatory regime that we are recommending comprises two broad categories of intervention:

- the **enforceable code of conduct,** which is designed to govern the behaviour of platforms that have market power over an important online gateway; and
- the power to impose a range of **pro-competitive interventions**, which are designed to tackle the sources of market power and promote competition and innovation.

7.15 These two categories of intervention have distinct functions. The first category of intervention comprises rules to govern the behaviour of platforms that enjoy a position of market power. It would take the form of an enforceable code of conduct for platforms with strategic market status (SMS), as envisaged by the Furman Review. The objective of the code is to address the harmful effects that can arise from the exercise and extension of market power, rather than tackling the underlying causes.

7.16 The second category – which we refer to as pro-competitive interventions – would, by contrast, aim to address the sources of market power and other market failures that we have identified, by tackling issues on both the demand and supply side of the markets we have reviewed. These include a number of types of intervention suggested by the Furman Review – in particular, data-related remedies including the provision of third-party access to data and measures to increase interoperability – as well as remedies not directly considered by the Review, including consumer control and separation measures. Many of these would be very significant interventions, the costs and benefits of which would need to be considered very carefully.

7.17 A key benefit of behavioural interventions (the first category) as enshrined in the code is that they allow for considerable flexibility in tackling problems as they arise, which is an important consideration in the rapidly-changing markets that we have reviewed. In contrast, the benefit of pro-competitive interventions (the second category) is that they provide for the possibility of solving problems at source, reducing the need for ongoing and costly

regulatory controls and potentially in the long run leading to platforms no longer meeting the criteria for SMS designation. However, these interventions could change the nature of competition in fundamental ways, and close attention would need to be paid to the potential costs and unintended consequences of such measures.

7.18 In principle, pro-competitive interventions could be implemented alongside the code, or considered only once the code has been up and running for a period of time. In the next chapter, we provide views on the potential interaction between the code and pro-competitive interventions in tackling the concerns we have identified, including whether they should be applied in combination or sequentially.

Institutions and legal powers

7.19 All of the interventions that we consider in this chapter would need some form of dedicated regulatory body to implement them. This is consistent with the findings of the Furman Review, which called for a Digital Markets Unit (DMU) to be created in the UK, and the Stigler Center Review, which called for the creation of a Digital Authority in the US.

7.20 Our study has focussed on the case for, and design of, potential new regulatory functions - we have not considered which institutions might be best placed to discharge those functions. Given that the government has now accepted the Furman recommendations, we use the term 'DMU' to refer to the body empowered to implement the regulatory functions we are considering. We use the term DMU very broadly, however, noting that this could be a new or an existing institution, or even that some regulatory functions could be assigned across several bodies. Again, this approach is consistent with that of the Furman Review.

7.21 Any regulator would need to have legal powers to enforce both the provisions of the code and pro-competitive interventions by ordering or blocking conduct and issuing financial penalties for non-compliance. Any such powers would need to be assigned through primary legislation and in this market study we are looking to inform the scope and direction of such legislation. We note that the CMA already has powers in principle to impose some of the interventions discussed in this chapter, in the context of a market investigation; in Chapter 9 we explain the reasoning behind our decision not launch a market investigation at the conclusion of this study, and in Chapter 10 we set out our plans for further work in this area in the near term.

Code of conduct for online platforms with strategic market status

7.22 As noted above, the Furman Review proposed that the behaviour of online platforms with market power over a strategically important online gateway should be governed by a pro-competitive code of conduct. The code would set out principles or rules to govern the behaviour of platforms with strategic market status (SMS),[448] requiring them to act in a way that ensures that consumers and businesses dealing with them are fairly treated and vigorous competition can take place.

7.23 **We recommend that an enforceable code of conduct (the code) be established to govern the behaviour of SMS platforms funded by digital advertising**.[449] Once it is in place, the code has the potential to address many of the concerns that we have identified in both consumer-facing and digital advertising markets in a more rapid and effective way than through the use of our existing tools.

7.24 In this section we:

- set out **the case for the use of the code** as a complement to existing enforcement powers in addressing the concerns we have identified;
- propose **criteria for identifying the platforms that the code should apply to** and apply these to the markets we have reviewed;
- set out our proposals for the **content and structure of the code**, and explain how the principles within it would address the concerns we have identified in the study to date; and
- set out our proposals for the **powers that should be available and the procedures** that should be followed to enforce the code.

7.25 A more detailed discussion of these issues is set out in Appendix U.

The case for the code

7.26 There is a gap in the current regulatory landscape. The enforceable code is a necessary tool to fill that gap and help to address a range of the concerns we have identified, both in the consumer-facing and digital advertising markets, to the benefit of competition and consumers.

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[448] We discuss the notion of SMS and its potential application to platforms funded by digital advertising later on in this chapter.
[449] The CMA in its Digital Markets Taskforce will consider in the coming months whether other platforms should also be governed by a code.

7.27 The code, if implemented in the way we have proposed in this chapter, would have a number of advantages over existing ex post enforcement powers, including:

- greater **clarity** for platforms and other market participants through tailored rules;
- the ability to address concerns **before substantial harm occurs, and more rapidly**;
- the ability to cover a much **wider range of concerns** than those which can be addressed under existing competition law;
- the **greater focus on remedies** and remedy design;
- the ability to improve **trust and transparency** in markets covered by the code; and
- the potential to develop regulatory **expertise** and understanding over time.

7.28 We describe these benefits and the potential costs of imposing the code below, before summarising parties' views and presenting our overall conclusions on the case for the code.

Ex ante clarity

7.29 The code, and associated guidance from the DMU as to its application in practice, would be tailored specifically to these complex and unique markets. It would provide increased certainty – for platforms and the parties they engage with – over what represents acceptable behaviour of the SMS platform when interacting with customers, competitors and suppliers. This is likely to be particularly helpful in fast-moving digital markets, where there is less of a corpus of relevant past cases from which to draw precedents.

7.30 This clarity over acceptable behaviour should influence platforms' decision-making upfront, helping to avoid the emergence of concerns altogether. It will also provide greater certainty for business users over the operating environment on which they depend, enabling them to be more confident in making decisions around investment and scale-up. This clarity will no doubt also be welcome for the platforms themselves.

Timing and speed of action

7.31 The markets we have reviewed can be fast-moving and dynamic, and harm to competition and consumers can occur before a competition authority can intervene. Competition law, consumer law and data protection law is

principally used to correct or stop conduct after that conduct has occurred, often with a penal element. The current enforcement models typically require lengthy investigations and/or litigation before the illegality of the conduct is finally determined. The code would enable behaviour to be challenged and changed much more rapidly than is possible through existing laws and before it has harmed competition.

7.32 We envisage, as discussed below, that formal investigations into possible breaches of the code by SMS firms should be completed within a limited but achievable timescale, and that the DMU would have the power to require the SMS platform to change its conduct.[450] While the investigation is ongoing, the relevant conduct could be required to be suspended so as to avoid competitive harm occurring.

7.33 In contrast, for example, cases under the competition law prohibitions typically take over a year, and sometimes several years, to reach a decision. They take place after the conduct has occurred, and often after it has harmed competition in the relevant market, with the use of interim measures being quite rare and applicable only in certain circumstances. Of those cases that have been brought by the European Commission against Google in recent years, *Android* took more than five years, *Shopping* took more than seven years and *AdSense* took nine years, not including their appeal processes. The CMA's most complex competition enforcement cases also tend to take several years to reach a final decision. Such timescales create a material risk that, even if a platform is ultimately found to have acted anti-competitively, the harm to competition and consumers will have become irreversible before such a conclusion is reached.

7.34 Although the formal route of investigation will be a central part of the DMU's toolkit, it would not be practical or desirable to apply it to every breach of the code. We expect that the DMU will frequently be able to achieve even more timely cooperation from platforms under the shadow of an investigation and possible code orders and financial penalties. This would be consistent with the expectation set out by the Furman Review that fast resolutions could often be achieved through a participative approach, within weeks, to ensure behaviour can be changed before the dependent firm has gone out of business.

[450] As noted below, we propose that the DMU should have the power to impose fines – for example, for intentional or negligent breaches of the code, or failure to comply with DMU orders. To allow for appropriate rights of defence, we envisage that timescales for considering the imposition of fines would be longer.

Coverage of concerns

7.35 Competition law applies to specific categories of conduct and it applies broadly to all sectors of the economy. The code would allow action in respect of concerns which might not fit within existing competition law tests but would still have an adverse effect in these markets. This is likely to be particularly important in markets such as the open display digital advertising market, for example, where we have found that concerns can take the form of a range of practices that in combination may lead to material harm.[451]

7.36 Platforms are also often rule-makers and arbiters over the interactions between businesses and consumers, or other businesses. In many cases the platform may make a decision that is in their own interests or that they deem to be appropriate for their users, but the outcome of this decision may be unfair or socially undesirable and require intervention by the DMU.

Focus on remedies and remedy design

7.37 An advantage of the code over enforcement under the competition law prohibitions is that its main focus would be on changing behaviour – where this in the interests of consumers – rather than penalising illegal conduct. The consideration of potential remedies and discussion of these with parties would be a key part of the investigation process throughout and the DMU would have much greater influence over the design of remedies through its order making powers than is the case in antirust cases.

7.38 There are important constraints on the ability of competition authorities to achieve pro-competitive outcomes from enforcement cases under the competition law prohibitions. Cases are often scoped to deal with one discrete aspect of a business's conduct, meaning that any remedy would not deal with aspects that would improve the functioning of the market more broadly. To bring the infringement to an end, it will often be sufficient to cease the conduct proved to be illegal. The majority of European Commission remedies are of the nature of an order to 'cease and desist' from the unlawful conduct and the undertaking enjoys discretion as to how to modify its conduct.[452] The same is true in the UK – although the CMA has the power to give directions to undertakings, these can only be for the purpose of bringing the infringement to an end.[453] In either regime, the competition authority lacks the ability to

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[451] See Chapter 5 and Appendix M for further discussion of this.
[452] '*Most prohibition decisions include a so-called "cease and desist order*"', para. 25, Chpt 25, Antitrust Manual of Procedures Internal DG Competition working documents on procedures for the application of Articles 101 and 102 TFEU March 2012 ('ManProc'), ISBN 978-92-79-23360-9, the text is made available on the internet:. See also para. 7, Chpt. 19. ManProc '*The most common "behavioural remedy" is a "cease and desist order".*'
[453] Sections 32 and 33, Competition Act 1998; see also CMA 8, paragraphs 13.7-13.8.

revise the remedy over time, which is particularly important in this sector which can be fast-moving.

7.39 In contrast, the powers for the DMU would include the ability to consult on the changes the platforms would need to implement to comply with orders under the code. The DMU would also be able to test the likely effectiveness of future changes, and to monitor actual effectiveness, which could lead to a review and changes where appropriate. This will be important in the complex digital sector.

Trust and transparency

7.40 The code would also be a valuable tool in improving transparency and hence trust in the market. For example, under our proposals, the DMU would be given powers to audit and scrutinise the workings of opaque algorithms and to investigate concerns around conflicts of interest or discriminatory treatment of some customers. This would potentially address much of the opacity and lack of trust which has developed in the markets we have reviewed.

Expertise

7.41 The markets we have reviewed are highly complicated, both from a technical perspective and (in the open display market) in terms of market structure. It would therefore be beneficial to have a dedicated DMU to enforce the code, as this body will be able to develop its expertise over time, helping to improve the efficiency and timeliness of decision making.

Potential costs

7.42 We recognise that introducing the code would also create costs, particularly for those platforms subject to the code, which would need to comply with reporting requirements and with investigations (and may be required to contribute to the operational costs of the DMU as is the case in many regulated industries). The code might also require SMS platforms to implement new measures to be able to demonstrate compliance, or new systems to be able to demonstrate that customers are being treated equally. There is also a risk that changes brought about through the code may introduce inefficiencies into platforms' (and others') operations. We note that the DMU, when ordering a change of behaviour under the code, would need to assure itself that there were sufficient benefits to outweigh any such costs on a case-by-case basis, having regard to the evidence.

7.43 Perhaps the biggest potential cost of an enforceable code is that it might inhibit innovation by unduly constraining the behaviour of SMS platforms. We

have carefully considered this risk in our proposed design of the code, and in particular in our consideration, later in this chapter, of which powers to change behaviour should be available under the code and which should be reserved for pro-competitive interventions. These, as discussed below, would be subject to a longer timetable and include greater requirements for consultation.

7.44 Overall, based on the analysis we have carried out in this market study, we consider that there is a large number of potentially problematic practices in consumer-facing and digital advertising markets that could be investigated under the code, with likely improvements to competition, innovation and trust. Taking into account the range of these concerns, and our proposed design of the code, we believe that the overall impact on innovation from the introduction of the code will be overwhelmingly positive.

Parties' views on the case for the code

7.45 The vast majority of parties that responded to our interim report supported the development of a code and agreed that there was a very strong case for its establishment. All of the publishers who responded to our consultation and many advertisers supported the introduction of a principles-based code of conduct as a means of limiting platforms' ability to exploit their market power. It was generally believed that the interim report struck the appropriate balance in the scope, structure and enforcement of the proposed code.

7.46 Several parties including broadcasters and telecoms companies highlighted that it was vital for any interventions in this sector to be flexible and able to adapt to a fast-moving market and suggested that a code would likely deliver against these aims. A number of market participants we have spoken to, such as several specialised search providers, while not responding formally to the consultation, have expressed support for the concept of a code, suggesting that it should help curtail platforms' self-preferencing and leveraging behaviour.

7.47 Google was, in general, not opposed to a code and stated that the principles underpinning the code would be essential to a healthy digital economy. However, Google thought it should apply to all digital platforms.

7.48 The strongest criticism for the concept of a code came from Facebook which, although supportive of our proposals to deliver increased choice and transparency, thought the proposed approach would result in regulation that is 'ineffective and not fit-for-purpose'.

7.49 A small number of respondents were concerned that a code on its own would not address the competition concerns in full. For example, News UK submitted that while proposals for regulatory reform would go some way to addressing the concerns that have been identified in the interim report, it noted one of the potential limitations of the code is that it may not restrict all of Google and Facebook's incentives to exploit the market position that they have built up to their own advantage.

Recent international developments

7.50 Over the past year there has been increasing consensus among a number of countries on the need for ex ante tools that allow earlier intervention in digital markets. For example:

- In Australia, the government established a special unit within the ACCC to proactively enforce, monitor and investigate competition and consumer protection in digital platform markets,[454] and asked the ACCC to create a mandatory code of conduct to govern the commercial relationship between digital platforms and media companies.[455]

- In Germany, there is draft legislation proposing that the national competition authority, the Bundeskartellamt, have the ability to designate platforms as dominant where they have 'paramount significance for competition across markets' and that the Bundeskartellamt have powers to prohibit platforms engaging in a range of conduct.[456]

- In Japan, the government established a 'Headquarters for Digital Market Competition' in September 2019 with an aim to facilitate discussions on the transparency of the dealings with digital platform businesses and the protection of privacy.[457] In June 2020 it released an interim report proposing that ex ante regulation be applied to digital platforms.

- The competition authorities of Belgium, the Netherlands, and Luxembourg issued a joint memorandum proposing a tool allowing competition authorities to impose remedies on dominant companies to prevent competition problems, rather than relying on ex post enforcement.[458]

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[454] The Australian Government media release announcing its response to the ACCC report.
[455] Australia announces mandatory media code between platforms and media companies.
[456] Proposed German legislation
[457] Media release announcing the Japanese Headquarters for Digital Competition
[458] Joint memorandum from the Belgian, Netherlands and Luxembourg competition authorities.

- The European Commission is considering 'how best to address more systemic issues related to platforms and data, including by ex ante regulation if appropriate, to ensure that markets stay open and fair'.[459]

7.51 The proposals we have made for a code in this study can therefore be seen as part of a growing international consensus on the need to reform competition tools to address the issues raised by the role of online platforms in today's digital markets.

Conclusion on the case for a code of conduct

7.52 On the basis of the evidence we have gathered and the analysis we have carried out in this market study, we believe that the code would address many of the concerns that we have identified in both consumer-facing and digital advertising markets in a more timely and effective way than through the use of our existing tools. This view was supported by the significant majority of respondents to our consultation and several respected authorities abroad appear to be drawing similar conclusions in relation to the need to bolster enforcement powers with ex ante behavioural controls.

7.53 In our view, a code operating along the lines we have set out in this chapter would not preclude competition enforcement in appropriate circumstances. Such enforcement would still be appropriate in cases of egregious or repeated anti-competitive behaviour, and in cases not explicitly covered by the code, serving as a deterrent against such behaviour in the future.

Which platforms and markets would the code apply to?

7.54 The government has asked the Digital Markets Taskforce to recommend the criteria by which a platform would be designated as having SMS, taking account of the characteristics of a broader range of online platforms than those we have considered in this study. For the purposes of this market study, we have considered which platforms that are funded by digital advertising should be considered to have SMS. This assessment is based on the analysis carried out and the evidence gathered in the study and the high-level principles set out in the Furman Review.

7.55 Our view is that the code should apply to the small number of platforms whose conduct raises the most significant competition concerns. This is consistent with the Furman Review, which proposed the SMS concept to define the category of firms to which the code of conduct would apply.[460] SMS

[459] A European strategy for data
[460] Furman Review (2019), Unlocking digital competition.

is not explicitly defined in the report, but is described as a position of enduring market power or control over a strategic gateway market with the consequence that the platform enjoys a powerful negotiating position resulting in a position of business dependency.[461]

7.56 We believe that the Furman criteria provide a useful basis for assessing whether a digital platform should be considered to have SMS and hence be subject to the code of conduct. We would envisage the SMS designation criteria to include firms that have obtained gatekeeper positions and have enduring market power over the users of their products.

7.57 Evidence likely to be relevant in making this assessment for platforms funded by digital advertising include: measures of shares of supply in the consumer-facing market; the extent of reach across consumers; share of digital advertising revenues; control over the rules or standards which apply in the market, and the ability to obtain and control unique data that is applicable outside the market.

7.58 The Digital Taskforce will be advising government on the specific criteria for deciding whether a digital platform has SMS, so we have not sought to determine these criteria in this market study. However, based on the evidence that we have gathered, we consider it to be highly likely that both Google and Facebook would meet any criteria for SMS that are consistent with the Furman Review's explanation of the concept.[462]

7.59 Through our analysis in Chapter 3 and Chapter 5, we have established that Google has enduring market power in search and search advertising and in open display, and that Facebook has enduring market power in social media and display advertising. We have also demonstrated that the platforms each play an important role as a gateway for large numbers of businesses to access users on the other side of the platform.

7.60 Evidence to support our assessment that Google has SMS includes that it has had around 90% or more of the search market for over 10 years, as well as having a share of over 90% in the key publisher ad server market. It has a reach of over 90% of UK internet users and many businesses depend on Google for accessing these consumers. Publishers are particularly reliant on appearing within Google's search results and are vulnerable to changes to its algorithm which can have a material impact on user traffic. Google also frequently hosts publishers' content within its ecosystem. Similarly,

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[461] Ibid.
[462] In reaching a formal determination in relation to Google and Facebook we expect that DMU or government would not need to conduct material further analysis to gather evidence but could rely on the findings in this study.

specialised search providers are heavily reliant on user traffic from Google's search engine. Google has entered into various specialised search markets, including flights, hotels and local searches, and is in a position to leverage market power from general search into these markets, harming rivals' ability to attract users.

7.61 Google has also developed strong market positions in a number of markets which it operates alongside the search business. Google has developed unrivalled access to data through its operation of the largest browser (Chrome) and the Android mobile operating system. Through its display advertising businesses, including the largest publisher ad server (Google Ad Manager) and the largest advertiser-facing demand side platforms (DV360 and Google Ads), Google is a vital trading partner for advertisers wanting to secure conversions. This access to data and presence along the ad tech supply chain can limit the availability of genuine alternative choices for publishers and advertisers.

7.62 Evidence to support our assessment that Facebook has SMS includes that Facebook (including Instagram and WhatsApp) has a reach of over 85% of UK internet users,[463] around 75% of the time spent on social media for a number of years,[464] and a share of over 50% of all UK display advertising revenues. This significant online presence means that Facebook plays an important role in driving consumer traffic to content providers, including publishers, in particular through its Newsfeed.

7.63 Facebook also has extensive access to data and is the only medium through which advertisers can run certain valuable campaigns. It is a valuable portal through which advertisers can access a large number of users, with [over one million] UK advertisers using the platform in 2019. In addition, it can leverage this position to request data from advertisers or businesses interoperating with Facebook which is then used to create rival products in adjacent markets. Facebook also plays an important role for developers who are reliant on its platform to grow their userbase. Alterations made to its platform could require developers to make technical or even business model changes to their apps. Facebook may also leverage its position by creating products that compete directly with those of developers.

7.64 We note that other platforms may be considered to have SMS when considering their role in other markets outside the scope of this study, and this

[463] See Figure C.2 of Appendix C. Comscore MMX MP, Total Digital Audience, Desktop aged 6+, Mobile aged 13+, February 2020, UK.
[464] See Figure C.17 of Appendix C. Comscore MMX MP, Total Digital Audience, Desktop aged 6+, Mobile aged 13+, July 2015 – February 2020, UK.

will be considered by the Digital Markets Taskforce, which will also advise the government on the appropriate designation test. The regime would need to build in a mechanism such that SMS designations can be reviewed, and candidates for new SMS designations can be assessed, within a reasonable timescale. Again, these issues will be considered by the Taskforce.

Scope of designation

7.65 We recommend that SMS should apply to the corporate group as a whole (ie including all businesses with the same ultimate owner).[465] This is to: ensure that the DMU would have the ability to address concerns in markets that are adjacent to those where the firm has market power; ensure the DMU would have the ability to require all the information it needs from the corporate group; ensure that parent companies procure their subsidiaries' compliance with the code; and prevent the possibility of corporate reorganisations frustrating the operation of the code. However, the main substantive provisions of the code should apply to:

- 'Core markets' (ie those markets in which the firm has market power, and on the basis of which the SMS designation is made); and
- 'Adjacent markets', into which that market power can be leveraged, (eg through the use of data and/or consumer attention).

7.66 The substantive provisions of the code would not apply in those markets in which there is no plausible leveraging of market power, ie which are not plausibly 'adjacent'. The assessment of whether a particular market should be considered adjacent would fall to the DMU.

Structure and content of the code

7.67 We propose that the code for Google and Facebook should take the form of high-level principles rather than detailed and prescriptive rules. Given the complex and rapidly changing nature of the markets within scope and the issues we have identified, there is a risk that overly prescriptive rules would soon become redundant or fail to anticipate important new developments.

7.68 Responses to our consultation broadly supported this approach but some parties considered it would be necessary to have greater specificity over the coverage of the code, and how it would be applied in practice. Reflecting on

[465] As with many of the proposals in this chapter, they would apply to the platforms funded by digital advertising that we have investigated, ie Google and Facebook. The Digital Markets Taskforce will be assessing in the coming months whether the proposals should apply equally to other platforms.

these responses, and drawing on further discussions with stakeholders since our interim report, we have refined our proposals for the structure and content of the code, which are set out below.

Structure of the code

7.69 The code should comprise:

- A **statement of scope**, setting out the core markets within which the platform is found to have SMS and the key relationships covered by the code.
- Three **high-level objectives** (fair trading, open choices, trust and transparency, as described below). These are likely to be relevant across both SMS platforms.
- **Principles** within each objective, providing greater specificity as to the behaviour allowed or prevented by the code. Some of these may differ between SMS platforms.
- **Guidance**, setting out in more detail the potential application of the code to the specific SMS platform. The guidance would provide much more detail on practical application of the principles to the markets within which the SMS platform would operate. While not formally part of the code, an initial draft of the guidance would be published alongside the code, and it would be updated by the DMU as the market evolves.
- **Enforcement powers** enabling the DMU to force SMS firms to comply with the code, including the ability to order conduct and issue financial penalties for non-compliance with DMU orders and, where appropriate, for non-compliance with the code.

7.70 We recommend that legislation should make provision for the code's objectives, with the DMU empowered to prescribe the principles in the code and that consultation on the contents of the code should generally occur concurrently with the process of designating an SMS platform. The regime would need to build in a mechanism such that SMS designations can be reviewed, and candidates for new SMS designations can be assessed, within a reasonable timescale. The Taskforce will develop further advice in these areas.

7.71 In the following sections we provide more detail on the coverage of the code, the proposed objectives and principles, and how these would apply to the specific concerns we have identified in this study. This draws on Appendix U, which provides a more detailed discussion of these issues, and which could

form the basis for the guidance which would be applied to the markets in the scope of this report.

