UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

THOMAS LAUMANN, FERNANDA GARBER, ROBERT SILVER, GARRETT TRAUB, DAVID DILLON and PETER HERMAN, representing themselves and all other similarly situated, Plaintiffs v. NATIONAL HOCKEY LEAGUE, *et al.* Defendants	CA No. 12-1817 (SAS) ECF Case
FERNANDA GARBER, MARC LERNER, DEREK RASMUSSEN, ROBERT SILVER, GARRETT TRAUB, and PETER HERMAN, representing themselves and all other similarly situated, Plaintiffs v. OFFICE OF THE COMMISSIONER OF BASEBALL, *et al.* Defendants	CA No. 12-3704 (SAS) ECF Case REDACTED

DECLARATION OF ROGER G. NOLL[1]

QUALIFICATIONS

My name is Roger G. Noll, and I reside in Palo Alto, California. I am Professor *Emeritus* of Economics at Stanford University and a Senior Fellow at the Stanford Institute for Economic

[1] This declaration is subject to the Protective Orders entered in these cases and contains references to materials labeled highly confidential and specially protected.

Policy Research, where I am the Director of the Program on Regulatory Policy. I have a Ph.D. in economics from Harvard University and a B.S. in mathematics from the California Institute of Technology. My primary field in economics is industrial organization, which includes antitrust economics and the economics of specific industries, such as sports and broadcasting. I have taught antitrust economics to both undergraduate and graduate students for 50 years.

I have published over 300 books, articles and reviews, many of which deal with professional sports, broadcasting, and/or antitrust. Among these are two books on the economics of sports, *Government and the Sports Business* (editor and author of three chapters) and *Sports, Jobs and Taxes* (co-editor and co-author of three chapters). My co-authored book, *Economic Aspects of Television Regulation*, received an award from the National Association of Educational Broadcasters as the best book of the year in communications policy. I also have been awarded distinguished career awards by the AEI/Brooking Joint Center on Regulation, the Public Utility Research Center at the University of Florida, and the Transportation and Public Utilities Group of the American Economic Association. My complete *curriculum vita* is attached to this declaration as Appendix A.

I have been an economic expert in the following cases that are in process or came to conclusion during the past five years.

Testimony at Trial

Bernard Parish, et al., vs. National Football League Players Association (U. S. District Court, San Francisco);

In re Application of MobiTV Related to U.S. vs. ASCAP (U.S. District Court, New York City);

Reggie White, et al., v. NFL: Lockout Insurance & Lockout Loans (U.S. District Court, Minneapolis);

SmithKlein Beecham d/b/a GlaxoSmithKline vs. Abbott Laboratories (U.S. District Court, Oakland);

Novell vs. Microsoft (U. S. District Court, Salt Lake City);

DVD CCA vs. Kaleidescape (Superior Court, San Jose);

In the Matter of Adjustment of Rates and Terms for Pre-existing Subscription and Satellite Digital Audio Radio Service (Copyright Royalty Board, Washington, D. C.); and

In re Application of Pandora Media, Inc. Related to U.S. vs. ASCAP (U.S. District Court, New York City).

Declarations, Expert Reports and/or Depositions

National Association of Optometrists and Opticians, et al., vs. Lockyer, et al., (U.S. District Court, Sacramento);

In Re Dynamic Random Access Memory (DRAM) Antitrust Litigation (U. S. District Court, San Francisco);

Joel I. Roos and Tom Santos, et al., vs. Honeywell International (Superior Court, San Francisco);

Vincent Fagan and Anthony Gianasca v. Honeywell International (Superior Court for Middlesex County, Boston, Massachusetts);

John McKinnon v. Honeywell International (Superior Court for York County, Alfred, Maine);

Eric Seiken vs. Pearle Vision (Superior Court for San Diego County, San Diego);

Jason White, et al., vs. National Collegiate Athletic Association (U. S. District Court, Los Angeles);

In Re Static Random Access Memory (SRAM) Antitrust Litigation (U. S. District Court, San Francisco);

Fair Isaac, et al., vs. Equifax, et al. (U. S. District Court, Minneapolis);

Apple iPod iTunes Anti-Trust Litigation (U. S. District Court, San Jose);

Minority Television Project vs. Federal Communications Commission (U. S. District Court, San Francisco);

In Re Flash Memory Antitrust Litigation (U. S. District Court, Oakland);

In re Applications of AT&T Mobility, Ericsson and Verizon Wireless, Related to U.S. vs. ASCAP (U.S. District Court, New York City);

Sarah Perez, et al., vs State Farm Mutual Automobile Insurance Co., et al. (U.S. District Court, San Jose; and

Federal Trade Commission vs. Cephalon (U.S. District Court, Philadelphia);

In re Text Messaging Antitrust Litigation (U.S. District Court, Chicago);

In re NCAA Student Athlete Name and Likeness Licensing Litigation (U.S. District Court, Oakland);

City of San Jose, et al., vs. Office of the Commissioner of Baseball, et al. (U.S. District Court, San Jose); and

In re Electronic Books Antitrust Litigation. (U.S. District Court, New York City).

Amicus Submissions

PSEG Fossil, et al., vs. Riverkeeper Inc. (U.S. Supreme Court);

American Needle vs. National Football League (U.S. Supreme Court); and

Petition to Reconsider Sports Blackout Rules (Federal Communications Commission).

ASSIGNMENT

Attorneys for the class plaintiffs have asked me to undertake an antitrust economics analysis of the liability issues in *Fernanda Garber, et al. v. Office of the Commissioner of Baseball, et al.* and *Thomas Laumann, et al. v. National Hockey League, et al*. Henceforth I refer to the first as the *MLB Complaint*, the second as the *NHL Complaint*, and both collectively as the *Complaints*.

At issue in the *Complaints* are the policies and practices of Major League Baseball (MLB) and the National Hockey League (NHL) that restrict an individual team and the regional sports network (RSN) that telecasts its games to distribute live video broadcasts of the team's games outside of the team's home broadcast territory. These policies are agreed to and carried out by multichannel video program distribution systems (MVPDs), including Directv and Comcast. My assignment is to apply the methods of antitrust economics to determine whether these restrictions cause anticompetitive harm to consumers, including to members of the classes that are alleged in the *Complaints*.

In undertaking this analysis, I have considered submissions to the court by the parties in these cases, numerous documents and depositions in the discovery record and relevant publications and other publicly available information. The materials that I have considered in undertaking this analysis are listed in Appendix B or cited in the text of this declaration. I also am relying on my experience in undertaking research in the economics of broadcasting and the economics of sports for over 40 years. I have been assisted in carrying out this assignment by

economists at Navigant Consulting and Precision Economics, and by Professor Ali Yurukoglu of Stanford University. For my work on this matter I am compensated at the rate of $800 per hour.

SUMMARY AND CONCLUSIONS

This declaration undertakes an analysis of the competitive effects of the television broadcasting policies of MLB and the NHL. I implement both approaches that economists use – the "direct effects" method and the "traditional" method – and conclude from both that the restrictions that the defendants have agreed to adopt with respect to the sale of live television rights and the geographic distribution of these rights has caused anticompetitive harm to consumers. This harm consists of causing the prices that consumers pay for access to live game telecasts to be higher than otherwise would be the case if the restrictions were not in place, and for consumers to have less choice among the live game telecasts that are available to them.

In undertaking my analysis, I have reached the following additional conclusions. First, each major league professional sport operates in its own relevant product market: games in one sport are not close competitive substitutes for games in another sport. Furthermore, the geographic markets in which teams sell their products are localized. For television rights, league rules confine the geographic market in which a team can sell and its RSN can distribute live game telecasts to the set of local television markets (called designated market areas, or DMAs) in which the team has home territorial broadcast rights. These localized markets are artificially created by league rules and the defendants' agreements and would be integrated into a national market if these restrictions were removed, leading me to conclude that these groups of home territory DMAs are properly categorized as submarkets.

I also conclude that the teams and the leagues enjoy substantial market power in selling television rights. The Lerner Index for the prices that the teams and the leagues charge for their television products is extremely high, and the submarkets in which these rights are sold are highly concentrated in the presence of high barriers to entry. Moreover, a principal potential competitor for live game telecasts of a team is the national package of games that are offered by the league, but the nature and terms for these packages are the product of collusive decisions by the teams in the league and are set so as to minimize the extent to which the league packages compete with local telecasts.

The principal cause of substantial market power by the teams and the leagues in the sale of television rights is the agreement among teams not to compete in the sale of local television rights, as implemented by territorial exclusive home television rights, including restrictions on the delivery of Internet streaming of live telecasts by RSNs.

The anticompetitive effects of these restrictions are less choice and higher prices for consumers. Many RSNs that carry live telecasts of games in a team's home broadcast territory are carried outside this territory, but with the live telecasts blacked out. In the absence of the territorial restrictions, RSNs could include these games in their out-of-market telecasts at almost no cost, and likewise could offer Internet streams of games at very little incremental cost.

To calculate the effects of the restrictions on prices, economists working under my direction have estimated an econometric model of the prices that would emerge in a market in which each league continued to offer its bundled package of out-of-market broadcasts, but each RSN also was permitted to offer the live telecasts of the team or teams in the league for which it holds local television rights. The model was estimated using subscriber data from 2012 for the Internet versions of the league packages that were offered by MLB and the NHL. The results of

this analysis are that competition between the leagues and the RSNs would drive down the price of the league packages by more than 50 percent.

I also have analyzed the business justifications for the territorial broadcast rights that were asserted in the *MLB Responses* and the *NHL Responses* to plaintiffs' interrogatories. I have concluded that none of these justifications is valid because none offers plausible benefits to consumers that offset a more than doubling of the price of the league packages of out-of-market games. Specifically, I conclude the following. First, neither MLB nor the NHL is a single entity with respect to the sale of television rights because teams do not have integrated and common business interests and, within the framework of territorial restrictions, in several local television markets teams still compete in the sale of television rights. Second, the provision of exclusive rights does not produce efficiencies. The alleged efficiencies asserted by the defendants apply only to the sale of exclusive rights by a team, and not to the exclusion of other teams from a market. Third, territorial restrictions are unnecessary for the leagues to continue to offer various nationally distributed television products, and in fact the existence of these products is not challenged in this litigation. Fourth, the creation of territorial rights does not contribute to competitive balance, but in fact makes competitive balance worse due to the disparities in the value of home broadcast territories and the methods of the leagues in redistributing shared revenues. Finally, the claim that territorial rights contribute to "franchise stability" is not about providing a benefit to consumers, but about providing a benefit to teams at the expense of consumers by denying consumers the opportunity to switch their allegiances among teams.

The remainder of this report explains the basis for these conclusions.

ALLEGATIONS IN THE COMPLAINTS

The *Complaints* contain descriptions of four classes of plaintiffs, definitions of the relevant markets in which class plaintiffs purchase access to live video broadcasts of games in major league baseball or hockey, and allegations that the defendants have caused anticompetitive harm by engaging in a division of the relevant market and price collusion. This section reviews the relevant allegations in the *Complaints*.

Class Definitions

Each *Complaint* defines two classes of plaintiffs who pay for access to live video broadcasts (telecasts) of games in that sport: a television class, which refers to consumers who purchase access to live telecasts of games on an MVPD to view on a television set, and an Internet class, which refers to consumers who purchase access to live Internet streaming of games to a personal computer, tablet computer, smart phone, or any other device that can view video programming that is delivered over the Internet.

In the *MLB Complaint* (p. 18) the television class consists of "individuals who purchased television service from DirecTV and/or Comcast… that included channels carrying video presentations of live major league baseball games that were not available through a sponsored telecast…" The internet class in the *MLB Complaint* consists of "individuals who purchased MLB.tv in the United States directly from any of the League Defendants…" In the *NHL Complaint* (p. 17) the television class consists of "individuals who purchased television service from DirecTV and/or Comcast… that included channels carrying video presentations of live NHL hockey games that were not available through a sponsored telecast…" and the internet

class consists of "individuals who purchased NHL GameCenter Live in the United States from any of the NHL Defendants…"

In the *Complaints* the term "sponsored telecast" refers to broadcasts that are televised by an over-the-air station. Broadcasts by regional sports networks (RSNs) and some over-the-air TV stations also are aggregated and distributed nationally through MVPDs by MLB (MLB Extra Innings)[2] and the NHL (NHL Center Ice),[3] and over the Internet by MLB (MLB.tv)[4] and the NHL (NHL GameCenter Live).[5] I understand that at present this litigation is proceeding under the assumption that the classes consist of the subscribers to these aggregated services.

Relevant Markets

The *MLB Complaint* (p. 23) alleges two relevant product markets. The first relevant product market is the "provision of major league baseball contests in North America" in which "Major League Baseball has market power." The second relevant product market is "live video presentations of major league baseball games over media such as cable and satellite television and the Internet" in which MLB has "the ability, together with its television partners, to exercise market power in the market for live video presentations of MLB games."

The *NHL Complaint* (pp. 22-23) similarly alleges that major league professional hockey is a relevant product or service market, that the NHL has market power in this relevant market, that "live video presentations of major league professional hockey games" are a relevant market,

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[2] For the iN Demand description of MLB Extra Innings, see http://www.indemand.com/sports/mlb/. For the DirecTV description of MLB Extra Innings, see http://www.directv.com/sports/mlb.

[3] See http://www.nhl.com/ice/page.htm?id=26371.

[4] See http://mlb.mlb.com/mlb/subscriptions/index.jsp?product=pstv.

[5] See https://gamecenter.nhl.com/nhlgc/secure/gclsignup?CMPID=GCL:vnty.

and that the NHL has "the ability to exercise market power, together with its television partners, in the market for live video presentations of major league professional hockey games."

The *MLB Complaint* (p. 23) and the *NHL Complaint* (p. 23) also allege that the geographic scope of these relevant markets is North America and that the relevant "live video presentation" markets may have geographic submarkets.

Anticompetitive Conduct

The anticompetitive conduct that is alleged in the *Complaints* includes agreements not to compete and to fix prices among a league, the teams in that league, the RSNs that acquire local television rights of individual teams, and the MVPDs that implement the restrictions. According to the *MLB Complaint* (p. 24), MLB teams "have agreed not to compete in business matters related to the video presentation of live major-league professional baseball games." The *NHL Complaint* (p. 23) states that teams in the NHL have a similar agreement not to compete in live video broadcasts of major league professional hockey games. The *Complaints* describe two components of the agreements not to compete and to fix prices among a league, its teams, the teams' RSN broadcasters, and MVPDs like Comcast and DirecTV (*MLB Complaint*, pp. 24-31; *NHL Complaint*, pp. 24-31). The two components are the division of the U.S. and Canada into exclusive or semi-exclusive team home broadcast territories and the aggregation and distribution of packages of live telecasts of "out-of-market" games for nationwide distribution through MVPDs and the Internet. The first component prevents a team in a league from unilaterally selling the rights to telecast or stream its games outside of its exclusive home broadcast territory, and the second component allows teams to engage in price collusion for access to the package of

out-of-market games that competes directly with the in-market telecasts of the games of every team.

Home Broadcast Territories

Both MLB and the NHL have divided all (MLB) or nearly all (NHL) of the U.S. among the home broadcast territories of their member teams. In each local television market (called a designated market area, or DMA)[6] only teams with home broadcasts rights in that community are permitted to have their games televised live by either an over-the-air television station or an RSN. Exhibit 1 shows the number of teams that are permitted to allow their games to be televised in the top 75 DMAs in the United States. These markets collectively account for almost 80 percent of the U.S. population. With one exception,[7] a team and its broadcaster do not stream live telecasts over the Internet, even in the DMA in which its playing facility is located.

In many DMAs (among the top 75 markets, 33 in MLB and 58 in the NHL) a team's television rights are exclusive in that only one team in the league has the right to sell live television rights to its games to local broadcasters (over-the-air or RSN). In the rest of the DMAs two to six teams in a league share the right to sell live television rights.

In both MLB and the NHL, a team's home broadcast territory includes the DMA in which its home playing facility is located. In MLB, four DMAs – Chicago, Los Angeles, New York, and San Francisco – have two teams with home stadiums in that area that share local

[6] The Federal Communications Commission has constructed and assigned most over-the-air television licenses so that stations serve a geographic area that correspond roughly to a metropolitan area. A DMA is the geographic area in which consumers who receive television over the air primarily view the stations that have been assigned to that metropolitan area.

[7] A consumer who subscribes to a cable television service that carries the games of the New York Yankees also is permitted to receive Internet streaming of Yankees games.

broadcast exclusivity. In addition, the Orioles and the Nationals share exclusivity in Baltimore and Washington, which are separate but substantially overlapping DMAs, and the Astros and the Rangers share the Dallas and Houston DMAs, even though neither team plays home games in the other team's home DMA. In all other DMAs in which an MLB team has a home stadium no out-of-market team can televise its game in that market. The NHL has two multi-team areas, Los Angeles (two teams) and New York (three teams). In both of these DMAs the home teams share local broadcast exclusivity. Each of the other teams in the NHL has sole exclusive broadcast rights for televising live games in the DMA in which its playing facility is located.

In both leagues a team's home broadcast territory extends beyond the local television area in which the team's playing facility is located to other DMAs that do not have a home team in the same sport.[8] MLB has allocated every square inch of every state and the District of Columbia to the home broadcast territory of one to six teams,[9] while the NHL has allocated every state except Alaska to home broadcast areas of between one and four teams.[10] Among the top 75 markets shown in Exhibit 1, 50 have no home MLB team and 55 have no home NHL team, yet all are assigned to the home broadcast territory of teams from other metropolitan areas. Most of the top 75 DMAs with no local team (27 of 50 in MLB and 51 of 55 in the NHL) are

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[8] The NHL further divides a team's home territory into its "sphere of influence" (the television market in which it is located plus other, nearby television markets) and its "outer market" (additional, more distant television markets that have no home NHL team). The NHL then imposes a fee on a team if its RSN televises games into its outer market. The fee originally was [redacted] per subscriber per month that receives the RSN in the outer market but more recently has been negotiated between the team or RSN and the Commissioner. See, e.g., Bates Nos. NHL1408857-62.

[9] MLB's team broadcast territories are shown in "Major League Baseball Home Television Territories by State," March 27, 2013, Bates Nos. MLB417359-372, and "Home Television Territories," March 3, 2005, Bates Nos. MLB36926-962.

[10] The NHL's team broadcast territories are shown in "TV Subscriber Overview," September 2012, Bates Nos. NHL2833794-818. Vancouver has "outer market" home television rights to Oregon and Washington (see Bates Nos. NHL0365400-31 at 26).

assigned to only one or two teams. When DMAs with local teams are included, 52 of the top 75 markets are assigned to one or two MLB teams, and 70 are assigned to one or two NHL teams.

While some DMAs are assigned to a team from the nearest DMA that has a home team, distance to the nearest teams in the league does not explain many assignments of home broadcast territory. Boise, Idaho, and Billings, Montana, are over 600 miles apart, but they are in the exclusive broadcast territories of the same teams – Seattle in MLB and Colorado in the NHL. Billings is 820 miles from Seattle and 522 miles from Denver, but is in the home broadcast territory of the Mariners and not the Rockies. Boise is closer to San Jose (673 miles) and the Sharks than to Denver (813 miles) and the Avalanche. NHL broadcast exclusivity in Indianapolis is shared by the Chicago Blackhawks (180 miles away) and the St. Louis Blues (242 miles away), but not the Columbus Blue Jackets (172 miles away).

Teams with home playing facilities in different DMAs sometimes share home broadcast rights in distant markets. For example, consider the NHL's assignment of territorial rights to the three state capitols near New York City: Albany, Hartford and Trenton. Albany is assigned to all three teams in New York City (150 miles away)[11] plus the Buffalo Sabres (288 miles away), but not to Boston (170 miles away) or Montreal (222 miles away). Hartford is assigned to both the Bruins in Boston (102 miles away) and the Rangers in New York City (117 miles away), but not to the other teams that have home arenas in the New York City area (Devils and Islanders). The NHL assigns Trenton to all three teams in the New York DMA (66 miles away) plus the Flyers in Philadelphia (34 miles away).

[11] Distances between cities are from http://www.travelmath.com/.

The number of teams that share a DMA is usually one or two, but in a few cases is much larger. Three of the top 75 DMAs are in the home broadcast territory of six MLB teams: Des Moines, Honolulu and Las Vegas.

Des Moines and the rest of Iowa are in the home broadcast territory of MLB teams from five different metropolitan areas (Chicago, Kansas City, Milwaukee, Minneapolis and St. Louis), but Omaha, across the Missouri River from Iowa, is in the exclusive broadcast territory of only one MLB team, the Kansas City Royals. Omaha (188 miles) and Des Moines (194 miles) are approximately the same distance from Kansas City, and the distance from Omaha to Minneapolis (379 miles) is about the same as the distance between Des Moines and Milwaukee (374 miles).

Honolulu and the rest of Hawaii are in the home broadcast territory of all six MLB teams from the four metropolitan areas on the west coast (Los Angeles, San Diego, San Francisco and Seattle) as well as the two NHL teams from Los Angeles, all of which are two time zones away. Anchorage and the rest of Alaska are in the home broadcast territory of one MLB team, the Mariners, while no NHL team can broadcast games into Alaska. San Francisco is closer to Anchorage (2017 air miles) than to Honolulu (2,397 air miles), but its MLB teams are permitted to televise games only in the latter.

Las Vegas is in the home broadcast territory of MLB teams from four metropolitan areas (Los Angeles, Phoenix, San Diego and San Francisco), but Reno, Nevada, is in the territory of only the two San Francisco teams. Reno is closer to Los Angeles (517 miles) than Las Vegas is to San Francisco (579 miles).

League Packages

The second element of the agreements not to compete and to fix prices is the delegation to the league of the exclusive right to distribute an "out-of-market" bundle of local live telecasts of all of the teams in the league. A consumer can buy access to each league television package from a local MVPD such as DirecTV or Comcast or as an Internet streaming service from a subsidiary of the league. Consumers are not allowed to purchase access to the games of only one team, but instead must buy the entire league package to get access to a single out-of-market team.

The term "out-of-market" refers to games involving teams for which the home broadcast territory of both teams does not include the television market in which the consumer lives. Thus, the games that are included in the league package vary among television markets. For the MLB league packages, the games of teams that include the consumer's location in its home territory are blacked out from the league package. For the NHL league packages, home broadcast territories are divided into a "sphere of influence" and a more distant "outer market." The games of a team are blacked out from both league packages within its sphere of influence, but in a team's outer market its games are blacked out only on GameCenter Live (the Internet service) but not on Center Ice (the service for distribution by MVPDs).

Consumers cannot obtain access to any live game broadcasts over either the Internet or an MVPD involving out-of-market teams other than by purchasing the entire league package of games. The alleged conspiracy pertains to the agreement by each league and its member teams to offer out-of-market live telecasts only through the league packages, collectively to set prices for each league package, and to divide the profit from sales of the league package among all teams in the league.

LIABILITY ANALYSIS IN ANTITRUST ECONOMICS

The objective of an antitrust economics analysis of liability is to ascertain whether alleged anticompetitive conduct caused harm to competition. Harm to competition means that the anticompetitive conduct of one or more firms on one side of a market (usually, but not always, sellers) inflicted economic harm on participants on the other side of the market (usually, but not always, consumers or other buyers). This harm includes both a reduction in the wealth of those harmed by the anticompetitive conduct through changes in prices and a reduction in market efficiency.

