

COMMENT

A JUDICIAL ANALYSIS OF THE SATELLITE RADIO MERGER: CREATION OF THE NEXT LED ZEPPELIN OR SIMPLE GARAGE BAND?*

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I. INTRODUCTION

As Mick Jagger aptly stated, “You can’t always get what you want.”¹ Once able to listen to a channel dedicated solely to all things Rolling Stones,² subscribers of Sirius Satellite Radio could not, without tremendous expense, tune into a station committed to airing exclusively Bob Dylan because such content could only be found on XM Radio.³ This conundrum for classic rock fans typifies one reason so many subscribers are ecstatic about the formally proposed merger of the two satellite radio providers,

1. ROLLING STONES, *You Can’t Always Get What You Want*, on LET IT BLEED (Decca Records 1969).

2. Although now retired, Sirius previously offered Rolling Stones Radio—a channel that played live concerts, interviews, rare recordings, and all the songs recorded over the band’s five decades in the music industry. Press Release, Sirius Satellite Radio, Rolling Stones Take Over SIRIUS Satellite Radio Music Channel (Aug. 22, 2005), available at <http://investor.sirius.com/ReleaseDetail.cfm?ReleaseID=171262>.

3. See Bob Dylan’s Theme Time Radio Hour, <http://www.xmradio.com/bobdylan/index.xmc> (last visited Nov. 14, 2008) (listing the times and channels on which the legendary singer would be hosting his own show).

which occurred on February 19, 2007.⁴ These listeners can now acknowledge that “you just might find, you get what you need”⁵—in this case, access to the vast music, sports, and news of a combined satellite radio company.⁶

Although many groups and individuals immediately voiced support for the merger,⁷ a handful of dissenters loudly decried the evils of a transaction they viewed as monopolistic.⁸ Believing the merger will allow the unified company to raise prices unilaterally while simultaneously offering consumers few, if any, potential benefits, those in opposition of the merger conclude that it must be prevented.⁹ An accurate assessment of the potential harm this merger poses to competition can only be viewed within the judicial framework of established antitrust standards. Although a brief discussion of the differences between Federal Communications Commission (FCC) review and judicial review of a merger is necessary, the benefits or drawbacks of one versus the other exceed the scope of this Comment.¹⁰

On March 24, 2008, the Department of Justice (DOJ) released a statement declaring the merger posed no threat to competition and, in doing so, left FCC approval as the only

4. Press Release, Sirius Satellite Radio, Sirius and XM to Combine in \$13 Billion Merger of Equals (Feb. 19, 2007), available at <http://investor.sirius.com/ReleaseDetail.cfm?ReleaseID=230306>.

5. ROLLING STONES, *supra* note 1.

6. Emerging early in the twenty-first century, XM and Sirius utilize satellites to offer subscribers over 100 channels of news, sports, music, and entertainment programs, typically without commercials and available nationwide. Eric A. Taub, *Drive-Time Radio on 100 Channels: Digital Transmissions Could Transform Radio in the Car and at Home*, N.Y. TIMES, Oct. 19, 2000, at G1.

7. See, e.g., Press Release, Sirius Satellite Radio & XM Satellite Radio, In Their Own Words: Organizations, Experts Voice Their Support for the Sirius–XM Merger (July 9, 2007), available at <http://edgar.sec.gov/Archives/edgar/data/908937/000095012307009718/y36940be425.htm> (containing positive statements from representatives of the American Trucking Association, Americans for Tax Reform, Hispanic Federation, and the NAACP, among others).

8. See, e.g., Letter from F. James Sensenbrenner, Jr., Member of Cong., et al., to Alberto R. Gonzales, Attorney Gen., U.S. Dep’t of Justice, et al. (June 18, 2007), available at http://fjallfoss.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6519533318 (letter signed by seventy-two House members voicing their concerns regarding the XM–Sirius merger).

9. *Id.*

10. For a detailed discussion of the complicated issues that arise from media consolidation and the separate approaches to reviewing mergers, see generally Rachel E. Barkow & Peter W. Huber, *A Tale of Two Agencies: A Comparative Analysis of FCC and DOJ Review of Telecommunications Mergers*, 2000 U. CHI. LEGAL F. 29 (2000). See also Howard Shelanski, *Antitrust Law as Mass Media Regulation: Can Merger Standards Protect the Public Interest?*, 94 CAL. L. REV. 371, 396–400 (2006) (expressing skepticism with antitrust law’s ability to safeguard diversity of broadcast and democracy on radio and television).

remaining hurdle standing in the way of merger approval.¹¹ This succinct declaration, however, failed to fully explain the DOJ's reasoning and offered nothing by way of support in judicial precedent.¹² Although reaching the correct conclusion, the statement did little to calm the concerns of those opposing the merger. Indeed, Senator Herb Kohl, Chairman of the Senate Antitrust Subcommittee, immediately voiced his opposition to the DOJ's decision.¹³

This Comment takes the next step in examining the XM–Sirius merger by providing an in-depth analysis of the merger within the antitrust framework established by years of judicial decisions. The Comment posits that, if given the opportunity to rule, a court must find that the merger violates no antitrust laws and poses no threat to competition. Technology, as it is prone to do, has dramatically altered the audio entertainment landscape from the time of satellite radio's initial launch. Satellite radio's competitors have responded with the introduction of High Definition (HD) Radio,¹⁴ the rapid development and enormous popularity of music-enabled wireless phones, and the rise of the iPod and other MP3 players.¹⁵ The tremendous success of these new products indicates the market abounds with viable substitutes for satellite radio consumers.¹⁶ A reviewing court, following precedent and merger analysis, would include these products in the relevant market and find that the post-merger market concentration poses no anticompetitive harm.

By way of introduction, Part II of this Comment touches briefly on the FCC review of the XM–Sirius merger. Part III

11. Press Release, Dep't of Justice, Statement of the Department of Justice Antitrust Division on its Decision to Close its Investigation of XM Satellite Radio Holdings, Inc.'s Merger with Sirius Satellite Radio Inc. (Mar. 24, 2008), available at http://www.usdoj.gov/opa/pr/2008/March/08_at_226.html.

12. See *id.* (lacking case law citations and dedicating only a single page of analysis on the competitive effects in the retail channel).

13. See John Eggerton, *Kohl: FCC Should Block XM–Sirius Merger*, BROADCASTING & CABLE, Mar. 24, 2008, <http://www.broadcastingcable.com/article/CA6544438.html>.

14. HD radio technology allows AM/FM radio stations to broadcast digitally, as opposed to an analog broadcast, which greatly enhances sound quality. See, e.g., HD Digital Radio, It's Time to Upgrade!, http://www.hdradio.com/what_is_hd_digital_radio.php (last visited Nov. 14, 2008) (describing the positive attributes of HD radio).

15. MP3 players are portable devices that permit listeners to store hundreds or even thousands of songs, depending on the make and model. See Kevin Bonsor, Jeff Tyson & Craig Freudenrich, *How MP3 Players Work*, <http://electronics.howstuffworks.com/mp3-player.htm> (last visited Nov. 14, 2008) (detailing the various types of MP3 players and discussing their technological capabilities).

16. See *infra* Part V.A–C (discussing substitute products and their role in defining the relevant product market).

introduces the entities raising the loudest protest against the merger and illustrates how this merger could find its way into a federal courthouse. Part IV sets forth the analytical framework for the relevant product market in detail—the most critical aspect of any merger analysis.¹⁷ Part V analyzes the supporting and refuting evidence of what products are reasonable substitutes for satellite radio. Part VI considers the market share of a merged firm in light of the relevant market determinations. The Comment concludes in Part VII by showing that given recent judicial opinions and discussions of market determinations, a court reviewing the XM–Sirius merger must find that the correct relevant product market consists of all audio entertainment. With this critical aspect resolved, the merged firm clearly lacks market power. Therefore, the merger between XM and Sirius poses no threat to competition and must not be prevented.