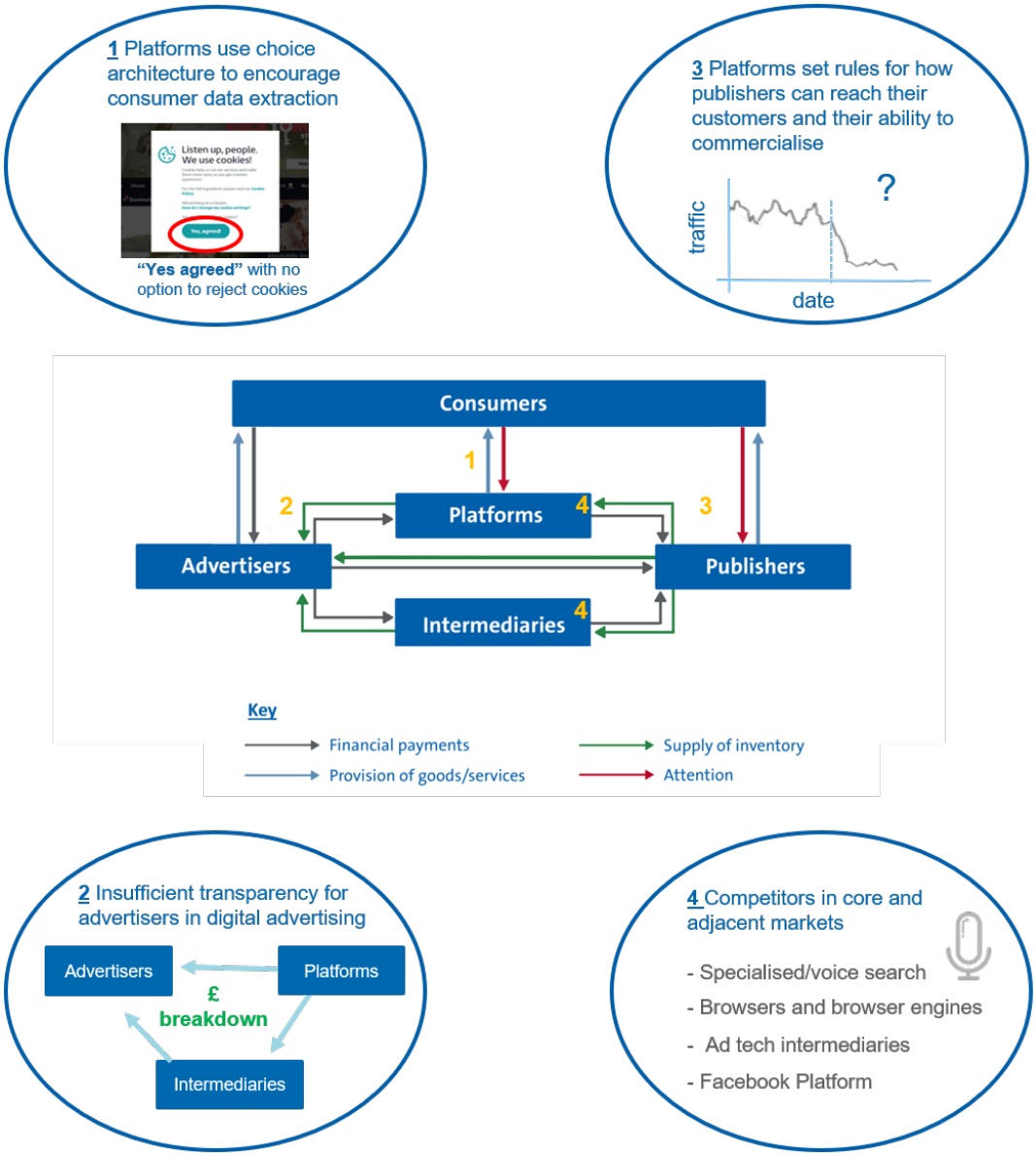
Relationships covered

7.72 In the markets that we have reviewed in this market study, the code would be used to address concerns relating to a range of different relationships between SMS platforms, consumers and business users, including:

- advertisers' and publishers' relationships with platforms in relation to buying and selling digital advertising;
- publishers' and content providers' relationships with platforms as a gateway for hosting content and accessing consumers via the platform;
- business users' relationships with platforms where they are providing services via platforms but which could also compete with the platforms' own service offerings (for example, online travel agents); and
- consumers' direct interactions with platforms (eg using a search engine or accessing a social media page).

7.73 Figure 7.1 illustrates the key relationships that we believe should be covered by the code as it would apply to Google and Facebook, drawing on the areas where concerns have been highlighted in respect of the markets in the scope of this study.

Figure 7.1: Key relationships which should be governed by a code of conduct



Source: CMA assessment.

Principles

7.74 To address the range of concerns we have identified in our study, we propose that the purpose of the code should be to protect consumers and businesses from the ability of SMS firms to use the market power they have to: exploit customers; exclude rivals; or reduce transparency, thereby undermining trust. Accordingly, we have structured the key provisions of the code in the form of three overarching objectives: '**fair trading**'; '**open choices**'; and '**trust and transparency**', which address each of these key concerns.

7.75 In the following sections, we explain the rationale for each of these objectives, present our views on the appropriate range of principles falling under each of each of these objectives, and briefly set out how they would relate to the

concerns we have identified in the study. In setting out these concerns, both here and in Appendix U, we are not drawing any conclusions about the outcome of any investigation of these practices under the code. In some cases, there may be efficiency arguments for the practices in question, for example. Rather, our purpose is to demonstrate that:

- there is a wide range of concerns across the markets we have reviewed;
- the number and complexity of issues are such that ex post enforcement alone is insufficient to resolve them; and
- there is therefore a robust case in practice for the establishment of the code.

Fair trading

7.76 The 'fair trading' objective would require the SMS platform to trade on fair and reasonable terms for services where they are an unavoidable trading partner as a result of their gateway market position. In effect, the fair trading objective is intended to address concerns around the potential for exploitative behaviour on the part of the SMS platform.

7.77 We have identified the following principles that would apply under the fair trading objective:

- to trade on fair and reasonable contractual terms;
- not to unduly apply discriminatory terms, conditions or policies to certain customers;
- not to put any unreasonable restrictions on how customers can use platform services;
- to act in customers' best interests when making choices on their behalf; and
- to require use of data from customers only in ways which are reasonably linked to the provision of services to those customers.

7.78 Table 7.1 summarises some of the concerns that we have heard in the market study that could be addressed under each of these principles. A more detailed discussion of these, drawing on a broader range of examples, is available in Appendix U and in Chapter 8.

Table 7.1: Fair trading: concerns that could be addressed under the code

Fair trading principles	Example of practices that could be investigated under the principle
To trade on fair and reasonable contractual terms	Requiring **access to publishers' data**, without sharing the same level of data with the publisher when platforms host content. Eg, terms under which Google and Facebook host publishers' content and control data and digital advertising using AMP and IA formats. (See Chapter 5 / Appendix S)
Not to apply unduly discriminatory terms, conditions or policies to certain customers	Concerns about a lack of **clarity in the platform's advertising policies**, resulting in ads or accounts being suspended for reasons that may be unclear or inconsistent (See Appendix Q).
Not to unreasonably restrict how customers can use platform services	Changes to Google's **keyword matching algorithm** resulting in advertisers participating in auctions for terms that are less relevant to them and where bids might have a reduced quality weighting, resulting in increased prices (See Chapter 5 / Appendix Q).
To act in customers' best interests when making choices on their behalf	Concerns that **automated bidding** options in Google and Facebook could be used to increase platform revenues (See Chapter 5 / Appendix Q).
To require use of data from customers only in ways which are reasonably linked to the provision of services to those customers	Concerns that Facebook's contractual provisions with businesses over **the use of commercially sensitive data** allows Facebook to use this data to develop their own rival service (See Chapter 3).

Source: CMA.

7.79 We have considered whether the DMU should be empowered under the principle of fair trading directly to restrict SMS platforms from setting key market outcomes at levels that are 'excessive'. This could take the form of directly seeking to control levels of ad load, for example, or even the prices paid by advertisers.

7.80 Imposing such direct controls is a resource-intensive and challenging process, involving a fine balance between protecting consumers and maintaining incentives to invest. These challenges are particularly great in the context of the markets we have reviewed, given the international nature of costs and the considerable heterogeneity in products and services offered. We have therefore concluded that such controls should not be included within the scope of the code for Google and Facebook, which requires rapid resolution of concerns. Rather, the code should be focussed on changing behaviour in a way that will facilitate stronger competition and minimise the scope for exploitation, thereby influencing outcomes.

Open choices

7.81 The 'open choices' objective would require the SMS platform to allow users to choose freely between elements of the platform's services and those offered by competitors. This principle is intended to address the potential for exclusionary behaviour on the part of the SMS platform.

7.82 There are likely to be two main domains in which this objective is important: contractual terms and commercial behaviour; and technical standards and

interoperability. Regarding contractual terms, this objective would focus on concerns relating to tying, bundling and self-preferencing behaviour. In relation to technical standards, this objective would seek to ensure that the SMS platform take reasonable steps to allow third parties to interoperate with the platform's services, and comply with common standards.

7.83 We have identified the following principles that would apply under the open choices objective:

- not to impose undue restrictions on the ability of customers to use other providers that compete with the SMS platform or to compete with SMS platform themselves;
- not to influence competitive processes or outcomes in a way that self-preferences a platform's own services, or services for which the platform derives a commercial benefit, over rival services;
- not to bundle services in markets where the SMS platform has market power with other services in a way which has an adverse effect on users;
- to take reasonable steps to ensure that core services interoperate with third party technologies where not doing so would have an adverse effect on users; and
- not to withhold, withdraw, or deprecate APIs or otherwise change them in a way which has an adverse effect on users.

7.84 Table 7.2 summarises some of the concerns that we have heard in the study that could be investigated under each of these principles.

Table 7.2: Open choices: concerns that could be addressed under the code

Open choices principles	Example of practices that could be investigated under the principle
Not to impose undue restrictions on ability of customers to use other providers that compete with the SMS platform or to compete with SMS platform themselves	Restrictions in **syndication agreements**, such as requiring approval to be preinstalled or set as the default on a web browser, can limit the ability of downstream suppliers to attract users (See Chapter 3 / Appendix Q).
Not to influence competitive processes or outcomes in a way that unduly self-preferences a platform's own services over those of rivals	Concerns that Google is able to use its **control of the publisher ad server** market to determine auction processes in a way which favours its digital advertising businesses (See Chapter 5 / Appendix M).
Not to bundle services in markets where the SMS platform has market power with other services in a way which has an adverse effect on users	De facto requirement to use the **AMP and IA formats** to gain prominence in search / newsfeed, rather than alternative mobile friendly formats (See Chapter 5 / Appendix S).
To take reasonable steps to ensure that core services interoperate with third party technologies where not doing so would have an adverse effect on users	**Frequent changes to Facebook's APIs** that require third-party developers to repeatedly redesign their applications (Appendix J).
Not to withhold, withdraw, or deprecate APIs or otherwise change them in a way which has an adverse effect on users	Facebook's decision to **deprecate the Public Actions API** which harmed the quality of content viewable across platforms and the ability for users on competitor platforms to reach a wider audience (See Chapter 3 / Appendix J).

Source: CMA.

- *Trust and transparency*

7.85 In the markets we have reviewed, many decisions are taken by algorithms that are complicated and difficult for users to understand or scrutinise. As a result, users may lack sufficient information to make informed choices, undermining the effectiveness of competition. Users may also be influenced by choice architecture and default settings into taking choices that may not be in their best interests. All of these factors can reduce trust in the market.

7.86 The 'trust and transparency' objective is designed to ensure that SMS platforms provide sufficient information to users, including both consumers and businesses which transact with the platform, so that they understand how the platform operates and are able to make informed decisions. Choice architecture should be designed in such a way as to facilitate informed decision making. Users should also have confidence that decisions are being made fairly and according to publicly stated criteria.

7.87 We have identified the following principles that would apply under the high-level principle of trust and transparency:

- to provide clear information to consumers about the services they receive and the data the platform takes in return, in a format which can realistically be read and understood;

- to ensure that choices and defaults in how to use services provided by the platform are presented in a way that facilitates informed customer choice;
- to ensure advertising is presented in a way that is clearly distinguishable from organic content;
- to explain the operation of search and ranking algorithms and advertising auctions and to allow audit and scrutiny of their operation by the regulator;
- to give fair warning about changes to the operation of algorithms where these are likely to have a material effect on users, and to explain the basis of these changes;
- to comply with industry standards and provide access to relevant data required for third-party verification and measurement; and
- to be transparent about fees charged.

7.88 Table 7.3 summarises some of the concerns that we have heard in the study that could be investigated under each of these principles.

Table 7.3: Trust and transparency: concerns that could be addressed under the code

Trust and transparency principles	Example of practices that could be investigated under the principle
To provide clear information to customers about the services they receive and the data the platform takes, in an easily understood format	Concerns that platforms often **require consumers to navigate a complex route** to find information about the use of their data (Chapter 4 / Appendices K and Y).
To ensure that choices and defaults provided by the platform are presented in a way that facilitates informed consumer choice over the use of their personal data	Concerns that platforms apply **choice architecture which can 'nudge'** consumers towards platforms' preferred choices and restrict their ability to make informed choices (Chapter 4 / Appendix Y).
To ensure advertising is presented in a way that is clearly distinguishable from organic content	Recent changes to the **way mobile ads and organic search results are labelled** make advertising less distinguishable from organic search results (Chapter 5 / Appendix Q).
To explain the operation of algorithms and advertising auctions and to allow audit and scrutiny of their operation by the regulator	A **lack of transparency of algorithms** used in advertising auctions, including those used to weight bids by relevance and automated bidding algorithms (Chapter 5 / Appendices Q and U).
To give fair warning about changes to the operation of algorithms where these are likely to have a material effect on users, and to explain the basis of changes	**Unexpected and unexplained changes** to Google and Facebook's algorithms which have material impact on flows of user traffic visiting different websites and are highly important commercially to the many businesses that rely on this traffic (Chapter 5 / Appendix S).
To comply with industry standards and provide access to relevant data required for third-party verification and measurement	Google and Facebook do not allow **full access to the relevant data to third party verification** providers, harming the assessment of quality (Chapter 5 / Appendix O).
To be transparent about fees charged	The **lack of transparency of fees** along the intermediation chain limits the ability of advertisers and publishers to make optimal choices on how to buy or to sell inventory (Chapter 5 / Appendix R).

Source: CMA.

7.89 The requirement to design choice architecture in a way that facilitates informed choice has applications to a number of areas, including the use of owned and operated advertiser sales interfaces, but is of particular

importance to our assessment of interventions to increase consumer control over data. We therefore discuss the appropriate application of this principle in some detail in Chapter 8, when we discuss the Fairness by Design duty under the code.

Relationship with codes proposed in the Cairncross Review

7.90 We note that the broad content of the enforceable code we are proposing in this study covers a number of the areas of concern set out in Cairncross Review into the sustainability of journalism. The Review set out a proposal for new codes of conduct to rebalance the relationship between publishers and online platforms. Specifically, it suggested that those online platforms upon which publishers increasingly depend for traffic should be required to set out codes to govern their commercial arrangements with news publishers, with oversight from a regulator.

7.91 The Review suggests that such codes of conduct could address a number of concerns that have been raised by publishers, including transparency over fees and ranking algorithms, access to user data, restrictions on publishers' ability to monetise their content and forewarning of significant changes to algorithms.[466] Each of these concerns are areas that we believe should be covered in the enforceable code of conduct for Google and Facebook that we are proposing in this study.

7.92 We note that there are some differences between our proposals for a code and the Cairncross Review proposals. Notably, the Review proposed that relevant platforms should develop their own codes, but with guidance from the regulator on what should be included and that, if the regulator believes the codes are not sufficient, or do not conform to its guidance, it should be empowered to develop a statutory code. In contrast, and as discussed further below, our view is that, to protect competition given the entrenched market power of both Google and Facebook, the codes applying to them would need to have a statutory basis, with powers for the DMU to suspend, block and reverse decisions of SMS firms, and to order conduct in order to achieve compliance with the code. Further, the enforceable code that we are proposing would cover a much broader range of relationships and issues that those that were the focus of the Cairncross Review.

7.93 Overall, we think that the enforceable code set out in this chapter could be a suitable vehicle for taking forward the proposal for multiple codes under the

[466] See Chapter 6 of the Cairncross Review for a full list of the concerns that could be addressed under these codes.

Cairncross Review. Government may therefore wish to consider this option in deciding how to take forward this element of the Review's recommendations.

Powers and procedures

7.94 The design of the DMU's processes will continue to be worked on by the Digital Markets Taskforce. Drawing on the analysis of ad-funded platforms, we have considered at a high level the powers and procedures that we envisage would be needed to enforce the code.

7.95 It would be important for the code to be directly enforceable by the DMU so that there is a strong deterrent to breaching the code and urgent issues can be dealt with. The code would therefore give the DMU the power to suspend, block and reverse decisions of SMS firms, and order conduct in order to achieve compliance with the code. These powers would follow an investigation into a breach of the code that balances reasonable rights of defence against the need for prompt decisions. In order for the DMU's orders to be effective, they would need to be backed up by the ability to impose financial penalties for non-compliance.

7.96 To achieve the objective of prompt intervention in these fast-moving markets, we envisage that where formal investigations under the code are necessary, they would be completed within a limited timetable, perhaps six months from the date on which an investigation is launched by the DMU. The DMU may often be able to achieve agreement and cooperation from the platform by signalling a likely investigation and the direction it is expected to take.

7.97 As these types of investigations would seek only to bring an SMS firm into compliance with the code, they would not be used to order major new interventions of the type envisaged by the pro-competitive interventions in the section below. If an investigation under the code raised an issue that may require such an intervention, the DMU would need to use other its pro-competitive intervention powers with a lengthier process to achieve them.

7.98 To achieve the objectives of the code, it is likely that the DMU would need appropriate powers including the ability to:

- compel information from SMS firms and other market participants;
- carry out own-initiative investigations and investigations stemming from complaints;
- put in place rapid interim measures pending the outcome of an investigation, for example to suspend or reverse the implementation of a

potentially harmful decision by an SMS firm, backed up by financial penalties for non-compliance;

- publish reports on its work and the industry more generally, balancing the need for transparency against industry players' interests in protecting their confidential information;
- appoint a monitoring trustee to monitor and oversee compliance by an SMS firm; and
- co-ordinate and share information with UK regulators such as CMA, ICO and Ofcom, and with overseas authorities with similar objectives provided the DMU is satisfied that confidential information will be treated appropriately.

7.99 We would expect that there would be a right of appeal on judicial review grounds by the SMS firm or other materially affected person against decisions of the DMU. This would enable a timely review of the DMU's decisions in line with other regulatory regimes.

7.100 In addition to the type of investigations outlined above, it is important for the regime to deter conduct by SMS firms that would intentionally or negligently inflict harm. It may be insufficient in those circumstances if there were no ability to penalise the conduct and the outcome of the DMU's investigation were merely to reinstate the SMS firm's compliance with the code.[467] Therefore, the DMU would need the power to impose substantial financial penalties in these circumstances. We would expect the process for this type of investigation to be lengthier than the standard investigation under the code.

7.101 Given the international nature of the relevant markets and the importance of clarity in the DMU's jurisdiction to carry out its duties, the DMU would need express jurisdiction to investigate the supply of services to UK consumers, and to investigate those who supply them – including the power to require the production of information from, and to impose orders on, firms not physically present in the jurisdiction.

Pro-competitive interventions

7.102 The code discussed above has the objective of addressing the ability of platforms to exploit market power in core markets and to leverage that market

[467] See, for example, the deficiencies in the CMA's current powers in enforcing compliance with its remedies following a market investigation under Part 4 Enterprise Act 2002, as outlined in the CMA Chairman's reform proposals, page 15:

power into adjacent markets. It would give the DMU the power to write guidance on acceptable behaviour in trading with users and competing in adjacent markets, and to change platforms' behaviour if necessary to require compliance with the code. We have confidence that it would provide greater certainty and promote competition and innovation for firms which trade with large platforms.

7.103 We therefore think that the code will provide a highly valuable tool to address, on a timely basis, many of the concerns we have identified in this study, by influencing the behaviour of Google and Facebook in relation to users and other market participants. However, the code is not intended to give the DMU the power to design and implement measures directly targeted at the sources of market power, such as access remedies or separation. Therefore, given the entrenched market positions of Google in search, search advertising, and open display advertising, and of Facebook in social media and display advertising, there are aspects of competition in these markets that will not be substantially improved by the code. Further, there are other market-wide problems that we have identified that do not relate solely to the market power or behaviour of Google or Facebook and the code will not therefore be the right instrument to address them.

7.104 Therefore, we consider there is likely to be a need for additional interventions – which we call pro-competitive interventions – to improve outcomes for consumers in the consumer-facing and digital advertising markets. This is consistent with the conclusions of the Furman Review, which, alongside the code, called for the DMU to be given a range of powers to introduce data-related remedies, including interoperability and data access interventions. We agree that data-related interventions could play a central role in improving competition in these markets but, as discussed below, we also consider that there is a need for other forms of intervention, including interventions to increase consumer choice and control and separation remedies.

7.105 We intend that the code and pro-competitive interventions would play complementary roles, largely because they target different objectives and differ in their scope. The key differences between the code and the pro-competitive interventions are:

- The key objective of the code is to mitigate the effects of market power by governing the behaviour of platforms with SMS, helping to guard against exploitative or exclusionary behaviour. It can therefore be thought of as aiming to 'protect' competition and consumers. Specifically, it would be a tool for dealing with the many concerns raised by stakeholders that arise from Google and Facebook's gatekeeper role and market power, which

leads to a position of dependency for users and customers of the platform and consequently an imbalanced bargaining position.

- In contrast, the key objective of pro-competitive interventions is to increase competition by tackling the sources of market power directly, by overcoming barriers to entry and expansion and by addressing systemic market failures, such as information asymmetries or coordination failures. They are more transformational in nature and can thought of as aiming proactively to 'promote' greater competition between the platform and existing or potential rivals, including by creating new forms of competition.
- Code powers would be applied to SMS platforms, while the orders arising from pro-competitive interventions could in principle be applied to a broader range of market participants.
- Changes to behaviour under the code could be introduced rapidly and would deliver immediate protection for dependent customers of platforms. Conversely, the pro-competitive interventions would require greater opportunities for consultation with affected parties and longer timescales for analysis and decision-making, reflecting their transformational nature and their potential application to a wide range of parties. The benefits for consumers of the pro-competitive interventions may also take longer to materialise, as the market power of the SMS platforms will most likely be eroded gradually over time.

7.106 While distinct, the code and pro-competitive interventions would have highly complementary functions. Although the pro-competitive interventions are designed to tackle the causes of market power at source, potentially solving many of the concerns and problematic behaviour we have identified, their impact is uncertain, given the range of self-reinforcing barriers to entry and expansion we have identified – the code is therefore essential to deal with the negative effects of the market power held by platforms with SMS. When pro-competitive interventions are introduced, the code could be a useful mechanism to manage their ongoing monitoring and enforcement. Finally, if the pro-competitive interventions are sufficiently successful in reducing the market power of the platforms, they may no longer be designated with SMS, and the code would cease to apply.

7.107 In this report, we have identified pro-competitive interventions that the DMU should assess, but the DMU would also have a more general power to put in place other pro-competitive interventions that are not mentioned in this report, and to revoke interventions that are no longer necessary, thus enabling the regime to evolve over time.

7.108 In the rest of this section, we set out our views on: the different types of pro-competitive intervention that should be available to the DMU; the appropriate scope of such interventions; and the powers and procedures that should apply to the implementation of pro-competitive interventions.

Types of intervention

7.109 The Furman Review recommended that the DMU should have powers to implement a range of data-related remedies including data mobility, systems with open standards and open data. We agree that data-related remedies are key in digital platform markets, but, based on our analysis of market failures in the consumer-facing and digital advertising markets, we consider that powers to introduce consumer choice and separation interventions are also required. We summarise these three different categories of pro-competitive interventions in turn below.

Data-related remedies

7.110 Many of the interventions that we have assessed in this study are data-related interventions. This reflects the fundamental role that data plays in the business models of online platforms, particularly those funded by digital advertising. It also reflects the fact that differential access to data is at the heart of several of the barriers to entry and expansion that we have identified, and that data is an important route by which market power in one market can be leveraged into adjacent markets.

7.111 The main data-related interventions that we have assessed in this study, and which we consider should be part of the DMU's toolkit, are the following:

- **Increasing consumer control over data**, which includes providing a choice over the use of data (for example, the proposal to require consumers be given a choice over whether to receive personalised advertising) and facilitating consumer-led data mobility;
- **Mandating interoperability** (for example, the options we consider to increase Facebook's interoperability with other social media platforms and interventions in digital advertising such as digital IDs and transaction IDs);
- **Mandating third party access to data (**for example, the intervention considered below to require Google to share click and query data with other search engines); and
- **Mandating data separation / data silos** (for example, the intervention we discuss to limit integrated platforms' use of data in digital advertising).

7.112 As discussed in more detail when we assess the potential remedies below, the choice of which data-related remedy to employ needs to be made on a case by case basis and this assessment will be informed by the particular characteristics of the data and market. For example, the case for consumer control remedies is generally stronger where: consumers internalise relevant costs and benefits (ie there are no significant 'externalities'); privacy views / concerns vary substantially within population (so a one size fits all rule would not be appropriate); and where putting the responsibility on the consumer does not involve excessive transactions costs or unreasonable expectations.

7.113 Conversely, the case for third party access / mandated interoperability interventions is greater where: data is valuable in overcoming barriers to entry and expansion; there are positive externalities in the use of the data; the data is held by a platform without significant ongoing costs or investment, or is due to first mover advantages; and privacy concerns can be effectively managed (eg either the data is not personal or can be anonymised).[468]

Consumer choice and default remedies

7.114 We have been struck in the work we have done in this study by the power of defaults and choice architecture in influencing consumer decision making. These apply not just to the question of consumer control over data, but to other areas including the user's choice of search engine, which is highly influenced by the default set by the browser or device.

7.115 We discuss in Chapter 8 potential interventions to restrict the ability of platforms to purchase search default positions and to introduce choice screens and we believe both are important powers for the DMU to have. Although there is a link here to our proposed 'Trust and Transparency' code power to influence choice architecture, where the power extends to introducing requirements for choice screens, and obligations on parties other than SMS platforms, in our view this would go beyond the scope of the code and would need to be implemented as a pro-competitive intervention.