As described in the previous section, the alleged anticompetitive conduct in this litigation is collusion among the defendants to divide markets and to fix prices. Usually agreements not to compete by dividing a market into exclusive geographic territories and to fix prices are *per se* antitrust violations; however, I understand that the conduct that is at issue in this litigation may be evaluated under a "rule of reason" standard, which requires a more comprehensive economic analysis of liability issues. This section reviews the methods of antitrust economics for distinguishing between *per se* and rule-of-reason conduct and the economic methods for undertaking a rule-of-reason analysis.

Economic Analysis of Per Se versus Rule-of-Reason Conduct

Normally in antitrust economics agreements among horizontal competitors to divide markets and/or to fix prices are not evaluated under a rule-of-reason analysis, but are regarded as *per se* anticompetitive conduct because the purpose of such agreements is to harm competition by raising prices and reducing the variety of products that are available to consumers. "Price fixing by a cartel seems to fit this description… This means that the behavior need only be

proved to have existed; there is no allowable defense."[12] *Per se* anticompetitive conduct includes "all agreements among competing firms to fix prices, to restrict or pool output, or otherwise directly to restrict the force of competition."[13]

In this litigation plaintiffs allege that the defendants engaged in activities that normally are regarded as *per se* anticompetitive conduct: the teams in each league the entities that televise their live games have divided the television markets in the nation and have agreed not to compete in live television broadcasts of games outside of the local television markets that have been allocated to each of them. The teams in each league also have agreed to offer an exclusive package of out-of-market games in each of these local markets at a price that is determined by the league, which is jointly owned and controlled by the member teams. Exclusive home broadcast territories are a classic example of a division of the market because they protect a team and its RSN from competition from teams and their RSNs that have other home broadcast territories. This division of the market harms consumers by reducing the intensity of price competition and the variety of live game telecasts in every local television market. Moreover, because the league package is a competitive substitute for the live televised games of a team in its home broadcast area and is the only option for obtaining live games of out-of-market teams, the involvement of all teams in setting prices for the package is price fixing among horizontal competitors.

The division of television markets into exclusive home broadcast territories has no purpose and would be unnecessary if it did not have anticompetitive effects. If live telecasts of

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[12] W. Kip Viscusi, Joseph E. Harrington, Jr., and John M. Vernon, *Economics of Regulation and Antitrust*, 4th Edition, MIT Press, 2005, pp. 135.

[13] F. M. Scherer and David Ross, *Industrial Market Structure and Economic Performance*, 3rd Edition, Houghton Mifflin, 1990, p. 317.

games of out-of-market teams were not competitive substitutes for live telecasts of games involving an in-market team, all RSNs and MVPDs would be sacrificing audiences, subscription fees and advertising revenue, and all teams would be sacrificing revenues from rights fees, by agreeing to honor the assignment of home broadcast rights. Thus, as a matter of antitrust economics, the agreement that each team and its RSN will not compete outside its home market must have anticompetitive effects or this policy would make no economic or business sense.

Economic Analysis of Liability under the Rule of Reason

In antitrust economics an analysis of liability under the rule of reason seeks to assess the overall effect of alleged anticompetitive conduct on economic performance in the market in which the conduct occurred and in related markets. To ascertain whether alleged anticompetitive conduct harmed the competitive process under the rule of reason requires addressing two fundamental issues.

The first issue is whether the conduct in question caused anticompetitive harm by reducing competition. Conduct by sellers harms competition if it injures buyers by causing prices to be higher, output to be lower, and/or product quality and variety to be less than otherwise would have been the case.

The second issue is whether conduct that caused anticompetitive harm has a reasonable business justification. Conduct has a business justification if it is reasonably necessary to achieve an improvement in market performance that exceeds the harm to competition. The benefits to entities that engage in anticompetitive conduct are not relevant to establishing a reasonable business justification. Just as antitrust policy protects competition rather than competitors, anticompetitive conduct has a business justification only if it improves market performance

rather than just benefits those engaging in it. That is, anticompetitive conduct must deliver benefits to the other side of the market that otherwise could not reasonably have been obtained and that exceed the anticompetitive injury that it causes.

The methods of antitrust economics for analyzing the harm to competition from anticompetitive conduct under the rule of reason apply to this litigation in the following ways. The conduct at issue is dividing the market for live video broadcasts via television or the Internet among teams in a league by restricting each team's sale of such rights to its own home broadcast territory and by jointly fixing the price of the package of out-of-market live broadcasts that is assembled and marketed by the league. The first part of liability analysis is to show that this conduct affected price and quantity: in the absence of the agreements not to compete and to fix prices, consumers would be able to obtain access to out-of-market broadcasts of teams in each league and Internet streaming of in-market games at lower prices than the prices that are charged for the league-wide packages of local broadcasts that are sold by MLB and the NHL, and that as a result more consumers would have purchased access to telecasts of out-of-market games through an MVPD and all types of games over the Internet.

Once harm to competition has been established, the anticompetitive conduct still can be reasonable if it creates a benefit that exceeds the anticompetitive harm. The defendants in this litigation have not yet exhausted their opportunities to offer business justifications for agreeing not to compete in video broadcasts of their games, but in submissions in this litigation the defendants have offered several such justifications: each league is a single entity, exclusivity in television rights creates efficiencies, the allocation of television broadcasting rights allows the leagues to create new products that otherwise would not exist, the system for allocating television rights improves competitive balance, and the agreement not to compete increases the

stability of teams in the league. For reasons that are explained in the section of this report on "Business Justifications," I do not agree that these arguments are valid business justifications for the anticompetitive conduct of the defendants.

Approaches to a Rule-of-Reason Economic Analysis

A rule-of-reason analysis of the allegations in the *Complaints* involves two issues that are not part of a *per se* analysis. The first is empirically to demonstrate that the leagues' policies regarding live telecasts of games within each home television market caused harm to consumers by reducing the quantity and variety of output and by causing higher prices. The second is to determine whether the anticompetitive conduct has pro-competitive benefits that could not otherwise reasonably be obtained by less anticompetitive means and that deliver benefits to consumers that offset the anticompetitive effects.

Antitrust economics has developed two methods for determining whether alleged anticompetitive conduct has harmed consumers: a traditional approach based on a five-step economic analysis of the market in which the defendants participate, and a more streamlined economic analysis of the direct effects of the challenged conduct on prices, output and product variety.

A traditional rule-of-reason analysis involves examining five economic issues: (1) market definition: determine the scope of the market in which the defendants' alleged anticompetitive conduct occurred; (2) market power: determine whether the defendants possess market power in the relevant market; (3) sources of market power: ascertain whether anticompetitive conduct, such as an agreement among competitors to restrain competition, contributed to defendants' market power; (4) anticompetitive effects: analyze whether defendants' anticompetitive conduct

caused harm to competition; and (5) business justifications: determine whether the challenged conduct was reasonably necessary to obtain efficiency benefits that could not reasonably have been obtained by less anticompetitive means.

The second method for analyzing whether conduct caused anticompetitive harm is called the "direct effects" method.[14] This approach focuses on direct evidence about the competitive effects of alleged anticompetitive conduct, essentially skipping the steps of defining the market and establishing that the defendants enjoy market power.[15] Direct effects and traditional methods share the same goal, which is to determine whether conduct by a defendant caused harm to competition. One reason for preferring the direct effects approach is that it avoids unnecessary complexity by bypassing the analysis of market definition and market power. Conduct that does not improve efficiency and that adversely affects market performance must have enabled the entities that engaged in that conduct to exercise enhanced market power in an appropriately defined relevant market.

The principal reason to define a relevant market is that it leads to measures of market concentration, which under some circumstances can be used to infer whether a defendant or group of defendants acting collusively has market power, i.e., the power profitably to sustain

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[14] See Joseph Farrell and Carl Shapiro, "Antitrust Evaluation of Horizontal Mergers: An Economic Alternative to Market Definition," *B. E. Journal of Theoretical Economics* Vol. 10, No. 1 (March 2010), on-line at http://www.degruyter.com/view/j/bejte.2010.10.1 /bejte.2010.10.1.1563/bejte.2010.10.1.1563.xml; Louis Kaplow, "Why Ever Define Markets?" *Harvard Law Review* Vol. 124 (February 2011), pp. 437-517; Louis Kaplow, "Market Definition and the Merger Guidelines," *Review of Industrial Organization* Vol. 39 (August 2012), pp. 107-25; J. Douglas Richards, "Is Market Definition Necessary in Sherman Act Antitrust Cases When Anticompetitive Effects Can Be Shown with Direct Evidence?" *Antitrust* Vol. 26, No. 3 (Summer 2012), pp. 53-59.

[15] *FTC vs. Indiana Federation of Dentists*, 476 U.S. 447 (1986) states (p. 461) that "the finding of actual, sustained adverse effects on competition… is legally sufficient to support a finding that a challenged restraint was unreasonable even in the absence of elaborate market analysis."

prices above the competitive level and/or to exclude competitors from the market. Other tools in antitrust economics besides market concentration also can be used to determine the presence of market power and the competitive effects of challenged conduct. "Some of the analytical tools… to assess competitive effects do not rely on market definition, although evaluation of competitive alternatives available to customers is always necessary at some point in the analysis."[16]

As explained by J. Thomas Rosch, former Commissioner at the Federal Trade Commission (FTC): "Direct effects evidence is evidence indicating the likely competitive effects of a transaction or practice that is not based on inferences drawn from market concentration alone."[17] The main benefit of the direct effects approach is that it causes the focus of the economic analysis to be whether conduct by a defendant caused harm to competition.[18]

In this litigation the direct effects approach focuses on the key empirical issue that is the motivation for the traditional approach: whether the restrictions that limit the sale of live broadcast rights by teams in the league cause higher prices and less output in sports broadcasting than otherwise would be the case. Regardless of the precise contours of the relevant market in which live broadcast rights are sold, the conduct at issue in this litigation causes harm to competition if it affects the price and/or uses of these rights and/or the price and/or output of the products that exploit these rights. Thus, an appropriate direct effects test in this matter is to determine whether eliminating restrictions on competition among teams in broadcast markets

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[16] *Horizontal Merger Guidelines* (henceforth *Merger Guidelines*), U.S. Department of Justice and Federal Trade Commission, August 19, 2010, p. 7.

[17] J. Thomas Rosch, "The Past and Future of Direct Effects Evidence," Remarks before the ABA Section of Antitrust Law, March 30, 2011, p. 1.

[18] "A case focused on market definition risks getting bogged down in esoteric fights over critical loss analysis or the SSNIP test." *Ibid.*, p. 2. The "SSNIP test" refers to an economic analysis that determines whether a group of firms acting collaboratively could sustain a "**s**mall, **s**ignificant **n**on-transitory **i**ncrease in **p**rice."

would cause the prices for live video broadcasts to decline and the availability of live broadcasts to consumers to increase.

I conclude that the direct effects approach is sufficient to evaluate the liability allegations in the *Complaints*. The issue of whether the defendants harmed competition hinges on whether the agreements not to compete and to fix prices prevented teams in each league from competing in the sale of live video broadcast rights and, thereby, caused prices to consumers for live video broadcasts to be higher and the number of consumers who purchase access to these broadcasts to be lower. I also undertake a traditional economic analysis of antitrust liability that includes an analysis of market definition.

MARKET DEFINITION

The *Complaints* allege two markets for each league: the "provision of contests" in each sport and "live video presentations" of games. This section first sets forth the method for defining a relevant market in antitrust economics, and then applies this method to the four alleged relevant markets.

Principles

In antitrust economics market definition "is not an end in itself,"[19] but is a tool that is valuable only to the extent that it sheds light on whether the conduct at issue caused anticompetitive harm by either increasing market concentration or enabling a group of independent sellers to engage in effective collusion because collectively they had a sufficiently high market share to exercise market power if they behaved in a coordinated fashion. Here I

[19] *Merger Guidelines, op. cit.*, p. 7.

proceed with an analysis of the relevant markets that are alleged in this case, although for reasons discussed in the section of this declaration entitled "Harm to Competition," the methods that economists use to determine the harm to competition arising from the alleged anticompetitive conduct do not require defining the relevant markets in which this conduct took place.

Conceptual Foundations

A relevant antitrust market is a group of products that, hypothetically, could profitably be monopolized under a common owner, but that would effectively compete if common ownership were anything short of giving one seller a monopoly in all of the products in the group. The starting place for defining a relevant market is a "reference product" – a product or set of products that is offered by a defendant at a specific geographic location. Because the anticompetitive conduct that is alleged in this litigation involves live video broadcasts of the games of a team in a major professional sports league, the reference product is live television broadcasts of a team in either MLB or the NHL, and the starting place for analyzing whether different geographic areas are submarkets is a local television market in which the games of a particular team are televised by an over-the-air station or are made available by an MVPD. The other alleged antitrust market is the provision of contests, for which the reference product is the home games of a team in either MLB or the NHL. The transactions associated with this product are primarily the sale of tickets to consumers for attendance at the games, but also involve the sale of other products, such as on-site concessions and promotions inside the playing facility.

A complete analysis of competition in these products requires taking into account two features of the business of team sports.[20] First, an essential input to the sale of the products associated with access to a team's contests or a team's live broadcast rights is a game between two teams. Second, teams typically are members of a league, which is an organization that adopts common playing rules and schedules for a group of teams. A major professional sports league is an entity that organizes a schedule of games that leads to a championship at the highest level of competition. Thus, another reference product is the services that a league – here MLB or the NHL – performs for its member teams to organize annual North American championships in baseball or hockey, respectively.

The process of market definition consists of identifying other products that collectively impose a competitive constraint on the price of the reference product. The concept that underpins market definition is economic substitution. A group of products are close economic substitutes for the reference product if a "small but significant non-transitory increase in price" (SSNIP) of the reference product would cause a sufficient amount of sales of the reference product to shift to sales of other products in the group to make the price increase unprofitable.[21] A relevant market for purposes of antitrust economics is the reference product plus the smallest group of other products for which a SSNIP would be profitable if a "hypothetical monopolist" sold all of the products. The "smallest market principle" implies that not all economic substitutes for the reference product necessarily must be included in the relevant market. Instead, the relevant market contains the smallest number of substitute products that, if sold by a single firm,

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[20] For a more complete discussion of these issues, see Roger G. Noll, "The Organization of Sports Leagues," *Oxford Review of Economic Policy* Vol. 19, No. 4 (Winter 2004), pp. 530-51, and Stefan Szymanski, "The Economic Design of Sporting Contests," *Journal of Economic Literature* Vol. 41, No. 4 (December 2003), pp. 1137-87.

[21] *Merger Guidelines, op. cit.*, pp. 8-9.

profitably could raise price above the level that would arise if all products were sold by separate, independent firms.

Although market definition is based on identifying products that are substitutes on the demand side of the market, the principle of substitution applies to both demand and supply responses to a change in relative prices. *Demand substitution* refers to actions by consumers to switch purchases among products. *Supply substitution* refers to the entry of new suppliers in the relevant market, either by shifting sales efforts from one geographic area to another or by changing product lines to increase the number of products that are substitutes on the demand side of the market.

Evidence on Market Definition

In identifying a relevant product market, economists make use of several kinds of evidence. The normal starting place is to identify products that have similar descriptions and functions as the reference product, which is useful for identifying the set of products that are most likely to be close competitive substitutes for the reference product. In most circumstances competition arises among so-called "differentiated products," i.e. products with different qualities and technical characteristics. In this case both reference products are differentiated: the distinct identity of a team, including its geographic location and their historical performance, are a source of product differentiation because they cause the products that one team offers not to be perfect substitutes for the products that are offered by another team.

The fact that products are differentiated does not imply that they are not competitive substitutes in a relevant antitrust market. In the end, whether products are in the same market is not simply a matter of functional definition and technical description, but whether customers

regard the products as sufficiently close substitutes that the price that is charged for one product imposes a competitive constraint on the price that is charged for another product. The process of deciding which products actually are competitive substitutes is fact driven, and the evidence that is used depends on the characteristics of the products and the nature of competitive interactions among participants in the market.

The core underlying fact that economists seek to uncover in defining a relevant market is the cross-elasticity of demand between the reference product and each product that is a plausible close substitute.[22] If the cross-elasticity of demand between two products is high, an attempt by the producer of one product to increase price will cause a large loss of sales to the other product, assuming that the prices of the other products remain unchanged.

In some cases econometric models can be used to estimate the cross-elasticity of demand between the reference product and each candidate for inclusion in the relevant market. The basic idea is to estimate the relationship between the price of the reference product and variables that capture the supply and demand conditions that determine its price, such as its technical features, its marginal cost of production, and the prices of its most plausible substitutes.[23] Unfortunately, an econometric estimate of cross-elasticity of demand can be very difficult, and sometimes is impossible. For example, the task of estimating the cross-elasticity of demand between products

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[22] The cross-elasticity of demand is the percentage change in sales of one product arising from a one percent change in the price of another product.

[23] The seminal research in estimating the cross-elasticity of demand for purposes of antitrust analysis is Jonathan B. Baker and Timothy F. Bresnahan, "The Gains from Merger or Collusion in Product Differentiated Industries," *Journal of Industrial Economics* Vol. 33, No. 4 (December 1985), pp. 427-44, which applies this method to the beer industry. The proposed merger between Staples and Office Depot is examined in Orley Ashenfelter, David Ashmore, Jonathan B. Baker, Suzanne Gleason and Daniel S. Hosken, "Empirical Methods in Merger Analysis: Econometric Analysis of Pricing in *FTC v. Staples*," *International Journal of the Economics of Business* Vol. 13, No. 2 (July 2006), pp. 265-79.

that are close substitutes is not possible if all producers of close substitutes engage in price collusion. If all competitors set the same collusive price, there is no information on which to estimate the cross-elasticity of demand between two competing products.

As explained elsewhere in this declaration, league rules in both MLB and the NHL prevent competition in the sale of live video broadcast rights between teams that have different exclusive home broadcast territories. Hence, estimating the cross-elasticity of demand in the sale of live video broadcast rights of two teams that have different home territories is not possible.

To overcome the problem that estimating the cross-elasticity of demand from econometric models often is impossible or unreliable, economists frequently employ other indicators of the degree of competition between two products to determine whether they are in the same markets. The *Merger Guidelines* list the kinds of evidence that bears on defining the relevant market.[24] This evidence includes documents from buyers, sellers and informed third parties that contain information about which products are commonly regarded as competitive substitutes, the nature and extent of downstream competition in the buyers' output markets, and the costs of switching products.

One potentially useful indicator is the understanding of experienced participants in and observers of the industry. Here, the most useful evidence is the opinions of experienced individuals, preferably when expressed outside the context of the litigation, as to which products are close competitors of other products. The relevant evidence is not their opinions about market definition, for consumers and business executives are not likely to know the technical requirements for including or excluding a product from a relevant antitrust market. Instead, the information that is useful is a supplier's or a buyer's sense of principal competitors, a seller's

[24] *Merger Guidelines, op. cit.*, pp. 3-6.

perception of the prices that must be taken into account in setting a price, and a buyer's sense of the closest substitutes, if any, for a reference product.

Another type of evidence that is closely related to the perceptions of sellers and buyers is the actual extent to which buyers in the same geographic area patronize different sellers. The *Elzinga-Hogarty* test is an empirical method to identify geographic markets on the basis of buyer choices among potential sellers.[25] This test identifies the geographic area in which few inside the area buy from outside and few outside the area buy from inside.[26] If such an area exists that is smaller than the entire world, the test concludes that sellers outside of the area are not in the same market as local firms.

Because the *Elzinga-Hogarty* test does not examine the effect of changes in relative prices on sales by local firms, the test may misidentify the scope of a geographic market.[27] For example, outside firms may have a small share of local sales, but nonetheless impose a competitive constraint on local prices because, if local prices were to increase, their sales share would rise substantially. Notwithstanding this limitation, if the *Elzinga-Hogarty* test finds that

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[25] Kenneth G. Elzinga and Thomas F. Hogarty, "The Problem of Geographic Market Delineation in Antimerger Suits,"*Antitrust Bulletin* Vol. 18 (1973), pp. 45-81.

[26] The appropriate definition of "few" is controversial within antitrust economics. Elzinga and Hogarty originally proposed that the geographic market is an area that contains all local producers and in which more than 75 percent of local production is consumed locally and more than 75 percent of local consumption is produced locally. Subsequently Elzinga and Hogarty changed the standard to 90 percent. See Kenneth G. Elzinga and Thomas F. Hogarty, "The Problem of Geographic Market Delineation Revisited: The Case of Coal," *Antitrust Bulletin* Vol. 23, No. 1 (Spring 1978), pp. 1-18. The substance of this controversy is that even if the fraction of sales accounted for by outsiders is small, the fraction could grow dramatically if local producers formed a cartel and tried to raise prices, in which case the outsiders still discipline the market. There is no controversy that, if the product market is appropriately defined, a high share of outsiders in local sales indicates that the local area is not a geographic market.

[27] See Jonathan B. Baker, "Market Definition: An Analytic Overview," *Antitrust Law Journal* Vol. 74, No. 1 (2007), pp. 129-73, especially pp. 153-54.

outside firms have a substantial share of local sales, outside firms are likely to be part of the local market.

Another useful indicator for identifying whether a reference product faces close competitive substitutes is the presence of market power. Antitrust analysis separates market definition from market power, but evidence that a firm has substantial market power is pertinent to market definition. If products from many independent suppliers are close substitutes, competition among them will drive prices to the competitive level. Hence, if products are broadly similar but the supplier of one product is able to sustain its price substantially above its average total cost of production and thereby to earn profits in excess of the competitive level, the highly profitable product must be sold in a relevant market that contains few competitive substitutes.

Submarkets

Plaintiffs allege that the relevant product markets may be separated into submarkets according to geographic areas. An issue that is raised by these allegations is the relationship between a market and a submarket in antitrust economics.

A submarket refers to a group of products that are part of a larger relevant market because they are close substitutes with other, similar products, but may constitute a relevant antitrust market by themselves because they may be uniquely affected by anticompetitive conduct. The method for identifying submarkets was elaborated in *Brown Shoe*, which cited indicators that could be used to detect whether one or more submarkets, by themselves, constituted relevant antitrust markets, despite commonalities between products in and out of the submarket:

> The boundaries of such a submarket may be determined by examining such practical indicia as industry or public recognition of the submarket as a separate economic entity, the product's peculiar characteristics and uses, unique production facilities, distinct customers, distinct prices, sensitivity to price changes, and specialized vendors.[28]

Antitrust scholars have struggled with bringing clarity and concreteness to the concept of a submarket, and as a result the term is controversial in antitrust economics.[29] The seven "practical indicia" in *Brown Shoe* have been interpreted by economists and other antitrust scholars as referring to four distinct conditions that could cause a subset of products in a market to be atypically affected by anticompetitive conduct:[30] (1) the possibility of price discrimination; (2) extensive product differentiation that causes some products to be closer substitutes than others for some buyers; (3) differential ability among sellers to engage in "supply substitution" (i.e., to switch production from one variety of the product to another); and (4) the presence of some unilateral market power by one seller that is partly but not fully constrained by competition from other sellers.

Application to the Reference Products

Although the alleged anticompetitive conduct in this litigation involves the activities of the defendants in the sale of the rights to live video broadcasts, a useful starting place for an analysis of competition on live video broadcasts is the overall structure of MLB and the NHL

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[28] *Brown Shoe Co. vs. U.S.*, 370 U.S. 294, 325 (1962).