II. FCC REVIEW OF THE PROPOSED MERGER BETWEEN XM AND SIRIUS

The FCC typically proclaims authority to review mergers under the Communications Act¹⁸ and makes decisions based upon the “public interest, convenience, and necessity.”¹⁹ A vague standard nevertheless upheld by the Supreme Court,²⁰ the FCC’s definition of public interest has undergone several changes. It typically results, however, in the Commission giving substantial weight to “whatever [it] deems important at the time.”²¹ In reviewing a particular transaction, the Commission focuses on the merger’s effect on competition by defining a relevant market, considering actual and potential entrants into that market, analyzing effects on competition within the market, and then weighing any pro-competitive efficiencies induced by the merger.²² Generally, this analysis follows the steps a court undertakes in reviewing the effects of a merger.²³ Unlike

17. See, e.g., *FTC v. Staples, Inc.*, 970 F. Supp. 1066, 1073 (D.D.C. 1997) (emphasizing the importance of the relevant product market definition in the disposition of many antitrust cases).

18. 47 U.S.C. §§ 151, 221 (2000). The Communications Act was originally enacted in 1934. It was subsequently amended by the Telecommunications Act of 1996 and is now codified at 47 U.S.C. §§ 151–614.

19. 47 U.S.C. § 310(d) (2000).

20. See *FCC v. RCA Comm’ns*, 346 U.S. 86, 91 (1953) (noting that Congress granted the FCC authority to apply the “public interest” standard although it is “vaguish” and has “penumbral bounds”).

21. Barkow & Huber, *supra* note 10, at 42–43.

22. *Id.* at 44–45.

23. Compare *id.* at 44–46 (noting that the FCC framework tracks the standards

traditional antitrust analysis, however, this standard permits the FCC to consider the effect of an increase or decrease in programming diversity.²⁴

Although the FCC aspires to review all proposed mergers within 180 days, the complexity of this merger required considerably longer analysis.²⁵ Indeed, this transaction spent over a year before the FCC without a ruling.²⁶ Yet, as discussed below, the ultimate fate of this transaction likely lays in the hands of a judge, regardless of which way the FCC rules.

III. THE PARTIES INVOLVED AND HOW THEY CAN SEND THIS CASE TO COURT

Given the substantial amount of money at stake, the tumultuous relationship between satellite and AM/FM radio, and the potential effect the merger would have on the competitive landscape, merger supporters and opponents are likely to fight for or against the merger until all viable options are exhausted.²⁷ Provided the standing requirements are satisfied, any party disappointed by the FCC's ruling could appeal to the U.S. Court of Appeals for the District of Columbia.²⁸ If the FCC approves the merger, an alternative (and more likely) route for merger opponents would be to file suit under the Clayton Act.²⁹

employed by the DOJ, but observing that the FCC takes a broader view of the competitive effects), *with* *FTC v. Arch Coal, Inc.*, 329 F. Supp. 2d 109, 117 (D.D.C. 2004) (detailing the basic analytical framework espoused by courts for analysis of alleged Clayton Act violations).

24. See Shelanski, *supra* note 10, at 388–89 (observing the importance of diversity to FCC regulation). For a more detailed discussion of how FCC merger review diverges from antitrust principles, see generally Barkow & Huber, *supra* note 10.

25. See FCC, Informal Timeline for Consideration of Applications for Transfers or Assignments of Licenses or Authorizations Relating to Complex Mergers, <http://www.fcc.gov/transaction/timeline.html> (last visited Nov. 14, 2008) (describing the timeline the FCC hopes to comply with).

26. See FCC, XM and Sirius: Timeline, <http://www.fcc.gov/transaction/xm-sirius.html#timeline> (last visited Nov. 14, 2008) (indicating the FCC review began on June 8, 2007, but as of June 29, 2008, no decision had been announced).

27. See Press Release, Sirius Satellite Radio, *supra* note 4 (proclaiming that market analysts estimate cost savings resulting from the merger to be between \$3 billion and \$7 billion); see also Andrew Pollack, *Next, Digital Radio for a Superior Sound*, N.Y. TIMES, July 11, 1990, at D1 (noting the National Association of Broadcasters' (NAB's) opposition to the introduction of digital radio from satellites over eighteen years ago); Letter from Philip J. Schoonover, Chairman, President & CEO, Circuit City Stores, Inc., to Marlene H. Dortch, Sec'y, Fed. Comm'n Comm. (June 28, 2007), available at http://fallfoss.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6519537861 (expressing support for the merger based upon the belief that it will lead to new products and innovations that will appeal to consumers).

28. 47 U.S.C. § 402(b) (2000).

29. See *infra* Part III.C (detailing the Clayton Act and describing how Consumer

A. The Parties Involved

Long before XM and Sirius contemplated a merger, the National Association of Broadcasters (NAB) made it clear to all with ears or antennas that it opposed satellite radio.³⁰ Advocating on behalf of “8,300 free, local radio and television stations and also broadcast networks,”³¹ the NAB has filed several documents with the FCC and placed several advertisements disclaiming the anticompetitive effects of the announced merger.³² The NAB also provides substantial funding for the Consumer Coalition for Competition in Satellite Radio (C3SR)—a major entity opposing the merger whose membership is purportedly comprised of XM and Sirius subscribers.³³ The thrust of C3SR’s criticism comes from documents filed by J. Gregory Sidak. Professor Sidak analyzed the competitive impact of the merger in three separate filings, two of which are discussed in this Comment.³⁴

Not surprisingly, the strongest and most in-depth analysis of the merger’s positive aspects came from the merging firms, XM and Sirius. Specifically, CRA International, Inc. (CRA), a group commissioned by the merging firms, offered initial economic analysis and concluded the merger posed no threat to competition.³⁵ CRA authored a second analysis that expanded

Coalition for Competition in Satellite Radio (C3SR) satisfies the standing requirements and could seek an injunction).

30. Pollack, *supra* note 27.

31. Nat’l Ass’n of Broadcasters, About NAB, http://www.nab.org/AM/Template.cfm?Section=About_NAB (last visited Nov. 14, 2008).

32. See FCC, Record Documents, available at <http://www.fcc.gov/transaction/xm-sirius.html#record> (last visited Nov. 14, 2008) (containing over a dozen documents filed on behalf of the NAB between February and December of 2007).

33. See J. GREGORY SIDAK, EXPERT DECLARATION OF J. GREGORY SIDAK CONCERNING THE COMPETITIVE CONSEQUENCES OF THE PROPOSED MERGER OF SIRIUS SATELLITE RADIO, INC. AND XM SATELLITE RADIO, INC. 1 n.3, (2007) [hereinafter SIDAK I], available at http://fjallfoss.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6519008261.

34. These documents have been filed with the FCC in an effort to prevent approval of the merger. For the March 28, 2007 filing, see Letter from Julian L. Shepard, Counsel to Consumer Coalition for Competition in Satellite Radio (C3SR), to Kevin J. Martin, Chairman, Fed. Comm’n Comm’n (Mar. 28, 2007), available at http://fjallfoss.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6519008261. For the July 9, 2007 filing, see Petition to Deny of the Consumer Coalition for Competition in Satellite Radio at Exhibit B, *In re* XM Satellite Radio Holdings, Inc., MB Docket No. 07-57 (FCC July 9, 2007). For the October 1, 2007 filing, see Third Supplemental Declaration of J. Gregory Sidak at 55–56, *In re* XM Satellite Radio Holdings Inc., MB Docket No. 07-57 (FCC Oct. 1, 2007) [hereinafter Sidak III], available at http://fjallfoss.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6519738919.