Separation remedies

7.116 There are several forms of separation remedy, from operational separation, which seeks to ensure that units within a business are operated independently, to ownership separation, which can require divestiture of assets.

[468] In Appendix T we describe our approach to assessing data-related interventions in more detail.

7.117 Separation remedies can be an alternative to interventions under the code, to address concerns about the ability of integrated firms such as Google and Facebook to exploit market power through operating businesses across related markets in their common interest. Separation remedies interfere to a greater extent in a company's property rights, but often have the potential to have a broader range of benefits than some other remedies.

7.118 For example, following structural separation, independently-owned firms would not have the incentive to trade in a way that favours their own businesses, and will have independent incentives to innovate in new products or new technologies. These incentives are often more limited in integrated firms, which may not choose to invest in products that might disrupt their power in other markets.

7.119 There are two contexts in which we think the use of separation powers in some form may be necessary in the markets we have reviewed – to address Google's vertical integration and conflicts of interest in open display and to address the competition effects of the joint ownership of Facebook and Instagram, the two largest social media platforms by revenue. While we recognise that these would be highly intrusive interventions, they might also have the potential to change the nature of competition substantially. We therefore think that both operational and ownership separation powers, should available to the DMU. The DMU will be well placed to ensure that interventions such as these are effective in combination with the code and any other interventions.[469]

7.120 We will be providing further advice on the extent of the powers that should be available to the DMU in the context of the Digital Markets Taskforce work.

Scope of pro-competitive interventions

7.121 Many of our proposed interventions relate to SMS platforms, but not all of them. For example, some of the potential data-related remedies we consider in digital advertising, such as a transaction ID, would apply to a broad range of market participants, and several of the interventions to improve consumer control over data could apply to a broader range of market participants in the future.

[469] In Chapter 8 we describe in some detail how the DMU might apply these powers to address concerns relating to Google's conflicts of interest in the open display market, while in Chapter 9 we set out why, notwithstanding the importance of separation powers, we have decided not to launch a market investigation at this stage, preferring to focus in the near term on the development of the regulatory regime for online platforms through the Digital Markets Taskforce.

Powers and procedures

7.122 The design of the DMU's processes will continue to be worked on by the Digital Markets Taskforce. Drawing on the analysis of ad-funded platforms, we have considered at a high level the powers and procedures that would be needed to implement the pro-competitive interventions.

7.123 The DMU would need powers to assess and, if appropriate implement, the pro-competitive interventions. These powers would be separate from the DMU's powers to enforce compliance with the code.

7.124 A clear way to achieve this is through legislation by which the DMU assesses whether a pro-competitive intervention is required to address the adverse effects of an SMS platform's market power on competition or consumers in the UK or internationally. The statutory question the DMU would need to answer would therefore be relatively narrowly scoped in each case to ensure that the outcomes are deliverable within a reasonable timescale.

7.125 The DMU would need to assess what use of its powers would be effective and proportionate responses to comprehensively address that effect. The DMU would then have wide powers to implement (and enforce) the appropriate interventions itself. The interventions could ultimately be incorporated into the code of conduct if appropriate, or they could be implemented separately.

7.126 In addition to assessing and implementing the pro-competitive interventions raised in this study at the outset of the new regime, these powers would be necessary in ensuring the DMU could continue to promote competition in the SMS firms' markets in the medium and long term. These markets can be fast-moving, so we would expect new interventions to be required in the future. The DMU's ongoing presence in the sector would help it to monitor, amend and revoke the interventions over time in an efficient way.

7.127 The process by which these interventions would be assessed and, if appropriate, implemented by the DMU should reflect good practice in terms of transparency and consultation rights. It would be subject to appeal on judicial review grounds.

7.128 Both firms and consumers would suffer from a period of uncertainty while the DMU investigates these issues. As the DMU would have pre-existing knowledge of these markets and the scope of its enquiry would be pre-determined to some extent, we would expect that it would be possible for the DMU to operate within a statutory deadline of 12 months in most cases.

Conclusion and recommendations

7.129 The evidence we have assessed in this study strongly supports the case for the development of a pro-competition regulatory regime for online platforms. This is consistent with the type of regime envisaged by the Furman Review, the recommendations of which were recently accepted by government.

7.130 We have concluded that a code of conduct is necessary to protect competition and fair outcomes, where platforms in a gateway position have enduring market power, and would be assigned a strategic market status. We have identified three core principles around which the code should be formed: fair trading, which would require the SMS platform to trade on fair and reasonable terms for services where they are an unavoidable trading partner as a result of their market position; open choices, which would be intended to require the SMS platform to allow users to choose freely between elements of the platform's services and those offered by competitors; and trust and transparency, designed to ensure that SMS platforms provide sufficient information to users, including both consumers and businesses which transact with the platform.

7.131 The DMU would also need powers to introduce 'pro-competitive interventions' to tackle sources of market power and increase competition. These should include data-related interventions, which would give the DMU powers to increase consumer control over data and facilitate consumer-led data mobility, increase interoperability, provide third parties access to data and restrict the use and integration of data sets where necessary. The DMU should also have powers to increase consumer choice through the introduction of choice screens, and powers to restrict the ability of platforms to control default settings where these restrict choice and inhibit entry to from rivals. Finally, the DMU should have the power to separate platforms where integration creates conflicts of interest or undermines competition to the detriment of consumers. Separation could take a variety of forms, from management separation to full ownership separation.

7.132 To achieve this substantial package of reform, the necessary next step is for the government to pass legislation. We have set out our recommendations to the government in Box 7.1 below for what this legislation should include.

Box 7.1: Our recommendations to the government

The government should legislate to introduce a new regulatory regime for platforms comprising both the code and the pro-competitive interventions, drawing on the work of this study into online platforms funded by digital advertising, and that of the Digital Markets Taskforce, which will also be considering online platforms funded by transactions.

More specifically, we make the following high-level recommendations to government for what this legislation should include:

Recommendation 1: Establish an enforceable code of conduct to govern the behaviour of platforms funded by digital advertising that are designated as having strategic market status (SMS). The purpose of the code would be to meet three high-level objectives of fair trading, open choices and trust and transparency.

Recommendation 2: Establish the requirement for a DMU to undertake SMS designation, introduce and maintain the code based on objectives set out in the legislation, and produce detailed supporting guidance.

Recommendation 3: Give the DMU the necessary powers to enforce the principles of the code on a timely basis, and amend its principles in line with evolving market conditions.

Recommendation 4: Give the DMU the necessary powers to introduce a range of pro-competitive interventions, which should include:

a. Data-related interventions (including consumer control over data, interoperability, data access and data separation powers)
b. Consumer choice and default interventions
c. Separation interventions

7.133 In the next chapter, we set out in some detail how such a regime should be applied to address the concerns we have identified in search, social media, and digital advertising markets.

8. Interventions in search, social media, and digital advertising

- The pro-competition regulatory regime for online platforms that we are recommending is required to address the wide-ranging problems we have identified in this study. We have developed detailed proposals for how the DMU should apply the enforceable code and pro-competitive interventions within this regime to search, social media and digital advertising.

- There is a strong case for interventions to tackle the source of Google's market power in search. The DMU should have powers to introduce search choice screens and restrict Google's ability to secure default positions on devices and browsers where these are key entry points to the market, and to require that Google provide rival search engines with access to its click-and-query data, to help them overcome its scale advantages in data.

- In social media, interventions to tackle the source of Facebook's market power should focus on increasing its interoperability with rival platforms in order to overcome the network effects that currently act as a significant barrier to entry and expansion. We think there is a strong case for mandating greater interoperability in relation to finding contacts and cross posting functionalities, while the code would help to ensure that future decisions by Facebook to shut off or deprecate APIs do not have harmful effects on competition and consumers.

- The DMU should have powers to give consumers greater control over the data they provide to platforms, including by requiring platforms to give consumers a choice over whether to receive personalised advertising. A 'Fairness by Design' duty under the code would ensure that Google and Facebook design choice architecture in a way that encourages free and informed decision making by consumers, with a requirement to trial and test alternative approaches.

- The code would be an effective tool to address a wide range of the concerns we have identified in digital advertising, including restrictions on publishers' ability to monetise content, self-preferencing behaviour in the open display market and low transparency over fees and ad verification. To tackle conflicts of interest in the open display market, some form of separation of Google's intermediation activities, notably its publisher ad server function, may be necessary. The DMU should also have the power to introduce data-related interventions to increase transparency and address competition concerns, including data separation, data access and data mobility remedies.

  The CMA is undertaking to work with the ICO after the completion of this study on a range of issues relating to the interaction between data protection, consumer control and competition. This will aim to encourage a modern view of data protection regulation, which empowers consumers and avoids favouring large integrated platforms over smaller publishers.

Introduction

8.1 In the previous chapter, we set out the case for a new pro-competition regulatory regime for online platforms. At the heart of this regime is a DMU with powers to enforce a code of conduct to govern the behaviour of platforms with SMS and to introduce pro-competitive interventions to tackle sources of market power and promote competition.

8.2 In this chapter, we present detailed proposals for the application of such a regime to platforms funded by digital advertising, setting out how both the code and pro-competitive interventions should be used to address the issues identified in Chapters 3 to 5 of the report, covering search, social media, consumer control over data and digital advertising.

8.3 We have had three key objectives in undertaking these detailed assessments.

8.4 First, we have aimed to convince the government of the urgent case for significant new legislation, by demonstrating that there is a range of practical interventions that could be introduced under a new regulatory regime which would significantly improve outcomes for consumers, and which could be designed in such a way as to minimise any potential adverse consequences. In essence, our detailed assessments therefore serve to provide 'proof of concept' of the new regulatory approach that we are advocating.

8.5 Second, we have aimed to draw on the analysis and evidence that we have carried out in this study to inform the future work of the DMU. In particular, we have set out how specific concerns could be considered under the code and provided a detailed assessment of how a range of pro-competitive interventions should be designed by the DMU to maximise benefits for consumers.

8.6 Third, recognising that the challenges raised by the role of Google and Facebook in digital markets are global in nature, we have aimed to inform the global debate on how to regulate online platforms funded by digital advertising. Consistent with this aim, much of our work after publication will be focused on engaging with international competition authorities and regulators to highlight our key findings and insights. This is discussed further in Chapter 10.

8.7 The rest of this chapter provides:

- our assessment of how the code and pro-competitive interventions could address the competition concerns in search and social media that we identified in Chapter 3;

- our assessment of how the code and pro-competitive interventions could give consumers greater control over, and protection in relation to, the use of their data, addressing the issues identified in Chapter 4; and

- our assessment of how the code and pro-competitive interventions could promote competition and improve transparency in digital advertising markets, addressing the issues identified in Chapter 5.

8.8 To support this chapter we have produced a series of appendices in which we assess the interventions in more detail, and consider a range of issues including: whether the intervention in question would be effective in addressing the concerns identified in this report; whether the costs of the intervention would likely outweigh the benefits; and how the intervention should be designed to maximise the net benefits to consumers and society more broadly.[470]

Interventions in search

8.9 As explained in Chapter 3, we have found that the ability of general search engines to compete with Google is constrained by the need to overcome a number of barriers to entry and expansion, on both the supply and the demand side of the market.

8.10 On the supply side, to produce independent search results, rival (or new entrant) search engines must overcome: economies of scale in crawling and indexing; and scale advantages with respect to the number of search queries and the information gained from consumers' interaction with search. Google and Microsoft are the only two providers that undertake English-language web-crawling and indexing at a scale that can support a competitive search engine in the UK, and the greater scale of English-language queries seen by Google is likely to support its ability to deliver more relevant search results compared to its competitors, especially in relation to uncommon and fresh queries.

8.11 On the demand side, Google is the default search engine for most search entry points in the UK. These default arrangements harm competing search engines' ability to access consumers and are consistently described by these parties as the most significant barrier to growing their userbase, monetising their operations and improving the quality of their search results.

[470] See Appendices T, U, V, W, X, Y, Z, and ZA.

8.12 Other search engines including Yahoo Search, DuckDuckGo and Ecosia access organic search results and adverts through negotiated agreements with Bing (in most cases) or Google. Both Google and Bing place restrictions on these search engines, such as how they can present search results to consumers. This makes it harder for these competitors to differentiate themselves and innovate, for example in developing their own algorithms or in approaches to presenting search results to consumers.

8.13 Finally, we heard a number of concerns from a range of parties regarding Google's behaviour in search. These included concerns from specialised search providers that Google was leveraging its market power in general search to undermine competition in specialised search through self-preferencing behaviour, and concerns from newspapers that they were exposed to sudden, dramatic changes in traffic from search due to changes in the algorithm for which there was no forewarning or explanation.

8.14 We have considered how these concerns could be addressed through the code and how pro-competitive interventions could address the barriers to entry and expansion set out above. A detailed discussion of these issues, the remedy design considerations and stakeholders' views is set out in Appendix V and we have provided a summary of our assessment below.

Code

8.15 As explained in more detail in Appendix U, the code could be an effective tool in investigating and addressing some of the concerns we have identified in search. For example, the code could be used to investigate concerns around unfair contract restrictions in syndication agreements (fair trading). Further, it could be a valuable tool in developing interventions to address concerns regarding self-preferencing (under the open choices objective) in areas such as specialised search (an area that has been the subject of lengthy enforcement cases, but outstanding concerns about the effectiveness of remedies) and voice search.

8.16 Under the objective of trust and transparency, the code could also be used to investigate concerns around sudden algorithmic changes that have a material effect on traffic to newspapers and other content providers, and seek to ensure that adequate forewarning of material changes is given in advance.

8.17 More broadly, the code could be used to investigate concerns around the relationship between search and web browsers and ensure that Google is not redirecting customers to its other services in a misleading manner. It could also be used to ensure that Google is not unnecessarily designing its software in a manner that inhibits interoperability and web compatibility.

8.18 Overall, although the code would be a helpful tool in addressing concerns about several aspects of the exercise of market power by Google in general search, including the leveraging of that market power to adjacent markets, it is unlikely to have a significant effect in tackling the root causes of Google's market power in search. We consider that pro-competitive interventions are likely to be required to overcome barriers to entry and expansion on the demand and supply side of search, as discussed below.

Mechanisms for determining default search engines on devices and browsers

8.19 We have been struck by the very substantial payments that are made to be the default search engine on browsers and devices and the significant impact being the default search engine has on consumer take up. Several stakeholders, including rival search engines, have told us that Google's control over Android defaults and its ability to pay more than its rivals to be the default on browsers such as Safari is the most significant barrier to entry and expansion in general search.

8.20 To address these barriers to entry and expansion, we have considered three key questions: (i) whether to limit Google's ability to acquire defaults and, if so, the scope of such restrictions, (ii) whether to mandate the use of choice screens and, if so, how they should be designed, and (iii) whether to restrict the monetisation of defaults and choice screens.

Restrictions on Google's ability to acquire default positions

8.21 Many respondents to the interim report, including rival search engines and parties such as newspapers, called for a restriction on Google's ability to enter into arrangements to be the default search engine on devices and browsers. Apple was strongly opposed to such restrictions being applied to Apple products, while Google suggested that a prohibition on Google securing default positions would harm the welfare of inert consumers if they end up with a 'worse' search engine as a default.

8.22 Given the importance of defaults in search, such a restriction would be a major change in the sector. The evidence we have seen suggests this intervention may radically improve other search engines' ability to gain customers and in turn improve their algorithms, but this would need to be weighed against any potential consumer harm arising from such restrictions. Given the impact of preinstallations and defaults on mobile devices and Apple's significant market share, it is our view that Apple's existing arrangements with Google create a significant barrier to entry and expansion for rivals affecting competition between search engines on mobiles. We therefore currently see a stronger case for imposing default remedies on large

mobile device manufacturers (eg Apple and large Android OEMs) in the UK than for imposing remedies on smaller browsers.

Choice screens

8.23 The second intervention we have considered is a requirement to offer choice screens to consumers on devices and browsers, and rules regarding their design. Several search engines submitted that specific devices and browsers should be mandated to present users with a choice of search engines. This remedy would guarantee users have the opportunity to make an active choice regarding their search engine from a selection of viable alternatives at a key point in time, such as during the device or browser set up. Certain web browsers already choose to make a choice screen available to users, and there are several examples of competition authorities successfully introducing choice screens to remedy competition problems in the web browser and search engine market.[471]

8.24 Google has recently introduced choice screens on all new Android phones and tablets in Europe, following the European Commission's Android case. While the introduction of a choice screen was welcomed by several market participants, we have heard concerns regarding Google's design and implementation of this choice screen, in particular the number of choices made available, the use of descriptive text and their timing and frequency.

8.25 The evidence we have seen suggests to us that such design considerations can have a material impact on the effect of choice screens. We therefore consider that there is an important role for the DMU to play in scrutinising the design choices associated with any choice screens implemented by platforms owners, OEMs and web browsers, particularly given Google's entrenched position in this market. Such involvement will likely require the trialling of different versions to ensure the choices are sufficiently visible and comprehensible to users.

Monetisation

8.26 One of the most controversial aspects of the design of default interventions is whether restrictions should be imposed on the ability to monetise default

[471] A choice screen was introduced in Russia on Android-operated mobile devices in August 2017 following a settlement agreement between Google and Federal Antimonopoly Service of Russia. Yandex told us that this remedy, together with the FAS decision to prohibit Google from entering into exclusive default agreements, was effective at providing users with greater choice and improving competition between general search engines. In 2009, Microsoft entered into commitments with the European Commission and made a choice screen available on Windows devices between 2010-2014 which gave users the opportunity to choose from a variety of web browsers, leading to a significant uptake in the downloading of non-Microsoft browsers.

positions. In 2019, Google paid around £1.2 billion for default positions in the UK alone, and such fees can support device manufacturers' business models. Apple submitted that an intervention that restricted its ability to monetise default positions would be very costly. Samsung made similar submissions, noting that an intervention on the related point of setting defaults could limit its ability to maximise financial benefits.

8.27 If device manufacturers or providers of browsers are less able to monetise defaults, a potential concern is that they may raise their prices, harming consumers. However, monetising consumer inertia through default payments restricts rival search engines' ability to compete and entrenches search monopolies: indeed, the current system of default payments gives Google and Apple an incentive to increase market power in search and share the rents between them. Reducing rent in digital advertising by restricting monetisation should also lead to lower costs of goods and services across economy. Overall, our assessment is that default payments are likely to have a negative impact on welfare overall and that restricting them will therefore increase welfare.[472]

8.28 Market participants were highly critical of Google's decision to run an auction to determine which search engines would be made available on its choice screen on Android devices. Microsoft described the presence of an auction as inappropriate as it enables Google to use its market power in Android to take search revenues from competitors. The decision to limit the amount of options to four is alleged to have pushed up the price to participate and was described as having enhanced Google's ability to extract rent and exclude less profitable search engines, in addition to limiting the amount of potential competition to Google. This indicates that the design of the choice screen can influence the level of monetisation.

8.29 Several parties have suggested that the identity of the alternative search engines made available through the choice screen should instead be determined by non-monetary criteria, such as market share for each particular device or browser, rather than through an auction,[473] and called, more generally, for greater involvement from a regulator in the design of choice screens.

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[472] There is a trade off in the allocation of rents between the costs of devices that currently receive default payments and the costs of goods and services across the economy that use digital advertising. However, we expect that Google would only agree to make substantial default payments where the benefit to it from doing so (in terms of protecting its profits in search) exceeds the level of the payment. This, combined with the dynamic costs of restricting competition in search, suggests that benefits from search default payments are outweighed by the costs that they impose.

[473] This would be consistent with how Microsoft made its browser choice screen available after it entered into commitments with the European Commission in 2009.

Conclusion on default search engines

8.30 Overall, we consider that default payments are a very significant current barrier to entry and expansion in search, and that addressing concerns in relation to them is likely to have one of the biggest positive impacts on competition in search. Given the substantial benefits and costs involved in some of the interventions, including the restriction of monetisation, they would need to be carefully assessed and designed before implementation.

8.31 At this stage, we are confident that there is a variety of incremental reforms that would produce better outcomes than the status quo without entailing major costs (eg a requirement for choice screens on mobile devices with a design driven by the DMU). While more far-reaching reforms – such as full prohibitions on Google's ability to purchase defaults and major restrictions on monetisation – are likely to involve greater costs, they are also likely to have a more transformational effect on competition in search. The DMU would have discretion to design interventions in such a way as to maximise the net benefits for consumers. **We therefore recommend that the DMU should have the power to restrict defaults and monetisation and introduce choice screens.**

Third-party access to click and query data

8.32 In the interim report, we consulted on an intervention that would require Google to provide click and query data to third-party search engines to allow them to improve their search algorithms, thus helping to overcome Google's scale advantages in data. Our initial view was that this intervention had the potential to overcome the data advantages that Google has on account of having a much larger userbase. In particular, we thought that it should allow rival search engines to provide more relevant searches to fresh and tail queries and could in principle lead to a situation in which several search engines are able to compete on relevance even for unusual queries.

8.33 Given that we have found search data, in particular uncommon search queries, to be a valuable input into the provision of high-quality search results, and that competitors to Google currently face clear barriers to accessing this data, we believe there are significant static efficiency benefits associated with this intervention. This is reinforced by the fact that it should be possible to design the remedy in a low-cost manner, given that APIs already exist to provide search results and a bespoke API could be developed with provides large-scale access to relevant search data.

8.34 Most rival search engines expressed strong support for a remedy that provided access to Google's user click and query data and considered that it

would not be costly to implement. Google raised two concerns in relation to this remedy, regarding privacy implications and the impact on incentives to innovate.

Privacy

8.35 Google and other stakeholders, including Privacy International, expressed concern at the potential privacy implications of such an intervention. Google suggested that, since it cannot guarantee the security requirements of third parties that might receive the data, its users would be vulnerable to the disclosure of sensitive and private information, which would undermine users' trust in Google.

8.36 We agree that concerns from a privacy perspective arise if the disclosure of search data could lead to the identification of users. This risk arises if the disclosed data includes personal identifiers or enables the reverse-identification of users. We understand that this risk is heightened when information is disclosed as 'sessions', which provide a record of a consumer's searches linked together over time or by device through a single identifier.

8.37 However, with the exception of changes made to reflect users' location, search results are generally not personalised. We do not therefore believe there would be material competition benefits associated with the provision of access to user identifiers that are associated with the search data, including search history data. With regards to location data, it should be possible to provide this information on a sufficient generalised basis, such as regions or neighbourhoods, to avoid the potential disclosure of personal data.

8.38 We have discussed these issues with the ICO (Information Commissioner's Office) and other relevant parties, and these discussions indicated to us that the challenges should not be insurmountable. Overall, our conclusion is that an intervention could be designed which provided access to users' query, click, click back data and generalised location data, without requiring the disclosure of personal data. We note this is consistent with the views of the privacy search engine DuckDuckGo, which submitted that APIs already exist to provide search results and that since the data is presented in a non-user identifiable manner, privacy and consumer protections, including compliance with GDPR, are preserved.

Incentives to innovate

8.39 Google also expressed strong concerns that such an intervention could dampen incentives to innovate, as it could mean that any benefits from

improving its search results would be shared with its rivals, harming all parties' incentives to invest in indexing technologies and ranking algorithms.

8.40 We agree that the impact of this intervention on dynamic incentives needs to be given careful consideration and that there is a risk, if such a remedy included a requirement to disclose the outputs of proprietary search algorithms, which are the result of investments in search and associated infrastructure, that this could dampen incentives for Google to innovate and improve its algorithm by enabling free riding.

8.41 The overall effect on innovation is likely to be dependent on a number of factors, and in particular the specific type of data to be shared (query data alone, click and query data, click and query data and search results, or even all of these plus value-added services such as quick answers). In general, these options involve progressively greater risks to innovation. At this stage, our view is that directly sharing search results or value added service is likely to run excessive risks to innovation, while sharing query data alone may be insufficiently informative to overcome Google scale advantages in data.

8.42 We think that a regime that required Google to share click and query data with accredited third-party search engines is likely to be the most appropriate form of this intervention, since it involves sharing observed and inputted data rather than the results of Google's analysis. Google submitted that sharing clicks and queries – even without search results – could allow rivals to reverse engineer aspects of Google's search results since rivals could deduce the likely rank from the volumes of clicks that a link received. We consider that the DMU should undertake further work to consider how this intervention could be designed in a manner that enhances incentives to innovate.

Conclusion on third party access to click and query data

8.43 We consider that this intervention can be designed in a way that does not create privacy concerns. It would have a positive impact on competition through helping to overcome barriers to entry and expansion, which should provide a spur to greater innovation, although, depending on the design, there is also a risk of it leading to free riding, reducing incentives to innovate. In seeking to strike the right balance between overcoming barriers to entry and expansion and creating a risk of free riding, the DMU would need to pay careful attention to design, including precisely which data should be within scope and, potentially, whether third parties should be required to pay for access to the data. **We recommend that the DMU be given the powers to introduce such an intervention**.

Mandated syndication

8.44 Some parties submitted to us that Google and Bing should be subject to obligations to supply syndicated search results on fair, reasonable and non-discriminatory terms when syndicating to smaller search engines. In the interim report, we sought views on the effect this would be expected to have on competition, and on how terms should be set, including whether prices could be set at a level that is low enough to provide an incentive to enter the market but high enough to reward providers of search results and maintain the incentive for third parties to develop their own web index.