[29] The *Merger Guidelines*, *op. cit.*, do not address the issue of submarkets, but capture the concept by explaining (Section 4) that, if products are geographically or qualitatively differentiated, some products that are weak substitutes for the reference product properly should be excluded from the relevant market because a hypothetical monopolist that did not control these products could still implement a profit-enhancing price increase.

[30] See Jonathan B. Baker, "Stepping Out in an Old *Brown Shoe*: In Qualified Praise of Submarkets," *Antitrust Law Journal* Vol. 68, No. 1 (2000), pp. 203-18.

and the alleged relevant markets in each sport. Each team in each sport sells numerous distinct products, among which are licenses for commercial use of the name, logo and other identifiers of the team, rights to sell concessions inside the team's home playing facility, the sale of tickets for admission to the home facility, sales of advertising and other promotions in the playing facility, rights for live radio and television broadcasts of games in which the team is involved, and various archival products that are derived from these broadcasts, such as highlight films, action photos and video clips that can be used in advertising.

All of these products are derived directly or indirectly from the "core product" of a sport, which is "the game itself."[31] Revenues from ticket sales, premium seating, and concessions are derived directly from decisions by consumers to attend a game, and revenues from broadcasting are derived directly from granting broadcasters the right to televise the game as it is being played. Other sources of revenue are not as closely connected to either attending a game or watching a game on television, and so are indirectly related to the staging of games in that such things as product licenses and promotions have value because of the participation of the team in the sport.

Although many products are sold in connection with staging a game, financially the most important are the sale of tickets (including "seat licenses" and other premium seating) to attend games and the sale of the rights to televise the game. For example, in 2012 MLB's total revenue was [redacted] of which [redacted] was from ticket sales, [redacted] was from local broadcasting, [redacted] was from national broadcasting plus centralized licensing by MLB,

[31] William A. Sutton and Ian Parrett, "Marketing the Core Product in Professional Team Sports in the United States," *Sport Marketing Quarterly* Vol. 1, No. 2 (1992), pp. 7-19.

and [redacted] was all other local revenue (which includes premium seating).[32] The NHL receives a smaller share of its revenue from broadcasting. In the 2011-12 season, total NHL revenue was [redacted] of which [redacted] was from gate receipts and premium seating, [redacted] was from local and nation broadcasting, [redacted] was from the playoffs (sources unspecified), and [redacted] was from all other sources.[33] Because so much revenue is directly connected to attending a game or watching it on television, the proper focus of an economic analysis of the nature and extent of competition in the industry is the demand for game attendance and the demand for live television broadcasts.

Attendance

Because the reference product in the alleged relevant market for the "provision of contests" is a game, and because so large a fraction of revenue is derived directly or indirectly from attendance, the logical starting place to analyze the market in which games are produced is the demand for attendance at a game. The standard economic approach to studying the demand for attending games in each sport yields information that is directly relevant to market definition.[34] Many published research studies seek to explain home attendance among teams in a sport for either each game or an entire season on the basis of measures of the size of the local market, the quality of the home team and, in studies of individual game attendance, the quality of the visiting team, the attributes of the playing facility, and ticket prices. A few studies examine

[32] Bates Nos. MLB1002651-81 at 81. While no breakdown is provided between central broadcast revenue and central licensing revenue, the former constitutes most of the total.

[33] Bates No. NHL3655230.

[34] For a comprehensive discussion of the relationship between demand studies and market definition in professional team sports, see Jason Winfree, "Fan Substitution and Market Definition in Professional Team Sports Leagues," *The Antitrust Bulletin* Vol. 54, No. 4 (Winter 2009), pp. 801-22.

the effect of demand of the presence of competing teams in the same locality in the same sport and in other sports.

As explained above, market definition depends on the cross-elasticity of demand between the reference products and other products that are candidates to be close competitive substitutes for the reference product. One way that demand analysis might shed light on market definition is to provide estimates of own-elasticity and cross-elasticity of demand. Unfortunately, demand analysis in the economics of sports does not provide reliable estimates of the price elasticity of demand. Reduced form demand equations provide the economically implausible result that the demand for attendance at current prices is inelastic (that is, teams could profitably raise prices but do not). One cause of these results is the unavailability of variables that measure the relevant cost and other supply conditions that influence price.[35] Because of this intractable problem, nearly all studies of the attendance demand for games do not even attempt to measure the cross-elasticity of demand between two teams in the same local area.[36]

Notwithstanding the paucity of econometric estimates of the cross-elasticity of demand between two sports teams, other information supports the conclusion that the only close competitive substitute for attending games of one team in a major league is games of another team in the same league in the same metropolitan area. This section reviews this information, and concludes that attendance at games in a single major league sport is a relevant product market and that the geographic market is a metropolitan area in which one or more teams in a sport are located.

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[35] For a complete explanation of this problem, see Roger G. Noll, "Endogeneity in Attendance Demand Models" in Placido Rodriguez, Stefan Kesenne and Jaume Garcia, eds., *The Econometrics of Sport*, Edward Elgar, 2013.

[36] See Winfree, *op. cit.*, pp. 802-05.

In determining attendance demand for a game, a game involving other teams in the same sport is likely to be a closer substitute than a game involving teams in other sports for two reasons: consumers have diverse interests in sports, and, except for the National Basketball Association (NBA) and NHL, the playing seasons for the different major-league sports in North America are only partially overlapping.

First, most consumers do not have equal interests in all sports and so will sort among sports according to the intensity of their interests in each. A Gallup survey indicates that in 2012 the fraction of Americans who followed each professional team sport closely was 63 percent for football, 48 percent for baseball, 33 percent for basketball, 24 percent for auto racing, 22 percent for hockey, and 19 percent for soccer.[37] The sum of all of these fractions was 204 percent, indicating that the average respondent was a fan of two of the six sports. Gallup also found that in 2013 the fraction stating that each sport is their favorite to watch was 34 percent for football, 14 percent for baseball, 12 percent for basketball, 4 percent for soccer, and 3 percent for hockey, with only 11 percent reporting that they have no favorite.

Second, major league team sports generally do not have fully overlapping seasons of play. For example, in 2013-14, the NHL's regular season began on October 1, 2013, and ends on April 13, 2014.[38] The NHL season largely overlaps the NBA's regular season, which this year runs from October 29, 2013, until April 16, 2014.[39] Both of these sports overlap the MLB regular season schedule only for a couple of weeks in April. The 2013 MLB schedule ended September 29, 2013 and the first day of the 2014 season on which games are played in the U.S. is March 31,

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[37] See http://www.gallup.com/poll/4735/sports.aspx.

[38] See http://www.nhl.com/ice/news.htm?id=678238.

[39] See http://www.cbssports.com/nba/eye-on-basketball/23041832/nba-releases-20132014-nba-schedule.

2014.[40] The regular season of the National Football League (NFL) in 2013 ran from September 5 through December 29, and so overlapped the NHL season for three months and the NBA season for two months.[41] MLB's regular season overlaps the NFL's regular season for three weeks in September, but from mid April until early September – nearly five months – MLB's season does not overlap any of the other most popular professional team sports.

The playoffs in each sport extend the overlap in seasons by a few weeks, but the playoffs involve fewer teams as they progress and so create dwindling possible competition for attendance in localities with teams in more than one sport. Pre-season games also extend the overlap in seasons, but these games lack consequentiality for the championship season and so are unlikely to be as close a competitive substitute for regular season games in other leagues as are regular season or playoff games. Thus, if regular season games in different sports are not close competitive substitutes, pre-season and post-season games are not likely to be close competitive substitutes for regular season games in another sport. Hence, the focus of the analysis in this section is on competition in attendance at regular season games.

As a matter of economic theory, the distance between teams in different cities causes attendance at games in different cities not to be close substitutes. The cost of attending a game is the price of a ticket plus travel costs, both direct travel expenditures and the value of time spent traveling. Consumers who live several miles from a playing facility face travel costs that are comparable in magnitude to the price of a ticket.

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[40] See http://mlb.mlb.com/news/article.jsp?ymd=20120912&content_id=38303572& vkey=pr_mlb&c_id=mlb and http://mlb.mlb.com/news/article.jsp?ymd=20130910& content_id=60137340& vkey=pr_mlb&c_id=mlb.

[41] See http://www.nfl.com/schedules/2013/REG1 and http://www.nfl.com/schedules/2013 /REG17.

For example, in 2012, the average ticket price in MLB was [redacted].[42] If two fans live 12.5 miles from the playing facility and drive to a game at an average speed of 25 miles per hour, total travel time to attend the game is an hour. Benefit-cost analyses of government transportation programs typically value the cost of travel time at between 50 percent of the after-tax and 100 percent of the before-tax hourly wage of the traveler, with an upward adjustment for congestion.[43] If these fans earned the average wage in 2012, each would have experienced a time cost of between $9 and $22.[44] In addition, the mileage cost for business-related driving that was set by the Internal Revenue Service for 2012 was 55.5 cents per mile,[45] which implies a cost of $13.88, or $6.94 per person. Thus, travel costs to the game for these fans would have been between $16 and $29 per person. Obviously, travel costs are higher for fans who live farther away from the playing facility and/or who have higher incomes.

Due to travel costs, attendance at games of teams with home playing facilities in different metropolitan areas cannot be close competitive substitutes for most people who live in either area. The cities with teams in either MLB or the NHL that are closest together are Baltimore and Washington (MLB only) – 39 miles, New Jersey Devils and Philadelphia (NHL) – 84 miles, Chicago and Milwaukee (MLB only) – 90 miles, New York City and Philadelphia (MLB) – 94 miles, Anaheim and San Diego (MLB only) – 96 miles, and Buffalo and Toronto (NHL only) – 98 miles. In these relatively close cities, for most fans the additional travel cost of attending a game in the other metropolitan area causes the total cost of attendance to be more than double

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[42] In 2012 MLB gate receipts were [redacted] and attendance was [redacted] million, implying an average ticket price of [redacted]. Bates Nos. MLB1002651-81 at 81.

[43] Anthony E. Boardman, David H. Greenberg, Aidan R. Vining and David L. Weimer, *Cost-Benefit Analysis: Concepts and Practices*, 3rd Edition, Pearson Prentice Hall, 2006, pp. 415-17.

[44] See http://www.bls.gov/oes/current/oes_nat.htm#00-0000.

[45] See http://www.irs.gov/Tax-Professionals/Standard-Mileage-Rates.

the cost of attendance at home games of the team in the same metropolitan area. Hence, ticket prices in one city are unlikely to constrain ticket prices in another city, so different metropolitan areas constitute distinct relevant submarkets.

The effect of travel cost on competition among MLB teams has been the subject of one econometric study of baseball attendance.[46] The key finding is that an MLB team with a home stadium that is very close to the stadium of another MLB team experiences substantially lower attendance. For example, this study estimates that the effect of having a team ten miles away is to reduce season attendance by about 175,000 compared to having no team within 100 miles. Because living closer to a team is equivalent to a reduction in the price of a ticket in terms of its effect on demand, a valid economic inference to be drawn from this study is that if the distance between two teams is less, the extent to which ticket prices of one team affect the attendance of the other will increase. Thus, a nearby team in the same market is a much closer competitive substitute than a team that is much further away, such as a team in a different metropolitan area.

A natural experiment for measuring the competitive effects of a second team in the same sport in the same city arises when a team exits or enters a multi-team market. A study of these cases that does not attempt to take into account other factors that might affect attendance finds that a team gains attendance when another team in the same league exits the same metropolitan area and loses attendance when another team in the same league enters. The magnitude of these effects is between 6.1 and 7.4 percent of the attendance of the team that does not move and between 13.8 and 16.5 percent of the attendance of the team that enters or exits.[47]

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[46] Jason A. Winfree, Jill J. McCluskey, Ron C. Mittelhammer, and Rodney Fort, "Location and Attendance in Major League Baseball," *Applied Economics* Vol. 36, No. 19 (2004), pp. 2117-24.

[47] Winfree, *op. cit.*, pp. 805-13.

More formal econometric studies have examined the same issue, but in models that take into account other factors that affect attendance. An econometric model of attendance in MLB for the period 1950 to 2002 found that adding an MLB team to the same metropolitan area causes a drop in attendance of about 10 percent, with the effect being slightly higher after 1975 than before.[48] An econometric analysis of attendance in the National Basketball Association (NBA) found that a team's attendance is lower, all else equal, if the same metropolitan area contains another NBA team.[49]

All studies of the effect of competition on attendance underestimate the competitive significance of a second team in the same league because, as explained elsewhere, these studies cannot take into account the effect of competition on ticket prices. The introduction of a competitor will cause attendance demand for the incumbent team to become more price-elastic. As a result a team's profit-maximizing ticket price will be lower after entry occurs (or higher after exit occurs), which in turn will cause the change in attendance to be less than would occur if price did not change.

Economists also have addressed the issue of whether attendance at minor and major league games are competitive substitutes. One study estimated the cross-elasticity of demand of MLB ticket prices on minor league baseball attendance.[50] The main finding of this study is that the ticket price of a nearby MLB team affects attendance at games of the minor league team only if the two teams are not affiliated. If the teams are not affiliated, higher MLB ticket prices cause

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[48] Christopher M. Clapp and Jahn K. Hakes, "How Long a Honeymoon? The Effect of New Stadiums on Attendance in Major League Baseball," *Journal of Sports Economics* Vol. 6, No. 3 (August 2005), pp. 237-63.

[49] Kevin Mongeon and Jason Winfree, "Comparison of Television and Gate Demand in the National Basketball Association," *Sport Management Review* Vol. 15, No. 1 (2012), pp. 72-79.

[50] Seth R. Gitter and Thomas A. Rhoads, "Determinants of Minor League Baseball Attendance," *Journal of Sports Economics* Vol. 11, No. 6 (December 2010), pp. 614-28.

increased minor league attendance, indicating some degree of competition between the two teams.[51] This effect is much larger if the two teams are separated by less than 100 miles than if they are separated by between 100 and 250 miles. Because minor league attendance is much lower than major league attendance, the magnitude of even the larger effect for a nearby team is small compared to attendance at the MLB team.[52] For minor league affiliates of the nearby MLB team, the ticket price of the MLB team does not affect minor league attendance, and a higher winning percentage for the MLB team increases minor league attendance. The won-lost record of the major league team has no effect on attendance at an unaffiliated minor league team, indicating that a nearby minor league team is not a competitive substitute for a major league team.

Another study addressed the effect of the NHL lockout on attendance at minor league and junior league hockey games.[53] The main finding of this study was that the 2004-05 NHL lockout led to an increase in attendance for all minor league teams and for junior league teams that were located in the same metropolitan area as an NHL team. The magnitude of this effect was 212 fans per game in minor league hockey and 589 fans per game in junior hockey. Because these effects are small compared to attendance at NHL games, the proper conclusion is that minor and

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[51] Because this study did not attempt to estimate the own price elasticity of demand, the estimated coefficient on ticket prices for the MLB team is likely to be biased because MLB and minor league teams share common factors that affect prices in the same locality and because the model lacks instrumental variables for these common factors.

[52] The regression result is that a one percent increase in the ticket price of the MLB team causes an increase of about 2/3 of one percent in minor league attendance. Attendance at major league games is about five times attendance at AAA level games, seven times attendance at AA level games, and ten times attendance at A level games, implying that a one percent increase in the MLB team's ticket price would lead somewhere between 1/16 of one percent and 1/8 of one percent of MLB fans to switch to an unaffiliated minor league team within 100 miles of the MLB team.

[53] Jason A. Winfree and Rodney Fort, "Fan Substitution and the 2004-05 NHL Lockout," *Journal of Sports Economics* Vol. 9, No. 4 (August 2008), pp. 425-34.

junior league hockey is only a very weak substitute for NHL games, even when the latter are completely unavailable.

A few studies have attempted to measure the effect of the presence of teams in other sports, and all conclude that a team in one sport is not a close competitive substitute for attendance at games of a team in another sport. The only attempt to measure local competition among teams in all four major league sports is 40 years old, and it found that the number of major league professional sports teams was not statistically significant in explaining attendance in basketball and football, was significant but small in MLB, and was sometimes of borderline significance but highly sensitive to the specification of the regression equation for hockey.[54] A study of attendance in the NHL included a variable for the number of teams in other major leagues that played in the same metropolitan area as an NHL team, and found that this variable had the wrong sign (positive) and was statistically insignificant.[55] The NBA study mentioned above found that attendance for an NBA team is lower if teams in other sports also play in the same area, but that the negative effect of another NBA team is about four times as great as the effect of the presence of a major league team in another sport.[56]

The results from studies of attendance in major league sports confirm the theoretical expectation that attendance at major league team sporting events is a differentiated product for which the only close competitive substitute is another team in the same league in the same metropolitan area. While other teams, such as nearby minor league teams or team in other sports

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[54] Roger G. Noll, "Attendance and Price Setting," in Roger G. Noll (ed.), *Government and the Sports Business*, Brookings Institution, 1974, pp. 115-57.

[55] J. C. H. Jones, "Winners, Losers and Hosers: Demand and Survival in the National Hockey League," *Atlantic Economic Journal* Vol. 13, No. 3 (1984), pp. 54-63.

[56] Mongeon and Winfree, *op. cit*.

in the same locality, may be weak competitive substitutes, they are not close enough substitutes to create a substantial competitive constraint on a team's ticket pricing.

Game Telecasts

Plaintiffs allege that live video presentations of major league games in each sport, regardless of how they are delivered, constitute relevant product markets. Here the reference products are packages of out-of-market telecasts that are offered by each league and the live telecasts of games of each member of a league by an RSN. The same telecasts of the games of a team in either league are carried on over-the-air stations or RSNs in the team's home broadcast territory and in the league packages outside of the team's home broadcast territory. For game packages that are distributed over MVPDs, the reference products are MLB Extra Innings and NHL Center Ice. For games that are distributed over the Internet, the reference products are MLB.tv and NHL GameCenter Live.

The reference products are bundles of other products, so the natural starting place for analyzing the relevant market that includes an out-of-market package of televised games in a league is the relevant market that includes each component of the bundle, i.e., the relevant market that includes the televised games of a specific team. Market definition must then address two issues. The first is to identify the products that are close competitive substitutes for the telecasts of the games of one team. The second is to determine whether games telecast over-the-air or through an MVPD and telecasts that are distributed over the Internet are close competitive substitutes.

Teams in the Same Sport

A team owns or leases its playing facility and uses its control over access to the facility as a means for selling tickets to games and other products in the stadium. Control of access to the stadium also enables a team to sell the right to televise its home games. A team obtains the right to televise its away games by entering into agreements with other teams whereby each grants the other the right to televise away games in the stadium of the home team. This procedure enables each team to sell an entire season of home and away games to a broadcaster. For example, the Office of the Commissioner of Baseball reported that in 2011 teams in MLB televised, on average, 151 of their 162 regular-season games.[57]

The most plausible close competitive substitutes for telecasts of the games of a major league team are telecasts of other teams in the same league. Although a few teams face competition from another team in the same league that is located in the same metropolitan areas, most teams do not. Hence, for most teams the closest plausible competitive substitute for telecasts of its games are telecasts of games of teams that are located in other metropolitan areas.

Because economics research concludes that teams in the same league in the same metropolitan area are competitive substitutes, the same is likely to be true for competition for television rights. The value of rights to telecast games are derived from the value of sports telecasts to broadcasters, which in turn is derived from the revenue that a broadcaster can generate from televising the games of a team. The revenue to the broadcaster comes from two sources: advertising and the fees charged to MVPDs for the right to carry the channel. Advertising revenues depend on the size and composition of the audience, and fees depend on the value of the channel to the MVPDs in attracting subscribers to the system.

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[57] Federal Communications Commission, *In the Matter of Sports Blackout Rules: Notice of Proposed Rulemaking*, MB Docket No. 12-3, December 18, 2013, p. 13.

The revenues from broadcasting are similar to the revenues from attendance: ticket prices are like channel carriage fees, and in-stadium advertising and promotion is like advertising on television. Thus, competition in ticket sales and the sale of television rights is driven by the same fundamental phenomena – the interest of sports fans in various sports and their willingness to switch among teams. If teams in the same sport in the same metropolitan area are competitors for attendance, they also are likely to be competitors for television rights since both sources of revenue depend on the behavior of local sports fans.

One research study tested this proposition by examining the demand for both attendance and viewing locally televised NBA games. This study found that the attendance and audience regressions produced similar results, and that both were significantly reduced by the presence of another NBA team in the same area.[58]

The next issue in defining the relevant market is whether telecasts of games of teams with home facilities in other local television markets are competitive substitutes for a local team. Unlike the market for attendance at games, distance from the stadium does not create a cost advantage for a local team compared to a team from another television market. Hence, if consumers are interested in an entire sport or multiple teams, and if a substantial number of fans of a team do not live in its home television market, telecasts of games involving two out-of-market teams can be a competitive substitute for a telecast of a game involving a local team.

Consumers who follow a particular team are not confined to that team's home television market. An analysis of purchases of team apparel from Fanatics, the on-line merchandiser of team apparel for MLB and the NHL, found that 63 percent of purchasers of MLB team products and 54 percent of purchasers of NHL team products were "displaced" customers in that the

[58] Mongeon and Winfree, *op. cit.*

apparel that they purchased was for a team that was located in another state.[59] For MLB, approximately half of the fans of a particular team do not live in that team's home television market.[60] For the NHL, on average 49 percent of the registered users of NHL.com in 2010 were fans of an out-of-market team.[61] The fraction of an NHL team's fans that are from within the team's home market varies from 31.4 percent for Detroit to 68.2 percent for Minnesota. At the time these data were assembled, Detroit was the most popular NHL team, accounting for 5.5 percent of all fans,[62] but even within the Detroit market the Red Wings were not the favorite team of 29.2 percent of all hockey fans.[63]

Except for Alaska, states with no home team are assigned to the home broadcast territory of an NHL team in another state. For example, Indianapolis is assigned to the home television markets of Chicago and St. Louis. Among Indiana hockey fans, 25.4 percent are fans of the Blackhawks, 3.4 percent are fans of the Blues, and 71.2 percent are fans of out-of-market teams. These results imply that, were it allowed, telecasts of teams at least as popular as the Blues would be offered in Indiana and would be competitive substitutes for the teams that now claim Indiana as home territory.

The distribution of fans among teams in two large, multi-team states – California and New York – shows that even with four in-state teams, many consumers are fans of other teams. The assignments of California DMAs are divided between San Jose in the north and Anaheim

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[59] Irving Fain, "Displaced Fans Remain Connected – and Valuable – to Teams," *Sports Business Journal*, Feb. 4-10, 2013, at http://www.sportsbusinessdaily.com/Journal/Issues/2013/02/04/Opinion/From-the-Field-of-Fan-Engagement.aspx.

[60] *Deposition of Robert Bowman*, November 6, 2013, p. 157.

[61] See Bates No. NHL1496456. slide 23. A fan is defined as either having stated that the team is a favorite or having purchased merchandise bearing the team's logo.

[62] Calculated from NHL Fan Data Base for the 2009-10 season, Bates No. NHL2845470.