35. Economic Analysis of the Competitive Effects of the Sirius–XM Merger at 1, *In re* XM Satellite Radio Holdings, Inc., MB Docket No. 07-57 (FCC July 24, 2007) [hereinafter CRA I] (Exhibit A to Sirius–XM Joint Opposition prepared by CRA Int’l Senior Consultant Steven C. Salop and Vice President Steven R. Brenner), available at

upon its initial findings and responded to criticisms set forth by Professor Sidak.³⁶ Although many other groups and individuals filed documents expressing support for or against the merger,³⁷ this Comment largely overlooks these documents because many rely on reasoning that falls outside the scope of what a judge may consider under established antitrust principles.³⁸ Courts are ill-equipped for weighing the externalities brought about when the marketplace casts its vote for one good over another.

*B. Bringing the XM–Sirius Merger to Court:
Appealing an FCC Decision*

As mentioned above, one avenue for challenging an FCC decision is filing an appeal in the U.S. Court of Appeals for the District of Columbia Circuit.³⁹ To meet standing requirements, a plaintiff must show that they are a “person who is aggrieved or whose interests are adversely affected by any order of the Commission granting or denying any application.”⁴⁰ Case law suggests a showing of potential economic injury satisfies the aggrieved person standard.⁴¹ The Supreme Court posited that Congress intended to allow competitors to meet the aggrieved standard because “one likely to be financially injured . . . would be the only person having sufficient interest to bring to the attention of the appellate courts errors of law . . . in granting [a] license.”⁴² While this language and reasoning suggests potential economic injury by a competitor is sufficient, it may also be required.⁴³

http://fjallfoss.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6519560249.

36. Further Economic Analysis of the Sirius–XM Merger at 1, *In re XM Satellite Radio Holdings Inc.*, MB Docket No. 07-57 (FCC Nov. 9, 2007) [hereinafter CRA II] (Exhibit A to Sirius–XM Joint Submission prepared by CRA Int’l Senior Consultant Steven C. Salop and Vice President Steven R. Brenner), available at http://fjallfoss.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6519811380.

37. See, e.g., Letter from Members of Congress to Kevin Martin, Chairman, Fed. Comm’n Comm’n (Oct. 25, 2007), available at http://fjallfoss.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6519810041 (expressing support for the merger because it will enhance diversity on the radio).

38. Judicial antitrust analysis centers on “the protection of competition, not competitors,” which undermines support for the merger that hinges upon the survival of an individual program. *Brown Shoe Co. v. United States*, 370 U.S. 294, 320 (1962).

39. 47 U.S.C. § 402(b) (2000).

40. 47 U.S.C. § 402(b)(6) (2000).

41. See *FCC v. Sanders Bros. Radio Station*, 309 U.S. 470, 477 (1940).

42. *Id.*

43. See *Nat’l Anti-Vivisection Soc’y v. FCC*, 234 F. Supp. 696, 697 (N.D. Ill. 1964) (doubting the plaintiff was aggrieved within the meaning of § 402(b)(6) merely because it was a “vanguard[] for interests which need[ed] protection”).

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In reviewing an FCC decision that employs the public interest standard, courts are to give “substantial judicial deference.”⁴⁴ Courts will consider “whether the FCC’s action resulted from consideration of the relevant factors and whether the agency has succumbed to a clear error of judgment.”⁴⁵ Such a deferential standard suggests the probability of successfully overturning the decision, in either direction, is small. Nevertheless, the allure of substantial cost savings and some market analysts’ skepticism about the ability of the satellite companies to survive sans merger may persuade XM and Sirius to appeal despite the unlikelihood of a reversal. Fortunately for merger opponents, a more attractive alternative to appealing the FCC decision exists if they are the group faced with an adverse FCC ruling.

*C. Bringing the XM–Sirius Merger to Court:
Filing Suit Under the Clayton Act*

Rather than appeal the FCC’s adverse ruling, merger opponents could file an independent lawsuit. Pursuant to the Clayton Act, “Any person . . . shall be entitled to sue for and have injunctive relief . . . against threatened loss or damage by a violation of the antitrust laws.”⁴⁶ The Supreme Court subsequently interpreted this statute to require that a private plaintiff “must allege threatened loss or damage ‘of the type the antitrust laws were designed to prevent and that flows from that which makes defendants’ acts unlawful.’”⁴⁷ Although case law clearly allows competitors to seek injunctions for mergers forming a monopoly power, courts find the antitrust injury satisfied based upon an inference of predatory or exclusionary conduct—an issue not present in this particular transaction.⁴⁸ This requirement raises doubt as to the NAB’s ability to sue on its own behalf.

Conversely, a group such as C3SR appears to be an ideal plaintiff. As current subscribers of XM or Sirius, these individuals face potential increases in price resulting from the

44. FCC v. WNCN Listeners Guild, 450 U.S. 582, 596 (1981).

45. GTE Serv. Corp. v. FCC, 782 F.2d 263, 269 (D.C. Cir. 1986) (citing MCI Telecomms. Corp. v. FCC, 750 F.2d 135, 140 (D.C. Cir. 1984)).

46. 15 U.S.C. § 26 (2006).

47. Cargill, Inc. v. Monfort of Colo., Inc., 479 U.S. 104, 113 (1986) (quoting Brunswick Corp. v. Pueblo Bowl-O-Mat, Inc., 429 U.S. 477, 489 (1977)).

48. See R.C. Bigelow, Inc. v. Unilever N.V., 867 F.2d 102, 109–11 (2d Cir. 1989) (declaring that a merger satisfies the antitrust injury requirement because, among other things, it might limit the competitor-defendant’s “access to supermarket shelf space for its products,” and therefore creates substantial monopoly power).

allegedly monopolistic merger.⁴⁹ Although consumers typically lack the ability and motivation to seek injunctions for antitrust violations,⁵⁰ the financial backing and acute industry understanding of a group such as the NAB alleviates these concerns.⁵¹

Approval of this merger carries with it critical importance for the merging firms as well as those groups who vocalize disapproval.⁵² With significant sums of money invested already, the probability of an appeal to the judiciary seems high. Whether appealing the FCC's ruling directly to the Court of Appeals or by filing suit as a private plaintiff under the federal antitrust laws, the groups and individuals opposing the merger will continue to fight. No matter the path this case travels to reach the courthouse door, the antitrust analysis remains the same: a court must analyze the competitive effects raised by the merger in a relevant product market.⁵³

IV. STANDARDS FOR JUDICIAL DETERMINATION OF THE RELEVANT PRODUCT MARKET

Merger review is primarily concerned with market power, and transactions tending to enhance it are not permitted.⁵⁴ The Clayton Act prohibits acquisitions "where in any line of commerce or in any activity affecting commerce in any section of the country, the effect of such acquisition may be substantially to lessen competition."⁵⁵ To analyze the competitive effects, a court must determine (1) the relevant product market; (2) the relevant

49. Although this claim is sufficient to satisfy the standing requirement, it does not stand up under the rigors of current antitrust analysis. *See infra* Part VI.B (concluding that the merged firm will lack market power and pose no threat to competition).

50. *See* Joseph F. Brodley, *Antitrust Standing in Private Merger Cases: Reconciling Private Incentives and Public Enforcement Goals*, 94 MICH. L. REV. 1, 36 (1995) (noting that consumers lack the financial incentive to maintain the action, detailed knowledge of the industry to prove their case, and are often dissuaded without the appeal of monetary damages).