8.45 Parties' views on this intervention were mixed. Several search engines that currently rely on syndication agreements expressed strong support for this intervention, while other search engines expressed concerns that such an intervention would constrain the ability or willingness of competing search providers to explore new business models, or that it would dampen incentives for search engines to develop their own indices and algorithms. Google characterised this intervention as an extreme form of regulatory intervention which effectively amounts to a requirement to license its intellectual property rights or proprietary technology on FRAND terms, which should only be applied in 'exceptional circumstances' such as standard setting.

8.46 Overall, we think syndication search engines play an important role in promoting diversity and choice in search, offering many value-added services and appealing to a diverse range of consumer segments. As noted above, we think the code could be a valuable tool in assessing concerns that the terms or restrictions imposed on syndication partners are unfair. However, imposing an obligation on Google and Bing to enter into syndication agreements with third parties on specified terms is arguably, in our view, a more intrusive remedy than the click and query intervention discussed above, with lower prospects of delivering transformational change to the search market. It would, however, be open to the DMU to reconsider this intervention in the future, particularly if circumstances change.

Sequencing

8.47 Given the impact of defaults on user behaviour and Google's approach to acquiring default positions across such a significant portion of the market, we consider that a DMU should prioritise an intervention in this area. This might in the first instance be focussed on the broader application of choice screens, with the possibility of an iterative approach to testing and trialling, before more interventionist measures were considered, including direct restrictions on default positions and monetisation.

8.48 Click and query interventions could, if considered necessary, work in combination with default interventions, helping to improve quality and access to consumers simultaneously. If these interventions were successful at reducing the reliance of smaller search engines on syndication from Google and Bing, there would likely be no need to impose syndication obligations. The latter could be considered in the event that the other interventions do not have a transformative effect on competition in search, such that the main locus of competition becomes the development of value-added services on top of syndicated search results.

Interventions in social media

8.49 As discussed in Chapter 3, we have found that Facebook is subject to limited direct competition from close substitutes in the social media sector. Successful entry in this sector over the last ten years has tended to be characterised by the development of more specialised consumer services that are clearly differentiated from Facebook. Facebook faces limited competitive threat due to the strong network effects that it enjoys and which act as a barrier to expansion for its rivals and limited interoperability with other social media platforms.

8.50 We have considered various interventions aimed at addressing these barriers to expansion, focusing on measures to address the strong network effects of social media platforms by increasing the capability of users to interact with consumers active on a different platform. We have summarised how the code and mandating increased interoperability would address these concerns below. A more detailed assessment of the role of interoperability and data mobility as a solution to these concerns, along with stakeholders' views on this subject, is set out in Appendix W.

Code

8.51 The code would provide a valuable means of addressing a range of concerns we have heard, primarily relating to data and APIs. For example, under the fair trading objective, the DMU could investigate concerns expressed by third parties that they are required to provide data to Facebook when interoperating with its social media platform, which, the companies suspect, is then used by Facebook to create rival products in adjacent markets.

8.52 We consider that there would also be an important role for the DMU, under the open choices objective, to oversee the changes that Facebook makes to its platform policies and functionalities, particularly with regards to deprecating APIs and functionalities. We note that Facebook may wish to restrict

competitors' ability to develop services that compete directly with Facebook[474] and the DMU will wish to ensure that policies such as non-replication principles, and associated behaviours, are not re-introduced. This could take the form of requiring prior notice of API changes, giving market participants an opportunity to raise any competition concerns with the DMU before implementation.

8.53 Finally, under the objective of trust and transparency, the code could also be used to investigate concerns around sudden changes to the Newsfeed algorithm where these have a material effect on traffic to newspapers and other content providers. The code would also incorporate the Fairness by Design duty to ensure choice architecture facilitates informed choices.

Mandating increased interoperability

8.54 An important means of achieving greater competition between social media platforms is through increased interoperability with Facebook's large network of users. Interoperability requirements enable the positive network effects stemming from large userbases to extend to other platforms.[475]

8.55 Since interoperability involves some form of standardisation, there is a potential cost to mandating interoperability (reduced innovation and variety in respect of the functionality that is standardised) as well as a benefit. Our view is that the case for interoperability is greater in respect of functionality which is: directly helpful in overcoming identified network effects; not highly innovative (or not recently innovative); and in respect of which privacy concerns can effectively be managed.

8.56 In the interim report, we sought views on whether Facebook should be required to interoperate specific features of its current network with existing competitors, and if so which features or functions should be made interoperable against the above criteria, including:

- the ability to identify and make contact with friends or other potential contacts from other social platforms;
- the ability to post content across several platforms simultaneously;
- the ability to view posts from friends on other social platforms, or consolidate and view updates across social platforms, allowing

[474] Facebook previously included a clause in its Developer Policy which stated: 'Add something unique to the community. Don't replicate core functionality that Facebook already provides'. This clause was removed in 2018.
[475] See Appendix W for a more detailed consideration of potential interoperability interventions.

consumers to search for content across their aggregated services in real-time; and

- the ability to engage with content by commenting or 'liking' it.

Accessing connections

8.57 Several social media platforms and other respondents submitted that standardising contact data in a way that enabled users to contact their existing contacts from one platform and 'invite' them to join a new platform would bring benefits, by encouraging more downloads of rival platforms, overcoming network effects and increasing multi-homing and competition.

8.58 It is clear that measures which facilitate attracting and growing users' networks are likely to improve competition between social media platforms and it is positive that such measures already exist through Facebook. However, we found differences in the amount of access that Facebook provides to different social media platforms in terms of the 'finding friends' functionality and the ability of third-party developers to enable their users to invite their Facebook friends to use an app has varied over time.

8.59 Tools that make it easier for consumers to access their existing networks across multiple platforms could make new or smaller platforms more attractive to consumers and could reduce the extent to which same-side network effects act as a barrier to expansion in the social media sector. Therefore, interventions that extend the availability of these tools, or that limit the ability of incumbents to degrade or withdraw access to them, would help promote competition and benefit consumers in the social media sector.

Cross-posting

8.60 Facebook recognised that cross-posting functionality, which enables users to post content across different platforms simultaneously, creates value for its users as it enables users to share content from other apps to Facebook which improved their ability to build social experiences with friends, as well as generating reactions to that content. However, Facebook degraded this functionality, the 'Publish actions' API, in August 2018 and explained that this was due to concerns about safety and data privacy. With limited exceptions, including Instagram posts for which the cross-posting functionality remains unchanged, users now have to make use of the 'Share Dialogue' functionality which presents the post as a link, rather than viewing fully functional content on Facebook.

8.61 Market participants have submitted to us that this change has harmed the quality of content viewable across platforms and the ability for users on competitor platforms to reach a wider audience and promote their own products. Several market participants told us that, if delivered as fully functional content, without distortion or stripping of attribution of the original source, cross posting functionality would deliver benefits for consumers and competition.

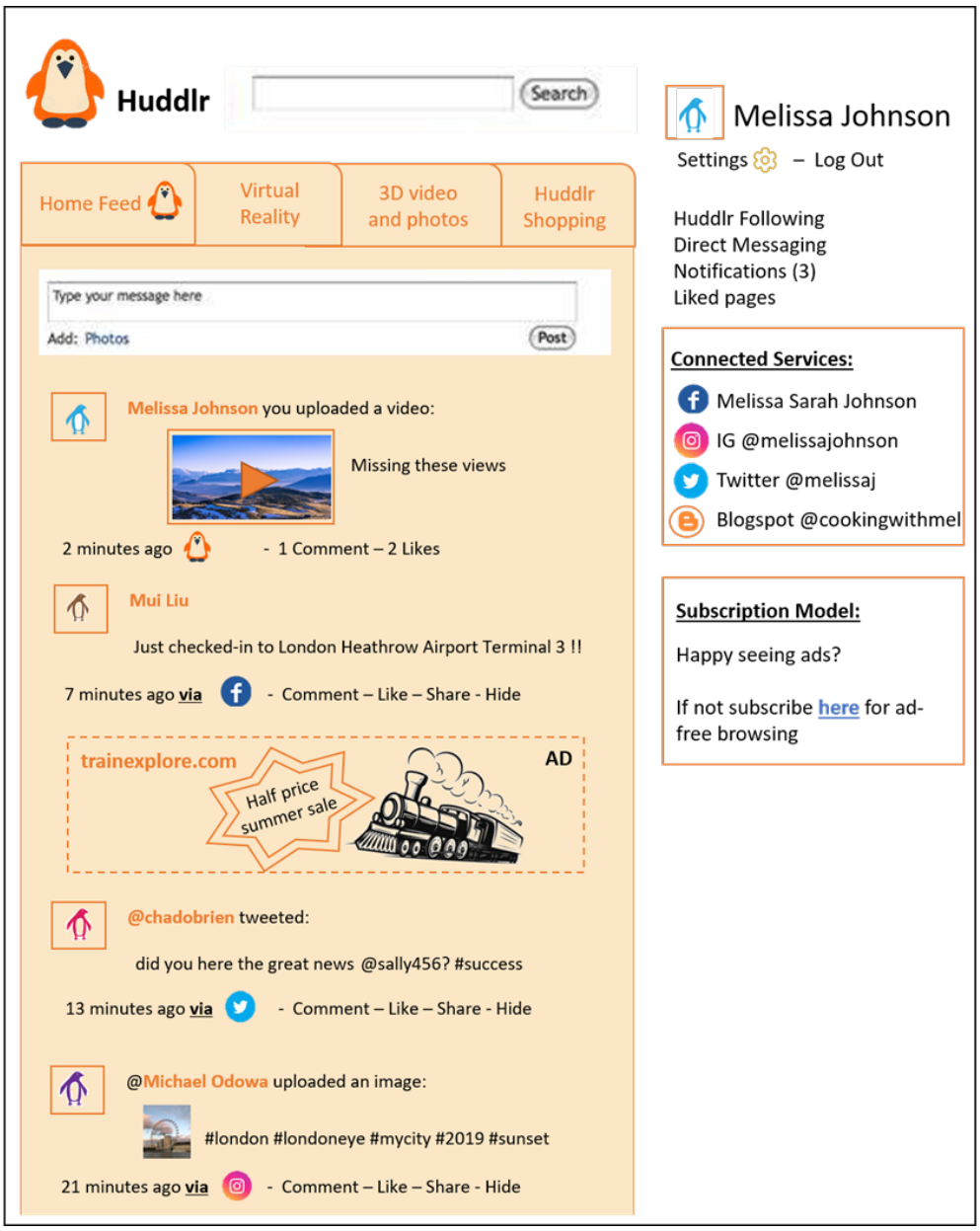
8.62 We believe there is a clear benefit to competition from increasing the extent of cross-posting functionality between Facebook and other platforms, as this would enable users that wish to share content with a wide audience to spend more time on (and share more content from) a platform that best suits them overall, rather than a platform that has the largest number of users. It would also extend a functionality that exists between Facebook products to third parties.

8.63 Any intervention such as this which allows user data to be shared across platforms would need to be carefully designed, having regard to data protection legislation, and the obligations on platforms in respect to information which includes personal data. However, following discussion with ICO, our view is that, as long as the decision to post content across platforms is user-initiated, freely given and informed, it should be feasible to design the intervention in a way which addresses the concerns highlighted by Facebook with regards to privacy.

Viewing and engaging with content

8.64 A broader form of interoperability could allow consumers to post, view and engage with content across platforms without having to switch service. For instance, a consumer could post messages that could be viewed by their contacts on different social media platforms, and view messages that their contacts originated on different social media platforms. We use the term ‘content interoperability’ to refer to this combination of functionalities. We have sought to illustrate content interoperability by designing a fabricated social media platform, Huddlr, which contains fictitious usernames and posts, as shown in Figure 8.1.

Figure 8.1: Content interoperability



Source: CMA.

8.65 Social media platforms that responded to the interim report in this market study generally opposed the idea of mandating content interoperability, with several expressing concerns that such an intervention would dampen incentives to invest and innovate, lead to excessive standardisation and risk foreclosing the market to innovative newcomers. Other participants raised privacy concerns about individuals' content being viewable across platforms without their consent.

8.66 While we consider that content interoperability has the potential to be the most effective form of interoperability intervention for overcoming network effects, we recognise the risks associated with this intervention, the need for more extensive regulatory design and the lack of support from existing market

participants. We do not therefore currently recommend its implementation, although it would be open to the DMU to reconsider this in the future, if circumstances change.

Conclusion on interoperability between social media platforms

8.67 We **recommend that the DMU be given powers to mandate interoperability**. Interventions to require greater interoperability will involve balancing a number of considerations including the competitive and consumer benefits of overcoming network effects and the potential costs of greater homogenisation of services and risks to privacy. We think that the case for interoperability is greater in respect of functionality which is: directly helpful in overcoming identified network effects; not highly innovative; and in respect of which privacy concerns can effectively be managed

8.68 At this stage, our assessment against these criteria is that there is a strong case for mandating greater interoperability in relation to finding contacts and cross posting functionalities, but that the evidence does not currently favour more ambitious forms of interoperability such as content interoperability. Given the market position of Facebook and the extent to which it benefits from network effects, we think that such interventions should apply asymmetrically to Facebook in the first instance (eg Facebook should offer a defined find friends service to users of a third-party platform, but rival platforms should not be required reciprocate). The balance of considerations is likely to change over time: the fast-evolving nature of social platforms means that the DMU will be well-placed to judge the right forms of interoperability to deliver consumer benefits on an ongoing basis.

Sequencing

8.69 We think that the focus of interventions in social media should be on the use of interoperability to overcome network effects. The code and pro-competitive interventions would have strongly complementary functions in relation to interoperability: the code would aim to maintain the ability to interoperate with Facebook where this is in the interests of competition and consumers, by assessing the effect of proposed API deprecations, while the pro-competitive interventions could be used to increase interoperability over certain functionalities where this is in consumers' interests.

8.70 At this stage, we think these measures, alongside other actions under the code, should be sufficient to expose Facebook to greater competitive pressures in the social media market. Should these measures prove unsuccessful, it may be necessary for the DMU to consider other forms of intervention using its powers.

8.71 This could include, for example, a consideration of whether some form of separation of Facebook.com and Instagram may be required. Such an intervention could, in principle, lead Instagram to compete more closely with Facebook for users, and lead to greater choice for advertisers in social display advertising. The high degree of interoperability that currently exists between Facebook and Instagram could also be retained to the benefit of users. While we recognise that a forced separation would bring significant costs and complexity, this should be a tool available to the DMU to use if necessary.

Interventions to give consumers greater control over their data

8.72 As discussed in Chapter 4, we think the balance of control over consumers' data is too far in favour of the platforms. Consumers value privacy and want control over their data, but many social media platforms do not give consumers the choice to turn off personalised advertising. Those platforms that do provide a choice use defaults and choice architecture that make it difficult for consumers to exercise this choice. This results in consumers sharing more data than they might otherwise have decided to do and having their data used for personalised advertising in a way that they may not be happy with.

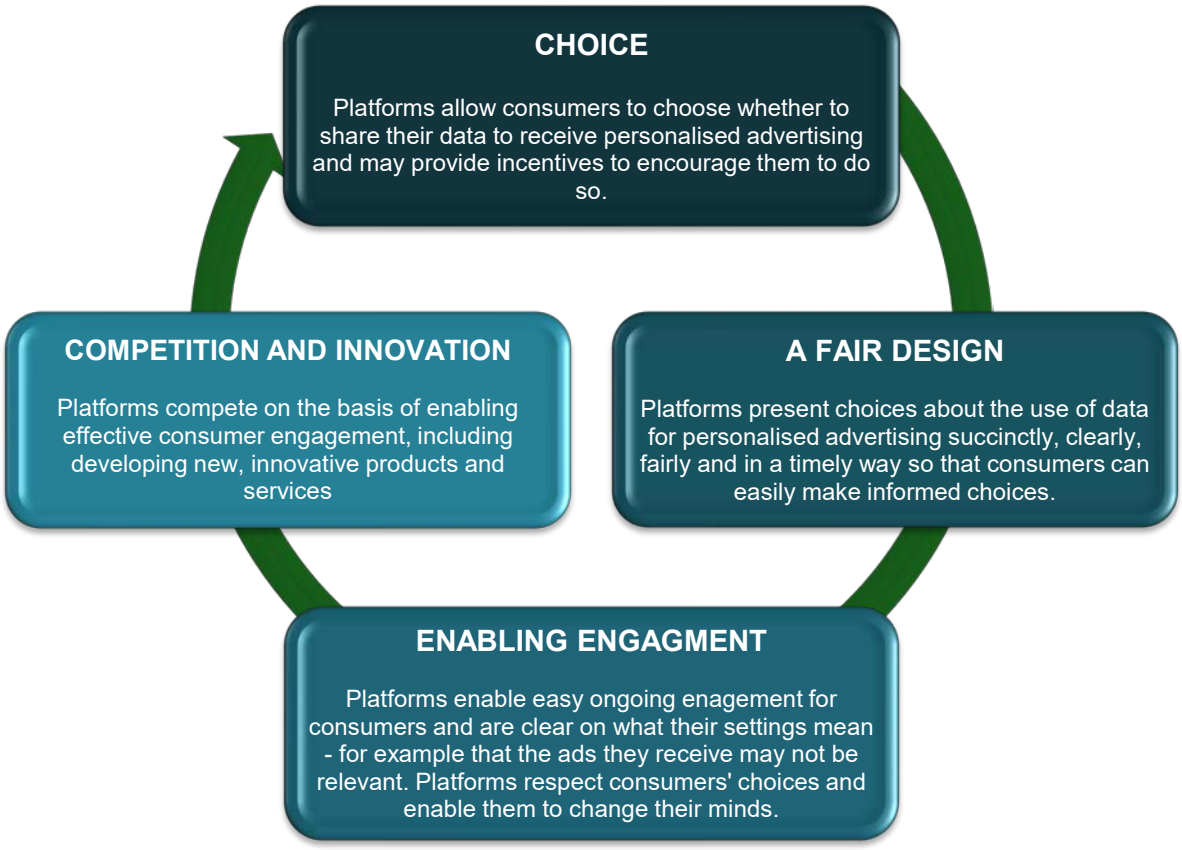
8.73 To address these concerns, we recommend that the DMU have powers to introduce two interventions that would require platforms to give consumers more choice and control over the use of their data:

- **The choice requirement remedy**: requiring platforms to give consumers the choice not to share their data for personalised advertising, but instead to receive adverts that are not personalised.
- **'Fairness by Design' duty**: placing a duty on platforms to take steps to ensure that they are promoting consumers' awareness and their ability to make informed choices about the use of their personal data.

8.74 The choice requirement would be implemented by the DMU as a pro-competitive intervention. The second intervention would be a duty under the code, and hence would apply to Facebook and Google in the first instance.

8.75 These remedies are intended to address the harms we have identified. In combination, they should establish a virtuous cycle (Figure 8.2), where platforms give consumers a fair and more informed choice, and competition benefits consumers through quality improvements and innovations, which in turn respect their control of their data.

Figure 8.2: Virtuous cycle through privacy-enhancing competition



Source: CMA.

Scope of the interventions

8.76 In the interim report of this market study, we proposed possible interventions that would require all platforms to: give consumers the option to use their core services without requiring in return the use of their data for personalised advertising (the 'choice requirement' remedy); and comply with an overarching Fairness by Design duty in the design of their data collection practices, to complement the GDPR 'data protection by design' duty (the 'Fairness by Design duty').

8.77 We also proposed some additional potential elements to these core remedies, some of which would apply to all platforms and some of which would apply only to platforms with strategic market status (SMS).[476] For the choice requirement, we proposed that: platforms with SMS could be required to set the default as 'opted out' of personalised advertising; and that all platforms would have to offer users who chose to opt out of personalised advertising the same core services as those who chose to opt in, but they could offer

[476] We discuss the concept of strategic market status (SMS) in Chapter 7.

incentives to consumers to opt into the use of their data for personalised advertising. For the Fairness by Design duty, we proposed that platforms with SMS would be required to trial and test their choice architecture.

Focusing the remedies initially on platforms with SMS

8.78 We received a range of responses on which platforms should be required to implement the remedies – notably whether the remedies should be applied to platforms with SMS or to all platforms. Some respondents considered that it would be appropriate to apply them widely given the widespread practices we identified, but others suggested that it would be burdensome and unnecessary to apply them to smaller firms. Publishers, in particular, were concerned that it would be disproportionate and could be detrimental to online news publishers that are funded by advertising to apply the Fairness by Design duty to them.

8.79 In this market study, we have identified concerns in the practices of a range of market participants regarding how effectively consumers can control the use of their data for personalised advertising. However, having carefully considered responses and the evidence we have seen, as well as the most effective way to implement the remedies, we conclude that in the first instance, the DMU should apply all the remedies only to platforms with SMS.

8.80 In introducing remedies it is important to consider their proportionality and potential impact on platforms. In relation to the Fairness by Design duty, the initial development and application of changes to platforms' choice architecture will involve some costs. Imposing such developmental costs on new platforms could hinder the entry or expansion of much smaller platforms which may act as a competitive constraint on platforms with SMS. We consider the impact of the duty will be manageable for larger and well-established platforms which already carry out some testing and trialling. Smaller platforms would continue to be subject to the existing regulatory framework, but we do not think it appropriate at this stage to make them subject to the DMU's ex ante regime.

8.81 Furthermore, we consider it reasonable to prioritise the application of both the choice requirement and Fairness by Design duty according to the extent to which firms hold and use data on consumers, and the extent of their market power. Google and Facebook are used by very large numbers of consumers and use very substantial volumes of their data. In addition, as noted above, where platforms have SMS, consumers often have little meaningful choice of whether to use the platform, resulting in an imbalance of power between controller and consumers which these interventions are intended to address.

8.82 We therefore consider it reasonable to focus both the choice requirement remedy and the Fairness by Design duty on platforms with SMS in the first instance so that the DMU can review and refine their implementation and assess the impacts before considering wider application. While other platforms would not initially be subject to the remedies, they and the SMS platforms would still need to comply with the requirements of the GDPR and DPA, including the fairness and transparency provisions and the requirements for data protection by design.

The choice requirement intervention

8.83 In Chapter 4, we set out the factors which undermine consumers' choice and control over the use of their data and the harms caused to consumers as a result. We noted that several social media platforms, including Facebook, do not give consumers control over the use of their data by allowing them to turn off personalised advertising. Rather, accepting personalised advertising is a condition of using the platform.

8.84 This lack of choice and control harms consumers. Although some consumers may be relaxed about their data being collected and shared for personalised advertising, others express concern. As set out in Chapter 4, the evidence we have reviewed suggests that, as consumers learn more about personalised advertising, they typically become more uncomfortable with it. Consumers also express concerns about their lack of knowledge and understanding about data processing and the fact that the processing of their data takes place without their control.

8.85 In addition to causing direct harm to consumers, lack of choice and control over users' data can also exacerbate the competition issues that we set out in Chapters 3 and 5. We found that data acts as a barrier to entry on both the user side and the advertising side of the platforms. Consumers' lack of control of the use of their data means that the large platforms are able to entrench their competitive advantages over potential entrants, leading to harm to competition over time.

8.86 In response to the interim report, Facebook argued that consumers can in fact exercise choice by choosing not to use a platform if they do not want to receive personalised advertising. However, we have shown in Chapter 3 that Facebook has significant market power as a social network. It is a 'must have' platform for many consumers. These consumers do not have a realistic option of switching to an alternative provider that does not use personalised advertising if they want to stay in touch with their friends and family, so the only way in which consumers of platforms with SMS would be able to exercise

genuine choice would be for them to be given the option of using the platform without personalised advertising.

8.87 In view of this, we **recommend that the government introduces legislation to give the DMU the power to require platforms to provide consumers with the choice not to share their data for the purposes of personalised advertising ('the choice requirement'**).[477] This would include **powers to influence the presentation of the choice including defaults**. This would be a pro-competitive intervention and hence subject to DMU assessment and consultation before application, as described above.

Definition of personalised advertising in the choice requirement

8.88 The platforms we have addressed in this market study collect and use consumer data for a variety of reasons. Our proposed choice requirement would focus specifically on enabling effective consumer control of the collection and use of personal data as defined in the GDPR[478] for the purpose of serving personalised adverts to individual consumers.

8.89 By personalised advertising we mean the practice of targeting advertising to a consumer, based on his or her characteristics and previous browsing activity, ie data collected on the consumer's behaviour over time is used to determine the advert they see. The choice requirement would not apply to the use of contextual information for serving adverts to consumers (including where that contextual information reflects personalised content which has been based on the consumer's personal data). It would also not prevent platforms from collecting and processing personal data for other purposes, which could include improving their services and measuring the effectiveness of advertising.

8.90 Where consumers choose not to share their data for personalised advertising, platforms would still be able to serve consumers with non-personalised (eg contextual) advertising as a pre-condition of the consumer's use of the site and to collect data for the purposes of measurement and attribution. The platforms would be able to collect user data even if a consumer opts out of receiving personalised ads, for example to evaluate campaigns or to offer the consumer a personalised service. The difference will be that consumers will

[477] The choice requirement extends to the use of data for the purposes of personalised advertising, but relevant data may be collected for other purposes. Switching off personalised advertising may not therefore result in a reduction in the amount of personal data collected, due to the need for platforms to collect data from consumers for operational purposes.
[478] Personal data only includes information relating to natural persons who: can be identified or who are identifiable, directly from the information in question; or who can be indirectly identified from that information in combination with other information. Pseudonymised data can help reduce privacy risks by making it more difficult to identify individuals, but it is still personal data. See: ICO, What is Personal Data?

be able to exercise a specific choice about whether their data is used for personalised advertising.

8.91 As we note above, GDPR, the Data Protection Act 2018, and the Privacy and Electronic Communications Regulations 2003, which together provide the framework for the lawful, fair and transparent processing of personal data, will continue to apply to all platforms.