[63] See Bates Nos. NHL2270833-67 at 63.

and Los Angeles in the south. Among NHL.com customers who are identified as living in California, 25.6 percent are Sharks fans, 25.5 percent are fans of the Ducks, 15.9 percent are Kings fans, and 33.0 are fans of other out-of-market teams – more than support any home-state team.[64] The New York DMAs are divided among the Buffalo Sabres, New Jersey Devils, the New York Islanders, and the New York Rangers. Among New York state hockey fans, 31.9 percent are fans of the Sabres, 24.6 percent are fans of the Rangers, 12.6 percent are Islanders fans, 5.1 percent are fans of the Devils, and 25.8 percent are fans of out-of-market teams.

The NHL fan database shows that the fans of teams are distributed throughout the country, and that many consumers in the home market of even the most popular teams are fans of out-of-market teams. These data support the conclusion that games of out-of-market teams could compete effectively in the markets from which they are excluded from televising their games. Except for occasional national telecasts or games against in-market teams, games of out-of-market teams are not available except through the out-of-market package that is sold by the league. As discussed elsewhere, the Gallup survey indicates that 22 percent of Americans are NHL fans, and the NHL fan database indicates that nearly half of these are fans of an out-of-market team. Thus, the share of NHL fans that are subscribers to the NHL out-of-market packages is much smaller than the fraction of NHL fans who follow out-of-market teams.

The policies of MLB and the NHL also support the conclusion that out-of-market telecasts are competitive substitutes for in-market telecasts. The fact that both leagues have divided all (MLB) or most (NHL) of the nation into home broadcast territories makes economic and business sense only if, in the absence of such a policy, out-of-market telecasts would be offered within the home markets of teams and would be competitive substitutes of telecasts of

[64] Calculated from NHL Fan Data Base, *op. cit.*

games involving the home-market team. In their responses to interrogatories, both leagues assert that allowing out-of-market telecasts will inflict financial harm on at least some teams.[65] The only condition under which these claims could be true is if telecasts of out-of-market games are competitive substitutes for telecasts of in-market games.

If out-of-market telecasts were not close competitive substitutes for in-market telecasts, the decision by a local MVPD to carry an RSN that telecasts games of an out-of-market team in the same league would not cause the local team to experience a decline in the audience and rights fees for its telecasts. But the out-of-market team would experience greater audiences, and hence be able to charge higher rights fees, if its games were not blacked out. If telecasts of out-of-market teams were not competitive substitutes for telecasts of in-market teams and so were not in the same relevant market, exclusive territorial broadcast rights and blackout rules would reduce the profits of every team in a league and so would be economically irrational.

As discussed above, league rules limit the extent to which teams actually compete in each DMA. As shown in Exhibit 1, each DMA is assigned to between one and four (NHL) or six (MLB) teams, with most DMAs assigned to one or two teams. The effect of this assignment of rights is to cause the extent of competition among teams in the same league to vary among DMAs. The economic analysis that is applied to assess the extent of competition in each DMA is the same, but the baseline condition – the number of teams that are permitted to participate in that DMA – varies. Consequently, if the relevant market is limited to teams in the same sport, then each set of DMAs for which the same group of teams has home broadcasting rights is a submarket.

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[65] *NHL Defendants' Objections and Responses to Plaintiffs' Interrogatories*, December 13, 2013 (henceforth *NHL Responses*), pp. 11-16, and *MLB Defendants' Objections and Reponses to Plaintiffs' Interrogatories*, December 13, 2013 (henceforth *MLB Responses*), pp. 6-25.

Teams in Different Sports

The next most plausible substitutes for telecasts of a team's games are telecasts of games involving teams in other sports. Because teams in different sports are not close competitive substitutes in attendance, even when located in the same metropolitan area, they are not likely to be close competitive substitutes in the market for television rights because the demand for television rights is derived from the same consumer preferences as the demand for attendance.

Because their playing seasons are almost completely overlapping, the NBA and the NHL are the two major leagues in different sports that are most likely to be close competitive substitutes. The extent to which telecasts of NBA games are substitutes for telecasts of NHL games can be measured by examining the effect of lockouts in one sport on television audiences in the other sport. In the past decade, the NHL has experienced two lockouts and the NBA has had one lockout. A study of audience ratings during 2000-2005 found that audience ratings for NBA telecasts actually fell during the first NHL lockout, and more generally over the long run NBA television ratings were only slightly affected by the presence of an NHL team in the same market.[66] The second NHL lockout caused the loss of the first half of the 2012-13 NHL season, from early October to early January. During this period the number of subscribers to the NBA League Pass, a package of out-of-market games, actually fell, indicating no substitution of the NBA for the NHL.[67]

[66] Winfree, *op. cit.*, pp. 17-19.

[67] See Bates No. COM-00091099. Although hockey was unavailable for the first third of the 2012-2013 season, sales of the NBA package fell by [redacted] from the previous year, and sales fell even more for the "Early Bird" subscription, which should have been most affected by the cancellation of the first few months of the NHL season.

The NHL has produced data on the television ratings of all NHL games from the 2007-08 season through the 20012-13 season.[68] These data show the home and away team, the time, date and location of the game, the identity of the broadcaster, the audience rating (fraction of total households watching) and audience share (fraction of household watching television) of the telecast in each team's local television market. Under my direction, economists at Navigant Consulting collected records of the times of all national NBA telecasts on ABC, ESPN, ESPN2 and TNT.

Exhibit 2 compares the average rating and share of local telecasts of an NHL home team when a nationally televised NBA game is shown simultaneously and when no NBA game is being shown. As is apparent in Exhibit 2, the presence of a nationally televised NBA game has no significant effect on the audience for an NHL telecast. Exhibit 3 shows the results of a similar exercise comparing audiences for nationally televised NHL games when nationally televised NBA games are or are not being televised simultaneously. As in Exhibit 3, the data do not show that nationally televised NBA games are substitutes for nationally televised NHL games.

The President and CEO of Major League Baseball Advanced Media testified that while the prices of other on-line streaming services are considered in setting the prices for MLB.tv, the latter prices have never been changed in response to a change in the prices of the out-of-market services of the other major league sports.[69] Instead, "we set our price talking to our most avid baseball fan."[70]

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[68] Bates No. NHL1436894.

[69] *Bowman Deposition, op. cit.*, pp. 84-85, 89-92.

[70] *Ibid.*, p. 92.

One test that economists use to determine whether two products are in the same relevant market is whether changes in prices are highly correlated.[71] Exhibit 4 shows the prices on DirecTV for the regular season packages of MLB Extra Innings, NBA Center Court, NFL Sunday Ticket, and NHL Center Ice from 2005 through 2010. These prices have moved independently during this period. While the price of NFL Sunday Ticket has increased by 34 percent over this period, none of the other packages show price increases in every year, and the price for NBA Center Court has actually declined slightly. MLB's price began the period below the price of the NBA and only slightly above the NHL price, but now substantially exceeds both. The NBA has fallen from about $30 more than the NHL to only about $5 more. Thus, the changes in the prices of the out-of-market packages are not closely correlated, which implies that they are not close competitive substitutes and so are not in the same relevant market.

In summary, the evidence from the research literature and from the discovery record in this litigation supports the conclusion that telecasts in one sport are not close competitive substitutes for telecasts in other sports.

Non-Sports Programming

The quest for the products to be included in the relevant market normally ends when the next most plausible candidate for inclusion in the market proves not to be a close competitive substitute for the reference product. Telecasts of games in different sports are more plausibly close competitive substitutes than, say, a telecast of a baseball game and a non-sport telecast. This section reviews the evidence on whether sports and non-sports television programs are close competitive substitutes.

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[71] Roger A. Sherwin and George J. Stigler, "The Extent of the Market," *Journal of Law and Economics* Vol. 28, No. 3 (October 1985), pp. .

The most recent FCC report on competition in video programming, after reviewing all of the evidence that was submitted in the proceeding, concluded that sports programs have no close competitive substitutes for an MVPD.[72] Among the submissions was a statement by Verizon that the denial of access to the MSG HD Regional Sports Networks had the effect of "significantly hindering" Verizon's ability to compete for MVPD customers in New York City and Buffalo.[73] A submission by ABC's affiliates stated that their retransmission consent fees to MVPD were necessary for them to acquire sports programming, which in turn enhanced their ability to compete with MVPD channels.[74] Based on the evidence before it, the FCC reached the following conclusions regarding sports programming:

> Sports programming continues to be a distinct form of programming in comparison to movies and other types of television programming. First, it is easier to predict audience and advertiser interest with sports programming, especially for marquis events. Major sporting events – including the championship games for professional football, baseball, and basketball, the Olympics, and championship games for certain NCAA sports – consistently generate among the highest ratings of any programming, especially among those in the demographics most desirable to advertisers, including the 18-to-35 male demographic. Nielsen has also found that sports programming is the least time-shifted genre of television programming. According to Nielsen, in 2012, the 18-49 demographic watched nearly all of sports television programming live or within the same day of airing. Therefore, major sporting events are typically viewed as "premium" programming. This has led broadcast and cable networks to pay increasingly large amounts to sports teams for television rights.[75]

Economics research on the demand for MVPD systems finds that sports channels are a subscription driver in the sense that sports channels are necessary for an MVPD to reach maximum penetration and to compete effectively with another MVPD that offers sports. Research on the demand for cable television has found that while consumers are largely

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[72] Federal Communications Commission, *Fifteenth Report: Annual Assessment of the Status of Competition in the Market for Video Programming*, Docket MB 12-203, July 22, 2013.

[73] *Ibid*., footnote 114, p. 23.

[74] *Ibid*., p. 28.

[75] *Ibid*., p. 172 (footnotes omitted).

indifferent to most of the channels that are offered on an MVPD, sports channels, along with news and recent release motion picture channels, are very important in determining the decision to subscribe to MVPD service.[76] Indeed, sports channels are the only type of programming that consistently adds to MVPD subscriptions across all studies and all time periods.

In summary, other types of programming are not a close competitive substitute for sports programs because of the unique position of sports in attracting incremental audiences and incremental subscriptions to MVPDs.

Television versus Internet Distribution

Both MLB and the NHL sell out-of-market packages of games that are televised by local over-the-air stations and RSNs both to MVPDs for distribution to consumers as television services and directly to consumers for delivery through high-speed Internet connections. One issue in defining the relevant markets in this case is whether Internet distribution and MVPD distribution are competitive substitutes. To address this issue requires examining the competitive implications of rapid technological change in telecommunications.

[76] Diane Bruce Anstine, "How Much Will Consumers Pay? A Hedonic Analysis of the Cable Television Industry," *Review of Industrial Organization* Vol. 19, No. 2 (September 2001), pp. 129-47 (sports channels have the highest value to cable systems); Gregory S. Crawford, "The Impact of the 1992 Cable Act on Household Demand and Welfare," *Rand Journal of Economics* Vol. 31, No. 3 (Winter 2000), pp. 422-49 (consumer willingness to pay for ESPN is higher than for all other channels except HBO); Andrew Stuart Wise and Kiran Duwandi, "Competition between Cable Television and Direct Broadcast Satellite: The Importance of Switching Costs and Regional Sports Networks," *Journal of Competition Law and Economics* Vol. 1, No. 4 (December 2005), pp. 679-405 (ownership of RSN by cable system makes satellite less of a competitive substitute against cable); Noel D. Uri, "The Market for Subscription Television Service in the United States," *Engineering Economist* Vol. 51, No. 3 (3006), pp. 205-36 (sports channels are the only specific type of program channel that enhances cable demand).

When MLB launched MLB Extra Innings in 1996, high-speed Internet access was only beginning to be introduced by cable television companies[77] and did not exist for either wire-line or wireless telephone companies. The principal method for accessing the Internet was a dial-up telephone line that did not operate at sufficient speed to make high-quality distribution of video programming technically feasible. To receive streaming video that is capable of producing video of the quality of standard television sets requires data speeds in the range of a megabit per second (mbps).[78] In 1996 no technology could deliver Internet streams at this speed.

By the time that MLB launched MLB.tv in 2002, most cable television companies had upgraded their networks to provide high-speed Internet access, but the number of subscribers to high-speed Internet service was fewer than 20 million.[79] Moreover, the standard for defining high-speed service was 200 kilobits per second (kbps), which is too slow for receiving a streaming television signal that is capable of producing a quality of picture for a televised sporting event that is comparable to standard television. Thus, in these early years Internet distribution of telecasts of sporting events was not a plausible competitive substitute for distribution over MVPDs.

The class period in this case begins in 2008. By that time the technology for providing Internet access on both local telephone and cable television companies had improved substantially. During the class period both telephone and cable companies offered conventional MVPD service and high-speed Internet access capable of supporting high-quality video program distribution over the Internet. In addition, wireless telecommunications carriers were in the

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[77] See http://www.calcable.org/learn/history-of-cable/.

[78] A. Michael Noll, "Television over the Internet: Technological Challenges," in Eli Noam, Jo Graebel, and Darcy Gerbarg, *Internet Television*, Laurence Erlbaum Associates, 2004, pp. 22-3.

[79] Federal Communications Commission, *Internet Access Services, Status as of December 31, 2002*, June 2003, Table 1.

process of upgrading their networks to enable them to provide high-speed Internet access. By December 2008, 88 million residences subscribed to Internet access service at speeds greater than 200 kbps, including 19 million wireless customers, and 31 million subscribed to Internet access services that were capable of data speeds of more than 3 mbps,[80] which allows streaming video services comparable to high definition television signals. Nevertheless, at the start of the class period wireless carriers generally were not yet able to provide high-speed access at speeds sufficient to support Internet television of high quality. In December of 2008, less than one percent of consumers who had Internet access service at more than 3 mbps had wireless Internet access.

Since the beginning of the class period, the evolution of wireless technology from 2G to 3G and 3G to 4G has caused wireless to increase data speeds to the point that it can provide telecasts of sporting events at a quality comparable to standard television. By December 2012, 128 million subscribers (105 million residences) received Internet access service at more than 3kbps, of which 64 million (45 million for residences) were accounted for by wireless carriers.[81] The wireless industry is in the process of undergoing another technological transformation. Wireless carriers are deploying 4G wireless technology, which can sustain data transmission rates that are adequate for transmitting video signals at the same quality as a digital video disk (DVD) played on a high-definition television set.

The rapid development of telecommunications technology has made possible the convergence of information technologies. Convergence refers to the increasing overlap in the

[80] Federal Communications Commission, *Internet Access Services, Status as of December 31, 2012*, p. 17.

[81] *Ibid.*

services that are supported by each technology for delivering communications.[82] Modern digital technology reduces all forms of communications to a bit stream – a series of ones and zeros that contain the information that a sender seeks to convey to a receiver. Because all communications take the same physical form, distinctions among communications technologies (wire-line telephony, wireless telephony, cable television, broadcasting) have become blurred.

Originally, each type of information, each technology for delivering information, and each end-user communications device was designed to provide a specific service in a specific format. Telephones were used for two-way voice communications. Broadcasting and cable television were used for one-way scheduled audio and visual programs. Stereos and video playback devices were used to provide user-controlled audio and visual entertainment. Books, magazines and newspapers were used to deliver text and still images.

Digital technology allows each communications segment to be used for all of these purposes. Technologies (e.g., hard-copy publications) that cannot be transformed to support multiple forms of information products are being displaced by multi-purpose technologies (e.g., tablet computers). Today a single-purpose television set can become a device that also can receive video content over the Internet by acquiring a set-top box, and the latter includes access

[82] The scholarly journal *Convergence* was first published in 1995. The journal's purpose and scope is described as follows: "*Convergence* is an international peer-reviewed academic journal… to address the creative, social, political and pedagogical issues raised by the advent of new media technologies… Topics include: Video games * Cable and telecoms * Mobile media/content * Internet studies* Digital/new media art * Digital photography * VR * Control and censorship of the media * Copyright/intellectual property * New media policy * New media industries/institutions * New media history * New media in cross-cultural/international contexts * New media products * Digital TV * DVD * Digital music – recording, production, distribution, file formats/file sharing * Cinema." (See http://www.uk.sagepub.com/journals/Journal201774)

to sites that essentially duplicate MVPDs plus offer additional video content. Hulu offers a streaming Internet service that includes programming from hundreds of networks.[83]

Programs from the major networks typically are delayed before being released to Internet television, and most cable sports networks are not available over the Internet because sports leagues and broadcasters either prevent Internet streaming or require that the customer also subscribe to a package that is offered through an MVPD. Consequently, Internet television generally is not yet a close substitute for an MVPD for access to most televised sports. But this is not the case for the out-of-market packages that are sold by MLB and the NHL. MLB.tv and NHL GameCenter Live are available through two Internet television services that use set-top boxes to broadcast through TV sets, Apple and Roku.[84] Several other devices, including video game players, can be used to connect broadband services to television sets for the purpose of viewing streaming video over the Internet.[85] Hence, a consumer can acquire the packages of out-of-market games that are offered by MLB and the NHL via either distribution system. Thus, Internet distribution of the out-of-market packages is a competitive substitute for games in the same sport that are carried on MVPDs.[86]

The growing substitutability of Internet television for MVPDs during the class period is demonstrated by the trends in subscriptions to MLB.tv and MLB Extra Innings. Between 2008 and 2012, the number of subscribers to MLB Extra Innings [redacted]

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[83] See the lineup of Hulu networks at http://www.hulu.com/tv/networks.

[84] Amadou Diallo, "Ready to Cut the Cable TV Cord? Here's How to Do It," *Forbes*, October 16, 2013, at . http://www.forbes.com/sites/amadoudiallo/2013/10/16/how-to-cut-the-cord-cable-tv/

[85] FCC, *15th Report, op. cit.*, pp. 182-83.

[86] MLB also reached the conclusion that Internet streaming of live games competes directly with cable and satellite distribution, Bates Nos. MLB0367317.

[redacted].[87] Early in this period DirecTV and Comcast raised the [redacted].[88] Meanwhile, the number of subscribers to MLB.tv [redacted].[89]

These data show that technological convergence has caused Internet distribution of telecasts to become a competitive substitute for conventional telecasts of over-the-air stations and cable channels. Thus, I conclude that Internet distribution of games in a major league sport is now in the same relevant market as television distribution of major league games in the same sport.

Notwithstanding convergence of television and Internet streaming as distribution channels for game telecasts, league rules that prevent teams and RSNs from streaming games over the Internet inhibit the integration of DMAs into a single national market. Thus, rules and policies that effectively prevent streaming by individual clubs or RSNs and that allocate DMAs among teams, combined with the fact that only telecasts of major league games in the same sport are competitive substitutes for a telecast of games involving a specific team, cause a group of DMAs for which the same teams have home television rights to be a relevant submarket.[90]

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[87] Bates No. MLB0007161.

[88] Bates No. MLB0007162.

[89] Bates No. MLB0017972.

[90] For clarity, the Miami and West Palm Beach DMAs are in a submarket of telecasts of MLB games that includes the Marlins, but not the Devil Rays. The Tampa and Sarasota DMAs are in a submarket of telecasts of MLB games that includes the Devil Rays, but not the Marlins. The remaining DMAs in Florida plus the Mobile, Alabama, DMA are in a submarket that includes both teams. The other products that are in these submarkets are MLB Extra Innings and MLB.tv, but not telecasts by RSNs of any other MLB team. As a practical matter, the extent of competition in all DMAs in a submarket is the same, so an analysis of competition in one DMA applies to other DMAs in the same submarket.

The Role of Leagues

The structure of leagues and the scope of services that they provide are relevant to understanding the extent of competition in major league baseball and hockey in North America. While the structures and functions of the four major league team sports leagues in the U.S. (baseball, basketball, football and hockey) are similar, other league structures and functions also exist, and the structure and authority of a league has implications for the extent of competition among teams, including competition in the sale of television rights.

Two activities that are performed by MLB, the NHL and other North American major leagues are especially relevant to the allegations in the *Complaints*. The first activity is to determine the membership of the league and to assign home territories to each team for playing games and selling rights for live broadcasts, as discussed elsewhere. The second activity is to engage in business activities on behalf of all of the teams in the league.

Leagues as Standards Organizations

In addition to the participating teams, an important input to the production of a game in major league sports is a form of standardization service that is performed by a league. A league establishes rules of play and eligibility, employs officials to enforce the rules, creates schedules of games that lead to a championship, determines which teams participate in the league, and, in some cases, specifies where teams can play their home games.[91] The essence of the "product" of a league is to organize sporting competition that leads to one team being declared the league champion. Without leagues, teams would organize a series of unrelated matches, as was the case

[91] See Noll, "The Organization of Sports Leagues," *op. cit.*, Szymanski, "The Economic Design of Sporting Contests," *op. cit.*

in the early history of baseball and still is the case with "barnstorming" teams that stage a series of exhibitions, such as the Harlem Globetrotters.

The standardization function of a league adds value to a schedule that teams on their own might arrange from a series of bilateral agreements because consumers apparently prefer a standardized product (all games are played under the same rules) and the additional consequentiality of a game that arises from creating a balanced schedule of games that leads to a championship. Standardization can be accomplished either by mutual agreement among a group of teams or by each of a group of teams hiring an outside entity to perform this function for the group.

From an economic standpoint, the only plausible factors that would limit the geographic scope of the market for league standardization services are the underlying interest in a sport in each local area and the teams' travel costs of playing out a schedule in a league with a larger geographic footprint. The former factor plausibly explains why the NFL does not have teams around the world,[92] but it does not explain why the geographic scope of MLB, the NHL and the NBA is limited to North America. The contrast between these sports and soccer is especially interesting. As discussed in detail later in this section, international governing bodies in soccer organize international competitions among the top professional teams that are structured as a form of league. No such competitions exist that involve teams in MLB or the NHL, even though professional leagues in these sports enjoy popularity among consumers in other nations. Based on the soccer example, there does not appear to be a natural economic limit to the geographic scope of a league, notwithstanding the fact that North American major league teams do not participate in international leagues.

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[92] The NFL did attempt to create a satellite league in Europe – the World League of American Football – but this attempt did not obtain enough consumer support to succeed.

Leagues as Economic Agents of Member Teams

Leagues often perform other economic functions for their teams. Sometimes leagues stage contests (that is, manage a sporting event – an example is the Super Bowl in the NFL), sell product licenses for teams in a league, and centralize the sale of broadcasting rights. The last is especially important in understanding the nature of competition in the relevant telecasting markets that are alleged in this case.

All major professional leagues in North America sell rights to televise games at a specific time of the week during the regular season and the league playoffs to national networks that, in turn, distribute these telecasts over local over-the-air televisions stations and/or MVPD channels. All major North American professional sports leagues also aggregate and sell packages of out-of-market games that are televised by local over-the-air stations and RSNs in the home broadcast territories of the teams in the game. A full understanding of the nature of competition in providing these products requires taking into account the role of leagues in the supply of both games and telecasts of games.

Teams in all North American sports leagues, including MLB and the NHL, assign to their league the live video broadcast rights to at least some games, which the league then sells to a national network. The pooled rights that are sold by MLB, the NBA, and the NHL cover only a small fraction of all league games, but the NFL pools and sells television rights to all league games. Although the rights to televise all NFL games are sold to national broadcast networks, the actual telecasts of most games are regionalized in that they are televised only or primarily in the television markets of the teams in the contest plus nearby local television markets. Like MLB and the NHL, the NBA (League Pass) and the NFL (Sunday Ticket) also sell access to “out-of-market” regionally televised games.