51. The NAB advocates on behalf of radio and television broadcast networks—a group well informed of the developments in the audio entertainment market. Nat'l Ass'n of Broadcasters, *supra* note 31.

52. *See* Press Release, Sirius Satellite Radio, *supra* note 4 (proclaiming that market analysts estimate cost savings resulting from the merger to be between \$3 billion and \$7 billion).

53. *See, e.g.*, *United States v. Phila. Nat'l Bank*, 374 U.S. 321, 362 (1963) (stating the inquiry is "whether the effect of the merger 'may be substantially to lessen competition' in the relevant market"); *In re Merger of MCI Commc'ns Corp. & British Telecomms. PLC*, 12 F.C.C.R. 15,351, 15,357–58 (FCC Sept. 24, 1997) (noting that the FCC identifies the participants likely to have a competitive impact in a relevant market).

54. *See* *FTC v. H.J. Heinz Co.*, 246 F.3d 708, 713 (D.C. Cir. 2001).

55. 15 U.S.C. § 18 (2006).

geographic market;⁵⁶ and (3) the likely competitive effects within the relevant markets.⁵⁷

As several courts and commentators have noted, the crux of an antitrust case lies in the definition of the relevant product market.⁵⁸ The XM–Sirius merger is certainly no exception. From the start, XM and Sirius claim they are competing in the “audio entertainment marketplace.”⁵⁹ In addition to satellite radio, such a market includes traditional AM/FM radio, HD radio, music-enabled wireless phones, iPods, and other MP3 devices.⁶⁰ Conversely, the merger opponents’ contrasting definition involves a narrower array of products: satellite radio alone constitutes the relevant product market.⁶¹ The following subsections wade through the multitude of case law and agency-promulgated guidelines, and highlight critical legal issues raised by both parties regarding the definition of the relevant product market.

A. *The Relevant Product Market Standard*

In discussing how to determine the product market, the Supreme Court declared, “The outer boundaries of a product market are determined by the reasonable interchangeability of use [by consumers] or the cross-elasticity of demand between the product itself and substitutes for it.”⁶² A reviewing court must inquire as to a product’s ability to be used for the same purpose.⁶³ Next, the court determines the degree to which, if any, consumers substitute one product for another.⁶⁴ Well-defined submarkets may exist within a broad market; the Supreme Court articulated several “practical indicia” to aid in this inquiry.⁶⁵ Additionally, a reviewing court must examine the market as a

56. This Comment will not address the relevant geographic market; rather, this analysis presupposes a national market.

57. *FTC v. Arch Coal, Inc.*, 329 F. Supp. 2d 109, 117 (D.D.C. 2004).

58. *See, e.g., FTC v. Staples, Inc.*, 970 F. Supp. 1066, 1073 (D.D.C. 1997).

59. *See* Press Release, Sirius Satellite Radio, *supra* note 4 (asserting that among other benefits to the consumer, the merger would allow the firm to compete in this evolving and highly competitive market).

60. *CRA I*, *supra* note 35, at 9–10.

61. *See, e.g., SIDA I*, *supra* note 33, at 8.

62. *Brown Shoe Co. v. United States*, 370 U.S. 294, 325 (1962).

63. *Hayden Publ’g Co. v. Cox Broad. Corp.*, 730 F.2d 64, 71 (2d Cir. 1984) (quoting *United States v. Charles Pfizer & Co.*, 246 F. Supp. 464, 468 (E.D.N.Y. 1965)).

64. *Id.*

65. *See Brown Shoe*, 370 U.S. at 325 (introducing the submarket concept and listing “industry or public recognition of a 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” as factors to be considered).

whole, including its future development, to correctly judge the competitive effects brought about by a merger.⁶⁶

In 1992, the DOJ and the Federal Trade Commission (FTC) introduced the Horizontal Merger Guidelines, which were subsequently revised in 1997.⁶⁷ The Merger Guidelines provide an analytical framework for determining the cross-elasticity of demand by asking whether a “hypothetical monopolist of [a] product” could profitably impose “at least a ‘small but significant and nontransitory’ increase in price,” commonly referred to as the *ssnip* test.⁶⁸ The Merger Guidelines first examine the effect of an *ssnip* inflicted by a hypothetical monopolist of only the merging firms’ products.⁶⁹ If this price increase would be profitable for a firm, then that set of products constitutes the relevant product market.⁷⁰ If, however, the *ssnip* would not be profitable, the market must be expanded to include the products to which a consumer might reasonably turn.⁷¹ The Merger Guidelines also offer specific criteria that the DOJ and FTC look to when considering a buyer’s reaction to a price increase.⁷²

Although not binding on courts,⁷³ the Merger Guidelines have nevertheless become a significant part of judicial antitrust development.⁷⁴ Specifically, many courts have shown an increasing willingness to acknowledge that the *ssnip* test serves

66. See *FTC v. Whole Foods Mkt., Inc.*, 502 F. Supp. 2d 1, 15 (D.D.C. 2007) (quoting *FTC v. Arch Coal, Inc.*, 329 F. Supp. 2d 109, 116 (D.D.C. 2004)).

67. *Merger Guidelines—1992 (rev. 1997)*, 4 Trade Reg. Rep. (CCH) ¶ 13,104 [hereinafter *Merger Guidelines*].

68. *Id.* § 1.11.

69. *Id.*

70. *Id.*

71. *Id.*

72. Specifically, the Merger Guidelines offer four nonexclusive factors:

- (1) evidence that buyers have shifted or have considered shifting purchases between products in response to relative changes in price or other competitive variables;
- (2) evidence that sellers base business decisions on the prospect of buyer substitution between products in response to relative changes in price or other competitive variables;
- (3) the influence of downstream competition faced by buyers in their output markets; and
- (4) the timing and costs of switching products.

Id.

73. *Olin Corp. v. FTC*, 986 F.2d 1295, 1300 (9th Cir. 1993).

74. See Hillary Greene, *Guideline Institutionalization: The Role of Merger Guidelines in Antitrust Discourse*, 48 WM. & MARY L. REV. 771, 808–09 (2006) (offering statistical evidence of court reliance upon the Merger Guidelines); see also *New York v. Kraft Gen. Foods, Inc.*, 926 F. Supp. 321, 359 (S.D.N.Y. 1995) (declaring that both case law and the Merger Guidelines are informative regarding the relevant product market determination).

as an effective means of defining a relevant product market.⁷⁵ The most recent merger decision, *FTC v. Whole Foods Market, Inc.*,⁷⁶ clearly articulates the interaction of case law and the Merger Guidelines. The *Whole Foods* court observed that the relevant product market inquiry begins at the same place under the Merger Guidelines and case law: the product market is “determined according to the ‘reasonable interchangeability of use’ or cross-elasticity of demand between the product sold and ‘substitutes for it.’”⁷⁷ Beyond its usefulness in illustrating the relationship between case law and the Merger Guidelines’ *ssnip* test, the *Whole Foods* decision offers guidance for several critical issues in the XM-Sirius merger and will be referenced throughout this Comment.