Presentation of the choice and conditionality

8.92 There are a number of important design choices that the DMU would need to consider in implementing this intervention. Key amongst these are how the choice is presented and which conditions may be attached by the platform to the choice over personalised advertising.

8.93 There are several ways in which the choice might be presented to consumers. For example, platforms could present consumers with a choice screen with which consumers would have to engage before they could continue to use the platform. A further possibility would be for platforms to impose a default choice and require consumers to access their settings to change the default.

8.94 Whether a default is used, and if so whether the default is to receive personalised advertising or not, is likely to have an important bearing on the overall impact of the remedy. For example, we note that Facebook introduced an 'Off-Facebook Activity' to its users in 2019, with users required to opt out on their settings page if they wanted to exercise this option. As we report in Chapter 4, we found that a negligible percentage of users who were given this option at the end of 2019 exercised it.[479]This is another clear example of the power of defaults in influencing decision making. We note also that recent qualitative research by Which? found that consumers had a clear preference to opt-in, rather than opt-out, to data collection for targeted advertising.[480]

8.95 Setting the default to 'opted out' of personalised advertising would maximise consumer protection, particularly for those that cannot or do not wish to engage. But, perhaps more importantly, setting a default opt out (ie consumers would not have their data used for personalised advertising unless they actively agreed to it) would reset the balance between platforms and consumers, putting the onus on the platform to do more to engage with

[479] The feature was only rolled out to a sample of users towards the end of 2019.
[480] Which?, Are you following me? - Consumer attitudes towards data collection methods for targeted advertising, June 2020.

consumers to explain the benefits that could arise from personalised advertising, and to encourage consumers to make an active choice.

8.96 Regarding conditionality, in order to ensure that consumers are provided with a meaningful choice over whether to share their data for personalised advertising, those who decide not to share their data should still be able to access at least the basic, or 'core', service provided by a platform.[481] The consumer is likely to continue to see ads, but these will not be personalised to them. However, we think that it is important that platforms should be able to offer incentives to encourage consumers to agree to accept personalised advertising, since this would provide a means by which consumers can benefit more from the value of their data, drive greater consumer engagement and promote competition. Such incentives could take various forms, for example, a reduction in the number of adverts shown or special offers.[482] We propose that the DMU work with the ICO to consider what incentives platforms could legitimately offer to users in return for using their personal data for the purposes of personalised advertising.[483]

8.97 Discretion over how and when to use the choice requirement powers and how to design the requirement will lie with the DMU. Our expectation is that any decision will need to be informed by further analysis by the DMU concerning the impact of different design choices on consumer protection and the financial implications for platforms.

Benefits of the choice requirement

8.98 The choice requirement would directly address the lack of choice and control outlined above. Consumers would be able to choose whether or not to receive personalised advertising. Consumers who were relaxed about the collection and use of their data and who preferred to receive personalised advertising would continue to be able to do so. Conversely, consumer with a preference not to have their data used for personalised advertising would be able to exercise that control. Giving consumers the opportunity to make this choice on an individual basis recognises that consumers may hold differing views about sharing their data for personalised advertising and enables them to give effect to their personal preferences.

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[481] What is meant by 'core service' will vary by platform but we envisage that it will encompass the basic service(s) provided. For example, on a social media platform we expect that the consumer would be able to engage with friends, family and groups and see the usual layout of updates and the only aspect that would change if they turned off personalised advertising would be that they would see non-personalised advertising.
[482] However, as described above, there should be no detriment for consumers who have opted out of having their data used for personalised advertising.
[483] We acknowledge that there may be tensions between offering incentives and GDPR, in particular where the legal basis relied upon is freely given consent.

8.99 We have noted that one reason given by consumers for not engaging with privacy controls and settings was a feeling of powerlessness on the part of the consumers: that firms would find a way of collecting their data anyway. Giving consumers an explicit choice could help to reduce the perception of there being a power imbalance between the consumer and the platforms.

8.100 Importantly, depending on the way in which the choice is presented and the defaults used, the choice requirement could shift the bargaining relationship between consumers and platforms substantially, putting the burden on platforms to engage and persuade consumers rather than encouraging inertia. In turn, this could lead to a strengthening of competition more generally and may lead to platforms offering consumers a greater share in the value of their data to encourage them to accept personalised advertising.

Potential costs and unintended consequences

8.101 Facebook has submitted to us several arguments against imposing a choice requirement to allow users to turn off personalised advertising. Broadly speaking, we consider that the key arguments can be grouped into a number of themes:

- Most consumers prefer relevant personalised advertising over untargeted advertising, so a requirement to offer an option of no personalised advertising could lead to the majority of consumers being substantially worse off.
- The alternative to personalised advertising is contextual advertising and this is no less data intrusive and could be more offensive or annoying for consumers so that the consumer experience would be worse.
- Advertisers – and in particular SMEs – benefit from personalised advertising because they can target consumers for whom their advertising is more likely to be relevant, reducing wastage and increasing the overall value of advertising.
- Personalised advertising is a core part of some platforms' consumer offering, with targeted adverts being integrated with personalised organic contact (eg in Facebook's News Feed).
- Personalised advertising allows the platforms to fund valuable services which benefit users; any remedies that threatened to reduce these revenues might lead to a reduction in innovation and benefits for users.
- The choice requirement to allow consumers to turn off personalised advertising would have a disproportionate impact on social media

platforms and other display advertisers which use personalised targeting relative to, for example, search engines for whom similar value can be captured through the search query (ie in a contextual rather than personalised manner).

8.102 We have considered carefully whether these arguments suggest that the choice requirement could lead to unintended consequences, and if so whether these might outweigh the benefits of intervention.

Consumers' preferences for personalised advertising

8.103 Research suggests that a majority of consumers prefer 'relevant adverts', and we recognise that some consumers will be relaxed about receiving personalised advertising. As a result, consumers might lose out if they no longer received personalised advertising following the introduction of a choice requirement. However, in practice we think that this risk of harm to consumers is likely to be small, for two reasons.

8.104 First, the choice requirement would not ban personalised advertising based on consumers' personal data, but simply require platforms to give consumers a choice about whether to agree to it. If consumers do value personalised advertising, they are likely to choose it when given a free choice.

8.105 Second, non-personalised advertising is not necessarily 'irrelevant' advertising. Where consumers choose to opt out of sharing their data for personalised advertising, this would still allow platforms to provide contextual advertising.

Contextual advertising is data intrusive and annoying

8.106 Although contextual advertising may involve the collecting, parsing and interpreting of more data about the content a user is browsing than was historically the case, it is not based on personal data collected from a wide range of sources: previous browsing history, location, age, gender, previous purchase history etc. As contextual advertising is based on the content a user is looking at, it is still likely to reflect their interests and so can still be relevant to the consumer.

Advertiser benefits from personalised advertising

8.107 Advertisers may benefit from being able to serve personalised advertising to consumers as a result of less 'wastage' since an advert would only be shown to consumers who are likely to be interested in the product or service and therefore could be more likely to purchase.

8.108 However, we are not suggesting that platforms should be prohibited from offering personalised advertising to their consumers. Many customers are likely to continue to receive personalised advertising, either because they actively prefer it or because of an incentive Facebook has given them. Where consumers do not opt out of sharing their data, that provides a signal to platforms and advertisers that they are happy to receive personalised advertising and may be less likely to engage in ad avoidance strategies. These consumers could therefore in principle be more valuable to advertisers.

8.109 In addition, we envisage that contextual advertising will become more sophisticated over time, which would again reduce the potential reduction of advertising revenues. Overall, we accept that there may be some reduction in value of advertising – if significant numbers of users were to opt out of personalised advertising, notwithstanding any incentives offered by Facebook. However, as we set out below, this would depend on the eventual choice model adopted, and would be subject in any case to trialling to assess the impacts.

Personalised advertising as a core part of the platforms' offering

8.110 Facebook submitted that personalised advertising is a core part of the user experience. For example, where curated content is provided through the News Feed, having irrelevant adverts might damage the product and the user experience.

8.111 We recognise that, to the extent that consumers prefer to receive 'relevant' personalised adverts, the platforms would want to provide them. However, the choice requirement would not prevent this; it would simply offer consumers the choice. We have seen no evidence that consumers perceive or value the social media offer as a combined one of 'personalised content plus personalised advertising' and note that social media platforms do not describe their services in this way.

8.112 Some respondents also suggested that personalised advertising is an integrated and well-understood part of the social media platforms' contract with users to provide personalised content plus personalised adverts, which cannot be disaggregated. They suggested therefore that there is no need for consent to share data for personalised advertising specifically since it is covered under the terms which consumers are asked to accept when they sign up.[484] However, our choice requirement remedy will complement existing

[484] As we note in Chapter 4, the ICO, and EDPB (European Data Protection Board), have expressed doubt that contract or legitimate interests are likely to provide appropriate legal bases for the processing of personal data for

data protection and PECR requirements, but is agnostic as to the legal basis for consumers' personal data to be processed to serve personalised advertising. We recommend that a choice should be given to consumers, and that will also apply to platforms which currently base the processing of personal data to serve personalised advertising on contractual agreements with consumers.

Personalised advertising funds the services from which consumers benefit

8.113 We recognise that users benefit from many of the services provided by the platforms for no direct monetary cost and that platforms rely on digital advertising to fund these services. Therefore, there is a concern that introducing a choice requirement would lead to a reduction in revenues for platforms, and hence a worsening of service to consumers.

8.114 We have reviewed evidence that personalised targeting increases the value of advertising inventory. For instance, our analysis of a randomised control trial (RCT) carried out by Google indicates that publishers currently derive higher advertising revenues from being able to serve personalised advertising compared to advertising that has cookie IDs disabled. As set out in Appendix F, our analysis of Google's RCT data suggests that the short-run effect of blocking third-party cookies on publisher revenues could be to decrease short-term publisher revenues by 70% of the average revenue per query in the control group, which approximates business as usual during the study period. However, for the reasons given in the appendix, we think this is an overestimate of the long run effect of restricting personalised advertising, as the RCT analysis focuses on the very short-term impact of publishers not being able to offer personalised advertising while competing against others who can, and without being able to adjust their strategy.

8.115 As discussed above, the choice requirement would not remove personalised advertising; it would simply make it optional. We would expect many consumers to choose to continue to receive personalised advertising. We have also explained how contextual advertising and other approaches would allow platforms to continue to earn revenues from those that have opted out of personalised advertising. We accept that there may be some reduction in revenues from advertising, but SMS platforms would be able to manage the risk to their revenues through offering greater encouragements to users to opt into personalised advertising.

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personalised advertising as currently practised. For a contractual basis, clauses about advertising are likely to be ancillary to the main purpose of the contract and therefore would not be necessary for the performance of the contract.

8.116 Further, our recommendation would involve imposing a choice requirement only on firms with SMS. Specifically in relation to Facebook, our analysis in Chapters 2, 3 and 5 has shown that it has significant market power in social media and in display advertising and that it has been able to earn profits which are significantly in excess of its cost of capital. As a result, we believe that Facebook's services would continue to be highly profitable even if there was a reduction in revenue as a result of some consumers choosing not to receive personalised advertising. Both Facebook (in its offer of incentives to users) and the DMU (in amending the design of the intervention) would be able to adjust their approach in the event that revenue losses were higher than expected.

Choice requirement would have a disproportionate impact on Facebook

8.117 Facebook has noted that a choice requirement would have a disproportionate impact on social media platforms, and Facebook in particular, when compared to Google, which already offers consumers the option of turning off personalised advertising. Facebook argues that this is because the value of personalised advertising is significantly less to Google, as the primary source of value in search advertising is the contextual search query, rather than data about characteristics of the individual making the search.

8.118 We accept that the value of personalised advertising does vary between search and display advertising, as discussed in Appendix F. As a result, the choice requirement would indeed have a more significant impact on platforms using display advertising. However, as set out in Chapter 5, we think that there is limited competition between search and display advertising in practice. Therefore, we would not expect this to have a significant negative impact on competition, and hence consumer outcomes.

Conclusion on the case for introducing a choice requirement

8.119 For the reasons set out above, we think there is a strong argument for introducing a choice requirement on platforms with SMS, requiring them to offer consumers the choice to opt out of personalised advertising. This would address one of our key concerns about lack of consumer choice and control, and also help address some of the competition barriers we have identified.

8.120 As we note in Chapter 4, if there were more choice for consumers, then there could be scope for more competition between platforms as platforms would need to compete more actively to persuade consumers of the benefits of personalised advertising. There would also be scope for other platforms to compete for consumers on the basis of alternative business models offering different options in respect of the privacy choices and the services that they

offer. At present, consumers do not experience the full benefits of competition in terms of more quality, choice and innovation. We therefore consider that the intervention will give rise to important consumer welfare benefits.

8.121 This intervention would have an impact on platforms' business models and would require careful design. The DMU would have discretion over the implementation of the requirement, which could result in a range of options for consumers including, for example, platforms offering an option for consumers who opt out of personalised advertising to receive their full service but with more non-personalised ads; or to receive a core service only; or to receive the full service but not receive the incentives provided to consumers who opt in.

8.122 We accept that there are some potential costs of such an intervention to consumers, advertisers and the platforms themselves. However, for the reasons set out above, we consider that the costs and risks could be effectively managed by the DMU in the design and implementation of the intervention and periodic assessment of its impacts. In particular, the DMU would have discretion over how and when to use the choice requirement powers and how to design the requirement. We expect that its decisions would be informed by further analysis, including testing to understand the impact of different design choices on consumer protection and the financial implications for platforms.

The Fairness by Design duty

8.123 For consumers to have genuine control over their data, they must not only have a choice in principle as to whether to provide or withhold access to it – they must also find it easy to exercise that choice freely in practice.

8.124 Chapter 4 explained natural consumer biases and how platforms' choice architecture may exacerbate these, with the effect of discouraging consumer engagement so that users are more likely to share their data. These include default settings and presentation of information and options that nudge consumers into sharing data. Consumer engagement with privacy controls is correspondingly low.

8.125 Having considered responses and examined the evidence in more detail in Chapter 4 and Appendix Y, we consider that there is a strong basis for taking the action we proposed in the interim report of this market study. It is unreasonable to expect consumers to have to hunt for information, interpret complex material and engage with complicated settings. The burden should be on platforms to present information fairly and make the process as straightforward as possible so that there are no barriers to consumers engaging effectively.

8.126 We therefore **recommend that the government empower the DMU to require platforms to meet a 'Fairness by Design' duty.** We recommend that the duty be applied initially only to platforms with SMS, and that this duty would form part of the Trust and Transparency Principle in the code, taking the form of a high-level principles-based requirement to ensure that consumers can make informed choices: 'To ensure that choices and defaults provided by the platform are presented in a way that facilitates informed consumer choice over the use of their personal data'.

8.127 SMS platforms would be required to demonstrate compliance with the duty to the DMU – ie that they were actively monitoring user knowledge and levels of engagement; and taking appropriate steps to improve these metrics through trialling and testing alternative approaches and improving their choice architecture. Measures which improve consumer engagement, knowledge and understanding will mean that consumers are better placed to express their privacy preferences on a case by case basis. We think this will have a positive impact on consumers and will also have pro-competitive effects by enabling consumers to make more informed choices and encouraging more innovation in terms of effective choice architecture.

Complementarity with Data Protection by Design

8.128 The GDPR has a 'data protection by design and default' duty that requires firms to process data in accordance with a set of principles which include fairness and transparency (Article 5). Data protection by design requires data controllers to put in place appropriate measures to implement the data protection principles and to integrate safeguards to meet the GDPR's requirements and protect individual rights. The GDPR is not prescriptive about how this can be achieved, and the ICO guidance suggests approaches that may be appropriate depending on the circumstances.[485]

8.129 We consider that the Fairness by Design duty will complement the GDPR duty. First, it will initially be applied only to firms with SMS, although in the long run it could have wider application. Second, Fairness by Design would also be used to inform other elements of platform design beyond the use of personal data, such as sales interfaces. Third, it will also include an ongoing requirement for trialling and testing, with the DMU setting out what steps are needed to test and trial choice architecture and iterating to improve it.

[485] These include offering transparency tools, strong privacy defaults, user-friendly options and controls and respecting user preferences. We note, for instance, in Chapter 4 that the ICO has produced the Age Appropriate Design Code which includes requirements for transparency, for default settings to be set to high privacy by default and for not using nudge techniques to lead or encourage children to provide unnecessary personal data or weaken their privacy protections. See: ICO, Age Appropriate Design: A ode of practice for online services

8.130 The ICO in its response to the interim report agreed that the interventions put forward in the market study that have the objective of giving consumers greater control of their data would complement the GDPR.

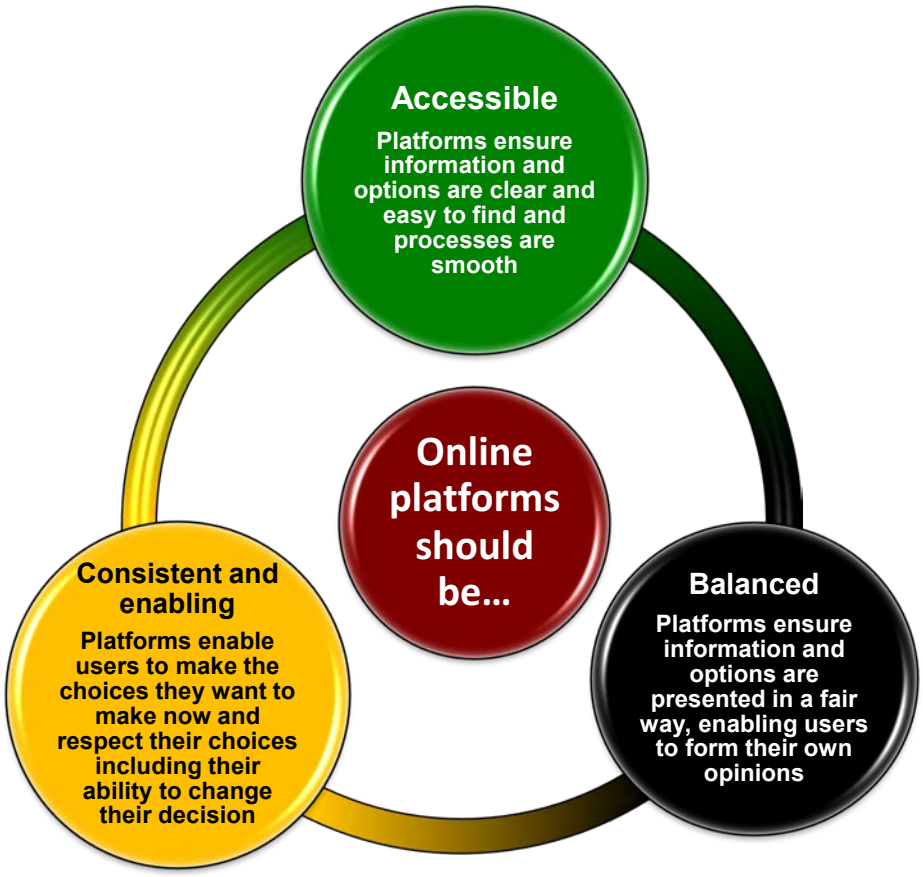
Applying the Fairness by Design duty

8.131 We recommend that the DMU adopt high-level principles rather than defining detailed requirements to ensure that the duty can flex to new market and technological developments. It would be for the DMU to set the high-level basis of compliance with this principle. We address above how we propose the DMU enforce the code and penalise non-compliance.

8.132 The proposed Fairness by Design duty addresses the evidence presented in Chapter 4 and Appendix Y, which shows examples of platforms' choice architecture which are likely to hinder users from engaging with exercising control. Three broad behavioural themes emerged from this evidence: (1) the need for information and options to be accessible, (2) the need for information and options to be presented in a fair, balanced way; and (3) the need to users to be able form preferences and act upon them in a consistent way. To address these three themes, we conducted behavioural analysis to identify relevant psychological mechanisms that would drive consumer behaviour.[486]

8.133 Broadly, we propose that, to comply with the duty, platforms should, in presenting information and options about personalised advertising, treat users fairly by being Accessible, Balanced, Consistent and Enabling (ABC) – see Figure 8.3.

Figure 8.3: Fairness by Design – High Level Responsibilities



Source: CMA.

8.134 To address the harms we identified in Chapter 4 and provide further clarity to platforms about the expectations on them under the Fairness by Design duty, the DMU could set examples of what these expectations mean in practice in the form of guidance. For instance:[487]

- **Accessible** – Ensure information and choices are clear and easy to access so that consumers can easily review and adjust settings.
- **Balanced** – Present all information and options in a fair and balanced way, using the same colours, fonts, language and other design features across all options.
- **Consistent and enabling** – Periodically remind users of their current choice settings and available controls.

8.135 We recognise that there could potentially be a negative impact on individual platforms that had 'unfair' privacy practices or made it difficult for users to find privacy controls / settings. Better informed and more engaged consumers will

[487] We provide some further potential examples in Appendix Y.

be able to better express their privacy preferences and so choose to avoid such practices and may switch to alternative platforms where available. As a result, such platforms would be likely to suffer from a reduction in the ability to offer personalised advertising to all their customers, which could lead to a loss of revenue. This would, however, provide an incentive to improve choice architecture.

8.136 Overall, we consider that the merits of the Fairness by Design duty in terms competition and consumer protection benefits outweigh any potential negative impacts.

Trialling, testing and monitoring

8.137 The principles which underpin the Fairness by Design duty are aimed at protecting consumers and promoting greater user engagement with privacy policies and settings. In this context greater user engagement includes:

(a) Better access to information about the context of the privacy choices presented to them;

(b) Better user comprehension and understanding of the consequences of the privacy choices available to them; and,

(c) The ability to make active choices in respect of their privacy preferences in any given situation.

8.138 As we note in Chapter 4, overall, we expected to see evidence of a more extensive and rigorous evidence base of user research in relation to privacy and data sharing issues. Therefore, to ensure that Fairness by Design is having the desired impact on outcomes for users, we recommend that the Duty be supplemented with a trialling and testing and monitoring regime.

8.139 It will be for the DMU to decide how best to implement the duty. We suggest that it would work with platforms to develop and implement a framework for such a regime. This would involve taking advantage of the analytical capabilities and huge reserves of data available to the largest platforms to develop the best approaches to empower and protect consumers.

8.140 Trialling and testing by platforms will enable the platforms and the DMU to understand the impact of the duty and changes proposed by the platforms. Trialling and testing could also be extended to adopt an inclusive approach to sampling – for instance, including users with vulnerabilities.

Types of testing / trialling

8.141 The actual trialling and testing would be carried out by the platforms themselves but would be subject to monitoring by the DMU.[488] Platforms would be expected to put in place systematic, hypothesis driven trialling and testing programmes – in line with good practice – to evaluate changes in consumers' knowledge, understanding and engagement with the privacy choices available to them over time.

8.142 Key metrics would cover the extent of informed choice. Greater engagement would mean consumers understand the choices available to them; and are able to make a choice that matches their preferences. In terms of measuring user engagement, it is important to emphasise that we would not necessarily expect to see large numbers of consumers opting out of receiving personalised advertising, changing their privacy settings or requesting access to the data that is held by platforms.

8.143 In addition, we envisage that platforms would collate specific behavioural data including consumers' choices and the changes in their choices over time as part of testing and trialling, as well as providing data to the DMU to enable monitoring. It will be particularly important to collect this data in respect to the use of default settings – for instance, if consumers opt in / out when they initial sign-up, how they change their choices over time and how they respond to prompts.

8.144 We suggest the DMU explores with platforms, appropriate forms of trialling and testing that are robust and practical to implement at scale. We would expect platforms to use a range of different types of testing according to the issue under consideration. We consider this further in Appendix Y.

8.145 We note that platforms already use in certain contexts A/B testing (ie randomised control trials of alternative design patterns in the live platform) and qualitative (eg user research on proposed alternative designs). There are also a range of alternative research and experimental approaches to understand engagement that are not currently utilised by platforms.

8.146 Over time, the DMU could identify and promote examples of good practice in terms of promoting user engagement and identify measures which do not work in practice so that lessons can be learnt.

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[488] We noted in Chapter 4 that platforms also need to comply with relevant equality legislation. The DMU may wish to engage with the Equalities and Human Rights Commission where the accessibility and equity issues overlap with choice architecture design of platforms.

Implementation and monitoring

8.147 We would expect that the process of establishing a trialling and testing regime will be an iterative approach. That is, the trialling and testing regime should build on work already carried out by platforms but that there should be scope for the regime to adapt and change over time.

8.148 We also anticipate that the DMU would monitor the impact on consumer engagement over time to establish the effectiveness of the measures it takes. We consider some potential options for this in Appendix Y.

Possible wider application of the remedies

8.149 The choice requirement and the Fairness by Design duty focus specifically on consumer users of the platforms and how their data is used for personalised advertising. Given the scale and importance of personalised advertising and heavy use of consumer data in its delivery, these remedies could have a significant impact in addressing the harms we have identified.

8.150 We envisage that the Fairness by Design approach will have a wider application than that we have set out in this section:

- In particular, we note in Chapter 5 how self-service interfaces for advertisers exhibit similar choice architecture techniques, such as unbalanced text and default options that seek to maximise spend. We therefore propose below that a Fairness by Design Duty could also be applied to advertiser users of the platforms.

- Furthermore, we think that the DMU could be given general powers that, to complement data protection law, enable it to consider wider application of similar remedies to other sectors that make use of consumer data for personalised advertising – such as online retailers, service providers (airlines, dating sites, secondary ticketing, etc), gambling and gaming sites. It could also address tools such as Consent Management Platforms (CMPs).