League Structure

In North America professional leagues typically are joint ventures that are owned by the teams in the league. Consequently, the sale by a league of television rights is the product of an agreement among teams to pool some individual team television rights and to collaborate in deciding the content and price of the package of games. In addition, in North American sports leagues, members play games against only other league members, and the decision to admit new members to a league is made jointly by existing members. This organizational structure is not necessary to successful operation of a league.

The National Collegiate Athletic Association (NCAA) performs league functions for approximately 1,200 colleges and universities in the United States in 23 sports.[93] The NCAA determines which schools can be members of the organization and participate in NCAA sports, limits roster sizes in each sport, defines eligibility to participate, and makes playing rules. The NCAA also organizes national championship events. In Division I, the "major league" for college sports, the NCAA organizes 38 national championships in 23 sports, 18 for men, 19 for women, and one (fencing) for coeducational teams.[94] Among the national championships that are organized by the NCAA are baseball and men's hockey.

Nearly all member colleges of the NCAA belong to conferences that also perform league functions. Conferences determine their own membership, have latitude to make their own rules as long as these rules are consistent with NCAA rules, and arrange league schedules that lead to conference championships. In addition, other entities also organize college championship events. Historically, the most famous was the National Invitation Tournament in basketball, which was

[93] See http://www.ncaa.org/about/who-we-are/membership and http://www.ncaa.org/about/what-we-do/championships.

[94] See http://www.ncaa.org/championships?division=d1.

organized by five New York City colleges before it was acquired by the NCAA as part of a settlement of an antitrust complaint (*Metropolitan Intercollegiate Basketball Association v. NCAA)* in 2005.[95]

Auto racing in North America has several leagues that are not owned by member teams, and membership in auto racing leagues is not exclusive. NASCAR and Indy Racing are distinct, separate entities from the race car teams that participate in their events.[96] Formula 1 is an international racing league that schedules one event each year in the U.S. and that also is a separate entity from the teams that race in its events. Indy Racing also owns the Indianapolis Motor Speedway, which hosts the most famous event in its series of races, but also includes races at many other tracks in its season schedule. A team in auto racing normally sponsors several drivers, sometimes in different leagues. For example, Team Penske is a leading participant in both Indy Racing and NASCAR,[97] and in 2013 Danica Patrick switched from Indy Racing to NASCAR, causing audience ratings for NASCAR to rise while ratings for Indy Car fell.[98]

Professional soccer leagues in Europe are owned by teams, but the operating rules of the league, including eligibility for membership, are supervised by national governing bodies for the sport. Despite holding an ownership stake in leagues, teams in a league can play in and be partial

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[95] Andy Katz, "NCAA Buys Tournaments, Ends NIT Litigation," *ESPN.com*, Aigust 17, 2005, at http://sports.espn.go.com/ncb/news/story?id=2136724.

[96] Peter von Allmen, "Is the Reward System of NASCAR Efficient?" *Journal of Sports Economics* Vol. 2, No. 1 (February 2001), pp. 62-79, and Craig A. Depken, II, and Dennis P. Wilson, "The Efficiency of the NASCAR Reward System," *Journal of Sports Economics* Vol. 5, No. 4 (November 2004), pp. 371-86.

[97] See http://www.teampenske.com/about/.

[98] "Year in Sports Media Report: 2013," Nielsen Company, 2014, p. 14.

owners of several leagues simultaneously.[99] For example, an English major-league soccer team may participate in four distinct leagues: the Premier League, the Football League Cup, the Football Association Cup, and either the European Champions League or the Europa Cup.

The Premier League organizes an annual round-robin schedule of matches that is analogous to the regular season of MLB or the NHL, but does not organize a playoff elimination tournament. The Premier League is owned jointly by its member teams and the Football Association, the governing body for soccer in England to which all amateur and professional soccer teams belong.[100] Membership in and ownership of the Premier League changes from year to year because, after each season, the three teams with the worst records are relegated (demoted) to the highest minor league, while three teams from the highest minor league are promoted to the Premier League.[101] The system of promotion and relegation is used for all eleven levels of the hierarchy of leagues, including three minor leagues that are operated by the Football League (Championship League, League One, and League Two), and additional levels of semi-professional and amateur leagues that are operated by the Football Association and by county football associations. An important aspect of the system of promotion and relegation is that teams do not have "home territories" in which they enjoy protection against competitive entry. Any team, regardless of its home location, can gain entry to the Premier League by winning in

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[99] Stephen F. Ross and Stefan Szymanski, "Antitrust and Inefficient Joint Ventures: Why Sports Leagues Should Look More Like McDonald's and Less Like the United Nations," *Marquette Sports Law Review* Vol. 16, No. 2 (Spring 2006), pp. 213-60.

[100] See http://www.premierleague.com/content/premierleague/en-gb/about/who-we-are.html and http://www.premierleague.com/content/premierleague/en-gb/about/formal-relations.html.

[101] Roger G. Noll, "The Economics of Promotion and Relegation: The Case of English Football," *Journal of Sports Economics* Vol. 3, No. 2 (May 2002), pp. 169-203, and Stefan Szymanski and Tommasso M. Valletti, "Promotion and Relegation in Sporting Contests," *Revista de Politca Economica* (May/June 2005), at http://www.dsl.psu.edu/centers/sports_institute/articles/Szymanski%20Valetti%20promotion%20relegation.pdf.

lower leagues and so being promoted through the hierarchy. The Premier League normally includes six or seven teams from London and multiple teams from other large metropolitan areas.[102]

Second is the Football League Cup, an annual elimination tournament among all 92 professional soccer teams (major and minor league). The Football League Cup resembles the post-season tournaments that are organized by major North American professional sports leagues. The major difference is that all professional teams qualify for the Football League Cup, rather than limiting participation only to the top major league teams, as is done in the U.S. The Football League Cup is organized by the Football League, an entity that operates the three minor professional soccer leagues that rank below the Premier League: the Championship League, League One, and League Two. The Football League is owned by the 72 teams that belong to its three leagues.[103] Teams in the Premier League are not members of the Football League, but they participate in the Football League Cup.

Third is the Football Association Cup, an annual elimination tournament among over 700 professional and amateur soccer teams. Like the League Cup, the Football Association Cup is an elimination tournament that runs during the regular season from August to May. The Football

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[102] In 2013-14, the London teams in the Premier League are Arsenal, Chelsea, Crystal Palace, Fulham, Tottenham and West Ham. In addition, Queen's Park Rangers recently played in the Premier League, and Milwall, although not a Premier League member, reached the final game of the Football Association Cup and qualified for the Europa League in 2004. Both of these clubs now play in the Championship League. Also in the London area are Charlton Athletic (Championship League) plus four other teams that play in either League One or League Two. In the Manchester metropolitan area, current Premier League members are Manchester City and Manchester United, but Bolton and Wigan, now in the Championship League, also have recently played in the Premier League, and three other Manchester area teams play in the Football League. For current league memberships, see http://www.football-league.co.uk/page/Home/0,,10794,00.html and http://www.premierleague.com/en-gb.html.

[103] For history and rules of the Football League, see http://www.fl125.co.uk/history and http://www.football-league.co.uk/page/RegulationsIndex/0,,10794,00.html.

Association Cup is organized by the Football Association, the governing body for the sport at all levels and the supervisor of the Premier League.[104] Ownership of the Football Association is divided into 2,000 shares, with one share owned by the Premier League, the Football League, and each member club in every league in the hierarchy, and additional shares owned by county football associations based on the number of member clubs in the county.[105]

Fourth, seven professional English teams each year participate in one of two European club championships that are operated by the Union of European Football Associations (UEFA): the European Champions League and the Europa League. The top four teams in the Premier League qualify for the Champions League, and three other teams qualify for the Europa League.[106] Both leagues are organized as elimination tournaments involving many teams that begin in July and end in May.[107] UEFA is the governing body for soccer in Europe and the Football Association is the member for England and Wales.[108]

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[104] The Football Association also operates four levels of soccer leagues below the Football League and supervises amateur leagues below the 8th level of leagues.

[105] For the ownership structure and operating rules of the Football Association, see http://www.thefa.com/~/media/files/thefaportal/governance-docs/rules-of-the-association/2013-14/articles-of-association.ashx.

[106] If not already qualified for the Champions League, the winners of the Football League Cup and the Football Association Cup qualify for the Europa League. If the winner of the Football League Cup has qualified for the Champions League, this slot goes to the fifth best team in the Premier League. If the Football Association Cup winner has otherwise qualified for either UEFA league, this qualifying slot goes to the other finalist in the Football Association Cup. If this team also has otherwise qualified for either UEFA league, the position goes to the next best Premier League team that has not yet qualified. The last position in the Europa Cup is then filled by the best remaining team in the Premier League. Usually all seven qualifiers are among the top half of the teams in the Premier League, but that is not always the case. In 2013, the winner of the Football Association Cup was Wigan, which also was demoted in that year to the Football Championship League. Hence, in 2013-14, one English team in the Europa Cup is a minor league team and two are major league teams.

[107] The format for both tournaments is a series of two-game, home and home matches with the winner determined by the total score for both games. Both tournaments have a “group stage” in

Practices in selling television rights also vary among leagues. In college football and basketball, most live television rights are sold by many conferences, creating a highly competitive market that causes a very large number of games to be telecast throughout the U.S. without territorial restrictions.[109] In Europe national policies differ regarding whether leagues can pool the sale of live television rights, and as a result the role of a major league in selling television rights varies from none to full control among the top soccer nations.[110] UEFA controls the rights to televise its championship tournaments and sells the television rights to these games on a nation-by-nation basis, even though all of the participants in these events also are members of national soccer leagues.[111]

The variety of sports leagues around the world indicates that the common core functions of a league – the reference product in the provision of league services – is standardization. All leagues promulgate rules of play and participation, create schedules for league seasons, and enforce league rules. Engaging in other business activities and requiring exclusivity of membership and play are not core attributes of a league.

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the middle of the tournament in which the survivors to that point are divided into eight groups of four teams and play a double round-robin schedule, with the top two teams in each group moving on to the next elimination round. Top seeded teams enter the competition in the group play stage when 32 teams remain.

[108] See http://www.uefa.org/aboutuefa/organisation/index.html.

[109] Originally almost all live college football television rights were controlled by the NCAA, but this system came to an end when the NCAA lost an antitrust case for monopolizing the sale of college football television rights in *NCAA v. Board of Regents*, 468 US 85 (1984).

[110] For a discussion of the variety of ways that leagues in Europe and North America are involved in selling television rights, see Roger G. Noll, "Broadcasting and Team Sports," *Scottish Journal of Political Economy* Vol. 54, No. 3 (July 2007), pp. 400-21.

[111] See http://www.theguardian.com/sport/2013/nov/09/bt-sport-champions-league-exclusive-tv-rights for details about the sale of the British rights for 2015-18 and http://www.insideworldfootball.com/matt-scott/13386-matt-scott-high-stakes-game-for-tv-rights-will-keep-uefa-s-club-giants-content for details about rights in other nations.

In the U.S. multiple leagues compete for team members in intercollegiate sports and auto racing, but not in major league team sports. In the past, new leagues have attempted to enter every major professional sport, but in every case have either failed or merged into the established league.[112] At present there are no close substitutes for the established league in each of the four major-league team sports, including MLB and the NHL. In the competition for league members, a major league in one sport is not a competitive substitute for a league in another sport. Hence, the relevant product market is major league services in a specific sport.

Conclusions

On the basis of the evidence and analysis in this section, I conclude that the relevant market in which a league (MLB or the NHL) sells its out-of-market packages are nationwide markets for telecasts of major league games in that sport. This relevant market includes all distribution methods for game telecasts: over-the-air stations, MVPD channels, and Internet streaming video services. In addition, because of league practices that divide home broadcast territories among league members, I conclude that the geographic demarcations of home television territories in each league constitute relevant submarkets that otherwise would not exist, with each submarket defined by the specific teams in the league that are permitted to have their games telecast in that territory. Likewise, I conclude that the relevant market for attendance of a team in any major league sport includes teams in the same sport that also play home games in the same metropolitan area. Finally, I conclude that the provision of core league functions in each sport is a relevant product market.

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[112] See James Quirk and Rodney D. Fort, *Pay Dirt*, Princeton University Press, 1992, Chapters 8 and 9, pp. 294-361.

MARKET POWER

In antitrust economics, market power, or monopoly power, is the ability to control prices and/or to exclude competitors. Control of prices refers to maintaining prices above the competitive level for a sustained period of time. In a market in which there are barriers to entry, a firm that accounts for all or nearly all sales in a market can exercise monopoly power by setting the price of the product substantially above the level that would arise if the market were competitive. The long-run competitive price of a product equals the long-run marginal cost of production (i.e., the incremental cost of the last unit of production), including a competitive return on the additional investment that is necessary to produce the last unit of output.[113]

Exercise of market power harms consumers because it transfers wealth to sellers, reduces consumer choice, and excludes buyers who are willing to pay a competitive price but who are not willing to pay the monopoly price. Nevertheless, the exercise of some market power may be necessary for firms to remain viable. In industries with high fixed costs (i.e., costs that do not depend on the amount of output that is produced, such as research and development costs) or economies of scale (i.e., the marginal cost of output declines as output increases), firms cannot recover all of their costs unless they can sustain price above the marginal cost of production. Thus, antitrust economics also is concerned with whether price exceeds the long-run average cost of production, which is equivalent to whether firms earn profits that exceed a competitive return on investment.

[113] In antitrust economics, the distinction between market power and monopoly power is that in a monopoly only one firm is a significant player in the market, whereas several firms can enjoy market power if a market is sufficiently highly concentrated. Thus, monopoly power is an extreme form of market power. In both cases the indicator of its presence is whether firms can sustain prices that exceed marginal cost.

This section examines whether MLB and its member teams, and the NHL and its member teams, enjoy market power in the relevant markets for the sale of broadcast rights to games in their respective sports, and concludes that they do possess market power. I also conclude that the RSNs have market power by virtue of the exclusive rights they obtain from the member teams. The section then investigates the sources of this market power, and concludes that it was obtained by anticompetitive means: collusion among the teams that own a league to allocate exclusive home broadcast territories among themselves and their RSNs, to pool their licensed telecasts of games to create a bundle of out-of-market telecasts, and to set the price for this bundle in a manner that reduces competition between their local telecasts and the out-of-market telecasts in the bundle.

Principles for Measuring Market Power

The analysis of the presence of market power is closely related to the methods that are used to define the relevant market. Market definition identifies the products that are competitive substitutes, and market power analysis determines whether the number of close competitive substitutes is sufficient to prevent a firm in the relevant market from exercising market power. The focus of market power analysis is the *firm*, not the *product.* A single firm may sell multiple products in the same market. Market power refers to the ability of a single decision maker to control prices or exclude competitors.

Price-elasticity of Demand

The most direct indicator of a firm's market power is the price-elasticity of demand for its products at the competitive price. The price-elasticity of demand is the absolute value of the

percentage change in the quantity sold that would arise from a one-percent change in price. The formula for the elasticity of demand is -(%change in quantity/%change in price). If the demand for a firm's product is not highly elastic (e.g., the price-elasticity of demand is substantially less than infinity) when price equals long-run marginal cost, the seller has market power. Long-run marginal cost excludes fixed costs, such as research and development (R&D), and is less than average cost if the firm enjoys economies of scale (i.e., declining marginal costs as production increases).

Methods for estimating the price-elasticity of demand are valid only for prices and sales within the range of observable data. Because the relevant price-elasticity for measuring market power pertains to transactions at the competitive price, a reliable estimate of the relevant price-elasticity is not feasible unless the market has experienced periods of competition. Since the introduction of MVPDs with high channel capacity and high-speed broadband services, league rules have not permitted competition in the provision of live game telecasts. Consequently, no data about competitive prices and sales of live game telecasts are available to estimate the price-elasticity of demand at the competitive price. Nevertheless, if price is substantially above long-run marginal cost, a valid inference is that the price-elasticity of demand is not high at the competitive price, for if it were, a price substantially above marginal cost would not be profitable. This inference does not entail actually measuring price-elasticity, but simply observing that price exceeds any plausible estimate of marginal cost.

Profitability

Profitability is an indicator of market power. A firm's profit is relevant to market power because, in a competitive market with no entry barriers, prices are driven to the long-run average

cost of production, which implies that firms do not earn profits that exceed the return that is necessary to attract financial capital.[114]

Competition can take either of two forms: perfect competition or monopolistic competition. In perfect competition, firms have no fixed costs or economies of scale and competition causes average cost to equal marginal cost. In monopolistic competition, firms have fixed costs and/or economies of scale, offer somewhat different products, and possess sufficient market power to sustain price above marginal cost, but entry is sufficiently easy that firms cannot earn excess profits without inducing entry by imperfect substitutes that take away enough sales to force profit to the competitive level.

Profit as the term is used in economic analysis is difficult to measure, rendering profit-based measures of market power of little use in many circumstances.[115] Profit equals revenues minus the costs incurred by the firm in producing and selling products. The problems with measuring profitability arise because some components of costs are difficult or even impossible to measure accurately, causing economists to avoid using profit data as a direct measure of market power in most circumstances.

One problem with using profits as an indicator of market power is that the relevant concept of profit for antitrust analysis is the excess of revenues over cost in a relevant market, whereas profits generally are measured for a firm or a division of a firm that sells multiple products. In order to calculate the profitability of a product a firm's costs must be allocated

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[114] If a key input is limited in supply, firms that sell that input can earn excess profits even if they have no market power. An example is atypically productive farm land or the exceptional skills of a star major league athlete.

[115] For a more thorough discussion of the problems encountered in measuring profits, see Frederic M. Scherer and David Ross, *Industrial Market Structure and Economic Performance, Third Edition*, Houghton Mifflin, 1990 Chapter 11, pp. 411-47.

accurately among the markets in which it operates, which is inherently arbitrary. For example, as discussed in the section of this report that deals with market definition, a professional sports team sells many products, including television rights, tickets to attend games, concessions within its playing facility, and advertising and promotion. To calculate the profitability of one line of business, such as the sale of television rights, requires determining the amount of costs that properly can be attributed to televising games.

A second problem is that profitability is a long-run concept, related to the entire stream of revenues and costs arising from the investment that was necessary to enter a market, whereas anticompetitive conduct occurs at a specific time and affects competition over a period that is unlikely to correspond to the useful life of the investments that are used to produce the product. As a result, to calculate profit during a particular period requires estimating the depreciation of capital investment during that period. Depreciation is an elusive concept because the useful life of a capital investment is unlikely to be precisely known and conventional measures, such as generally accepted accounting methods and allowances in the tax code, are based on historical averages and legal requirements, and so are not necessarily accurate estimates that would apply to any specific investment.[116] In addition, the values of a firm's intangible assets are not necessarily related to investment expenditures that were made to create the asset, but instead reflect the firm's market power. For example, the market price of a team "franchise" – which in sports is a team's membership in a league – reflects in part investments by the team in building

[116] Because profits are not easy to observe, economists sometimes use Tobin's *q* as an estimate of profitability. Tobin's *q* is the ratio of the market value of equity in the firm to the net book value of assets (after subtracting depreciation and debt), and $q > 1$ implies that future profits exceed a competitive return on the book value of the assets of the firm. See Eric B. Lindenberg and Stephen A. Ross, "Tobin's q Ratio and Industrial Organization," *Journal of Business* Vol. 54, No. 1 (January 1981), pp. 1-32. But like profitability, *q* can be measured accurately only for the entire firm, and its validity hinges on the accuracy of depreciation deductions.

its brand name in its local market, but also reflects the market power that the team enjoys from its exclusive territorial rights in the league.

A third problem with direct profit measures is that a firm that enjoys market power in a relevant product market but competes in an input market in which supply is restricted will dissipate at least some of its profits by bidding up the price of the input.[117] In major league professional sports, players differ in skills, and the number of exceptional players is far less than the number of roster slots on all teams. In a competitive market, the salary of a player is the player's marginal revenue product – that is, the increment to team revenues arising from adding that player to the roster.[118] If teams have more market power, the incremental revenue due to a star player will be greater, and so the competitive salaries of players will be higher. Hence, competition in the player market thereby transfers some of the financial benefits of greater market power to the players. The fact that players benefit if teams enjoy more market power in a product market does not diminish the fact that greater market power harms consumers of major league sports because it increases the prices that they pay.[119]

A final problem with the use of profit data is that in companies in which ownership and management are integrated and stocks are not publicly traded, as is the case with most professional sports teams, the accounting costs of the enterprise do not necessarily represent the true costs of doing business. In small, privately held companies, owner/managers decide their

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[117] See Scherer and Ross, *op. cit*, pp. 438-39.

[118] For a thorough discussion of the economic theory of the player market and an empirical application to MLB, see Gerald W. Scully, *The Business of Professional Baseball*, University of Chicago Press, 1989, Chapter 8, pp. 151-70.

[119] One important insight from the economics of player markets is that super-competitive prices in product markets are the cause of high salaries for star players, rather than the other way around. See Quirk and Fort, *op. cit.*, chapter 7, pp. .

own salaries, benefits and other perquisites of employment. Thus, items that appear as costs in the books can be a form of profit from ownership by the owner/manager of the team.

Another profitability measure of market power is the Lerner Index, (P – MC)/P, where P is price and MC is the marginal cost of the last unit of output.[120] The Lerner Index measures the proportion of the price that represents a mark-up over marginal cost. In a perfectly competitive market price equals marginal cost and so the Lerner Index is zero. In the *Merger Guidelines*, the standard for determining whether a merger is likely to be anticompetitive is whether it would lead to a "small but significant increase in price" (the so-called SSNIP test), which is "most often" five percent.[121] This standard implies that a Lerner Index above 0.05 indicates the presence of sufficient market power to raise concerns about the competitiveness of the market.[122]

The advantage of the Lerner Index is that it is easier to implement than measures of firm profits. But the Lerner Index must be used with care. A firm that has fixed costs or economies of scale must set price substantially above incremental cost in order to recover all of its costs. For example, in research-intensive industries producers must enjoy some market power (as measured by the Lerner Index) to recover their R&D costs, so a competitive outcome in which price equals marginal cost is inconsistent with a market with economically sustainable firms. Nevertheless, a high and, especially, rising Lerner Index is regarded as a reliable indicator of market power.

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[120] Abba P. Lerner, "The Concept of Monopoly and the Measurement of Monopoly Power," *Review of Economic Studies* Vol. 1, No. 3 (June 1934), pp. 157-75.

[121] *Merger Guidelines*, *op. cit*., p. 10.

[122] If the pre-merger price is marginal cost and the post-merger price is five percent above marginal cost, the pre-merger Lerner Index is zero and the post-merger Lerner Index is [(1.05)MC – MC]/(1.05)MC = (0.05)/(1.05) = 0.048.

Market Concentration with Barriers to Entry

Due to measurement problems in using profit to measure market power, economists also use indicators that do not depend on interpreting a firm's financial records. The most commonly used indicator is market concentration. Economic theory predicts that the number of firms in a market normally is negatively correlated with price if the number of firms is small. Research has shown that concentration is highly correlated with various measures of profit.[123] One text puts it as follows: "Empirical evidence has shown that a high concentration index is a signal of a high price-cost margin. Thus the relationship is true not only in theory but in practice."[124] Nevertheless, concentration alone is not a definitive indicator without considering other factors that affect competition. Research also shows that concentration does not explain most of the variation in profits among firms either across industries or over time in the same industry. Another condition that must be considered is the presence of barriers to entry.