*B. The Relevant Time Frame of an snip
and the Impact on Satellite Radio*

Rarely a contentious issue for antitrust analysis, the relevant time period over which an *ssnip* is to be evaluated appears critical to the XM-Sirius merger. The merging firms desire to take the Merger Guidelines at face value; they believe that language such as “nontransitory,”⁷⁸ “lasting for the foreseeable future,”⁷⁹ and “economic interest”⁸⁰ indicates the Merger Guidelines’ intent to avoid viewing a short-term gain in profit as condemnation of a merger.⁸¹ Perhaps more controversial, at least to those opposing the merger, is the concept that the *ssnip* must be applied in light of the unique characteristics of satellite radio.⁸² As such, the merging firms argue that an *ssnip* implicitly includes consideration of the significant effect that a subscriber has on long-term profitability.⁸³ Termed “dynamic demand,” XM and Sirius argue they presently charge lower prices as a form of investment in future customers.⁸⁴ Critics view

75. See, e.g., *FTC v. Arch Coal, Inc.*, 329 F. Supp. 2d 109, 120 (D.D.C. 2004) (stating that the *ssnip* test is useful in assessing interchangeability); *FTC v. Swedish Match*, 131 F. Supp. 2d 151, 160 (D.D.C. 2000) (noting how the *ssnip* test measures price elasticity).

76. *FTC v. Whole Foods Mkt., Inc.*, 502 F. Supp. 2d 1 (D.D.C. 2007). Beyond its usefulness as being the most recent adjudication of a merger case, the *Whole Foods* decision offers guidance for several critical issues in the present case and will be analogized to consistently throughout this Comment.

77. *Id.* at 15 (quoting *Merger Guidelines*, *supra* note 67, §§ 1.0, 1.11).

78. *Merger Guidelines*, *supra* note 67, § 1.11.

79. *Id.*

80. *Id.* § 0.1.

81. *CRA II*, *supra* note 36, at 9–10.

82. *See id.*

83. *Id.* at 9–11.

84. *Id.* at 40.

this position as a fundamental departure from the Merger Guidelines and see it as an addition of terms never intended to be a part of the *ssnip*.⁸⁵

The Merger Guidelines caution against any “mechanical application” of its articulated standards as it “may provide misleading answers to the economic questions raised under the antitrust laws.”⁸⁶ Indeed, the ability to exercise judgment in the application of antitrust laws to a specific merger is critical considering such laws are applied to “a broad range of possible factual circumstances.”⁸⁷ Any evidence that results in an accurate evaluation of the potential competitive effects of a proposed merger is relevant.⁸⁸ In 2004, after undertaking a comprehensive review of the U.S. antitrust laws, the Antitrust Modernization Commission (AMC) submitted a report of recommendations for changing and updating the law.⁸⁹ In that report, the AMC stated that “[n]o substantial changes to merger enforcement policy are necessary to account for industries in which innovation, intellectual property, and technological change are central features.”⁹⁰ Merger opponents believe this statement reveals the flawed approach of the economic reports filed in support of the merger.⁹¹ This criticism, however, overlooks the abundance of language in the Merger Guidelines emphasizing a flexible analytical approach. Indeed, the AMC report specifically notes that “[c]urrent law, including the Merger Guidelines . . . is sufficiently flexible to address features in such industries.”⁹² The Commission stressed the importance of an analysis based upon the facts and circumstances of each case by declaring enforcers of the antitrust laws must carefully consider the individual market dynamics and economic factors of an industry.⁹³ The AMC report

85. See Sidak III, *supra* 34, at 55–56.

86. *Merger Guidelines*, *supra* note 67, § 0.

87. *Id.*

88. See U.S. DEP’T OF JUSTICE & FED. TRADE COMM’N, COMMENTARY ON THE HORIZONTAL MERGER GUIDELINES 3 (2006) [hereinafter COMMENTARY], available at <http://www.usdoj.gov/atr/public/guidelines/215247.pdf> (observing that the agency will consider the unique characteristics of a given market’s competitive processes based upon information provided by the parties).

89. ANTITRUST MODERNIZATION COMM’N, REPORT AND RECOMMENDATIONS, at i (2007) available at http://govinfo.library.unt.edu/amc/report_recommendation/amc_final_report.pdf.

90. *Id.* at 9.

91. See Sidak III, *supra* note 34, at 4 (relying on the AMC report to declare the CRA analysis to be “far outside the mainstream of legal and economic theory”).

92. ANTITRUST MODERNIZATION COMM’N, *supra* note 89, at 9.

93. *Id.* at 32. This view is also supported by antitrust commentators. See Jonathan B. Baker, *Market Definition: An Analytical Overview*, 74 ANTITRUST L.J. 129, 142–43 (2007) (noting that application of the *ssnip* test serves as a “conceptual guide” and the

merely confirms what the Merger Guidelines declare: proper antitrust analysis must contemplate the unique characteristics of the industry being scrutinized.⁹⁴

To properly analyze the XM-Sirius merger, a reviewing court must consider several unique factors to determine the competitive effects and *ssnip* application. As a product in its toddler stage, the demand for satellite radio has not yet reached the saturation point.⁹⁵ Thus, the potential for substantial subscriber growth remains a principle goal for satellite radio providers.⁹⁶ Satellite radio requires that listeners pay a subscription fee for the service—a new concept that may cause skepticism for potential customers.⁹⁷ As subscribers join and find value in satellite radio, they in turn encourage other customers to subscribe by positive word of mouth.⁹⁸ This unique characteristic has been termed “dynamic demand spillovers.”⁹⁹ This market dynamic creates an incentive for the satellite firms, and the hypothetical monopolist, to charge lower prices to increase subscriber growth leading to additional growth from the dynamic demand.¹⁰⁰

In evaluating the critical loss of an *ssnip*, and thereby determining the profitability for a hypothetical monopolist, the reviewing court must consider the longer-term impact of a decrease in present subscription growth.¹⁰¹ Inclusion of this factor leads to an accurate portrayal of market realities. As shown by the Merger Guidelines and the AMC report, antitrust laws are

“need to account for various features of the market”).

94. *Compare Merger Guidelines, supra* note 67, § 0, (stating that the Merger Guidelines use unique industry characteristics for antitrust analysis) *with* ANTITRUST MODERNIZATION COMM’N, *supra* note 89, at 9 (noting similarly that antitrust enforcers should pay “proper attention” to specific industry characteristics).

95. CRA II, *supra* note 36, at 49 (noting analyst projections that satellite radio subscribers will increase from 14 million at the end of 2006 to about 38 million in 2015).

96. *Id.* at 48–49.

97. CRA I, *supra* note 35, at 30–31, 34.

98. *See id.* at 51–52; Press Release, BIGresearch, Satellite Radio Listeners Have Big Plans to Purchase (Feb. 2, 2006), *available at* <http://www.bigresearch.com/news/big020206.htm> (finding that “34.4% of Sirius listeners and 36.9% of XM listeners ranked word of mouth as the number one influence on making a purchase” of satellite radio for car use).

99. CRA I, *supra* note 35, at 46.

100. Sirius follows such a pricing structure. *See id.* at 46–47.

101. *See* FTC v. Whole Foods Mkt., Inc., 502 F. Supp. 2d 1, 34 (D.D.C. 2007) (stating the realities of the market, among other factors, reveal how an *ssnip* would not be profitable); COMMENTARY, *supra* note 88, at 3 (describing how the DOJ considers specific industry conditions).

sufficiently flexible to permit such an evaluation as it merely tailors the standards to fit these “factual circumstances.”¹⁰²

A simple illustration reveals how the relevant product market hinges upon resolution of this issue. Suppose Firm A competes in an industry such that it prices a good at \$10 although it could presumably charge \$15 without losing a significant number of existing customers. Firm A chooses to accept this lower price because it knows that by attracting customers now, those customers will in turn enthusiastically recruit more customers who desire Firm A's product. If Firm A were to raise its price from \$10 to \$15, the company's bottom line would see an immediate increase of \$5 per unit sold (assuming for purposes of this example that no *existing* customer leaves). However, what is critical to Firm A is the loss of future customers who are now deterred by the increase in price. Although such a price increase appears to be profitable in the short-run, the long-term effects, which include a loss of revenue and additional expenses related to advertising (in an effort to reach customers not responding to word-of-mouth from friends), results in a net decrease in profitability.