- Finally, whilst we have focused on the use of data for personalised advertising, this is part of a much wider commercial use of such data – for instance to inform product development; comparisons and quotes; and logistics. How firms use consumers' data more generally raises similar and enduring issues around consumer privacy concerns and effective consumer control.[489] Our findings and recommendations in terms of

[489] See: CMA (2015), 'Commercial use of consumer data' (2015).

choice and fairness by design, therefore, potentially have wider relevance which the DMU may want to take forward with the ICO and other regulators.

8.151 We therefore also think that, when legislating, the government should consider whether to give the DMU the flexibility to widen the application of the remedies we identify in this study to other sectors and uses of personal data – tailoring the approach as needed.

Interventions in digital advertising markets

8.152 As set out in Chapter 5, our view is that Google's and Facebook's market power in the sale of their own advertising inventory could lead to worse outcomes for advertisers in search and display advertising respectively, ultimately leading to worse outcomes for consumers. The main sources of this market power come from barriers to entry and expansion on the consumer side in search and social media. We have set out above the possible ways that these barriers might be addressed. However, Chapter 5 also identified specific features of digital advertising markets which exacerbate the concerns about outcomes for advertisers and publishers.

8.153 Google and Facebook have both the ability and incentive to exploit their market power in search and display advertising respectively to increase revenues. For example, the evidence we have reviewed suggests that Google has charged higher prices than Bing and that Facebook has been able to increase revenue in recent years through higher ad loads.

8.154 In the open display market, we noted Google's strong position stemming from its access to advertising inventory and user data, combined with its very high share of supply in publisher ad serving and other parts of the ad tech chain. This leads to potential concerns about: conflicts of interest between Google's role on the buy and sell sides of the open display market; and the potential for Google to leverage its market power from its owned and operated advertising inventory into the open display market and to foreclose potential competitors in advertising intermediation.

8.155 We also identified a series of broader issues relating to lack of transparency and the data advantages of the large platforms which could limit competition in digital advertising:

- The large platforms' processes for auctioning inventory are not transparent and there is limited ability independently to verify the effectiveness of advertising because of lack of access to data.

- There is a lack of transparency over fees in the open display market, which may limit the extent of competition between intermediaries and lead to publishers earning lower revenues from selling advertising inventory.

- The data advantages of the large platforms in targeting advertising means they can monetise their content much more effectively than other platforms/publishers, increasing their market power.

- We identified a range of concerns that data protection regulation is interpreted and implemented by the large platforms in a way that entrenches their own competitive advantage.

8.156 In this section we discuss a range of interventions to address these concerns:

- the use of the code to manage the potential for exploitative and exclusionary behaviour by Google and Facebook, and increase trust and transparency in digital advertising;

- separation and access interventions to address concerns around Google's conflicts of interest in open display; and

- data-related interventions, to address concerns about transparency and unequal access to data between SMS platforms and other market participants.

Code

8.157 On the basis of the analysis carried out in this study, we think that the code of conduct would be an effective tool to address a wide range of the concerns we have identified in digital advertising. These concerns are often varied, detailed and technical in nature, requiring rapid case by case assessment to resolve and, in many cases, follow up action and regular monitoring. Such concerns are therefore more suited to ongoing control through the code. Below we summarise which of the concerns could be considered under each of the three main code objectives, drawing on Appendix U.

Fair trading

8.158 Under the fair trading objective, the code could be used to address concerns around the potential for auction manipulation, particularly where platforms exercise considerable discretion on bidders' behalf, such as through automated bidding, or where they restrict how customers can use platform services, such as through changes to matching functions.

8.159 The code could also be used to address concerns over the terms which the platforms apply which limit the ability of publishers to monetise content when hosted within the platforms' ecosystems. The DMU could write guidance on the application of the code which could specify reasonable behaviour by platforms when hosting publisher content and the associated digital advertising in format such as AMP or IA.

8.160 The code would also be an appropriate mechanism to address complaints about policies applied by the large platforms which mean that adverts, or accounts can be arbitrarily suspended for reasons that are unclear or inconsistent.

Open choices

8.161 The code of conduct could also be used to address self-preferencing concerns within search advertising and ad tech intermediation. For instance, it may ensure that new functionalities of rivals are introduced on SA360 quickly or facilitate the integration of AdX with rival publisher ad servers.

8.162 In the open display market, the code of conduct could require platforms not to prefer their own customers over third parties who use other intermediaries. The code could also resolve disputes about how Google runs its ad tech auctions, for example requiring Google's auctions to give equal treatment to Google and third-party exchanges.

Trust and transparency

8.163 Many of the concerns we have identified in digital advertising arise from, or are facilitated by, a lack of transparency and information asymmetries, leading in turn to a lack of trust. The trust and transparency principles under the code would allow the DMU to address many of these concerns.

8.164 For example, the Fairness by Design duty, discussed above in relation to the use of consumer data, could also be applied to the choice architecture of platforms' sales interfaces, to ensure that they facilitate fully informed choice by advertisers. We consider that the code of conduct would allow the DMU to provide clear guiding principles on how Google and Facebook present and distinguish between organic content, digital advertising, and their own services, such as specialised search.

8.165 The code would also allow the DMU to address some of the opacity within digital advertising through allowing it to scrutinise the working of algorithms and auctions.

8.166 Finally, the code might be applied in some cases to require transparency by SMS firms over fees or other data or compliance with industry standards on the provision of information to advertisers or independent firms on their behalf, such as for verification. For ease of exposition we discuss code and non-code interventions in relation to fee transparency and verification within the data-related interventions section below.

Limits of the code in digital advertising

8.167 A potential limitation of the code is that it may not restrict all of Google and Facebook's incentives to exploit the market position that they have built up to their own advantage. The code can set rules that restrict certain behaviours, but in a fast moving and very complex market such as digital advertising it may be difficult for the DMU to monitor every change that is made by SMS platforms. This is particularly likely to be the case when the platforms have established a strong market position in several parts of the value chain, such as Google's position in publisher ad serving.

8.168 We therefore discuss below two forms of pro-competitive intervention over and above the code of conduct, designed to tackle directly the sources of market power we have identified: separation interventions and data-related interventions.

Separation in open display

8.169 A significant remedy available to competition authorities and regulators is to require vertically-integrated firms to separate their businesses to address competition problems that arise from operating in multiple markets. Separation has the potential to deliver significant benefits in markets where one large player is able to affect the proper working of competition across a number of markets. In such circumstances, separation can be most effective where it can be used to re-establish a more effective competitive process, which can bring new products to consumers and lower prices to businesses.

8.170 In this section we consider options for separation of Google's activities in open display advertising.[490] In Chapter 5 we outlined that Google had the ability and incentive to prefer its own businesses in ad tech intermediation. Our assessment is that Google's strong positions in publisher ad serving, SSP and DSP, as well as its unique access to Google's ad inventory, means that each of these businesses potentially faces a conflict of interest. Each of the publisher-facing and advertiser-facing businesses may have the incentive to

[490] These interventions are discussed in more detail in Appendix ZA.

favour Google's own businesses elsewhere in the value chain in a way that reinforces its market power across the ad tech chain as a whole. This is discussed in full in Chapter 5.

8.171 In summary, we found:

- Google has a position of market power in advertiser-facing services (DSPs), which is strengthened by its unique access to its own inventory, and is able to use this position in DSPs to favour its own publisher-side services.
- Google has made it difficult to access its advertiser demand through alternative publisher ad servers, thereby increasing its market power in ad serving and making it difficult for other providers to compete on the merits.
- Google may be adopting several practices that have the effect of leveraging its position as the largest publisher ad server to favour demand from its own SSP and DSPs.

8.172 These concerns arise from Google's common ownership of firms at different levels of the value chain in digital advertising intermediation. This common ownership is what provides Google's ad server, for example, with the ability and incentive to design its ad serving processes in a way which favours Google's SSP and DSPs, and leads to conflicts of interest between its advertiser-facing and publisher-facing functions.

8.173 As described in Chapter 5 and Appendix M, the advertising intermediation chain is evolving rapidly. For example, the emergence of Header Bidding and recent introduction of Unified Pricing by Google has had a significant impact on market dynamics. Looking ahead, potential changes including Google's decision on whether to phase out the use of cookies on Chrome could materially change the way ad tech works. One possibility is that ads may be served in the future directly from a browser or mobile phone, taking over some of the function currently carried out by the publisher ad server.

Parties' views on separation

8.174 In the interim report, we sought views on the case for separating aspects of Google's vertically integrated business in the intermediated open display market. We also sought views on whether separation might also be appropriate where other firms operate in conflicting parts of the value chain, such as those operating both demand-side and supply-side platforms.

8.175 A number of respondents supported the case for separation of Google's ad tech businesses. While there was no single preferred approach to separation

identified, a number of respondents identified the ad serving functions within Google Ad Manager as a priority for any separation. Both DMG Media and [✂] indicated that there would be benefits of the separation of Google's businesses. Both these responses also highlighted the international dimension of any structural interventions, and that UK authorities would need to work with international agencies to make any separation effective.

8.176 Other respondents, including Google, submitted that separation interventions were unnecessary. Google submitted that if any of our concerns remained after further investigation they could be addressed through less intrusive means, such as initiatives to improve transparency and a principle within a code of conduct that it should not 'unduly discriminate between its other businesses and third parties'.[491] Google submitted that this would be 'less likely to have negative, unpredictable consequences for our partners and the ecosystem as a whole'. Reach plc also submitted that it would be better to focus on other interventions, as it considered that separation was unlikely to be successfully implemented, and it would be better to focus on implementing an effective code of conduct.

Options for separation

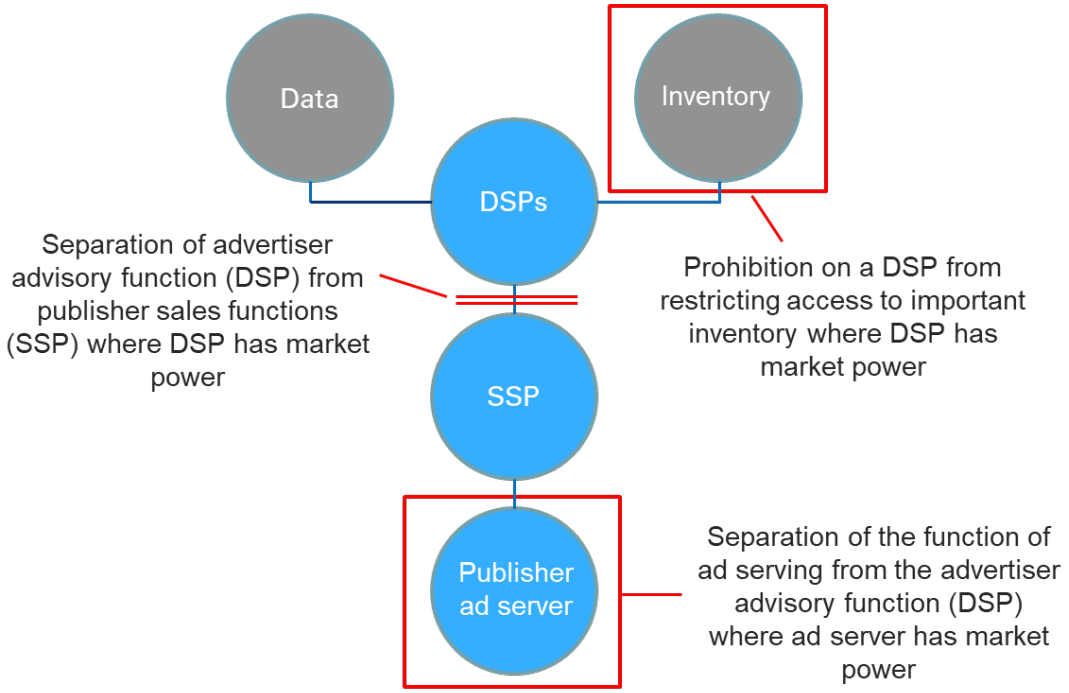
8.177 In this section we consider the options relating to separation to address the conflicts of interest that arise from common ownership within the different functions associated with ad tech.

8.178 Given the rapidly-changing nature of the digital advertising market highlighted above, we believe it is important that any interventions deal not only with current concerns, but are also future-proofed to address concerns that might arise in the future. For this reason, our proposed interventions relate to the underlying functions involved in digital advertising, set out in Chapter 5, rather than being based solely on the current organisation of the market.

8.179 Figure 8.4 illustrates the businesses within ad tech intermediation which operate these different functions, and our assessment of where there is a case for separation.

[491] Google's response to the Interim Report

Figure 8.4: Separation and access options in open display



Source: CMA.

8.180 Based on the analysis in Chapter 5, we consider that the following interventions could be expected to improve the working of competition in open display advertising, and therefore to deliver benefits to consumers. We summarise our findings and recommendations below:

(a) Separation of the function of publisher ad serving from the advertising advisory function (DSP), where the ad server has market power;

(b) Separation of advertising advisory functions (DSP) from publisher sales functions (ad server / SSP), where the DSP has market power; and

(c) A restriction on a DSP restricting access to its own inventory, where that inventory is sufficiently important to generate market power for the DSP. In the case of Google, this would be particularly relevant to YouTube inventory, which is only offered through DV360, giving that service a particularly strong market position in video advertising.

Separation of ad serving from the advertiser advisory function (DSP)

8.181 As discussed in Chapter 5, we found that there is a strong incentive on an owner of ad serving activities to prefer its own advertiser advisory services (DSPs). This is because DSPs, even if discriminated against, have no way of reaching the publisher other than through the ad server; at the same time, publishers have limited visibility over how the ad server operates, and the

integration of the ad server with the publisher's own systems results in significant switching costs.

8.182 Currently, the majority of publishers use Google Ad Manager's ad server, which has a market share of over 90%. This creates conflicts with Google's DSP businesses, and we consider that some form of separation could address these conflicts.

8.183 We found that there may be potential changes in the market in future which could reduce or change the role of the publisher ad server, including the possibility that the ad serving function might move onto the browser. In this case, choice would be determined by the user and not the publisher, again leading to potential conflicts of interest with the browser owner also operating as a DSP (ie carrying out the advertiser advisory function). However, we note that Google also has a very strong position in browsers through Chrome.

8.184 In the current ad tech ecosystem, separating Google's ad serving function from its DSP businesses could be achieved by either separating the publisher ad server from the rest of Google Ad Manager and Google's DSPs, or separating the whole of Google Ad Manager (including both ad server and SSP) from the DSP. Both options would address the underlying conflicts of interest between the publisher ad server and the advertiser advisory function (DSP).

8.185 Google told us that stand-alone ad servers were no longer meaningful businesses and that to the best of its knowledge that there were no full-featured ad servers that were not integrated with an SSP. Similar views were expressed by other intermediaries and by several publishers, who told us they benefit from using the integrated services of Google's publisher ad server and SSP.[492]

8.186 We consider both options to be equally effective in eliminating the incentive for a publisher ad server to favour its own sources of demand. Our current view is that a vertically integrated provider that was required to separate ad server and DSP could be given the opportunity of choosing between the two options, based on its assessment of their impacts on efficiencies

8.187 We think the case for a separation intervention is strongest in relation to any firm which has market power in serving ads directly to publishers and also owns an advertiser advisory function (DSP), where the DMU considers that the firm has the ability and incentive to favour that DSP as a result of market

[492] Stakeholders have also argued that the integration of SSP and DSP generates technical efficiencies. We note, however, that non-integrated DSPs do exist (eg The Trade Desk), and our analysis indicates that they are able to compete effectively with vertically integrated providers.

power on the publisher side. Given current market conditions as described in Chapter 5, this would suggest a case for separation of Google's ad server from its advertiser advisory function (DSP). In order to future-proof any remedy and ensure it could not be easily circumvented – for example if ad serving increasingly moved to the browser in future – any future interventions should be implemented in terms of functions, rather than business units.

8.188 We note that in the future other firms could develop market power, eg if browsers, which are chosen by the user, control how adverts are served. Equally, if the market for publisher ad serving changes, and switching becomes more feasible, then the case for separation of Google's ad server would be reduced.

Separation of the advertiser advisory function (DSP) from the publisher sales function (SSP)

8.189 As discussed in Chapter 5, given the current structure of the ad tech chain, competition between SSPs significantly reduces the incentive of an SSP that is vertically integrated with a DSP to discriminate against competing DSPs. This is because DSPs can use alternative SSPs to reach the same inventory and can switch if discriminated against. Moreover, given that large, sophisticated advertisers have tools to compare the performance of different DSPs, the incentive of vertically integrated DSPs to favour their own sources of supply is strong only if the DSP serves many small advertisers or has market power deriving from exclusive access to data or inventory.

8.190 Providers have pointed to the technical efficiencies generated by the integration of DSP and SSP, which can benefit advertisers and publishers. As these efficiencies could be lost as a result of separation, several stakeholders told us that it was not currently necessary or desirable to consider a general requirement on all intermediaries to separate their buy-side and sell-side businesses. Providers of ad intermediation services have also pointed at the technical efficiencies generated by the integration of DSP and SSP, which can benefit advertisers and publishers.

8.191 For these reasons, we consider that a general requirement to separate the advertiser advisory function from the publisher sales function would be disproportionate. On the other hand, we believe that, when a DSP has market power, the benefits from independence could outweigh the efficiency losses caused by separation. Given current market conditions, this would suggest a case for separation of Google's DSPs (DV360 and Google Ads) from Google Ad Manager. This separation would also address the concerns outlined in the previous section in relation to conflicts between the publisher ad server and advertiser advisory functions.

Access to inventory

8.192 Finally, we found that there is a strong incentive on the owner of advertiser-facing activities to restrict access to their own advertising inventory, where it is sufficiently important that it contributes to the generation of market power in the DSP. In the Interim Report, we identified Google's exclusive access to YouTube inventory as an example where the benefits of requiring access to third party DSPs could bring significant competitive benefits.

8.193 A number of third parties supported the opening of YouTube inventory. For example, Oracle told us that such an intervention would offer a straightforward solution to improve competition between DSPs and should not raise privacy concerns. Similarly, Beeswax, a DSP provider, told us that this was the most promising remedy proposal to level the playing field with Google.

8.194 Google submitted that restricting third-party access to YouTube inventory is the best way to maintain the privacy of user information and to ensure that the ads appearing on YouTube are of a consistently high quality. Google has also submitted that YouTube integration with third-party DSPs would be complex and expensive, given the complex auction dynamics for YouTube's TrueView inventory.[493] Google added that a requirement to offer integration of TrueView inventory with all third-party DSPs may make it infeasible to offer YouTube inventory through any DSP. For the reasons discussed in Chapter 5 and Appendix M, we consider that these do not constitute insurmountable barriers to providing third-party access

8.195 We consider that there is a strong case that opening access to YouTube inventory would have significant benefits. However, these would need to be set against the costs identified by Google. In deciding whether to require Google to offer access, the DMU would need to consider the trade-offs, and implement a remedy in a way which is both effective and proportionate.

8.196 We therefore recommend that the DMU should have powers to oblige DSPs with market power which operate in the open display market to supply their own inventory on reasonable terms to third-party DSPs. These powers would be applied where the benefits of opening access to the inventory are sufficiently large to outweigh any costs.

[493] TrueView allows users to skip an ad after five seconds, and the advertiser behind a TrueView ad is only charged if the user watches the full ad or 30 seconds, whichever is shorter.

Forms of separation

8.197 There are various forms of separation, each of which could apply to the separation remedies described above. These can be categorised as:

(a) Full ownership separation (divestiture);

(b) Operational separation, which would include management separation and 'firewalls' between different businesses under common ownership; or

(c) Restrictions directly targeted at conflicts of interest, where intermediary firms are not allowed to act on both sides of a single transaction.

8.198 In the context of the options for separation in open display advertising as illustrated in Figure 8.4 above, an ownership separation requirement would prohibit a single firm from having control through ownership of businesses which operate the distinct functions subject to separation. This remedy is sometimes used in merger control and normally has the advantage of being clear-cut, although it can be complex to implement in practice where it requires a common owner to divest at least one of the businesses. Where separation is expected to result in a significant increase in dynamic competition and innovation, ownership separation is most likely to achieve these benefits. However, we are conscious that a remedy of this type would be likely to have significant impacts on other markets outside the UK and may need to be coordinated with other authorities internationally.

8.199 Operational separation, sometimes called ring-fencing, requires firms to put in place measures which ensure that different businesses operate independently. This could include internal measures such as separate management responsibility, separate incentives, requirements to trade at arm's length, or physical separation of different activities. Under operational separation, there would be no obligation to divest either of the separate businesses, and operational separation therefore relies on a common owner having limited ability to control the behaviour of the separated businesses that it owns. The DMU may still face challenges in designing an effective approach to implementing some aspects of operational separation for the UK part of an international business. Some aspects of operational separation, such as arm's length trading requirements, would be more straightforward to achieve in a way which is targeted at the trading of inventory directed to UK customers.

8.200 Operational separation is sometimes used by utility regulators seeking to ensure that incumbent businesses do not favour their own businesses

operating in competitive markets.[494] The benefit of implementing operational separation in markets such as digital advertising is that Google should be incentivised to treat different parties in a way that does not unduly discriminate between its customers. To be effective, the operational separation would need to be accompanied by reporting to the DMU, and monitoring that Google is complying with the requirements of separation.

8.201 A more limited form of ring-fencing is also used in markets such as financial services, where there are legal requirements on buy-side and sell-side operations to act independently in any particular transaction. This form of separation could work well where there are strong conflicts of interest, but more limited overall market power. For example, if the decision on serving ads were moved to the browser, all owners of browsers could be subject to a restriction on serving both sides of a single transaction to offset the risk of a conflict of interest arising. However, at present, we do not expect that this remedy could be made effective in any way that is materially distinct from requiring ownership separation of the publisher ad server, as Google has a 90% market share in the publisher ad server.

8.202 As discussed in more detail in Appendix ZA, our finding is that operational separation is likely to be feasible in respect of Google Ad Manager and Google's DSP businesses. We understand that both businesses already trade with both Google's own digital advertising businesses and third-party digital advertising intermediaries. We also understand that a form of operational separation is already in place for Google's internal purposes. A regulatory requirement for operational or functional separation would include particular obligations on how Google should manage these businesses, including treating internal and external digital advertising businesses consistently.[495] This form of separation would require ongoing monitoring and evaluation by the DMU.

8.203 We **recommend that the DMU should have powers to implement ownership separation or operational separation. This should include powers to monitor the effectiveness of any separation requirements, and to vary the terms of separation where necessary to ensure their ongoing effectiveness.** In considering the use of its separation powers, the DMU should assess whether operational separation is sufficient, and if not

[494] The 'structural separation' which Ofcom requires BT to apply to Openreach represents a strong form of operational separation including the separation of Openreach into a different legal entity.
[495] In legal terms this could be a requirement to not unduly discriminate between Google's own businesses and third parties.

consider ownership separation, balancing the costs of intervention with the benefits for consumers through innovation and more effective competition.

8.204 Overall, we have concluded that there could be significant benefits if there were more formal separation between businesses with market power in ad tech, both market power in publisher-facing functions and market power in advertising-facing functions. Although these remedies are not limited to SMS firms, at present Google is the only firm with market power, and it has a high market share both in advertising advisory services (DSP) and publisher ad serving.

8.205 The CMA would also have these separation powers if we found sufficient evidence for intervention following a full market investigation. However, we expect that the products and technology involved in digital advertising are likely to continue change over time, and therefore the effectiveness of any 'one-off' intervention to separate current activities is likely to be time-limited. Any form of separation is likely to need ongoing monitoring and would evolve over time. We therefore consider that a DMU with powers to monitor and review the effectiveness of any separation interventions would be better placed than the CMA to implement and monitor any separation interventions in the open display markets.

Data-related interventions

8.206 Many of the concerns we identified in digital advertising markets in Chapter 5 relate to data. First, many of the basic functions of digital advertising, such as pricing and ad verification, are characterised by a lack of transparency and information asymmetries, inhibiting effective demand-side engagement and leading to a lack of trust.

8.207 Second, we have found that differential access to data for targeting and attribution creates a substantial barrier to entry and expansion in digital advertising, with Google and Facebook enjoying a much wider variety of sources of such data and restricting other parties' access to it, sometimes on the basis of data protection regulation.

8.208 In principle there is a strong case for increasing access to data to overcome such problems. Data can typically be shared at low cost, increasing the effectiveness of digital advertising and, where the data in question is a barrier to entry and expansion, helping to strengthen competitive pressures on incumbents. However, we also note that sharing personal data can also lead to concerns around privacy, and that sharing data that platforms have invested in or incurred costs to collect can affect incentives to innovate.

8.209 The assessment of data-related remedies therefore needs to be made on a case by case basis, taking into account the particular characteristics of the data and market. This is the approach we have taken in the discussion below, which considers data-related interventions in three areas: transparency in fees and transaction data; transparency in verification data; and interventions to address differential access to data for targeting and attribution. As noted in the discussion, some of these interventions could be implemented through the code, while others, that would have a more transformative effect on the market, would need to be implemented as pro-competitive interventions.

Transparency over fees and transactions data

8.210 Advertisers and publishers typically do not have visibility over the fees charged along the entire intermediation chain or visibility of other transaction-level data such as bidding data. Many are concerned that this limits their ability to make optimal choices on how to buy or to sell inventory, reducing competition among intermediaries and between buyers and sellers of inventory.

8.211 We have identified three main options for improving transparency around fees and bidding data:

- Within-contract fee transparency – whereby data on fees, at least at an aggregate level, are provided to contracted parties.
- Publication of average take rate and other fees and charges – whereby intermediaries publish their average fee or take rates.
- Sharing of more data across the supply chain. This might be aggerated data of might include impression-level transaction and bidding data with advertisers and publishers (including the adoption of a common transaction or impression ID).