Market concentration is unlikely to be a valid indicator of market power unless entry barriers are high so that a firm cannot enter a market quickly and cheaply. One barrier to entry is a high sunk cost. If entry costs are high, a firm must commit to substantial costs before it makes a sale, and then must obtain a substantial market share and set price substantially above average operating costs to recover the cost of entry. If the incumbent firms in a market enjoy so much market power that their revenues are substantially greater than costs, other firms may have an incentive to enter the market. If entry takes years and monopoly power is exercised in the interim, consumers must face a long wait before entry brings relief, so that concentration is a

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[123] Many of these studies are summarized in Richard Schmalensee, "Inter-Industry Studies of Structure and Performance," in Richard Schmalensee and Robert D. Willig (editors), *Handbook of Industrial Organization*, Vol. 2, North Holland, 1989.

[124] W. Kip Viscusi, John M. Vernon and Joseph E. Harrington, Jr., *Economics of Regulation and Antitrust, Third Edition*, MIT Press, 2000, p.149.

useful indicator of durable market power. And, if entry requires a substantial sunk cost and a long period of losses, entry may never occur even though incumbents enjoy excess profits.

Economists use several measures of concentration: the market share of the largest firm, the sum of the shares of the four largest firms (sometimes written as C4), and, most commonly, the Hirschman-Herfindahl Index (HHI).[125] The HHI is the sum of the squares of the market shares of the firms in the relevant market. Market shares usually are calculated on the basis of sales revenues, although quantities or simple market presence sometimes are used. If ten firms enjoy ten percent of sales, the HHI is $10(10^2) = 1{,}000$; for a firm that is the only seller in the market, the HHI is $(100^2) = 10{,}000$.

The *Merger Guidelines* define thresholds for the HHI that indicate the likely presence of market power based on economics research on the relationship between concentration and prices.[126] In a nutshell, if the HHI is less than 1500, firms are unlikely to possess market power regardless of other conditions in the market. If the HHI exceeds 2500, which would occur in a market with four firms of equal size or one firm with nearly 50 percent of the market and many other tiny firms, a firm with a high market share is likely to enjoy substantial market power unless other conditions in the market are unfavorable. For HHI values between 1500 and 2500, the extent of market power is likely to depend on other supply and demand conditions.

Although the HHI is divided into three regions for the purposes of competition analysis, the measure is a continuous one. As the HHI increases, the intensity of competition diminishes. Although economics research has produced several theories of the prices and quantities that will

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[125] Albert O. Hirschman, "The Paternity of an Index," *American Economic Review* Vol. 54, No. 5 (September 1964), p. 761-2.

[126] *Merger Guidelines*, *op. cit.*, Section 5.3, pp. 18-19.

emerge from an imperfectly competitive market, these theories generally predict that increasing concentration leads to higher prices.[127]

One commonly used model of concentrated markets is the *Nash-Cournot* theory, which is based on the assumption that a firm picks the quantity of its product to sell (and the price at which it expects to be able to sell that quantity) under the assumption that other firms will continue to sell the same quantities but will respond competitively to the firm's price. The ultimate outcome is the set of quantities of production and prices that leave no firm with an incentive to change its production decision. In this model the HHI is proportional to the Lerner Index.

Nash-Cournot is not the only model of oligopoly behavior. Some theories predict that even a monopolist will behave as if it were a competitor.[128] *Contestability theory* predicts that if a market has no costs of entry and if a firm cannot instantaneously adjust its price if another firm offers a perfect substitute at a lower price, then even a monopolist will be forced to charge the competitive price. This theory provides a reason to supplement measures of concentration with an examination of barriers to entry. *Bertrand* theory identifies the conditions under which all markets that contain two or more firms will be competitive. These conditions are that each firm

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[127] George J. Stigler, "A Theory of Oligopoly," *Journal of Political Economy* Vol. 72, No. 1 (February 1964), pp. 44-61 at 55, and John Kwoka, "The Herfindahl Index in Theory and Practice," *Antitrust Bulletin* Vol. 30, No. 4 (Winter 1985), pp. 915-47.

[128] For more thorough discussions of oligopoly theory, see any standard text in industrial organization, such as W. Kip Viscusi, Joseph E. Harrington, Jr., and John M. Vernon, *Economics of Regulation and Antitrust*, 4th Edition, MIT Press, 2005, or Jean Tirole, *The Theory of Industrial Organization*, MIT Press, 1988. See also Carl Shapiro, "Theories of Oligopoly Behavior," in Richard Schmalensee and Robert D. Willig (eds.), *Handbook of Industrial Organization*, Vol. 1, North Holland, 1989.

produces an identical product and assumes that other firms will not respond to a change in price.[129]

The version of *Bertrand* theory that assumes a homogeneous product can be rejected as having no relevance to sports because a professional sport does not produce a homogeneous product. In a product differentiated market the *Bertrand* and *Nash-Cournot* theories both predict that prices in a multi-firm market lie between the monopoly price and the competitive price.[130] If entry barriers are present, all oligopoly theories that are relevant to sports predict higher prices in more concentrated markets in the presence of barriers to entry.

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[129] If Firm A sets its price, P_A, above marginal cost (MC), then Firm B can capture the entire market by setting its price, P_B, slightly below P_A and capture 100 percent of the profits $Q(P_B)(P_B - MC)$ instead of capturing half of the profits if it matched Firm A's price, or $\frac{1}{2}Q(P_A)(P_A - MC)$. For such pricing behavior to make sense, Firm B must believe that Firm A will not adjust its price. But if Firm A does adjust to a price slightly below P_B, it will recapture all of the market. If each firm continues to assume that the other firm will not respond to its price cut, prices will continue to fall until no further price cut is feasible, which occurs when $P_A = P_B = MC$ (the competitive price).

[130] See Nirvikar Singh and Xavier Vives, "Price and Quantity Competition in a Differentiated Duopoly," *Rand Journal of Economics* Vol. 14, No. 4 (Winter 1984), pp. 546-54; Xavier Vives, "On the Efficiency of Bertrand and Cournot Equilibria with Product Differentiation," *Journal of Economic Theory* Vol. 36, No. 1 (June 1985), pp. 166-75; Shabtai Donnenfeld and Shlomo Weber, "Vertical Product Differentiation with Entry," *International Journal of Industrial Organization* Vol. 10, No. 3 (September 1992), pp. 449-72; Pio Baake and Anette Boom, "Vertical Product Differentiation, Network Externalities, and Compatibility Decisions," *International Journal of Industrial Organization* Vol. 19, Nos. 1-2 (January 2001), pp. 267-84; George Symeonides, "Comparing Cournot and Bertrand Equilibrium in Differentiated Duopoly with Product R&D," *International Journal of Industrial Organization* Vol. 21, No. 1 (January 2003); ; Jonathan B. Baker and Timothy F. Bresnahan, "The Gains from Merger or Collusion in Product Differentiated Industries," *Journal of Industrial Economics* Vol. 33, No. 4 (June 1985), pp. 427-44; Jerry Hausman, Gregory Leonard and J. Douglas Zona, "Competitive Analysis with Differentiated Products," Annales d'Économie et de Statistique, No. 34 (April-June 1994), pp. 159-80.

Exclusion of Competitors

Market power includes the ability to exclude competitors. Hence, one indicator of market power is the ability of incumbent firms to force other firms to exit the market or to prevent entry of new firms. The concept of exclusion is related to the concept of a barrier to entry in that exclusion can involve conduct by one or more incumbents that raises the cost of entry sufficiently that competitors cannot enter.

Application to Major League Sports

The products that are the main focus of this litigation are the out-of-market packages to telecasts that are offered by MLB and the NHL. In addition, other products that are closely related to the reference products are the sale of television rights by teams in each league within their designated home broadcast territories, the sale of attendance and related products at home games by teams in each league, and the provision of league services by MLB and the NHL to their respective members.

Margins

One measure of the market power of a firm is its profit margin. Both MLB and the NHL have produced some useful data about the costs and revenues of their out-of-market bundles of televised games. These data show that the profit margins for the league packages are extremely large, implying that both leagues exercise substantial market power in setting prices for these packages.

The data from MLB show actual revenues and costs in 2011 and projections for 2012 for MLB.tv, the Internet stream of out-of-market games, and two other products: an audio feed of

games and a club for visitors to MLB.com.[131] These data show that MLB.tv's actual revenues on 2011 were [redacted] and projected revenues in 2012 were [redacted].[132] Actual costs in 2011 and projected costs in 2012 are not clearly separated between MLB.tv and the other products, but after separating the costs of the club, the remaining costs are [redacted] for 2011 (actual) and [redacted] for 2012 (projected), some of which may be attributable to these other services. Thus, the profits from MLB.tv were at least [redacted] in 2012 (projected). These data imply that the profitability of MLB.tv was at least [redacted] percent of revenue in 2011 (actual) and [redacted] percent of revenue in 2012 (projected).

To calculate Lerner Indexes for MLB.tv in 2011 and 2012 requires further separating the costs into those that are incremental with respect to subscribers and those that are fixed costs that are independent of the number of subscribers. The data in the spreadsheet that was provided by MLB is insufficiently documented to permit such a separation, so for the purpose of providing an illustrative calculation I assume that *all* of the costs in the spreadsheet are marginal costs.[133] Under this assumption, the Lerner Index is the profit margin, or 0.774 in 2011 (actual) and 0.839 in 2012 (projected), both of which are near the maximum value of 1.0 and far above 0.05, the level that gives rise to antitrust concerns in the case of a merger. Thus, the margin data show that MLB enjoys substantial market power in the sale of MLB.tv.

[131] The data were produced as a spreadsheet (Bates No. MLB0108889).

[132] The spreadsheet also shows a forecast of MLB.tv revenues, based on the actual revenues for the first four months of actual data in that year, of [redacted]; however, there is no analogous cost forecast for the new revenue projections, so the revised profit margin cannot be calculated.

[133] This assumption is certain to overstate marginal costs. Note that the actual costs in 2011 were higher than the projected cost of serving more subscribers in 2012, indicating that the average cost in 2011 was not the marginal cost of a subscriber. Thus, my calculations bias the Lerner Index downwards (indicating that MLB has less market power than it truly has).

The NHL has produced revenue and cost data for its out-of-market television package for the fiscal year 2012 (the 2011-12 season) and budget projections for fiscal year 2013 (the 2012-13 season).[134] Although the NHL locked out its players for the first half of the season in 2012-13, the budget projections were for an entire year of operation. The revenue from subscriptions was [redacted] in 2012 (actual) and [redacted] in 2013 (forecast). Operating profits were [redacted] in 2012 (actual) and [redacted] in 2013 (forecast), implying operating profits of 82.1 percent of sales in 2012 and 74.9 percent of sales in 2013.[135] As with MLB, there is not sufficient information to separate marginal costs from other costs, so assuming that all costs are marginal costs, the implied Lerner Indexes for these years are 0.821 and 0.749, respectively. Again, these values are far above the 0.05 that would give rise to antitrust concerns in a merger.

Data have been produced for the revenues and expenses of all 30 MLB teams for the period 2006 – 2012.[136] These data show that average revenue from local broadcasting was [redacted] in 2012, up [redacted] from [redacted] in 2006. Data from all sales of national television rights (including Internet streaming) are not reported, but can be approximated by summing the net revenues from the major league central fund, MLB Advanced Media, and the MLB Network. The amount per team of this sum rose by [redacted] from [redacted] in 2006 to [redacted] in 2012. Thus, total revenue from these sources, which is accounted for

[134] Bates Nos. NHL1779546-55 at 46-47.

[135] The lower margin in 2013 despite higher projected revenue is a puzzle because one would expect an Internet streaming service to exhibit economies of scale. In fact, the budget for 2013 anticipated that about 40 percent of the growth in revenue between 2012 and 2013 would be spent on increased costs. The implication that the marginal cost of serving a subscriber substantially exceeds the average cost is not plausible.

[136] Bates Nos. MLB1002651-81.

primarily by television, rose from [redacted] in 2006 to [redacted] per team in 2012, an increase of 37 percent.

Data for the NHL teams in the 2011-12 season also have been produced.[137] These data show that the average revenue per team from local television was [redacted],[138] while total revenue from national broadcasting was [redacted] per team, for a total of [redacted].

The only non-trivial costs that a team faces in selling the rights to televise its games are the costs of negotiating the sale of television rights and accommodating game broadcasts within a playing facility. Neither of these costs are reported in the data. Nevertheless, these costs are not remotely close to the revenues that teams obtain from telecasts of games, implying that the margins and Lerner Indexes for teams from the sale of television rights are high and indicate the presence of substantial market power.

The exercise of market power in the sale of league packages is illustrated by MLB's short-lived decision to grant DirecTV exclusive rights to its league package of Games, Extra Innings, in 2007. The contract for exclusive rights that MLB negotiated with DirecTV called for rights fees totaling [redacted], beginning at [redacted] in 2007 and rising to [redacted] in 2013, [redacted].[139] After a public and Congressional outcry over the loss of Extra Innings to subscribers of other MVPDs, MLB agreed to eliminate the exclusivity, and the result was lower total revenues from Extra innings: [redacted] over the same period, rising from [redacted] in 2007 to [redacted]

[137] Bates No. NHL3655230.

[138] Local television revenue was calculated as total broadcast revenue minus revenue from radio broadcasting.

[139] Bates Nos. DTV-SP7156-246.

[redacted] in 2013, with no extra payment from additional revenues to the MVPDs.[140] These contracts show that DirecTV was willing to pay at least [redacted] more than the total fees MLB ultimately received from the entire market in order to obtain exclusivity.

The ability to extract more revenues from an exclusive contract arises because out-of-market telecasts are a subscription driver for MVPDs. The benefits of exclusivity to the licensee then can be captured by MLB through higher rights fees by auctioning the exclusive rights to the highest bidder. If live telecasts of other sports, or other types of programming, were close competitive substitutes for MLB Extra Innings, DirecTV would not be able to obtain greater revenue from subscribers by obtaining exclusive rights, and so MLB would not be able to extract additional revenue by selling Extra Innings on an exclusive basis.

Concentration and Exclusion of Competitors

The relevant markets in which television rights are sold include only telecasts of games within the same major league, but because the geographic scope of television markets is national, the relevant market in which television rights within a sport are sold, this market is not inherently highly concentrated. In principle, all 30 teams in each sport could be present in this national market, in which case the standard measure of concentration would be very low.

As discussed elsewhere, league rules in each sport have divided the nation into a series of home broadcast territories, the vast majority of which include very few teams, and in many cases only one team. Thus, league policies divide a national market into a series of regional submarkets. In markets in which a single team has home broadcast rights, the available options for viewing live telecasts of games are the RSN of the home team, national telecasts of live

[140] Bates Nos. DTV-SP8886-944.

games that are sold by the league, and the league package of out-of-market games. Because the relevant unit of analysis for measuring market concentration is an entity that sells rights, these products are not properly regarded as competitive. MLB and the NHL, as joint ventures of the teams in a league, should not be regarded as setting prices in competition with individual teams in each team's home market. Hence, the proper measure of competition in a local market is based on the shares of sales by separate independent suppliers in that market. Because data on rights sales by market are not available, the lower bound of concentration in each local market is the inverse of the number of teams in the market.[141]

Exhibit 1 shows the number of teams in each of the top 75 DMAs that account for nearly 80 percent of the households that watch television. The remaining DMAs also are assigned to specific teams according to the same rules of territorial rights. Exhibits 5A (MLB) and 5B (NHL) shows the availability of games in top 75 markets in which at least three teams have territorial broadcasting rights. These data show that when multiple teams and their RSNs have the opportunity to broadcast games into a DMA, they almost always do so.

As shown in Exhibit 1, most of the top 75 markets are assigned to only one or two teams. All DMAs in the home broadcasting territory of only one team are monopoly submarkets – an HHI of 10,000 – because the only participants are the team with local rights plus the league, which is jointly owned and controlled by the member teams. In areas in which two teams share a home broadcast territory, the HHI is greater than 5,000.

The most competitive DMA in which a team's home stadium is located is hockey in New York, which has three home teams and so an HHI that exceeds 3,333. In the NHL, no DMA that

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[141] Suppose two teams sell television rights in the same local market, and that one team generates 60 percent of the revenue from rights sales. The HHI in this market, therefore, is $60^2 + 40^2 = 5200$. If concentration is measured as the inverse of the number of teams in the market, the HHI is $2(50^2) = 5000$, which is an underestimate of the true HHI.

lacks a local home team is in the home broadcast territory of more than four teams. The HHI in the three DMAs among the top 75 that are shared by four teams exceeds 2500, which is the standard in the *Merger Guidelines* for a market to be sufficiently concentrated to give firms market power in the presence of barriers to entry. In MLB, three of the top 75 DMAs are in the home broadcast territory of more than four teams, in all three cases being assigned to six teams. In two of these DMAs the games of all six teams are carried by at least one major local MVPD, in which case the HHI exceeds 1667. In the third DMA, the games of five teams are televised by at least one major MVPD, implying an HHI of over 2000. These markets have HHIs that exceed 1500, which is the threshold below which a market can be presumed to be competitive.

High concentration is a reliable indicator of market power only in the presence of barriers to entry. In major league team sports, entry into the home broadcast territory by an out-of-market team is prohibited by league rules, so entry can only arise in the form of a new team or an entire new league. History shows that successful entry of either type is exceedingly rare, so that barriers to entry are high.

Teams cannot succeed in major league team sports unless they are members of a major league, and each major league sport has exactly one league. Thus, the only pathway for a single team to enter a major league team sport is through expansion of an established league. Established leagues expand only very infrequently, and when expansion does occur, the established league sets a fee for expansion that is extremely high.[142] Because there is no significant cost to league expansion other than the diminished profits of the established teams,[143]

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[142] For a more complete discussion of expansion, see Quirk and Fort, *op. cit.*, Chapter 2, pp. 23-87.

[143] In a competitive market, an entrant does not need to compensate established firms for their lost profits due to its entry.

high expansion fees contain extremely high profit margins and so themselves reflect the considerable market power of leagues.

Entry by new leagues has been singularly unsuccessfully in both baseball and hockey. Entry by a league requires that the entrant find enough potentially profitable locations for a new team to make entry by an entire league feasible.[144] Even if enough attractive areas are available, an established league can foreclose entry by admitting enough expansion franchises so that the number of viable team locations remaining is too small to make an entire new league financially viable.

MLB practiced this strategy in the late 1950s in response to the announced entry of the Continental League. MLB created expansion franchises in three of the eight cities that the entrant intended to put its initial teams (Houston, New York, Twin Cities) plus a second team in Los Angeles. The only league that has successfully entered against MLB is the American League, which began play in 1900. The only other entrant that actually played games is the Federal League, which entered in 1914 and folded in 1915. In the 1940s and 1950s, attempts by the Mexican League and the Pacific Coast League to achieve major league status were unsuccessful.

Only one league has entered major league hockey since the NHL entered the U.S. in 1924 by placing an expansion franchise in Boston. The World Hockey Association (WHA) entered in 1972 with twelve teams, expanded to fifteen teams in two years, but shrank to seven teams in 1978, one of which folded in the middle of the season. The WHA disbanded in 1979 when four of the surviving six WHL teams joined the NHL after paying a $6 million expansion fee.

Based on the history of new teams and leagues, I conclude that major league professional baseball and hockey have high barriers to entry.

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[144] For a more complete discussion of attempted entry in baseball and hockey that includes the examples discussed here, see Quirk and Fort, *op. cit.*, Chapter 8, 294-332.

Sources of Market Power

Market power is a neutral fact that does not necessarily imply that market power was obtained, enhanced or maintained by anticompetitive conduct. Market power can arise from superior efficiency, which can be a barrier to entry if an incumbent firm is so efficient that no other firm can hope to compete effectively with it. But market power also can arise from anticompetitive conduct. For example, incumbent firms may succeed in raising prices and obtaining higher profits by engaging in price collusion in the presence of entry barriers. The source of market power that produces super-competitive prices and profits from collusion is anticompetitive conduct, not superior efficiency.

The high degree of concentration in local television markets does not arise solely from the superior efficiency of the team that has territorial broadcast rights in any given geographic area. Instead local market power in television rights is enhanced by league rules that limit the natural competition that would arise in a market with natural national geographic scope. These league rules work to suppress competition because there is only one league in each major league team sport. And each league is a joint venture among its members teams, so exclusive territorial rights are the result of collusion among teams in a league not to engage in competition in the sale of television rights.

As an initial matter, the creation of exclusive territorial broadcast rights has no plausible explanation if the effect of these rules is not to increase the market power of the teams in a league in selling their broadcast rights. If live telecasts of the games of an out-of-market team would not reduce the value of the rights to offer live telecasts of the games of an in-market team, all teams in the league could increase their profits by eliminating territorial broadcast exclusivity.

In fact, allowing more teams to televise games into any DMA in the nation would increase the total audience for live game telecasts in a sport. The presence of out-of-market displaced fans creates a demand throughout the nation for live telecasts of games involving that team. Moreover, because RSNs already distribute live telecasts of the in-market games of a team, the incremental cost of allowing those games to be shown to out-of-market fans is extremely small, and indeed the biggest MVPDs already carry a large number of RSNs in out-of-market areas, but then black out the live games of the out-of-market MLB and NHL teams that are carried on those RSNs.[145] Thus, the possibility for additional revenue at little or no additional cost creates a financial incentive for RSNs to allow the games that they telecast to be made available everywhere in the U.S., which in turn enhances the value of each team's broadcast rights to the RSN.

From the perspective of an entire league, enhancing the total audience of the sport by allowing live game telecasts of every team to be made available throughout the nation is not attractive if the audience enhancement effect is more than offset by the increase in competition. While allowing an out-of-market team into a DMA captures additional audience from displaced loyal fans of that team, it also increases the competition for the part of the audience that is accounted for by fans who are not strongly attached to any particular team but are fans of the sport more generally. The success of national live broadcasts that are sold by the league would not be possible if each sport did not have a substantial number of fans who are sufficiently interested in the sport as a whole that they will watch games involving teams other than a team to which they have a special attachment. To an out-of-market team and its RSN, attracting these fans to live game telecasts is every bit as attractive financially as attracting displaced loyal fans

[145] For example, DirecTV offers subscribers a special sports package that allows its subscribers to access 31 RSNs plus other sports channels. See http://www.directv.com/ sports/sports_pack.

of the team, but the competition for these fans would drive down both the carriage fee that an RSN could charge and the rights fee that an RSN would be willing to pay to televise the games of a team. League rules that create exclusive home television territories are comprehensible business policies only if the goal is to prevent this competitive outcome.

The evidence that has been produced in this case confirms that teams and their RSNs will take advantage of the opportunity to televise live games into more DMAs if there is no agreement to divide DMAs among the teams in the league. Indeed, the very existence of the league packages of live out-of-market games that are distributed over both MVPDs and the Internet, and the high profit margins that the leagues obtain from these packages, proves that the demand for access to live out-of-market games is more than sufficient to induce these games to be offered nationally.

The RSNs that already are available nationally over MVPDs, even though their live telecasts of MLB and NHL teams in their home region are blacked out in out-of-market areas, establishes that in the absence of territorial rights and blackouts, these out-of-market games would be available nationally. Christopher Tully, the Senior Vice President for Broadcasting of MLB, testified that the current practice of nationwide distribution of RSNs, even with live games blacked out, has an adverse competitive impact on in-market teams, using as an example complaints by the Tampa Devil Rays about the distribution of the YES Network in Florida, even though the Yankees games on YES are blacked out.[146] Many documents that have been produced in discovery report similar disputes among teams that have arisen when one team encroaches on the home territory of another or efforts by teams and broadcasters to televise live games outside

[146] *Deposition of Christopher S. Tully*, November 22, 2013, p. 178.

of home broadcast territories.[147] These documents demonstrate that teams and their RSNs have an incentive to compete by entering the exclusive broadcast territories of other teams and the purpose of these rules is to prevent such competition from occurring.