Admittedly, this example oversimplifies the issues and arguments made by the parties to this case. Nevertheless, it illustrates the importance of the matter. If the profit-maximizing firm considers only short-term gains, the *ssnip* is profitable and the relevant market is properly confined to Firm A's product.¹⁰³ However, when the overall effects of the price increase are considered, the *ssnip* is unprofitable and the market must be expanded.¹⁰⁴

C. What Evidence is Relevant to Product Market Determinations?

Another critical issue bearing directly on a court's view of the competitive effects of the XM–Sirius merger stems from the parties' competing arguments regarding the relevance of available evidence.¹⁰⁵ The evidence in this case leaves much to be

102. *Merger Guidelines*, *supra* note 67, § 0; ANTITRUST MODERNIZATION COMM'N, *supra* note 89, at 48, 55.

103. *Merger Guidelines*, *supra* note 67, § 1.11.

104. *Id.*

105. *Compare* Sidak III, *supra* note 34, at 5 (“The scant demand-side evidence presented by CRA also fails to inform the relevant question of substitution away from SDARS [Satellite Digital Audio Radio Service] in response to a relative change in prices.”) *with* CRA II, *supra* note 36, at 14–18 (declaring that the Merger Guidelines permit evidence apart from econometric data of demand substitution).

desired in the way of econometric support.¹⁰⁶ Merger critics consistently attack the lack of hard and fast evidence of demand elasticity relating to the price of satellite radio.¹⁰⁷ The unavailability of traditional, quantifiable demand elasticity is due in large part to the fact that neither XM nor Sirius has yet to celebrate its tenth anniversary of existence.¹⁰⁸ Additionally, the audio entertainment industry is evolving at the speed of light (or sound, if you will) to keep up with consumer demand.¹⁰⁹ The evidence of substitution is further hindered because satellite listeners have faced only a single price increase, which coincided with a change in content.¹¹⁰

Ideally, a court looks to strong econometric data of past buyer reaction to price increases in order to establish evidence of substitutability.¹¹¹ In the absence of such data (or even in conjunction with it), courts define product markets on less direct or unquantifiable evidence.¹¹² The Merger Guidelines offer four nonexhaustive categories of evidence that may be informative to product market determinations.¹¹³ Evidence that “buyers have shifted or have considered shifting purchases between products in response to relative changes in price or *other competitive variables*” is relevant to market definitions.¹¹⁴ Similarly, evidence that “sellers base business decisions on the prospect of buyer substitution between products in response to . . . *other competitive variables*” is also indicative of substitutability.¹¹⁵ Although the Merger Guidelines do not define “other competitive variables,” several courts have considered evidence relating to

106. See CRA II, *supra* note 36, at 14–15 (discussing reasons why reliable econometric data of price elasticity is unavailable).

107. Sidak III, *supra* note 34, at 16–17.

108. See Peter Goodman, *Radio Is Out of This World*, NEWSDAY, Dec. 5, 2001, at B35 (commenting on the launch of XM and Sirius).

109. See *infra* Section V.A–C (describing the current and future implications of HD radio, audio-enabled wireless phones, and MP3 players).

110. CRA II, *supra* note 36, at 14–15.

111. See *Merger Guidelines*, *supra* note 67, § 1.11 (listing evidence of a buyer shift in response to price changes first among other factors); Baker, *supra* note 93, at 139 (stating that evidence of buyer responses constitutes one category of buyer substitution evidence).

112. See *FTC v. Staples, Inc.*, 970 F. Supp. 1066, 1076–77 (D.D.C. 1997) (considering evidence found in internal documents in addition to quantitative data); *Merger Guidelines*, *supra* note 67, § 1.11 (offering several additional factors apart from econometric evidence); see also COMMENTARY, *supra* note 88, at 9 (noting that the DOJ and FTC typically rely on evidence from customers and documents rather than econometrics).

113. See *supra* note 72 (listing the Merger Guidelines’ factors).

114. *Id.* (emphasis added).

115. *Id.* (emphasis added).

consumer substitution apart from price changes.¹¹⁶ Importantly, the *Whole Foods* court noted how changes in product quality, customer service, and store aesthetics impacted substitutability.¹¹⁷

Antitrust commentators have also noted the relevance of evidence apart from direct buyer responses to price increases.¹¹⁸ Buyer substitution may be inferred from the conduct of competitors.¹¹⁹ The way in which one market participant responds to product innovation of other competitors is indicative of the probability of buyer substitution.¹²⁰ Moreover, the opinions of market analysts are useful in determining the likelihood of buyer substitution.¹²¹

Relying on the language of the Merger Guidelines and views of antitrust commentators, a reviewing court must give proper consideration to the evidence of demand substitution presented by the merging firms.¹²² Market definition is an inexact science, especially when analyzing a new industry laden with rapid changes.¹²³ Thus, similar to its treatment of the dynamic demand theory, the court must consider any evidence leading to an accurate evaluation of the potential competitive effects of the proposed merger. With the proper analytical tools in mind, the court must then explore and weigh the available evidence of substitution between satellite radio and all audio entertainment products.

V. THE RELEVANT MARKET IN THE XM–SIRIUS MERGER

Whether a court finds that the XM–Sirius merger poses a threat to competition by creating a monopoly or, to the contrary, the merger poses no threat to competition, hinges on the court’s

116. See *FTC v. Tenet Health Care Corp.*, 186 F.3d 1045, 1054 (8th Cir. 1999) (disapproving of the lower court’s finding that other hospitals should not be viewed as substitutes because it did not account for “the impact of nonprice competitive factors, such as quality”); *FTC v. Whole Foods Mkt., Inc.*, 502 F. Supp. 2d 1, 25–26 (D.D.C. 2007) (considering how changes in product quality affect substitutability).

117. *Whole Foods*, 502 F. Supp. 2d at 24–28.

118. See *Baker*, *supra* note 93, at 141 (describing how informed industry participants’ responses to or monitoring of product changes indicates substitutability).

119. *Id.*

120. *Id.*

121. *Id.*

122. See, e.g., *Whole Foods*, 502 F. Supp. 2d at 24–28 (considering changes in atmosphere, customer service, and product quality); see also *Merger Guidelines*, *supra* note 67, § 1.11 (stating the relevance of buyer substitution on “other competitive variables”).

123. *Baker*, *supra* note 93, at 142–43.

relevant product market definition.¹²⁴ The merging parties maintain that the market entails all audio entertainment products,¹²⁵ while those opposing the merger vehemently assert satellite radio alone comprises the relevant market.¹²⁶ As set forth above, the reviewing court must first examine the products sold by the merging firms and determine if an *ssnip* could be profitably imposed.¹²⁷ Thus, the following sections attempt to identify the reasonable substitutes to which a satellite radio consumer might turn if an *ssnip* were imposed by the merged firm. Once the reasonable substitutes are identified, an analysis of the profitability of an *ssnip* can be properly evaluated.