Parties' views on transparency over fees and transactions data

8.212 In the interim report, we discussed a number of potential interventions to improve transparency over fees charged for intermediary services, including publication of fee rates, the sharing of bid data with publishers and the creation of a common transaction or impression ID. There was strong support amongst advertisers and publishers for these transparency interventions. For example, the one publisher submitted that it 'strongly support[s] all of these [transparency] interventions'.

8.213 However, whereas ad tech intermediaries generally supported more transparency and pointed to improvements in levels of transparency across the industry, some were wary of too much transparency Some intermediaries considered that some transparency remedies, especially with regard to fee data, could potentially increase costs for adtech intermediaries as well as potentially distort competition by encouraging a race to the bottom. In addition, there are some concerns that remedies that require the provision of more information by adtech intermediaries about fees and bidding data could breach client confidentiality and, if these remedies were to mandate a common transaction or impression ID, facilitate the identification of individual users.

Within-contract fee transparency

8.214 Within-contract fee transparency is already practised widely amongst intermediaries. One exception seems to be Google Ads.[496] We would consider it to be good practice that data on fees charged by ad tech intermediaries, at least at an aggregate level, is provided to contracted parties.[497] Such a provision should therefore, we conclude, be included within the code applying to Google.

Publication of fee rates

8.215 A number of intermediaries already publish average fees or take rates.[498] One SSP told us that 'technically and legally, there are no obstacles preventing One SSP from providing such data [on average fee or take rates] where the appropriate consent has been obtained'. However, as we note above, not all intermediaries would support the publication of average fee or take rates. Our view is that a move to more widespread publication of data on average fee or take rates could help bring a degree of confidence to market participants and could provide them with a starting point for assessing the scale of ad tech fees. Facilitating the publication of this is, in our view, an appropriate role for the DMU to take on.

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[496] This has sparked concern amongst, publishers in particular, that Google Ads is able to extract 'hidden fees' – see Appendix R for more discussion of this.
[497] However, we note that this should include all charges and deductions by an intermediary, not just the headline fees. This within contract reporting should also include, for-example, any buy-side fees or profits from arbitrage accruing to an intermediary.
[498] For example, Google does so in relation to its Ad Sense product and Xandr has in the past published its average SSP fees

Bid data and transaction ID

8.216 Advertisers and publishers felt perhaps the most useful move toward improving transparency within the ad the ad tech supply chain would be greater provision of transaction level data and, importantly, that data should be provided in a manner that allows them to relatively easily combine the data to obtain an overall market view, through a transaction or impression ID. one publisher submitted that, 'platforms should be required to share non-aggregate impression-level and bidding data with publishers. … Importantly, the different types of data should be shared in a format allowing publishers to combine them. Access to that information would allow publishers to better monitor whether the ad server conducts auctions fairly, as well as to optimize their monetization strategy'.

8.217 We consider that transaction-level transparency would bring benefits by strengthening market participants' ability to exert competitive pressure on others and improving trust in the market. We have also concluded that some form of common transaction or impression ID would be required If publishers and other market participants are to benefit fully from provision of transaction level data. A key finding of a recent study on ad tech fees by ISBA/PwC was that such standardisation was urgently required to facilitate data sharing and drive transparency.[499]

8.218 However, the privacy implications of the introduction of common transaction ID would need to be carefully considered. Google submitted, for example, that 'Imposing consistent transaction IDs raises potential privacy concerns by allowing advisers to join Google's secure bid data with other information in a way that would allow individual users to be identified'.[500] We conclude that **the DMU should have the power to introduce a transaction or impression ID** but that further work would need to be undertaken by the DMU to assess the extent of these privacy risks and, if material, how such a transaction ID could be designed to avoid such potential privacy concerns.

Transparency for ad verification

8.219 For there to be effective competition between suppliers of advertising inventory, advertisers need to be able to make informed choices about the inventory that they buy. Otherwise there is a risk that advertisers are overpaying for advertising inventory or purchasing poor quality inventory

[499] ISBA Programmatic Supply Chain Transparency Study (2019).
[500] Google response to the interim report, paragraph 100.

8.220 Although both Google and Facebook work with a number of 'approved' third-party verification providers, they restrict access to the underlying data on the advertising inventory they own and operate. In contrast, other display advertising platforms reported that they do allow advertisers to use third-party service providers to carry out independent verification on their advertising inventory.

8.221 Given a number of incidents of misreporting[501] and concerns about brand safety issues on Facebook and Google respectively, it is not surprising that advertisers would like the ability to carry out their own, independent assessments. Without access to the underlying raw data and the ability to have full independent verification, advertisers and media agencies have the perception that Google and Facebook have the freedom, in effect, to 'mark their own homework'.

8.222 Both Facebook and Google have argued that the way in which they compile data for the purposes of verification, eg on the viewability of impressions on their inventory, meets industry standards and is subject to external audit. Google also argued that its approach to ad verification is driven by its obligations under the GDPR.

8.223 By restricting full independent verification of their own inventory, Facebook and Google have engineered a degree of opacity into the buying and selling of their own advertising inventory. Advertisers feel that they have no choice but to rely on the information provided by Google and Facebook. This could weaken competition or potentially result in advertisers over-paying for the advertising inventory supplied by Google and Facebook relative to other sources of supply. The buying and selling of display advertising is a complex process and introducing additional restrictions on access to data adds to the friction in terms of evaluating market outcomes.

8.224 We understand that the data needed for verification for viewability involves information such as: the website on which the ad was served; whether the ad appeared on the screen; how much of the ad appeared on the screen; how long the ad appeared on the screen; and, if it was a video advert, whether the ad played, for how long it played, whether the sound was on etc. Similarly, for brand safety, the key information involves establishing which website an advert has been displayed on and what other content was on that website. As a result, our view is that verification of viewability and brand safety does not necessarily need to involve the use of personal data.

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[501] Source: Marketingland.com, 'FAQ: Everything Facebook has admitted about its measurement errors.'

8.225 We recognise the arguments that Google has made in relation to potential privacy concerns arising from providing access to data for verification purposes. However, as set out above verification for viewability and brand safety purposes doesn't need access to Google's targeting data.

8.226 Enabling third-party verification allows the performance of platforms to be properly evaluated and compared and this should help stimulate competition. In addition, as a matter of good business practice, it is important that advertisers should be able to verify that the inventory that they purchased has been delivered as contracted for, in particular in respect of viewability and brand safety.

8.227 As a result, we recommend that Google and Facebook should give advertisers – or their agents – access to the tools or information necessary to carry out their own, independent verification for viewability and brand safety purposes of advertising purchased on the inventory owned and operated by Google and Facebook and that all sides work to secure the necessary contractual and consent arrangements to ensure that this is done in a way that is consistent with the requirements of GDPR. Since the concerns we have heard relate exclusively to Google and Facebook, we think that such a requirement should be implemented through the code.

Access to data for targeting and attribution

8.228 Throughout this report we have highlighted the importance of targeting and attribution in digital advertising and have shown how the ability to target advertising and assess its effectiveness greatly increases its value for advertisers and publishers. We have also noted that access to personal data currently plays a central role in both these functions.

8.229 We have found that Google and Facebook have much greater access to such data through a variety of sources including extensive user-facing services, analytics services and, in the case of Google, browsers and devices. Further, while both Google and Facebook use this data across their wide ecosystems, they typically restrict third parties' access to it, sometimes citing the requirements of data protection regulation as a reason for doing so. The resulting differential access to data acts creates a substantial barrier to entry and expansion in digital advertising. In addition, several parties have submitted to us that Google and Facebook's sharing of data across their ecosystems raises privacy concerns and is not consistent with data protection regulation.

8.230 We also noted that the digital advertising market is changing very rapidly, and that Google's recent announcement that it will be phasing out support for third

party cookies on Chrome is likely to increase barriers to entry and expansion, affecting publishers' ability to target and attribute using personal data while allowing Google and Facebook to continue to do so, with potentially significant consequences for publishers' revenues.

8.231 To address these concerns, we have identified three forms of intervention, all of which could improve competition in digital advertising markets by providing more equal access to data for targeting and attribution for integrated platforms on the one hand and non-integrated publishers and advertisers on the other. However, they differ in terms of their potential implications for effective targeting and attribution and data protection and privacy. The interventions are:

- data separation (or data silo) interventions;
- user ID and data access interventions; and
- data mobility interventions

8.232 In practice, these options are not mutually exclusive as the DMU may choose to use different interventions in different circumstances.

Parties' views on access to data for targeting and attribution

8.233 Google did not agree that any remedies requiring access to data were appropriate. In a submission to us, Google explained that there were privacy limitations on its ability to share data that it gathered from advertisers and publishers through its analytics tools. Google also noted that in most cases it was not in the legal position to share analytics data with either third parties or other Google services. Google said that sharing data gathered from Google tags, including those associated with Google Analytics, raised serious privacy concerns through the exposure of user data to all ad tech recipients of the data.

8.234 Some publishers and intermediaries supported opening access to Google's data. Oracle, Verizon Media and Beeswax provided examples of data which could be subject to access requirements and which would improve competition for digital advertising based on data for targeting. Potential types of data raised by these submissions included location data, where Google has an unmatchable advantage due to its position in search and Android.

8.235 In respect of attribution, intermediaries and publishers also considered that an access remedy would be appropriate. Some stakeholders, including Oracle and Guardian Media Group, considered that access to the underlying data to allow third party attribution and measurement would be most appropriate, to

allow an independent assessment of Google's reporting. Others, including DMG media, supported access to Google's own attribution services.

8.236 Other stakeholders considered that a more appropriate intervention to address Google's data advantages would be to limit Google's ability to share data between its different businesses. Brave, which is challenging Google's internal sharing of data,[502] supported a restriction on how Google is able to use its own data for personalised advertising. Other stakeholders including Guardian Media Group, Arete Research and Which? raised concerns about the sharing of data within Google and Facebook, and suggested approaches to limiting the use and re-use of data gathered for other purposes.

Data separation

8.237 We think that the **DMU should have the power to mandate data separation (or data silos) where it concludes that the adverse effects on competition outweigh any efficiency benefits**. This would allow the DMU to prevent SMS firms from using data from services where they have market power in other markets where it has an adverse effect on competition. The DMU would need the power to monitor the remedy, including access to reporting from the SMS firms.

8.238 The DMU would only apply this intervention to cases where there are clear net benefits. We think that this is most likely to be the case where the linking of the data constitutes a significant barrier to entry and expansion, where there are significant privacy concerns from the data being combined, and/or where the data to be separated has been collected by the platforms through the leveraging of market power. More generally, the pro-competitive case for the use of data separation interventions on vertically-integrated platforms may be greater if publishers' ability to target and attribute is severely affected by the phasing out of third-party cookies on Chrome.

8.239 We note that Brave has advocated a 'purpose limitation' approach to data separation, under which SMS firms would not be allowed to share data within their ecosystem without specific granular user consent. This would have a similar effect to the data silos intervention, but could apply to a much wider set of markets – regardless of whether there were efficiency benefits of the relevant data being used in other markets. Further, by making consent the basis of control, it risks increasing burdens on consumers, adding to consent fatigue. Under current legislation, such a remedy would be implemented by

[502] Described at https://brave.com/google-internal-data-free-for-all/

the ICO, using its existing powers. We discuss our proposals for further work with ICO at the end of this section.

Common user ID and data access

8.240 We recommend the DMU be **given powers to introduce common user ID and data sharing interventions** as they have the potential both to address competition concerns and improve the efficiency of digital advertising. However, both interventions also raise potentially significant privacy concerns and would need to be developed with great care.

8.241 The user ID intervention would involve the DMU mandating the creation of a secure common digital ID that market participants could use to assign to their own data for targeting and attribution purposes. This is a form of interoperability intervention, as it involves establishing and ensuring adherence to a common standard.

8.242 Data access interventions would involve requiring a platform to share certain categories of data, such as location data or data from tags and pixels, with third parties, for the purposes of targeting and attribution, to enable them to compete more effectively. To enable the meaningful interpretation of any data shared, data sharing would require the development of a common user ID. As noted above, such an intervention received strong support from a number of market participants.

8.243 We think that the case for user ID and data access interventions to promote competition is strongest where the data is valuable in overcoming barriers to entry and expansion, and where the data is held by a platform without significant ongoing costs or investment. The main problem raised by these interventions is that they would likely raise data protection issues since (unlike the click and query data discussed above) data held by the platforms and used for targeting and attribution would likely be personal data, unless it were aggregated or anonymised in some way. Any privacy concerns arising from such an intervention would therefore need to be carefully managed.

- *Data mobility*

8.244 Such concerns around privacy are one reason why the third category of intervention – data mobility – is highly attractive in principle. Data mobility is a user-led form of data sharing that would allow consumers to share the data that platforms hold on them with other platforms. This approach could help increase competition by overcoming data-related barriers to entry and expansion and ensure that consumers can benefit to a greater extent from the

value of their data, while at the same time respecting users' privacy rights, as the data would only be shared at the user's instigation.[503]

8.245 The Furman Review recommended that the DMU should pursue personal data mobility interventions where this will deliver greater competition and innovation. It said that personal data mobility would 'give consumers greater control of their personal data so they can choose for it to be moved or shared between the digital platform currently holding it and alternative new services.' The Review noted that 'Open Banking has shown the potential for data mobility to provide new opportunities to compete and innovate in this way.'[504]

8.246 We have considered proposals put to us about products such as Personal Information Management services (PIMs) and Personal Data Stores (PDS) which may improve privacy protection and also enhance competition in the provision of services which rely on data to be effective. These approaches would enable the consumer to instruct a platform or an intermediary to share the information held on them with the publisher of a site they were visiting or with an intermediary, for specified purposes and for a set period of time, and for which the consumer would receive monetary or other incentives. The intermediary would create a consent dashboard for the consumer enabling them to vary or revoke their consents whenever they chose to do so. This could therefore part of a long-term solution to the problem of consent fatigue.

8.247 We have engaged with a variety of PIM businesses, which in principle could play a comparable function in digital advertising to the new banking intermediaries using Open Banking, and mirror the ongoing development in the utility sectors of services which negotiate good deals on customers' behalf. However, as we discussed in our interim report, these services appear to have a long way to go to be commercially viable. This is largely due to the fact that, unlike banking and other utility sectors, there is no current consumer-facing digital advertising market (in which consumers sell their data to advertisers for targeting and attribution), and PIMs have to persuade sufficient numbers of advertisers and consumers of the viability of such a market before generating revenues.

8.248 While there are many barriers to overcome in establishing such a market, in the long run, we believe the DMU could play a useful role in promoting data mobility in digital advertising. This could include, for example: setting standards; providing safeguards which support confidence and data security

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[503] We note, in this respect, that GDPR is not only about data protection. Article 20 of the GDPR introduces a right of data portability, which allows for data subjects to receive the personal data that they have provided to a data controller, and to transmit this data to another data controller without hindrance.
[504] Unlocking Digital Competition, Report of the Digital Competition Expert Panel, p9.

for approved intermediaries and exploring the case for strengthening the data sharing provisions of GDPR, which do not currently cover inferred or derived data.

Future work with the Information Commissioner's Office (ICO)

8.249 The digital advertising market is likely to undergo substantial change over the next couple of years, driven in party by evolving interpretations of the requirements of data protection regulation, not only by data protection authorities, but increasingly by online platforms. These changes are likely to have very significant effects on both competition in digital advertising and privacy. Therefore, while the main focus of this chapter is on the rapid establishment of a pro-competition regulatory regime overseen by the DMU, we recognise that action is needed before this regime can be put in place.

8.250 The CMA is therefore undertaking to work with the ICO after the completion of this study on a range of topics relating to the interaction between data protection, consumer control and competition. This will build on the constructive working relationship with the ICO that we have established in the course of the study. Our intention in undertaking this work is to ensure that consumers rather than platforms are in control of their data, and to encourage a modern view of data protection regulation, which empowers consumers and avoids favouring large integrated platforms over smaller publishers.

8.251 The focus of this work will be on many of the issues we have identified in the study, including how to respond to and engage with Google's proposals for phasing out third party cookies on Chrome over the next 18 months and the development of various privacy-preserving alternative technologies on Chromium. We will wish to consider, for example, how adequate Google's proposed alternatives for targeting and attribution are likely to be for market participants and whether such browser-focussed approaches for targeting and attribution raise competition concerns and, if so, how these can be addressed. Further, and in particular if the targeting and attribution proposals were to prove inadequate for market participants, we would wish to consider whether there is a need to consider constraints on integrated platforms' ability to share data for targeting and attribution across their ecosystems.

8.252 More broadly, as noted in Chapter 5, we have heard concerns that aspects of the design and interpretation of current data protection regulation risk creating competition concerns by unduly favouring the business model of large, vertically-integrated platforms over smaller, non-vertically-integrated publishers and we will wish to discuss with ICO how to implement a principle of 'competition neutrality' in the design and application of data protection regulation in digital advertising. We welcome the fact that the ICO is now the

data protection supervisory authority for Google in respect of the processing of UK users' personal data and is likely to be for Facebook when the Brexit transition period ends.

8.253 We will wish to discuss, for example: how secure sharing of consumer data between firms can be enabled by prioritising support for the development of codes of conduct and certification regimes under the GDPR; the data protection and competition implications of different models of consumer control over data, including privacy-enhancing technologies (PETs) and PIMS; and different regulatory approaches to ensuring more equal access to data, including data silos and data access interventions.

8.254 In the medium term we think it would also be helpful for ICO and other DPAs to consider the extent to which mechanisms, at application, browser, operating system or device level, can be supported to give effective control to consumers, by balancing the need for specific, informed and granular consent, against the risk of consent fatigue. We think this could in principle both benefit consumers and ensure neutrality in respect of larger and smaller firms seeking data. An example of this sort of approach is in the Commission's original draft of the proposed ePrivacy Regulation,[505] and the accompanying impact assessment, which observed that 'end-users are overloaded with requests to provide consent', and intended to 'empower end-users' via 'centralising consent'. The draft proposal called for a 'Regulation [which] enhances end-user's control by clarifying that consent can be expressed through 'using the appropriate technical settings of a software application enabling access to the internet.''

Sequencing

8.255 We have set out a number of powers that we think the DMU should be able to deploy to tackle the problems we have identified in digital advertising markets. The code would be a highly valuable tool in addressing a wide range of concerns in digital advertising markets, arising from self-preferencing behaviour, a lack of transparency, and the opaque operation of auctions and algorithmic decision making. We have also identified a number of significant pro-competitive interventions that, while they would take longer for the DMU to assess and implement, have the potential to transform competition in digital advertising markets, including separation of Google's position in open display and data-related interventions such as mandated data access and data silos.

[505] ePrivacy Explanatory Memorandum.

8.256 The DMU may in some cases consider it appropriate to consider deploying the pro-competitive interventions once the code has been operational for a period, which would allow it to assess whether SMS platforms' behaviour can be effectively managed before considering the case for more radical transformations of the market. Based on the design and initial experience of the code, the DMU would then be able to properly balance the additional costs of a measure such as separation, for example, against the potentially substantial benefits. In respect of other issues, the DMU may conclude that radical interventions are required as a matter of urgency. This would be a judgement for the DMU to take.

8.257 We have also identified some urgent issues relating to the relationship between competition and data protection regulation that we propose to consider with the ICO following the completion of this study and in advance of the establishment of the DMU.

Conclusion

8.258 Through this market study, we have identified a broad range of concerns relating to the functioning of online platforms that are funded by digital advertising. These concerns have led us to the conclusion that competition in these markets is not working as well as it should, and consumers are facing detriment as a result. In order to address these concerns, we have identified a substantial package of interventions for the government to initiate through legislation.

8.259 As set out in Chapter 7, the evidence we have assessed in this study strongly supports the case for the development of a pro-competition regulatory regime for online platforms. This is consistent with the type of regime envisaged by the Furman Review, the recommendations of which were recently accepted by government.

8.260 In this chapter, we have developed detailed proposals for the application of such a regime to platforms funded by digital advertising, setting out the specific interventions we believe will be most beneficial for the DMU to make, and how they might be designed to maximise benefits for consumers. Our intention in setting out this level of detail is to convince the government of the urgent case for such significant new legislation, to inform the future work of the DMU, as well as meeting our broader objective of informing the global debate on how to regulate online platforms.

8.261 There is a strong case for interventions to tackle the source of Google's market power in search, including a requirement that Google provide rival search engines with access to its click-and-query data, to help them

overcome its scale advantages in data. The DMU should also have powers to introduce search choice screens and restrict Google's ability to secure default positions on devices and browsers where these are key entry points to the market.

8.262 In social media, interventions to tackle the source of Facebook's market power should focus on increasing its interoperability with rival platforms in order to overcome the network effects that currently act as a significant barrier to entry and expansion. We think there is a strong case for mandating greater interoperability in relation to finding contacts and cross posting functionalities, while the code would help to ensure that future decisions by Facebook to shut off or deprecate APIs do not have harmful effects on competition and consumers.

8.263 The DMU should have powers to give consumers greater control over the data they provide to platforms, including by requiring platforms to give consumers a choice over whether to receive personalised advertising. A 'Fairness by Design' duty under the code would ensure that Google and Facebook design choice architecture in a way that encourages free and informed decision making by consumers, with a requirement to trial and test alternative approaches.

8.264 The code would be an effective tool to address a wide range of the concerns we have identified in digital advertising, including restrictions on publishers' ability to monetise content, self-preferencing behaviour in the open display market and low transparency over fees and ad verification. To tackle conflicts of interest in the open display market, some form of separation of Google's intermediation activities, notably its ad server function, may be necessary. The DMU should also have the power to introduce data-related interventions to increase transparency and address competition concerns, including data separation, data access and data mobility remedies.

8.265 The CMA is undertaking to work with the ICO after the completion of this study on a range of issues relating to the interaction between data protection, consumer control and competition. This will aim to encourage a modern view of data protection regulation, which empowers consumers and avoids favouring large integrated platforms over smaller publishers.

9. Decision on a market investigation reference

Introduction

9.1 The CMA may make a market investigation reference, under the statutory test, when:

- the findings of a market study give rise to reasonable grounds for suspecting that a feature or combination of features of a market or markets in the UK prevents, restricts or distorts competition;[506] and
- a market investigation reference appears to be an appropriate and proportionate response.

9.2 Such a decision is made at the discretion of the CMA's Board, in consideration of the organisation's full range of priorities and objectives. To provide some clarity about how these decisions are made, the CMA has published the following four criteria, which we consider as part of any decision:[507]

- the scale of the suspected problem is such that a reference would be an appropriate response (ie that the adverse effect on competition is likely to be significant based on the size of the market, the proportion of the market that is affected and the persistence of the market features);
- there is a reasonable chance that appropriate remedies would be available;
- it would not be more appropriate to address the concerns through undertakings in lieu of a reference; and
- it would not be more appropriate to address the competition issues through alternative powers available to the CMA or through the powers of sectoral regulators.

9.3 As we set out in our interim report, we initially received five representations from parties following the launch of this market study requesting that we make a market investigation reference. As a result, we had a statutory obligation to consult by 2 January 2020 on a proposal on whether to make a market investigation reference at the conclusion of the study.

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[506] Section 131, Enterprise Act 2002.
[507] CMA, Guidance about the making of references under Part 4 of the Enterprise Act, OFT 511, paragraph 2.1.

9.4 On 18 December 2019, we consulted on our proposal not to make a market investigation reference at this stage, while recognising that this was a finely balanced judgement. Following careful consideration of the responses we received, and also taking into account other significant developments during this period, in particular the disruption caused by COVID-19, we remain of the view that a market investigation reference should not be made at this point in time, and this is the CMA's decision.

9.5 This chapter summarises the views we received, notes some other significant developments since December that are relevant to our decision, and finally explains our reasoning for not making a reference at this stage.

The consultation

9.6 In our interim report, we stated that the statutory test for a market investigation reference under section 131 of the Enterprise Act 2002 was met, highlighting three potential candidates for the scope in general search, social media, and open display advertising.

9.7 We proposed not to make a market investigation reference at this time, while noting that it was a finely balanced judgement. We explained that there were three main reasons for not making a reference:

- the government had committed to regulatory reform in this area, which we viewed as the best way to tackle the issues we have identified;
- with regard to potential interventions, and in particular possible structural remedies, we needed to be pragmatic about what changes could efficiently be pursued unilaterally by the UK; and
- we had considerable further work to do to understand the nature and extent of the issues in the market, and what the appropriate range of remedies might be to address them.

9.8 We said we would revisit the conclusions of our interim report, in the light of the consultation responses that we received; our assessment of market developments; and the UK government's emerging position on regulatory reform in this area.

Summary of responses

Overview

9.9 Of the 77 consultation responses we received, 31 explicitly referred to our proposal not to make a market investigation reference at the conclusion of the market study. The views expressed, which came from a broad cross-section of market participants within the digital advertising ecosystem including platforms, national and regional news publishers, academics and thinktanks, and consumer bodies, are summarised in Table 9.1.

Table 9.1: Summary of views on our market investigation reference proposal

View	Number
Supported our proposal not to make a reference	8
Neutral	2
In favour of a reference	21
Social media and display advertising	*0*
Search and search advertising	*3*
Open display advertising	*11*
Preferred scope not specified	*7*
Total responses to our MIR proposal	31

Source: CMA summary.