The effect of the agreements not to compete in each league is to reduce the number of close competitive substitutes for the telecasts of games in a local area that is within the home broadcasting territory of any given team. The expected effect of eliminating most or all close substitutes is to cause an increase in the price of the remaining telecasts that are available.

The evidence that has been produced through discovery shows that the defendants agree that the purpose of the conduct at issue in this litigation is to reduce competition and to elevate prices, which makes sense only if telecasts of games of different teams are close competitive substitutes. In explaining why teams and RSNs want exclusivity in local television markets, the Commissioner of Baseball stated that "if you spent many millions for an RSN, and the next thing you start bringing in games from all over, it's absurd… [E]very team can't win every year, and so

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[147] *MLB Documents*: Bates Nos. COM-00031973-4 (White Sox expansion of territory), JWH0140-44 (Red Sox in Fairfield, Connecticut), MLB0370142 (Giants-Phillies game in Florida), MLB0370146-48 (several examples of stations wanting to carry out-of-market games), MLB0370176-78 (request for out-of-market telecasts), MLB0370198 (request for out-of-market telecasts), MLB0370245-46 (requests for out-of-market telecasts), MLB0370284-85 (Reds in Florida), MLB0370343 (Dodgers in Texas), MLB0482364-411 (Cubs and White Sox out of territory telecasts), MLB0485165-218 (responses to numerous requests for out-of-market telecasts). *NHL Documents*: MSG-00000043 (Rangers in upstate New York), MSG-00000474-75 (Rangers on Internet, expansion of Devils' and Islanders' territories), NHL005470 (Detroit and Columbus seek larger territories), NHL0051669-70 (Buffalo seeks larger territory), NHL0051718-21 (Columbus, Detroit and Pittsburgh all want broader territories), NHL1406311-13 (Buffalo and New York Rangers dispute about territories), NHL1407693-94 (Washington pays to encroach on Carolina's territory), NHL1431790-91 (Florida and Tampa prefer to share entire state when they play against each other), NYI0071040-48 (Islanders and Buffalo dispute over rights to Rochester, New York).

now you're telling me if you're going to bring in a whole bunch of other games, you don't think that would hurt the RSN?... You need exclusivity in those markets."[148]

The principal owner of the Boston Red Sox stated that the rules establishing home broadcast territories are solely for the purpose of increasing the value of television rights to broadcasters and thereby generating more rights fees for teams.[149] The Red Sox unsuccessfully sought permission from MLB to compete against the Yankees and the Mets by adding Fairfield County, Connecticut, to their home broadcast territory in order to reach their fan base in the area as well as to generate more television revenue.[150] This even shows that teams are restricted from competing in areas where they otherwise would want to offer their live games telecasts, and that these rules harm the fans who are fans of the team that would like to enter.

Similarly, the former Vice President for media on the NHL, in discussing the absence of the RSN that televises the games of the Columbus Blue Jackets in a county in eastern Ohio that is in the exclusive broadcast territory of the Pittsburgh Penguins, stated:

> The value of the Penguins is exclusivity within their sphere of influence. If they were to give it up and allow the Blue Jackets to go into Stark County with local telecasts, then the Penguins would be harmed because they would lose that exclusivity in their sphere of influence. Their fan base will be harmed, Fox Sports Pittsburgh would be harmed because the benefit of their bargaining with the Penguins was exclusivity in the marketplace, and bringing another club's games into another team's sphere of influence hurts the fan base.[151]

Because leagues are protected from competitive entry due to high entry barriers to new leagues, leagues and their member teams can enjoy high profit margins in the sale of television

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[148] *Deposition of Allan Huber "Bud" Selig*, January 3, 2014, pp. 109-10.

[149] *Deposition of John Henry*, February 12, 2014, pp. 55-60, 73, 90-91.

[150] *Ibid*., pp. 59-60.

[151] *Deposition of John Tortora*, October 8, 2013, pp. 253-53.

rights without fearing that these profits will be eroded by competitive entry. Thus, the ability to exclude competitors is the key entry barrier that sustains the high concentration in the sale of television rights and the high profit margins that result from that market concentration. Teams in MLB and the NHL and the two leagues in selling packages of out-of-market telecasts enjoy market power because the teams in a league have effectively divided an otherwise competitive national market into a large number of local markets that, for the most part, are occupied by only one or two teams. The market power that these teams enjoy is the result of a mutual, anticompetitive agreement among teams and their RSNs not to compete in live telecasts of games.

The advantage to the teams in a league of offering out-of-market games only as a league package is that doing so enables teams, acting through the league, to minimize the competitive impact of out-of-market telecasts on the demand for in-market game telecasts on RSNs within each team's home broadcast territory. Christopher Tully stated: "We limit our pkg offering to maintain a high price point and restrict the number of subs."[152] Mr. Tully also stated that MLB Extra Innings is packaged and marketed in a manner that "does not threaten the viability" of in-market teams and that "supplements the regional and nation telecasts."[153] According to Mr. Tully:

> Major League Baseball, in considering what the MLB Extra Innings package should look like, we're very sensitive to the interests of the 30 clubs. And, in fact, the deal itself has to get approved by the 30 clubs to make certain that it's incremental, it's additive to the framework we have in place and that it does not do harm to the framework of the local and national network telecasts. We've

[152] Bates No. MLB0031332.

[153] *Tully Deposition*, *op. cit.*, pp. 177-78.

> made that determination, and we are confident that, in fact, it does serve fans and it is incremental.[154]

Mr. Tully went on to explain that each expansion of the availability of out-of-market telecasts by MLB – first via satellite, then through cable, then over the Internet – was designed so that its effects would be incremental and not "'disruptive' – in the sense of do no harm."[155]

Conclusions

The member teams of MLB and the NHL enjoy local market power in the sale of television rights within their home broadcast territories, and the teams in each league acting together through MLB and the NHL enjoy market power in the sale of out-of-market packages of telecasts to MVPDs and over the Internet. The agreement not to compete among the members of each league causes each team in the league and its RSN to enjoy substantial market power.

Each team agrees not to compete with other teams in the league by selling the rights to televise its games outside of its mutually agreed home market territory, and collectively the teams manage their joint-venture league so that the out-of-market package is not configured and priced in a way that competes with the sale of home-market television rights by each team in the league. Thus, local market power in the sale of television rights arises because, in the presence of entry barriers against both single teams and entire leagues, teams in a league effectively have divided the nation into a series of mostly local monopoly broadcast territories and then, through their control of the league joint venture, set a collusive price for the out-of-market package to minimize the extent to which the league packages are competitive substitute for the telecasts of each team in its exclusive home broadcast territory. An RSN that acquires the rights to live

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[154] *Ibid.*, p. 179.

[155] *Ibid.*, p. 184.

telecasts of a team also enjoys substantial market power due to the limits on the number of teams that can sell television rights in the same DMAs that are in the home broadcast territory of the team from whom the RSN obtained rights.

ANTICOMPETITIVE EFFECTS

In antitrust economics, anticompetitive effects are the harms to the competitive process that are caused by anticompetitive conduct. Conduct by a supplier or group of suppliers is anticompetitive if it causes harm to buyers, in this case to consumers who purchase or who would like to purchase access to telecasts of out-of-market games in a major league sport. The harm to competition takes two forms: a reduction in the choices that are available to consumers, and increases in the prices of access to telecasts of games that cause a reduction in consumption of game telecasts. Both of these anticompetitive effects can be demonstrated by a "direct effects" analysis of the effect of league rules regarding out-of-market telecasts.

Choice and Quantity

The rules of each league that limit the distribution of game telecasts restrict the choices available to consumers and the quantity of output in live game telecasts. The proper measure of quantity is the number of consumers who view live telecasts, whether through MVPDs or over the Internet. League rules affect quantity by restricting the choices available to consumers in two ways. First, every DMA is in the home broadcast territory of at most a few teams. Teams cannot offer live telecasts of their games through an MVPD in any submarket that is outside of their home broadcast market. Second, RSNs that have obtained television rights to provide live game telecasts in a team's home broadcasting territory have not been permitted to sell streams of live

telecasts over the Internet as a stand-alone product even in the team's home territory. As a result, all Internet streaming sales effectively have been preserved for the league's package, which, as discussed elsewhere, is offered on terms that are designed to minimize its effect on local and national live telecasts. These restrictions in turn cause higher prices for access to the games that are permitted to be telecast within a DMA. Higher prices and restricted choice of games then reduce the number of viewers of live games in each league.

As shown in Exhibit 1, a few DMAs that do not have a home-town team in MLB and/or the NHL are in the home broadcast territories of multiple teams. The reduction in choice that is created by the agreements among teams in a league not to compete in out-of-market areas is illustrated by the carriage of RSNs in DMAs in which three or more teams share territorial broadcast rights. The issue examined here is whether the demand for RSNs that carry out-of-market teams is sufficient to cause those RSNs and the telecasts of the teams that they carry to be picked up by MVPDs in these markets.

One indicator of the demand for live games in each sport is the extent to which the RSNs of teams that have the rights to a DMA are actually carried by MVPDs in that area. Exhibits 5A (MLB) and 5B (NHL) list the top 75 markets with no home team in which three or more teams have territorial rights to telecast live games into the DMA. Exhibit 5A pertains to the 16 DMAs in which three or more MLB teams have home broadcast rights, and Exhibit 5B pertains to the three DMAs in which three or more NHL teams have home broadcast rights. The first column in the exhibit contains the names of the principal city in the DMA. The second column lists the teams that have territorial rights to live telecasts in that DMA. The third column shows the RSNs that televise the live games of these teams. The fourth column indicates whether at least one of

the principal MVPDs in the area – DirecTV, Dish TV, and the largest cable television system – carries that RSN.

Exhibits 5A and 5B demonstrate that when league rules grant home broadcasting rights to several teams in a distant DMA, the RSNs that telecast these games almost always are offered to consumers in those cities. For example, RSNs that televise all six of the MLB teams that claim Las Vegas as part of their home broadcast territory are carried by DirecTV in southern Nevada (Comcast SportsNet carries the A's and Giants, Fox Prime Ticket carries the Angels and carried the Dodgers last year, Time Warner SportsNet LA will carry the Dodgers this year, Fox Sports San Diego carries the Padres, and Fox Sports Arizona carries the Diamondbacks). Five of these RSNs are on the lowest DirecTV tier (Choice) that carries any out-of-market RSNs (this tier includes 150+ cable channels), and the sixth RSN, Fox Sports Arizona, is available on a higher tier (Premier) or by purchasing an additional bundle of sports channels.

In five of the 16 DMAs,[156] in which three or more MLB teams have home broadcasting rights, there is an RSN that televises games of one of these teams that is not carried by an MVPD in that market. In every case more teams have their games carried by at least one MVPD than the one or two teams that are permitted in most local markets. These carriage data show that consumer choice is reduced by the lower limit on the number of teams that are permitted to televise their games into most markets.

Another indicator of the demand for out-of-market games is the national availability of live telecasts of minor league games. MLB offers a package of minor league games as an Internet streaming service that includes all AAA teams plus some games involving teams from

[156] Comcast Sports Network Houston televises Astros games and apparently is not carried in Oklahoma. Root Sports Northwest carries the Mariners and is not televised in Hawaii, and Root Sports Pittsburgh telecasts the Pirates but is not carried in Buffalo and Columbus.

AA and A leagues. The price of this package in 2013 was $39.99 as a stand-alone service or $25 as an add-on to MLB.tv. The American Hockey League, a minor league with 30 teams nationwide,[157] also makes telecasts of its games available on a streaming Internet service, AHL Live, that can be viewed on either a personal computer, a tablet, or a smartphone. Consumers can purchase the entire package for $149.99, the games of just one team for $79.99, any ten games for $59.99, all away games of a single team for $49.99, any five games for $31.99, or any single game for $6.99.[158] The teams in both of these leagues are much less popular than MLB or NHL teams, yet the demand for them is sufficient to induce the provision of their live games on the Internet.

The prevention of Internet streaming of games except in the league packages has harmed consumers by creating an impediment to the ongoing migration of video program consumption from traditional television (over-the-air, cable and satellite) to Internet distribution. For the year ending in June 30, 2013, the total number of subscribers to MVPDs fell by over 1.5 million as an increasing number of households are relying on the Internet for video entertainment.[159] Reflecting the trend in other types of video programming, between April 2012 and September 2013, the number of households who accessed video on a sports web site using a smartphone rose from 35.5 million to 61.7 million, an increase of 74 percent, and the average amount of time these viewers spent watching sports per month increased by 56 percent.[160] The combined effect of more viewers doing more viewing caused the total amount of viewing to increase by 171

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[157] See https://ahl.neulion.com/ahl/secure/registerform.

[158] See https://ahl.neulion.com/ahl/secure/registerform.

[159] Jeff Baumgartner, "U.S. Pay-TV Providers Lost 366,000 Subs in Q2: SNL Kagan,"*Multichannel*, September 3, 2013, at http://www.multichannel.com/distribution/ us-pay-tv-providers-lost-366000-subs-q2-snl-kagan/145242.

[160] "Year in Sports Media Report: 2013," Nielsen Company, p. 4.

percent in just 17 months. Watching videos from sports sites on a computer also increased by 36 percent, while viewing of sports on television rose by 27 percent.

As discussed elsewhere, the league packages are structured to minimize the extent to which these packages effectively compete against local telecasts of live games. The restrictions are greater for Internet streaming because leagues effectively have prevented teams from streaming their live telecasts even in their home broadcast territories. Thus, the growing number of households who receive video entertainment exclusively from the Internet, as well as MVPD customers who would like the convenience of watching live games on smartphones and other mobile devices, can only obtain Internet streams of games by purchasing the league package, which has been assembled and offered on terms designed to minimize disruption of the demand for telecasts through traditional television outlets. Consumers are unable to receive over the Internet the games of the teams that have home territorial rights to the DMA in which the consumer lives, which limits access to games even for those consumers who are willing to purchase the league's package of out-of-market games.

Effect on Prices

From the perspective of economic theory, exclusive home broadcast territories plus the terms on which league packages are offered can be expected to lead to higher prices for both television rights that are paid by RSNs and prices that consumers pay for league packages. The availability of league packages of out-of-market games provides an opportunity to use the data on subscriptions to these packages and viewing patterns of subscribers to estimate the price that each channel in the package would command if the package were offered on an unbundled basis.

Conceptually, the problem of estimating the value of the components of the out-of-market packages is similar to the problem of estimating the prices that MVPDs would charge for individual channels if they were required to offer their current bundles of channels on an a la carte basis. A method for calculating the stand-alone market prices for each channel in a bundled MVPD package was published in a recent article in the *American Economic Review*.[161] The model assumes that each consumer derives welfare (utility) from spending time watching each channel plus time spent doing other things, and maximizes the utility-weighted sum of time allocation minus the utility that otherwise could be derived from the amount that is charged for channels.

To implement this model requires a large sample of consumer viewing data across the channels in a bundle. The viewing data are used to calculate the means and standard deviations of time spent viewing each sports channel and engaging in other activities. The utility weight for each consumer on the time spent viewing a specific team is then assumed to be drawn from a log-normal distribution,[162] and the parameters of this distribution are estimated using the generalized method of moments to maximize the extent to which the estimated weights explain the pattern of viewing behavior.

Using these estimates of the distribution among consumers of the utility weights for each channel, the demand relationships for individual channels are estimated. These demand functions

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[161] Gregory S. Crawford and Ali Yurukoglu, "The Welfare Effects of Bundling in Multichannel Television Markets," *American Economic Review* Vol. 102, No. 3 (June 2012), pp. 643-85.

[162] A consumer's utility function is assumed to be a weighted sum of a constant plus the logarithms of the viewing times, where team i's contribution to utility is $w_i \ln(1+t_i)$. For each consumers j, the logarithm of w_{ij} (the weight on team I for customer j) is calculated as $\ln(w_{ij}) = m_i + Z_j(v_i)^{1/2}$ where m_i and v_i are the mean and variance of the distribution that is estimated using the generalized method of moments for team i, and Z_j is a draw from a normal distribution with mean zero and variance one.

are used to calculate the profit-maximizing prices of each stand-alone channel under the assumption that every channel is offered separately by an independent firm (e.g., an RSN) in a product-differentiated market in which each channel is an imperfect competitive substitute for the bundled package of channels.

Under my direction and with the advice of one of the authors of the published study, Professor Ali Yurukoglu, a version of this model was estimated by economists at Precision Economics for the purposes of calculating the prices that an RSN would charge for each team's games on a stand-alone basis and the price of the league package if it had to compete against these stand-alone offerings. The data that were used in implementing this model are the amount of time spent viewing each channel on the Internet versions of the two league packages, MLB.tv and NHL GameCenter Live. The model that was estimated differs from the published model in three ways.

First, the published model assumes that an *a la carte* package of unbundled channels fully replaces the bundle. I assume that MLB and the NHL continue to offer the bundled package of out-of-market games. The idea is that consumer choices are expanded to include unbundled as well as bundled services and that each of these services is priced independently. Thus, the league packages become a competitor of the unbundled, stand-alone channels. The model then estimates the common national price that a league would charge for the package of out-of-market games if it had to compete with the RSNs that distribute the games of each team in the league.

Second, the published model assumes that each channel engages in a bilateral negotiation with an MVPD that has market power over the price of each unbundled channel and that these unbundled channels compete for carriage on an MVPD system according to the *Nash-Bertrand* model of imperfect competition among product differentiated firms. The model that is used here

is based on the assumption that the buyer of the league package and the stand-alone channels lacks bargaining power. The basis for this assumption is that the channels are being offered to consumers directly as an Internet streaming service. If Internet delivery is a competitive substitute for delivery over an MVPD, an MVPD also would not have significant bargaining power over the channels in the bundle. In addition, the model assumes that direct competition occurs only between each stand-alone channel and the bundled package of games, ignoring the competition among the unbundled, stand-alone channels. This assumption is made to make calculation of the equilibrium tractable.[163] These assumptions have a conservative effect on the estimates of the prices of channels and the league package. Bargaining power by the buyer would only lower prices still more, and ignoring competition among stand-alone channels except through the indirect effect that each channel has on lowering the price of the bundle leads to an over-estimate of the equilibrium prices and hence an underestimate of the anticompetitive effect of restrictions on the sale of out-of-market games by an RSN.

Third, the original model included socio-economic data for the local area in which a given customer resides that was incorporated into the demand estimation. This feature of the model has been ignored here, which prevents the estimation procedure from taking into account the effect of blackouts of local games in the league package on the distribution of viewing among teams in estimating team demand relationships. These data can be incorporated later for creating a model that can be used to calculate damages rather than simply to demonstrate the qualitative result that the availability of stand-alone channels reduces the price of the bundled service, and

[163] The computer times that are required to calculate the equilibrium prices under this simplified assumption are 12 hours for the MLB and 20 hours for the NHL. To add competitive interactions between each pair of teams would substantially increase these run times.

hence that the agreement not to compete causes anticompetitive harm to consumers who bought the bundle.

The data that were used to estimate the consumer choice model are viewing data for Internet streaming services during the 2012 season for MLB and the 2011-12 season for the NHL. The data are the amounts of time spent viewing each team by each consumer in the data set. For the MLB.tv, an observation is the number of games of each home team that were watched by each consumer, which is then multiplied by 1.5 hours as an estimate of the average time spent watching a single game to obtain an estimate of the total time spent viewing each game. For NHL GameCenter Live, an observation is the intensity of viewing each home team in the bundle, measured as the minutes spent viewing each team by each consumer. Exhibits 6A (MLB) and 6B (NHL) show the mean viewing time for each team in each league.[164]

The data on viewing time were then used to calculate the relative utility weights for each channel and for the catch-all other activities, using the generalized method of moments. The means and standard deviations of these parameters as well as for the other combined activities are shown in Exhibits 7A (MLB) and 7B (NHL). These relative utilities indicate the rank order of the teams in average popularity, with numbers closer to zero (less negative) indicating greater relative popularity.[165]

To calculate profit-maximizing prices requires assumptions about the nature of the competitive interactions among firms (here, the *Nash-Bertrand* model with product

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[164] Because of local blackouts, the league packages that are offered to consumers differ in different television markets. This feature of the league packages was not taken into account in estimating the relative utility weights in the consumer welfare function, and as a result is likely to cause a small underestimate of the relative utility of watching teams from the largest markets.

[165] The means of the weights are negative because the formula calculates the logarithm of the weights and the weights are less than one.

differentiation) and the marginal cost of a channel. The former assumption is that channels compete according to the *Nash-Bertrand* model with product differentiation. The latter were assumed to be equal to one minus the profit margins on MLB.tv in 2012 ([redacted])[166] and for the NHL GameCenter Live during the 2011-12 season ([redacted]).[167]

The *Nash-Bertrand* model was calibrated so that the existing prices of the bundles with no stand-alone channels available are profit-maximizing for the leagues. These calculations require estimating the share of each bundle in the potential number of viewers who would subscribe at a price of zero. These shares were calculated as the ratio of subscribers to the bundle divided by the number of households that viewed the league championship games in these two sports, the World Series (MLB) and the Stanley Cup finals (NHL).[168]

The equilibrium prices for the out-of-market games for each team and for the bundled package are shown in Exhibits 8A (MLB) and 8B (NHL). These results show two types of anticompetitive harm.

For consumers who continue to buy a bundle, the estimated prices of the bundles are $47 per season for MLB and $63 per season for the NHL. These prices are less than half of the actual prices of the bundles, which were $120 for MLB and $159 for the NHL. Thus, a lower bound on the harm to consumers who purchased each package is thus $73 for MLB and $96 for the NHL. While further refinements to the model are likely to produce better estimates of these prices, any

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[166] Bates No. MLB0108889.

[167] Bates Nos. NHL1779546-55 at 46-47.

[168] World Series viewing is from "World Series Has Record Low Rating," *ESPN*, October 30, 2012, at http://espn.go.com/mlb/playoffs/2012/story/_/id/8570950/world-series-finishes-record-low-rating. Stanley cup viewing is from "Stabley Cup Finals TV Ratings: 2012 Series Hits Lowest Numbers since 2007,´*SB*Nation*, June 13, 2012, at http://www.sbnation.com/nhl/2012/6/13/3083145/stanley-cup-finals-tv-ratings-2012-series-hits-lowest-numbers-since.

model that introduces competition for the sale of telecasts of out-of-market games will produce a similar result: competition would be expected to eliminate a large proportion – much more than half – of the excess mark-up over marginal cost that is enjoyed by a monopoly. Thus, these calculations are sufficient to demonstrate that consumers suffered substantial harm from restricting competition in the provision of out-of-market telecasts.

For consumers who would buy one stand-alone channel and not the bundle (for two or more stand-alone channels, the bundle is always less expensive for the NHL and almost always less expensive for MLB[169]), the anticompetitive harm arises because these consumers are intense fans of a single team. Among existing consumers, these fans save even more – roughly 80 percent of the current price of the bundle, but for access to many fewer games. Other consumers who do not now subscribe, but who would purchase either a stand-alone channel or the bundle at a lower price, represent the efficiency loss arising from the current monopoly price of the bundle due to the absence of competition from unbundled channels.