A. AM/FM and HD Radio

Foremost among the products the merging parties lobby for inclusion in the relevant product market are AM/FM radio and HD radio.¹²⁸ XM and Sirius believe satellite radio faces stiff competition from these products, and evidence suggests buyers would switch to these products such that an *ssnip* would not be profitable.¹²⁹ Conversely, merger opponents question the relevance of the evidence claiming to show demand elasticity¹³⁰ and note that the products are not reasonably interchangeable because of their substantial differences.¹³¹

1. Evidence for and Against Including AM/FM Radio and HD Radio in the Relevant Product Market. As the merging firms readily admit, the facts and circumstances of this specific merger are such that reliable econometric data regarding own-price elasticity or relevant cross-price elasticity cannot be calculated.¹³² Because satellite radio consumers have faced only one price increase, little information exists from which meaningful econometric data could be calculated.¹³³ Other contributing

124. See, e.g., *Whole Foods*, 502 F. Supp. 2d at 49–50 (noting that absent a properly defined relevant product market, lessening of competition cannot be proven).

125. CRA I, *supra* note 35, at 9–10.

126. SIDAK I, *supra* note 33, at 2.

127. *Whole Foods*, 502 F. Supp. 2d at 16.

128. CRA I, *supra* note 35, at 4.

129. See *id.* at 10 (noting how intermodal competition, demand substitution, and product-differentiation affects the relevant product market).

130. This criticism, however, has already been resolved in favor of the merging parties. See *infra* Part V.A.2 (detailing how judicial precedent and the Merger Guidelines language require consideration of such evidence).

131. SIDAK I, *supra* note 33, at 25.

132. CRA II, *supra* note 36, at 14.

133. See *id.* at 14–15 (noting the problems associated with attempting to rely on XM's single increase in price).

factors preventing reliable econometric evidence of demand are the lack of cross-sectional variation of subscription prices, the rapid growth of competition since 2005, and the fact that this is a youthful and developing industry.¹³⁴

This is not to say, however, that there is *no* evidence of demand elasticity. As evidence of demand substitutability between satellite and AM/FM radio, the merging firms point to the elasticity of demand.¹³⁵ Specifically, they identify the inverse relationship between satellite radio penetration and terrestrial radio coverage.¹³⁶ CRA attempted to show how changes in the relative quality of AM/FM radio versus satellite radio affected the demand for satellite radio. The study compared the number of AM/FM stations received—which served as a proxy for quality of AM/FM service—and the number of XM or Sirius subscribers in a given area.¹³⁷ As the number of AM/FM stations received increases, the quality advantage held by satellite radio decreases.¹³⁸ Generally, the satellite radio penetration increases in areas receiving fewer AM/FM stations, which suggests that consumers view the two products as substitutes.¹³⁹

Similar proof stems from the actions of satellite subscribers who deactivate their service. The merging firms claim their studies and documentation reveal how “nearly all switch their listening to other audio entertainment modes” and not to the other satellite provider.¹⁴⁰ This behavior evinces demand substitution by consumers of satellite radio.¹⁴¹ The parties opposing the merger reject this evidence as unacceptable because it fails to measure changes in price of AM/FM radio and thus does not relate to cross-price elasticity.¹⁴² As the Merger

134. *Id.*

135. Cross-elasticity of demand is one of the most basic factors for product market determinations. *See, e.g.*, *United States v. E.I. du Pont de Nemours & Co.*, 351 U.S. 377, 400 (1956) (declaring that products compete in the same market if a price decrease in one product causes consumers to switch to it).

136. CRA I, *supra* note 35, at 14–16.

137. CRA II, *supra* note 36, at 19.

138. *Id.* Logic suggests that quality of AM/FM radio increases with additional stations. *Contra* Sidak III, *supra* note 34, at 22 (critiquing the study by noting that additional stations may duplicate the format and repertoires of existing stations).

139. CRA II, *supra* note 36, at 18–19.

140. CRA I, *supra* note 35, at 13.

141. It must be noted that the details of this study have been redacted and are unavailable to the public. A reviewing court would not be so constrained and could place appropriate weight on these facts. The conclusions proclaimed by the merging firms (and represented to the FCC), however, are clear—consumers who deactivate their service switch to audio entertainment apart from satellite radio. *Id.*

142. *See* Sidak III, *supra* note 34, at 21–23 (concluding that the CRA study merely shows elasticity of demand for satellite radio with respect to changes in the number of

Guidelines make clear, however, such evidence is relevant when it shows how “buyers have shifted or have considered shifting purchases between products in response to relative changes in price or *other competitive variables*.”¹⁴³ Although the Merger Guidelines do not define “other competitive variables,” several courts have considered evidence relating to consumer substitution apart from price changes.¹⁴⁴ By measuring how the variation in quality of the two radio services affects consumer demand, the study comports with the Merger Guidelines’ “other competitive variable” requirement.¹⁴⁵

Additional proof of substitutability stems from how XM and Sirius view AM/FM radio as competition and vice versa—a factor clearly expressed in court decisions as relevant in product market determinations.¹⁴⁶ Indeed, as the *Whole Foods* court put it, “How the players in the marketplace view each other and how their conduct reflects those views” is an additional factor in determining which products to include in the product market.¹⁴⁷ Examples of such competition can best be seen in two ways: through memos and transcripts of executives of the respective radio providers and from observing how those views are borne out in product responses.¹⁴⁸ As late as September 2006, the President and CEO of the NAB, David K. Rehr, was on record as stating that AM/FM radio would “beat” the new competitor, satellite radio.¹⁴⁹ Similarly, the NAB undertook an extensive advertising campaign in 2005, which further underscores its view

AM/FM stations and does not conform to the Merger Guidelines).

143. *Merger Guidelines*, *supra* note 67, § 1.11 (emphasis added).

144. *See supra* notes 116–17 and accompanying text (listing examples of nonprice evidence courts consider).

145. *CRA II*, *supra* note 36, at 20.

146. Whom a firm regards as competition and how that affects their conduct offers evidence of substitutability. *See United States v. Continental Can Co.*, 378 U.S. 441, 453–55 (1964) (noting each manufacturer considered the price of the other’s product); *see also Merger Guidelines*, *supra* note 67, § 1.11.

147. *FTC v. Whole Foods Mkt., Inc.*, 502 F. Supp. 2d 1, 36 (D.D.C. 2007).

148. *See FTC v. Swedish Match*, 131 F. Supp. 2d 151, 164 (D.D.C. 2000) (relying on a memo expressing how moist snuff does not compete with loose leaf tobacco based on the varying characteristics of the two products); *Whole Foods*, 502 F. Supp. 2d at 24–25 (detailing internal documents that show how regular supermarkets have introduced premium products and observing that these supermarkets developed their own organic brands).

149. David K. Rehr, President & CEO, Nat’l Ass’n of Broadcasters, Speech to the 2006 NAB Radio Show (Sept. 21, 2006), *available at* http://www.nab.org/AM/Template.cfm?Section=Press_Releases1&TEMPLATE=/CM/ContentDisplay.cfm&CONTENTID=6802.

of satellite radio as competition. The tagline of the campaign read: "Radio: You shouldn't have to pay for it."¹⁵⁰

More convincing than ads and transcripts, however, are the product changes and innovations launched in an effort to compete with satellite radio. A reviewing court must, in light of the *Whole Foods* decision, carefully consider such evidence of competition as reason for including AM/FM radio in the relevant product market. For example, the *Whole Foods* court relied on the fact that supermarket chains across the nation reacted to the success of Whole Foods and other premium grocers by offering more organic foods and offering their own private labels.¹⁵¹ Some competitors went so far in responding to consumer demand that they "modeled the look and feel" of their stores after Whole Foods and proceeded to introduce "pro-active customer service, in-store demonstrations and promotions, and attractive, high quality fixtures and product cases."¹⁵²

Attempting to minimize the loss of listeners who value commercial-free programming, several AM/FM stations reduced commercial length and frequency.¹⁵³ Clear Channel, one of the largest AM/FM broadcasters, took note of consumer demand and undertook a specific campaign to shorten its commercial time, even at the risk of seeing profit margins shrink.¹⁵⁴ Other clear reactions to satellite radio include reformatting music programming, making a concerted effort to enlist prominent personalities to host shows, and an emphasis on variety.¹⁵⁵

Moreover, the development of HD radio offers strong evidence of substitutability. Touted as "the most significant advancement in radio broadcasting since the introduction of FM stereo," the increased sound quality directly competes with a

150. Press Release, Nat'l Ass'n of Broadcasters, Radio Industry Launches New On-Air Ad Campaign (Nov. 30, 2005), available at <http://www.nab.org/AM/Template.cfm?Section=Search&template=/CM/HTMLDisplay.cfm&ContentID=5170>.