9.10 The responses, both in favour and against our proposal, were carefully-considered and well-explained, with many valid arguments made on both sides. All but one of the 31 respondents indicated that they were in favour of interventions in these markets more broadly, most notably the proposed code of conduct, and those in favour of a reference did not appear to view a market investigation and broader regulatory reform as substitutes.

9.11 The following sections summarise at a high level the views we received in support of each of the main options.[508]

Support for our proposal not to make a market investigation reference

9.12 Eight responses to the consultation explicitly supported our proposal not to make a market investigation reference. While seven of these parties (which for example include BT, Barclays, and ISBA) appeared to agree with our assessment that the statutory test for a reference had been met, they also agreed with our reasoning that the likelihood of government intervention,

[508] See Appendix B for a more detailed summary of these views, and our case page where the responses have been published.

coupled with the global nature of the issues identified, entailed that on balance we should not make a reference at this point.

9.13 Just one response – from an industry body Developers Alliance – explicitly rejected the conclusion that our findings could reasonably justify a market investigation reference, suggesting that 'at present, it seems that there is not enough evidence of systemic problems that would support any of the broader regulatory measures proposed'.

9.14 Responses in support of our proposal not to make a reference said that there were sound reasons to be cautious about referring these markets for an investigation, in particular, that a market investigation could potentially cut across any broader regulatory reform, and that unilateral action by the UK could be challenging.

Support for a market investigation reference in social media

9.15 We did not receive any calls for a market investigation focused solely on social media and display advertising. However, as part of its arguments in favour of a more broadly scoped investigation, Privacy International did refer specifically to social media being included. It argued that, by launching a market investigation, the CMA could, amongst other things, 'use its order making powers to introduce increased interoperability in social media'.

Support for a market investigation reference in general search

9.16 Three of the calls for a market investigation were focused on the markets for general search and search advertising. The responses all emphasised the urgent need for action in the market, from different perspectives and with different concerns in mind. For example, one from Google's competitor (DuckDuckGo) noted the scale advantage Google has as a search engine, whereas another from an online travel comparison service emphasised Google's ability to implement changes affecting downstream markets, and its ability to bundle different services together.

Support for a market investigation reference in open display advertising

9.17 11 responses called explicitly for a targeted market investigation in the open display advertising market. Nine of these were from the national and regional news media, including for example News UK, DMG Media, the Guardian Media Group and News Media Association.

9.18 The arguments provided in favour of a market investigation in open display are summarised below under three high-level themes:

- A market investigation would complement the development of a new ex ante regulatory regime. Several respondents made this point, explaining that the structural issues identified in the open display market may not be adequately dealt with by behavioural measures, and that through a market investigation, the CMA could continue to gather evidence and inform any broader regulatory reform such as development of a code.

- Interventions through a market investigation could take effect earlier than those through a legislative route (eg the code of conduct). Several publishers considered their very existence to be under threat, with some such as DMG Media raising the concern that 'regulatory intervention may come too late to ensure the survival of the news industry'.

- A market investigation is an opportunity for the UK to influence the global debate in relation to online platforms.

Support for a market investigation without specifying a scope

9.19 There were seven further responses that indicated clear support for a market investigation, though they did not specify a particular candidate for the scope. These included, for example, Privacy International, Digital Policy Alliance and Arete Research. It is possible that some of the seven were in favour of an investigation with the same broad scope as this market study.

9.20 The reasons provided by these stakeholders were similar to those in support of the specific candidates outlined above – in particular, that it could be complementary to government reforms, that it could further shine a light on the market and inform government decision making, and that the global nature of the issues identified should not deter the CMA from taking action.

Developments since our consultation

9.21 There have been some important developments since publication of our interim report that we have taken into account when reaching our decision. The most significant of these have been the commissioning of the Digital Markets Taskforce by government, and the global disruption caused by the COVID-19 outbreak.

Digital Markets Taskforce

9.22 In the Budget of 11 March 2020, the government formally accepted all six of the Furman Review's strategic recommendations for unlocking competition in digital markets. To take this work forward, it also commissioned a Digital Markets Taskforce, to be led by the CMA, to advise it on the development of a

pro-competition regime for digital platform markets.[509] The purpose of the Taskforce is to provide advice to government on the practical application of the interventions set out by the Furman Review, which are fully consistent with the findings and recommendations of this market study.

9.23 Government's willingness to regulate to address our concerns was one of the key factors highlighted in our interim report as influencing our decision on whether to make a reference at the final report stage. We are therefore strongly encouraged by these developments, which indicate that the government is committed to action in this area, in particular regarding the development of a code of conduct to be overseen by a Digital Markets Unit and other tools to address the sources of market power in general search and social media.

9.24 In our study, we have identified a wide range of serious concerns in a large and growing part of the economy that will have an enduring impact on a number of UK businesses and on UK consumers. The complexity and range of these problems, and their fast-evolving nature, is such that one-off interventions of the sort that we can implement are likely to be insufficient. Rather, a dedicated regulatory body – a Digital Markets Unit advocated by the Furman Review – empowered with a bespoke toolkit is required to tackle them.

9.25 In particular, and as discussed in Chapter 7, an ex ante code of conduct, with ongoing powers to enforce it on a timely basis, is not a tool currently available to the CMA. We regard the establishment through legislation of such a tool and a dedicated regulatory body to enforce it as the best route to the swift resolution of many of the concerns we have identified in this study.

9.26 We have formally launched the work of the Digital Markets Taskforce alongside publication of this report, which will provide advice to government by the end of the year.[510] Chapter 10 sets out more detail on the objectives of and next steps for the work of the Taskforce.

Coronavirus (COVID-19)

9.27 Since publishing our interim report in December, the majority of the global population has been forced to adjust and adapt to substantial restrictions on its freedom and usual way of life due to the COVID-19 pandemic, and as a result, some forecasts suggest the UK will face the most severe downturn in economic output seen for hundreds of years.[8] There have also been some

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[509] UK Treasury, Budget 2020: Delivering on our promises to the British people, paragraph 2.266.
[510] The terms of reference are available here.

inevitable consequences for the work of this study, with the CMA and parties we have engaged with facing significant disruption and uncertainty. The CMA has launched a taskforce to monitor and identify harmful sales and pricing practices, warning firms suspected of exploiting consumers during the current pandemic and taking enforcement action if there is evidence that firms may have breached competition or consumer protection law.[511]

9.28 We are also acutely aware of the pressures that so many companies are under during these challenging times, and recognise that many parties who would have a strong interest in engaging in a market investigation do not currently have the capacity to do so.

9.29 In this context, we must consider very carefully the risks of launching any new projects that may impose additional burdens on businesses that are struggling to cope in the current crisis, or that may draw resources away from other areas of priority, such as the CMA's COVID-19 taskforce.

Our decision

9.30 We noted in our interim report that the statutory test for making a market investigation reference was met, and this continues to be the case. Our assessment on whether to launch a market investigation at the conclusion of this market study has therefore rested primarily on whether it is the most appropriate and effective mechanism for delivering the kinds of interventions we are proposing.

9.31 The broad spectrum of differing views set out in the responses to our consultation[512] reflected the large number of relevant considerations that we have needed to take into account in reaching a final decision on a reference:

- There were a significant number of calls for us to make a market investigation reference, each setting out reasons to support their case. These responses included calls for investigations into a number of different markets, and to solve multiple different issues and competition concerns.

- We also received strong support from a number of stakeholders for our proposal not to make a market investigation reference. These

[511] CMA COVID-19 taskforce
[512] See Appendix B for a more detailed summary of these views, and our case page where the responses have been published.

respondents agreed with our reasoning to pursue change through recommendations to government at this stage.

- We also note that the majority of respondents to our consultation did not comment on this issue at all.

9.32 As noted above, we received a number of valid arguments in favour of a reference, and in more than one market, and we agree with many stakeholders that the statutory test for a reference has been met. However, there have been two significant developments since our consultation that have reinforced our view that a market investigation is not the most appropriate way forward at this time.

9.33 Firstly, and most significantly, the acceptance by the government of the Furman Review's strategic recommendations, coupled with commissioning of the Digital Markets Taskforce, has given us renewed confidence that the government is committed to taking forward pro-competitive reforms in this area, which are consistent with the findings and aims of this market study. In particular, government confirmed it intends to set up a Digital Markets Unit that will enforce a code of conduct for platforms with Strategic Market Status.

9.34 This development is consistent with our conclusion that a new pro-competition regulatory regime is essential to delivering and overseeing the kinds of interventions we have proposed in this report. We believe that the most appropriate and effective mechanism to achieve this outcome will be through legislation, and that we can best support such legislation through detailed and practical recommendations to government regarding the powers it should allocate to the DMU, both through this report and, subsequently, through the Digital Markets Taskforce. We do not consider it would be helpful to the process of designing such legislation if we were to run a market investigation in parallel, as this would risk cutting across broader regulatory reform.

9.35 Second, the disruption caused by the COVID-19 pandemic, to the CMA but also to so many of our stakeholders, has been significant. We are mindful that launching any market investigation introduces burdens onto the businesses within its scope, and given the current disruption to the economy we do not think it would be appropriate, or in the best interests of consumers, to launch any market investigation at this stage.

9.36 These developments, alongside our further assessment that a new regulatory regime is essential to tackling the problems we have identified, have strengthened our view that recommendations to the government, including through the Digital Markets Taskforce, are at this time the most appropriate course of action.

9.37 After the work of the Taskforce has concluded, we will assess whether the actions being taken by the government are sufficient to address the full range of issues we have identified, or whether direct action by the CMA is likely to be required. This future action could take the form of enforcement cases or further markets work, including, potentially, a market investigation.

9.38 In the next chapter, we set out the next steps the CMA will now be undertaking to take forward the findings and recommendations of this market study, including our work leading the Digital Markets Taskforce, and advocacy and engagement with UK and international partners.

10. Further work by the CMA

Introduction

10.1 In this market study we have had two overarching objectives. First, we aimed to investigate the extent of concerns in the consumer-facing and digital advertising markets within our scope, and to develop interventions to address these concerns. Second, we aimed to influence the broader debate about the regulation of online platforms, both in the UK and abroad.

10.2 The publication of this final report is an important milestone in the achievement of these aims, but substantive further work remains to be done. This chapter sets out the key next steps the CMA will be taking towards these goals over the short to medium term. The main components of our strategy are:

- our work leading the Digital Markets Taskforce to further inform the development of a pro-competition regulatory regime for online platforms;
- proactive engagement and advocacy with our international counterparts;
- work with the Information Commissioner's Office (ICO) on a number of areas relating to the interaction between data protection regulation and competition; and
- ongoing consideration of direct intervention by the CMA to address the concerns we have identified, in the form of enforcement action and/or further markets work.

Digital Markets Taskforce

10.3 The government made two very significant announcements relevant to this market study in its budget of March 2020.

10.4 First, the government has formally accepted all six of the strategic recommendations made by the Furman Review, which included the establishment of a pro-competition Digital Markets Unit (DMU), which the review recommended should have a range of functions including establishing a code of conduct for digital platforms with strategic market status and powers to deploy a powerful set of data-related tools to create new opportunities for competition, including data mobility, open standards and data openness.

10.5 Second, as means of taking those recommendations forward, the government asked the CMA to lead a Digital Markets Taskforce, also incorporating

expertise from Ofcom and the ICO. The objective of the Taskforce is to provide the government with expert advice to inform its decisions on what action is necessary to promote competition and innovation in digital platform markets and to address the anti-competitive effects that can arise from the exercise of market power in those markets.

10.6 Specifically, the Taskforce will consider the practical application of the potential pro-competitive measures set out in the Furman Review. The terms of reference for the Taskforce's work set out a series of detailed issues that the advice will cover. These include advice on: a potential methodology to designate digital platforms with SMS; the form and content of the code of conduct; and the case for data-related remedies beyond those we have identified in the study, including any additional powers required to implement these.[513]

10.7 The Taskforce will draw on a wide range of evidence to inform its advice, including the findings and recommendations of this market study. The scope of the Taskforce is broader than that of the study, as it will cover platforms with a wide range of monetisation strategies, including those that are funded by commission from transactions (eg online marketplaces and App stores) as well as those that are funded by advertising. As the Taskforce is not a market study, it will not have formal evidence-gathering powers, and so the analysis and findings for transaction-funded platforms will necessarily be higher level than has been achieved in this study.

10.8 The Taskforce is seeking to engage with digital platforms, consumer and business groups as well as academics and wider industry expertise. The CMA has now formally launched this work by publishing a call for inputs. Responses to that consultation are requested by 31 July 2020.[514] The Taskforce will now provide advice to government by the end of the year. The revised timing is as a result of the disruption caused by COVID-19.

10.9 Building on the important work of this market study, the Taskforce will be a critical next step in the journey towards development of a new pro-competition regime for digital platform markets.

International engagement

10.10 Throughout the market study the CMA has engaged extensively with other international authorities. This includes discussions with countries undertaking similar market studies into digital advertising; countries developing proposals

[513] Digital Markets Taskforce terms of reference
[514] Digital Markets Taskforce case page.

for ex ante regulation of platforms; and countries taking enforcement action in relation to digital advertising. We believe these forms of international engagement are vital in seeking to develop a consensus on the issues and on potential solutions to the challenges posed by digital platforms.

10.11 Over the past year there has been increasing alignment between a number of countries on the need for tools that allow earlier intervention in digital markets. For example:

- In Australia, the government established a special unit within the ACCC to proactively enforce, monitor and investigate competition and consumer protection in digital platform markets,[515] and asked the ACCC to create a mandatory code of conduct to govern the commercial relationship between digital platforms and media companies.[516]

- In Germany, there is draft legislation proposing that the national competition authority, the Bundeskartellamt have the ability to designate platforms as dominant where they have 'paramount significance for competition across markets' and that the Bundeskartellamt have powers to prohibit platforms engaging in a range of conduct.[517]

- In Japan, the government established a 'Headquarters for Digital Market Competition' in September 2019 with an aim to facilitate discussions on the transparency of the dealings with digital platform businesses and the protection of privacy.[518] In June 2020 it released an interim report proposing that ex ante regulation be applied to digital platforms.

- The national competition authorities of Belgium, the Netherlands and Luxembourg issued a joint memorandum proposing a tool with which competition authorities could impose proportionate remedies on dominant companies in order to prevent competition problems, rather than relying on after-the-fact enforcement.[519]

- The European Commission is considering 'how best to address more systemic issues related to platforms and data, including by ex ante regulation if appropriate, to ensure that markets stay open and fair'.[520] It is currently considering rules and regulations to ensure there is a level playing field in European digital markets, given it considers that 'currently

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[515] The Australian government media release announcing its response to the ACCC report.
[516] Australia announces mandatory media code between platforms and media companies.
[517] Proposed German legislation
[518] Media release announcing the Japanese Headquarters for Digital Competition
[519] Joint memorandum from the Belgian, Netherlands and Luxembourg competition authorities.
[520] A European strategy for data.

a few large online platforms act as gatekeepers'. The proposed rules are to address these market imbalances, to ensure that consumers have the widest choice and that the EU single market for digital services remains competitive and open to innovation.[521] Separately, the EC is also currently inviting comments on a possible new market investigation tool that would allow it to remedy structural competition problems in a timely and effective manner, including in digital markets.[522]

10.12 Digital advertising markets have become the focus for increased scrutiny. A number of countries have completed, or are in the process of conducting market studies into digital advertising including Australia,[523] France,[524] Germany,[525] Netherlands,[526] Spain,[527] and Sweden.[528] The CMA has been sharing knowledge with these jurisdictions, including through dedicated days to discuss emerging digital platform issues, secondments of staff and the sharing of knowledge and information.

10.13 A number of jurisdictions have recently completed or have ongoing enforcement investigations, including authorities in Germany, Australia, France and the European Commission. In the United Sates, there have been several announcements in the past twelve months from the US Department of Justice, Federal Trade Commission and State Attorneys General that they are investigating Google and Facebook.[529]

10.14 In the course of our market study we have been engaging with several of these authorities undertaking or considering enforcement cases to understand their concerns and approaches and to share our knowledge and understanding. This has included discussions with several jurisdictions about approaches to information gathering, and sharing resources around investigative techniques.

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[521] Commission launches consultation to seek views on Digital Services Act package.
[522] Antitrust: Commission consults stakeholders on a possible new competition tool.
[523] In Australia, the ACCC is currently conducting an inquiry into adtech and ad agencies, which builds on the work it previously did examining digital advertising markets more generally in its digital platforms inquiry.
[524] In France, the Autorité de la concurrence published an Opinion on data processing in online advertising sector.
[525] In Germany, the BKartA is conducting a sector inquiry into market conditions in online advertising sector.
[526] In the Netherlands, the ACM has been looking at choice architecture relevant to digital advertising markets.
[527] In Spain, The CNMC has started a market study on online advertising, and has undertaken consultation.
[528] In Sweden, the Swedish Competition Authority is performing a market study of the functioning of competition on digital platforms in Sweden, including examining digital advertising issues.
[529]The US Department of Justice announced it is reviewing the practices of a number of platforms that may create or maintain structural impediments to greater competition. Facebook disclosed publicly that the US Federal Trade Commission had opened an antitrust investigation of its conduct. Also, 50 US State Attorneys General have instigated a multistate, bipartisan investigation of Google's business practices; and a coalition of Attorneys General are investigating Facebook.

10.15 Further, the work we published in our interim report has been influential in steering the broader debate about the case for enforcement in the markets we have analysed. For example, academic commentators have drawn on the analysis we presented to posit theories of harm that could lead to cases being taken under current US law, if the market conditions in the US were similar to those we set out in the interim report.[530]

10.16 Following the completion of the market study the CMA will continue to look to inform the international debate about how to address concerns relating to online platforms funded by digital advertising. In particular, we will:

- Disseminate the final report findings through seminars, and bilateral and multilateral engagement. We will invite all countries currently undertaking market studies into digital advertising to partake in a knowledge sharing workshop, and separately, invite leading academics to partake in a digital seminar series to discuss the findings and recommendations of our report.
- Advocate the need for ex ante regulation through fora such as the OECD and International Competition Network.
- Work closely with any enforcement agency investigating issues in digital advertising markets to share the knowledge and investigative techniques we have learnt. The CMA will host a digital seminar for countries to discuss theories of harm in relation to digital advertising markets

Engagement with the ICO

10.17 We have had constructive engagement with the ICO throughout this market study on the issues raised in Chapter 5 of the report concerning the intersection of competition and data protection law, and on the potential design and development of several of the interventions we have discussed in Chapter 8. While both the CMA and the ICO are independent statutory authorities with different mandates, priorities and roles, there is considerable scope for the two organisations to work together. After the completion of the study, we will build on this positive collaboration with the ICO as part of an ongoing programme of joint work to promote markets which are competitive, empower consumers and safeguard individuals' rights to privacy.

10.18 Our intention in undertaking this work is to ensure that consumers rather than platforms are in control of their personal data, and to encourage a modern view of data protection regulation, which empowers consumers and avoids

[530] Roadmap for a Digital Advertising Monopolization Case Against Google; Roadmap for an antitrust case against Facebook

favouring large integrated platforms over smaller publishers. In relation to consumer empowerment, we want to explore how consumers can be presented with choices that are unbiased, meaningful to them and easy to act upon, avoiding friction and confusion and facilitating genuine control. In relation to competition, we want to address the concern that some platforms are increasingly acting in a quasi-regulatory capacity, judging the appropriate application of data protection regulations not just for themselves but for others, with an incentive to interpret these regulations in a way that favours their own businesses. This work will have several components.

10.19 First, a key focus of our work with the ICO in the near to medium term will be on the issues discussed in Chapters 5 and 6 on the interaction between competition and data protection regulation in digital advertising markets. In this respect, we welcome the fact that the ICO is now the data protection supervisory authority for Google in respect of the processing of UK users' personal data and is likely to be for Facebook when the Brexit transition period ends.

10.20 Drawing on the analysis in Chapter 8, our work with the ICO will explore the principle of competition neutrality in the design and application of data protection regulation in digital advertising, including, for example, through the establishment of codes of conduct and certification regimes, and consider the data protection, consumer empowerment and competition implications of different models of consumer control over data, including privacy-enhancing technologies (PETs) and Personal Information Management services (PIMS), and different regulatory approaches, including data silos and data access interventions.

10.21 In concrete terms, an important element of this work will be how to respond to and engage with Google's proposals for phasing out third party cookies on Chrome and the development of its Privacy Sandbox proposals on Chromium browsers over the next 18 months. We will wish to consider, for example, how adequate Google's proposed alternatives for targeting and attribution are likely to be for market participants, whether such browser-focused approaches for targeting and attribution raise competition concerns and if so how these can be addressed, and whether there is a need to consider in parallel constraints on integrated platforms' ability to share data for targeting and attribution across their ecosystems. We will continue to monitor these proposals as they are developed and tested by platforms and the web standards community.

10.22 The second focus of our work with the ICO will be on the development of thinking on the Fairness by Design intervention as a key means of

encouraging informed consumer control, and how it would complement the Data Protection by Design obligation under data protection regulation.

10.23 Third, we will consider how data-related remedies may apply to other digital platform markets outside the consumer-facing and digital advertising markets we have reviewed in this study. We will collaborate with the ICO on these issues as part of the Digital Markets Taskforce.

10.24 Fourth, competition, consumer and data protection policy have similar broad objectives of promoting the welfare of individuals for the benefit of society but may seek to achieve this in different ways. We believe there is clear scope to collaborate on the process for achieving these objectives across other digital markets to build on the findings from this market study. Issues may include for example the role of cross-market features such as:

- the use of defaults (which may tend towards over-collection of data);
- control mechanisms which do not appear to respect consumer choice over time (for example repeated requests to 'opt in'); and
- the presentation of choices which appear designed to over-collect consumer data.

10.25 In the longer term, we believe that data mobility and interoperability interventions can be powerful levers to promote greater competition while preserving privacy. We propose to explore the potential benefits which may derive from the development of business practices or technologies in which data mobility and interoperability is a key feature including PETs, PIMS and Personal Data Stores (PDS). These may offer consumers greater control over data as an alternative to current business models, but they are still in the development stage. We will also seek to further develop our understanding and relationships with internet governance and the web standards community, to continue to develop our own technical expertise, and to draw on relevant academic and industry research to help address these complex challenges at the interface of competition, privacy and digital markets.

10.26 We have today announced the establishment of a Digital Regulation Cooperation Forum (DRCF) to support regulatory coordination in online services, and cooperation on areas of mutual importance between the CMA, ICO and Ofcom. It will coordinate relevant work undertaken by the three institutions and ensure that synergies and tensions between different policy objectives are effectively managed. The further work that we are proposing to undertake with the ICO on the issues arising from this study would be overseen by this Forum.

Potential CMA interventions using our markets and enforcement powers

10.27 For the reasons set out in the previous chapter, we have decided not to launch a market investigation at this stage into the markets within the scope of this study. We have made a series of important recommendations to government for reform, many of which build on the Furman Review's recommendations that government has accepted, and we are committed to ensuring that they are taken forward. In light of this, and the ongoing disruption caused by COVID-19, we have decided that the right focus for the CMA now is to add further clarity and practical detail on how many of these proposals can be implemented, and we will do this initially through the Digital Markets Taskforce.

10.28 We are not ruling out further markets work in this area in the future. We are optimistic that, following the report of the Taskforce, the government will be ready to take forward the necessary legislation for establishing the Digital Markets Unit in good time. If that turns out not to be the case, or if some of our recommendations are judged not to be well-suited to the emerging new regime, then the CMA will stand ready to take direct action of its own through a market investigation. The CMA will keep this option under review following the conclusion of the Taskforce.

10.29 In relation to enforcement action, the CMA is currently actively considering possible cases in the digital sector, drawing on the work of the market study. More broadly, the CMA will also continue to consider any examples of digital platforms exploiting their market power or otherwise engaging in anti-competitive conduct, and will stand ready to take enforcement action where it identifies evidence of anti-competitive conduct.

10.30 To the extent that the European Commission initiates any antitrust cases in the digital sector prior to the end of the transition period following the UK's exit from the European Union, the outcome of those cases would continue to apply to the UK market after the end of that transition period and the CMA will continue to work closely with the European Commission.

10.31 The CMA also continues incrementally to develop its approach to digital merger cases. This can be seen in the forward-looking approach it has taken in recent cases such as Google/Looker,[531] PayPal/iZettle[532] and Experian/Clearscore,[533] and also in the ongoing update of its Merger

[531] CMA, Google LLC / Looker Data Sciences, Inc merger inquiry.
[532] CMA, PayPal Holdings, Inc / iZettle AB merger inquiry.
[533] CMA, Experian Limited / Credit Laser Holdings (Clearscore).

Assessment Guidelines, to reflect the latest research and experience. Although we continue to believe that the UK merger control regime is largely fit-for-purpose, we are considering the need for legislative changes to ensure that we have the right tools to prevent harm to consumers arising from mergers in digital markets.

Concluding the market study

10.32 Through the work of this market study we have built up a comprehensive understanding of online platforms that are funded by digital advertising, while supporting the diagnosis of our competition concerns with extensive detail and evidence on the functioning of the markets in which they operate.

10.33 The content of this final report and supporting appendices will ensure that the CMA, the government, and also our international partners are well-placed to take forward this important emerging policy agenda with a sound understanding of the issues. We would like to thank the very many stakeholders that have cooperated constructively with the market study and enabled us to achieve this positive outcome within the 12 month timeframe.

10.34 We look forward to continuing our work in this area in the various ways outlined above, and in particular to contributing further towards the development of a new pro-competition regime here in the UK, while also promoting a coordinated approach to these issues globally.

10.35 If you would like to discuss the findings of this market study with us, you can contact us by email at: onlineplatforms@cma.gov.uk