BUSINESS JUSTIFICATIONS

In antitrust economics, anticompetitive conduct has a reasonable business justification if the conduct delivers benefits to consumers that exceed the anticompetitive harm arising from the conduct and if these benefits cannot reasonably be obtained by conduct that is less restrictive and so less harmful to consumers. One textbook in antitrust economics puts the matter as follows:

[169] For no NHL teams and five MLB teams the stand-alone price is less than half of the price of the bundle. Any combination of two of the stand-alone channels for these five MLB teams plus some combinations of one of these teams plus one of three other teams with prices only slightly higher would be cheaper than buying the bundle.

> Any restraint that hindered consumer welfare was unreasonable, and an unreasonable restraint could not be saved by resorting to other social values.[170]

Following this principle of antitrust economics, the key elements of a business justification for anticompetitive conduct are the following. First, the benefit from the conduct must be an improvement in economic efficiency. Anticompetitive conduct cannot be justified on the basis of a benefit that accrues to the parties that engage in that conduct, nor can an appeal to some other social value that is not a benefit to consumers justify anticompetitive conduct. Second, the amount of the efficiency benefit that is passed on to consumers must exceed the harm to consumers arising from anticompetitive conduct. Both the benefit and the harm to consumers must be quantified to determine whether the former offsets the latter. Third, if consumers receive a net benefit, conduct that causes harm is not anticompetitive only if there is no other reasonable way to deliver this benefit to consumers that causes less anticompetitive harm. If a reasonable, less restrictive method for capturing the efficiency benefit exists, the conduct that caused harm to consumers is not justified.

I understand that this litigation is not yet at the stage where the defendants would present their arguments and evidence pertaining to business justifications, so a complete analysis of this issue is not feasible at this time. Nevertheless, defendants have presented several business justifications for each league's policies regarding territorial broadcasting rights in their responses to plaintiffs' interrogatories. These justifications are as follows. (1) *Single Entity*: the products that each major league produces are the result of cooperation among teams and collaboration in developing the league product, and territorial restrictions are necessary to prevent members of

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[170] Roger D. Blair and David L. Kaserman, *Antitrust Economics*, Richard D. Irwin, 1985, p. 58.

the league from "free-riding" on these collaborative activities.[171] (2) *Efficiencies of Exclusivity*: exclusive rights give broadcasters the incentive to produce high-quality telecasts of games both locally and nationally, a team the incentive to invest in developing its local market, and cause the number of local telecasts to increase.[172] (3) *Product Creation*: restrictions against teams television games outside of their home broadcast territories provides the opportunity for the leagues to create national broadcasts and the league-wide packages of regionally televised games, thereby increasing the availability of broadcast products to consumers.[173] (4) *Competitive Balance*: exclusive home broadcast territories reduce disparities in the quality of teams and thereby promote fan interest by generating more central revenue that is shared equally among all teams.[174] (5) *Franchise Stability*: exclusive home territories and the centralization of the sale of national rights increase the financial stability of teams in smaller markets.[175]

Although a complete analysis of these issues must await a review of this evidence, based on the information that is available now, I do not believe any of these arguments constitute a reasonable business justification for the restrictions on competition in the sale and distribution of broadcast rights that are practiced by MLB and the NHL.

Single Entity

The underlying economic issue pertaining to the claim that a league is a single entity for the purpose of analyzing the competitive effects of its conduct is that the divisions of a company

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[171] *MLB Responses*, pp. 6-10, 15-16, and *NHL Responses*, p. 11.

[172] *MLB Responses*, pp. 13-16, 22, 24-26, and *NHL Responses*, pp. 5-6, 7, 12-14.

[173] *MLB Reponses*, pp. 17-24, and *NHL Responses*, pp. 11-12, 15-16.

[174] *MLB Responses*, p. 15, 20, 25-26, and *NHL Responses*, pp. 14-15.

[175] *NHL Responses*, p. 16.

cannot reasonably be expected to be independent competitors. The divisions of a company share the common goal of advancing the interests of the company of which they are a part. By comparison, the member teams of a league compete in many dimensions, including the acquisition of inputs and the sale of outputs.[176] For example, teams with home stadiums in the same DMA compete locally in all output markets, including ticket sales and telecasts of live games. Teams that have been given home broadcast rights in a DMA in which they are not physically located compete in selling rights to telecast live games in that DMA. Moreover, as discussed elsewhere in this report, teams have sought to have their home broadcast territories expanded so that they could compete with other teams in distant markets, and have sought to obtain the right to stream their live telecasts over the Internet in competition with the league package that is offered over the Internet.

An agreement among horizontal competitors to avoid competition by cooperating in a particular market does not cause these firms to become a single entity. Instead, the appropriate economic framework for evaluating a decision among horizontal competitors to collaborate in a specific market is a standard antitrust examination: did the collaboration cause anticompetitive harm, and if so, did it have a reasonable business justification? When two firms are independent competitors, the single entity argument has no economic content beyond the standard methods for evaluating whether another form of collaboration, such as a merger or a joint venture, is anticompetitive.

[176] As listed in my record of prior involvement in litigation, I am the co-author of an *Amicus* submission to the Supreme Court in its consideration of the American Needle case. This submission expresses my views about why research on the economics of sports supports the conclusion that a professional sports league and its member teams should not be viewed as single entity.

As explained elsewhere in this report, major professional sports leagues in North America perform functions that cannot be performed by a single team, which are to establish common rules of play, standards for the eligibility of players and teams to be permitted to participate, and a season-long schedule of games that produce a credible champion. These functions can be performed by a joint venture of the teams in a league, but such an organizational form is by no means necessary. Regardless of how these core league functions are organized and performed, the existence of such functions does not constitute a business justification for teams to act collusively in selling a final product, such as the sale of television rights.

Efficiencies of Exclusivity

The defendants assert that exclusive home broadcast rights contribute to efficiency in several ways, but at the root of all of these arguments is the correct premise that restrictions on competition among teams for the sale of television rights increase the amount that an RSN is willing to pay for those rights and hence the rewards to a team from the sale of its television rights. To this point the argument is simply that teams and leagues profit from restricting competition, which is not a business justification for these restrictions.

The remainder of the argument hinges on the false premise that a reduction in competition increases investments in building a customer base and hence increases output. As a matter of both economic theory and antitrust policy, this premise is false: the benefits of monopoly derive from the fact that a monopoly firm does not need to spend as much as firms in a competitive industry in convincing customers to buy the firm's product rather than another firm's product. Monopoly leads to less, not more, output and consumer satisfaction.

The first component of the argument of the efficiency of exclusivity pertains to RSNs, which, according to the defendants, may decide not to televise the games of a local team if telecasts of other teams are available in the local markets. The *MLB Responses* (p. 13) state: "Most fans like to watch a home team and it is good for fans in a local area to have their teams televised locally." The special interest in local teams explains why the games of local teams will be the first to be televised. The MVPD carriage data in DMAs that are the shared home territories of multiple teams show that MVPDs are willing to carry the live game telecasts of more than the one or two teams that are assigned to most DMAs, and do not support the idea that teams from smaller markets will not be televised if more alternatives are made available.

Examples of sports that have absolutely no territorial broadcast exclusivity are Division I college basketball and Football Bowl Division college football. In both sports many conferences compete for carriage on RSNs and national networks, and many games in both sports are available simultaneously on Saturdays from several channels in a local DMA, and many more games are available on other days of the week. The absence of territorial exclusivity in broadcasting rights among either colleges or conferences has not caused RSNs to stop televising games of local colleges in these divisions. The claim that the absence of exclusivity causes fewer games to be telecast because RSNs are uninterested in televising games unless they have exclusive local rights in that sport is inconsistent with the plethora of telecasts of college basketball and football games.

The second component of the efficiencies argument is that exclusivity gives a team a greater incentive to build its fan base in the local market. This assertion has no basis in economics, either theoretically or empirically. Economic analysis has developed an argument about the conditions under which exclusive dealerships and retail price maintenance can increase

investments in customer service and the creation of brand-name identification, but this analysis is in the context of a market in which brands compete for customers in the same product and geographic market.

Although both MLB and the NHL assert that they compete in a broad market for sports and entertainment, the analysis elsewhere in this report concludes that each sport is a separate relevant market, in which case exclusive territorial rights within a sport reduce the number of brands that compete locally. The analysis about the potential benefits of exclusive dealerships and retail price maintenance do not apply if the restrictions also reduce or eliminate brand-name competition within the market. The challenged conduct here is *not* whether a team can grant exclusive rights to televise its games to a single RSN, which is the analogous circumstance to the conditions analyzed in the economics literature on exclusivity, but whether horizontal competitors can agree to divide the country into distinct exclusive markets in which they otherwise would compete.

The third component of the argument that exclusivity enhances efficiency is that it creates an incentive for an RSN to invest in building the popularity of a team for which it holds the rights. To the extent that this argument is valid, it pertains only to exclusivity in the rights to televise games of a specific team. Exclusivity in the sense that no other RSN is permitted to compete by televising the games of another team reduces to zero the incentive of an excluded team's RSN to build brand loyalty for the team for which it televises games. Moreover, the absence of competition from another team on another RSN reduces, not increases, the incentive of the RSN with television rights to the local team to invest in building the brand-name loyalty of that team because the RSN's customers in the local area have no close substitutes for the games that the RSN televises.

The last component of the argument that exclusivity enhances efficiency is that without territorial exclusivity teams would "free ride" on the investments of the league and others in developing the market for the entire sport. Free-riding as the term is used in economics applies to the acquisition of a public good – a product that simultaneously provides benefits to all, regardless of who pays for it. The concept has been applied in antitrust economics to the incentive of a member of a collusive cartel to "cheat" on the collusive agreement not to compete.[177] In this context the agreement by a team not to compete provides broad benefits to all members of the cartel, creating the incentive for one cartel member to "free-ride" on firms that adhere to the price-fixing agreement. Free-riding becomes a relevant economic issue only when a public good that benefits consumers is under-produced because collectively a group of firms lack a sufficient incentive to provide enough of it.

The claim about free-riding with respect to the sale of television rights is difficult to evaluate because it lacks specificity about the nature and magnitude of the investments by a league or another team that enhance the television rights of another team. I am not aware of any concrete examples of investments by either a league or another team that enhances the value of a team's television rights in a distant DMA, or any evidence that the promotional spending by one team increases the demand for other teams.

The unstated premise of these arguments about investments in building a sport is that fans attend games to see the league, not to see the teams and players that are playing the game. The attachments of fans to a home team and the differences among teams in attendance and local revenues are inconsistent with the view that the league is responsible for the revenues that are generated by a game or, over the season, by a team.

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[177] Robert C. Marshall and Leslie M. Marx, *The Economics of Collusion: Cartels and Bidding Rings*, MIT Press, 2012.

Another unstated premise is that the public good that teams and the league provide cannot otherwise be provided by a cooperative agreement through the league. For example, if teams have insufficient incentive to promote their own games – a proposition that is dubious at best – the league can withhold a portion of centralized revenue, such as the revenue from national television rights, and either engage in promotional expenditures as a league or reimburse teams for spending on promotional activities, as is common among manufacturers as a mechanism for encouraging promotion of their products by retailers. The latter is a more direct as well as less restrictive way to induce promotional spending than the creation of exclusive territorial rights in broadcasting.

Product Creation

Both defendants argue that the allocation of television rights in each league has led to the creation of new national television products, including games involving all teams in the league on national networks that are packaged and sold by the league and the creation of the league packages that bundle the telecasts of the RSNs and over-the-air broadcasters that televise the games of teams in their home broadcast territories. This argument is not based on the actual content of the complaints or the relief sought by plaintiffs. The complaints do not attempt to prevent the leagues from offering the same package that they currently offer. Instead, the complaints challenge the restriction that the RSNs that are included in the package cannot offer the programming on their channel, including live telecasts of games involving the teams that they now carry locally, throughout the nation in competition with the league packages, and that limit the ability of the RSN to offer its game telecasts over the Internet.

Current league practice is to require that RSNs grant to the league the right to uncompensated use of their live telecasts of games by a team in the league. The complaints do not challenge this requirement. Because the profit margin of the league package is so large, the league could lose a very large share of the customers for its league package and still profit from continuing to offer it. Likewise, the complaints do not challenge the practice of leagues in setting aside a time during the week when rights to televise games are sold to a national broadcast network. The continued existence of national telecasts of games in college sports demonstrates that such national packages are financially viable even when the broadcaster does not enjoy exclusive rights to broadcast a particular sport in a particular time period.

The *MLB Responses* (pp. 14-15) also claim that exclusive home broadcast territories enable teams to obtain the right to televise their away games. The standard practice in all sports is for teams to grant reciprocal rights to televise all games involving the same two teams. The premise of the argument is that in the absence of home broadcast rights, a team will not agree to this reciprocal arrangement because it can then obtain the exclusive right to broadcast its home games with a team in the visiting team's home territory. Of course, the failure to reach this reciprocal agreement also would mean that a team would lose the right to broadcast its away games, vitiating the benefits of preventing the visiting team from broadcasting its away games.

Regardless of the merits of this argument about whether teams would reach reciprocal agreements about home and away broadcasts, a less restrictive alternative to the system of exclusive home territories is simply for the league to adopt the rule that a team has the right to telecast its away games.

Competitive Balance

Both MLB and the NHL argue that the existing system of assigning television rights enhances competitive balance, in part by giving a team certainty and added value in the sale of its local rights, and in part by increasing revenues from the sale of national rights that are shared equally among all teams.

Competitive balance is an elusive concept. The origin of the concept is the "uncertainty of outcome" hypothesis, which states that demand for a sport is greater if the outcome is uncertain.[178] Competitive balance refers to the extent to which teams are sufficiently close in quality that outcomes are uncertain. Economists have identified three different versions of the concept: (1) either team has a chance to win a game (short-term or match balance); (2) multiple teams have a chance to win a championship until late in a season (medium-term or season balance); and (3) championships rotate among teams over several seasons (long-term of inter-season balance). In addition, economists have proposed different ways to measure each type.[179] The standard test of the uncertainty of outcome hypothesis, and hence the economic significance of the concept of competitive balance, is an econometric analysis of the demand for a sport in which the goal is to determine how measures of the closeness of competition, using one of these three versions of the concept, affects demand.

Another important concept from sports economics is the "invariance principle," which states that the distribution of quality among teams does not depend on the degree of competition

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[178] The seminal work on this topic is the first scholarly publication in sports economics, Simon Rottenberg, "The Baseball Player's Labor Market," *Journal of Political Economy* Vol. 64 (June 1956), pp. 242-58.

[179] For a discussion of the various ways to measure competitive balance, see Brad Humphreys, "Alternative Measures of Competitive Balance in Sports Leagues," *Journal of Sports Economics* Vol. 3, No. 2 (May 2002), pp. 133-48.

in the market for players.[180] The essence of this idea is that in the long run teams having the potential to generate more revenue from better team quality will have stronger teams as long as there are opportunities for spending money to improve team quality. In professional sports in which competition for players is prohibited, such as major league baseball from 1879 until 1975 when the reserve clause gave a team the exclusive and unilateral right to renew the contracts of players, teams in better markets nonetheless fielded stronger teams by spending more on developing younger players in the minor leagues, buying the contracts of players from weaker teams, and spending more on coaching and training.

Management in baseball and other professional sports expressed strong disagreement with the invariance hypothesis, steadfastly maintaining that restrictions on competition for players were needed to preserve competitive balance. A triumph of sports economists is that research predicted that the introduction of competition in player markets would not cause competitive balance to worsen and then subsequently showed that the introduction of free agency did not reduce, and may have increased, competitive balance in pro sports.[181]

For competitive balance to be a business justification for restrictions on competition in the sale of television rights by teams, two empirical claims must be true. First is the validity of the uncertainty of outcome hypothesis: the financial success of a team and a league requires competitive balance. Second is the invalidity of the invariance hypothesis: without restrictions,

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[180] This idea also was first proposed in Rottenberg, *op. cit.*

[181] Roger G. Noll, "Professional Basketball: Economic and Business Perspectives." In *The Business of Professional Sports*, Paul D. Staudohar and James A. Mangan, eds. University of Illinois Press, 1991; Ira Horowitz, "The Increasing Competitive Balance in Major League Baseball," *Review of Industrial Organization* Vol. 12, No. 3 (June 1997), pp. 373-87; and Travis Lee, "Competitive Balance in the National Football League after the 1993 Collective Bargaining Agreement," Vol. 11, No. 1 (February 2010), pp. 77-88.

disparity in team quality would increase to the point that demand and revenues would fall significantly.

Economic research provides no reason to believe that restrictions in competition for television rights contribute to competitive balance, no matter how balance is defined, and some reason to believe that these restrictions actually make competitive balance worse. As a theoretical matter, the definition of a team's territorial broadcast rights affects the distribution of team quality only if it alters the relative incentives of teams to improve team quality. The fundamental reason that sports leagues do not exhibit competitive balance is that teams are assigned to local markets that differ in the incremental revenues that a team can earn by improving team quality. That is, teams in the biggest cities – New York, Los Angeles, Chicago – receive a greater financial payoff from fielding a strong team than teams in smaller markets. The assignment of territorial broadcast rights exacerbates this problem by insulating their local broadcast markets from competition, just as exclusive territorial rights for stadium locations insulate a team from competition for game attendance.

In practice, because home broadcast rights are determined in part from the histories of the expansion of RSNs before leagues began to regulate them, the older teams in larger markets tend to have the biggest, most lucrative broadcast territories. For example, the New York Yankees not only have the rights to the largest DMA in the nation, but to the rest of one of the largest states plus parts of other populous states in the northeast. Thus, in this case the boundaries of territorial broadcast rights increase the disparities in the financial returns to team quality in favor of the Yankees. By comparison, a team in a smaller market, such as the Kansas City Royals, has more to gain from the right to televise games into New York State than the Yankees have to gain by televising games into the Royals' less populous home broadcast territory.

The second premise of MLB's assertion is that revenue sharing improves competitive balance. Again, this claim is not supported by economics research.[182] Revenue sharing reduces the increase in team revenue arising from an increase in team quality for every team in the league, with the reduction in revenue equal to the proportion of revenue that is shared. Hence, revenue sharing does not change the relative incentives of teams to improve quality. The principal effect of revenue sharing is to reduce the overall demand for quality, which causes a reduction in payments to the inputs to team quality (players and coaches) and an increase in team profits.

Economics research also has identified two adverse effects of revenue sharing.[183] First, in leagues that engage in some competition for players with other leagues, such as MLB competes with Japanese baseball leagues and the NHL competes with European hockey leagues, revenue sharing reduces the average quality of teams in the league because it blunts the incentive of teams to recruit better players from these leagues. Second, in some plausible circumstances revenue sharing actually makes competitive balance worse. For example, a team may earn more profit by weakening the team and relying on revenue sharing for its revenues, which amounts to "free-riding" on the agreement to share revenues.

Economists have concluded that the revenue sharing procedure that has been in place in MLB since the lock-out of 1994 makes competitive balance worse by creating a higher implicit

[182] For an explanation of why revenue sharing does not improve competitive balance, see James Quirk and Mohammed El Hodiri, "The Economic Theory of a Professional Sports League," in Roger G. Noll (ed.), *Government and the Sports Business*, Brookings, 1974, pp. 33-80.

[183] Stefan Szymanski and Stefan Kesenne, "Competitive Balance and Gate Revenue Sharing in Team Sports," *Journal of Industrial Economics* Vol. 52, No. 1 (March 2004), pp. 165-77.

tax on team quality among low-revenue teams.[184] Economists also have concluded that the pooled sale of television rights by a league either has no effect on competitive balance or makes matters worse.[185] The only way that revenue sharing can improve competitive balance is if the tax is higher on sources of revenues that are more sensitive to team quality, but in this case revenue sharing also causes a larger reduction in the quality of play in the league.[186] Finally, economists have determined that "pool sharing" (placing shared revenue in a pool that is divided equally among all teams in a league, such as MLB and the NHL practice with respect to national television revenues) is likely to make competitive balance worse.[187]

Notwithstanding the fact that revenue sharing does not improve competitive balance, division of the television rights market into exclusive home territories is not reasonably necessary as a means to create greater equality of team revenue. Both leagues already share revenues, including some of the revenue that is from the sale of both national and regional television rights. If the leagues wish to share revenue more equally, simply increasing the share of total revenue that is shared is a much simpler mechanism for achieving this goal that also is

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[184] See Roger G. Noll, "The Economics of Baseball Contraction," *Journal of Sports Economics* Voil. 4, No. 4 (November 2003), pp. 367-88, and Andrew Zimbalist, "Labor Relations in Major League Baseball," *Journal of Sports Economics* Vol. 4, No. 4 (November 2003), pp. 332-55.

[185] Sonia Falconieri, Josef Sakovics & Frederic Palomino, "Collective Versus Individual Sale of Television Rights in League Sports," *Journal of the European Econom,iocs Association* Vol. 2 (September 2005), pp. 833-962; Stefan Kesenne, "The Impact of Pooling and Sharing Broadcast Rights in Professional Team Sports," *International Journal of Sport Finance* Vol. 4 (August 2009), pp. 211-18; Thomas Peeters, "Competitive Balance and Broadcasting Rights in European Football," Faculty of Applied Economics Working Paper, 2009; David Forrest, Rob Simmons & Stefan Szymanski, "Broadcasting, Attendance and the Inefficiency of Cartels," *Review of Industrial Organization* Vol. 24 (May 2004), pp. 243-265.

[186] Stefan Kesenne, "Revenue Sharing and Competitive Balance in Professional Team Sports," *Journal of Sports Economics* Vol. 1, No. 1 (February 2000), pp. 56-55

[187] Stefan Kesenne, "Revenue Sharing and Competitive Balance: Does the Invariance Proposition Hold?" *Journal of Sports Economics* Vol. 6, No. 1 (February 2005), pp. 98-106.

much less anticompetitive than dividing the nation into exclusive local broadcasting territories, especially when the economic value of these territories is highly variable and actually advantages the teams in the best DMAs.

Franchise Stability

The NHL states that exclusive home broadcast territories contribute to franchise stability. The explanation given by the NHL is that exclusive territorial rights increase "community commitment" during losing seasons. The argument seems to be that preventing fans from switching loyalties from an unsuccessful franchise by preventing competition from other, more successful franchises is somehow a positive efficiency benefit, when in fact it is another anticompetitive harm. The resulting "commitment" (which actually means a reduction in choices available to consumers) causes a team to lose less revenue and profit if it fields a poor team, which hardly is a benefit to its suffering fans. Undoubtedly preventing a fine chef from opening a restaurant in a city is an excellent way to promote the financial stability of established bad restaurants, but doing so hardly can be termed a benefit to consumers. More generally, consumers do not benefit by being tethered to either bad teams or bad restaurants.

I declare that the foregoing is true to the best of my knowledge and belief.

Roger G. Noll

Executed at Stanford, California, February 18, 2014.

CERTIFICATE OF SERVICE

I, Peter E. Leckman, an attorney, certify that on February 18, 2014, I caused a true and correct copy of the Declaration of Roger G. Noll to be served by email on all counsel of record in the above-captioned actions.

By: /s/ Peter E. Leckman
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