151. *Whole Foods*, 502 F. Supp. 2d at 32–33.

152. *Id.* at 25.

153. See Jason Manning, *Revolutions in Radio*, ONLINE NEWSHOUR, May 4, 2005, <http://www.pbs.org/newshour/media/radio/broadcast.html> (noting radio executives' decision to cut back on commercial time among several other dramatic responses).

154. See Lisa Kovach, *Clear Channel Radio Hopes to Gain More From Less*, SAN DIEGO BUS. J., Sept. 20, 2004, at 3.

155. See Tom Lowry, *Antenna Adjustment: Clear Channel Is Pulling Apart Its Empire as It Scrambles to Compete in a Changed Media World*, BUS. WK., June 20, 2005, at 64 (listing Donald Trump, Jesse Jackson, Bill Clinton, and Steve Jobs as potential hosts); Manning, *supra* note 153 (observing that broadcast stations dedicated lengthy blocks of time—time once dominated by computerized playlists—to various music themes hosted by DJs and the implementation of liberal talk shows to stations once dominated by conservative personalities).

perceived advantage of satellite radio.¹⁵⁶ Of the 1,350 HD radio stations that currently reach about 80% of the U.S. population, nearly half provide commercial-free programming.¹⁵⁷ What is more, many of these stations offer genre-specific music that mimics the programming patterns of satellite radio.¹⁵⁸ The collective AM/FM broadcasters further entrenched their support for HD radio by committing approximately \$450 million to the HD Digital Radio Alliance for advertising promotions.¹⁵⁹ In another step toward direct competition with satellite radio, Ford Motor Company joined Hyundai, Jaguar, and Mini Cooper by announcing it would offer factory installed HD radio receivers for most cars in 2008.¹⁶⁰

Admittedly, a potential plaintiff would not lack arguments for excluding AM/FM and HD radio from the product market. Courts must consider differences in products, quality, and prices in determining reasonable interchangeability.¹⁶¹ Under this line of reasoning, merger opponents point out that satellite radio holds itself out as a distinct product.¹⁶² Case law reveals, however, that this evidence by itself is insufficient because it does not address the relevant question for product market definition.¹⁶³ Moving beyond mere advertising, the commercial-free nature of satellite radio is consistently presented as evidence of a different and distinct product.¹⁶⁴ Merger critics note satellite's wide-spanning variety in channels and nationwide reception as indicators of a unique product and quality distinctions.¹⁶⁵ Additionally, satellite radio's ability to offer

156. See HD Digital Radio, *supra* note 14.

157. CRA I, *supra* note 35, at 19.

158. See *id.* (listing channels such as "Traditional Jazz & Blues," "Coffee House," "Deep Cuts Classic Rock," and "Indie & New Rock" as well as other unique genre offerings).

159. *Id.*

160. See Press Release, iBiquity Digital, Ford to Offer Factory-Installed HD Radio Technology on Ford, Lincoln and Mercury Vehicles in 2009 (Jan. 7, 2008), available at http://www.ibiquity.com/press_room/news_releases/2008/1126; Press Release, iBiquity Digital, Mini USA Offers Factory-Installed HD Radio Receiver in 2007 Mini Cooper and Cooper S (June 7, 2007), available at http://www.ibiquity.com/press_room/news_releases/2007/1040.

161. See, e.g., *United States v. E.I. du Pont de Nemours & Co.*, 351 U.S. 377, 404 (1956).

162. See *SIDAK I*, *supra* note 33, at 25 (observing that the Sirius website emphasizes the differences between satellite radio and traditional AM/FM radio).

163. See *FTC v. Whole Foods Mkt., Inc.*, 502 F. Supp. 2d 1, 35 (D.D.C. 2007) (rejecting the FTC's reliance on product differentiation).

164. *SIDAK I*, *supra* note 33, at 26.

165. See *Sidak III*, *supra* note 34, at 18 (listing these unique characteristics as a chief reason for drawing a narrow market definition).

content that would be considered indecent if aired on AM/FM is a feature distinguishing it as a separate product.¹⁶⁶

Despite the increase in sound quality and expanding capacity, merger opponents maintain that HD radio, like AM/FM radio, must be excluded from the relevant market. As evidence, they note HD radio “suffers from a limited national footprint” as well as only being able to offer the same content found on AM/FM stations.¹⁶⁷ While the content issue remains a concern for industry experts, they are quick to note that HD radio broadcasts are now available in 85 of the top 100 markets.¹⁶⁸ Increases in the number of HD receivers, swells in advertising money, and car manufacturers’ willingness to offer factory installed HD equipment¹⁶⁹ should persuade a court to reject the claims of parties opposing the merger and find that consumers would turn to HD radio as a substitute in the face of an *ssnip*.

Although such distinctions have served as a basis for excluding otherwise similar products from a relevant product market in the past,¹⁷⁰ other cases highlight a judicial trend toward placing little weight in them.¹⁷¹ As noted above, the attempts to erode the product differences cut against the arguments raised by merger opponents.¹⁷² Indeed, when considering the potential future—albeit unknown—evolution of audio entertainment, a court may evaluate these proposed differences with a critical eye.¹⁷³

166. SIDAK I, *supra* note 33, at 27–28.

167. *Id.* at 28–29.

168. See Tom Lowry, *HD Radio Still Taking the Rap*, BUS. WK., Jan. 29, 2007, http://www.businessweek.com/technology/content/jan2007/tc20070129_381520.htm.

169. *Id.*

170. See *United States v. Times Mirror Co.*, 274 F. Supp. 606, 616–18 (C.D. Cal. 1967) (finding morning, evening, and Sunday newspapers to be separate submarkets because of differences in price, style, and content); *Bon-Ton Stores, Inc. v. May Dep’t Stores Co.*, 881 F. Supp. 860, 869–70 (W.D.N.Y. 1994) (declaring a narrower relevant product market based upon the cumulative effect of otherwise trivial differences between “traditional department stores” and other retailers).

171. See *Cable Holdings of Ga., Inc. v. Home Video, Inc.*, 825 F.2d 1559, 1563 (11th Cir. 1987) (finding a relevant market for “passive visual entertainment which include[d] cable television, satellite television, video cassette recordings, and free over-the-air television”); *Reilly v. Hearst Corp.*, 107 F. Supp. 2d 1192, 1200–01 (N.D. Cal. 2000) (noting how competition among newspapers, Internet websites, radio, and television overlaps and may constitute its own relevant market).

172. See *Reilly*, 107 F. Supp. 2d at 1200 (suggesting that similar outlets for a product prevent a *prima facie* case for an antitrust violation).

173. See *FTC v. Whole Foods Mkt., Inc.*, 502 F. Supp. 2d 1, 27–29 (D.D.C. 2007) (considering evidence relating to the future increase in consumers of premium food products and the effect it has on the merged firm’s ability to impose an *ssnip*); *Reilly*, 107 F. Supp. 2d at 1200 (chronicling the history of print and nonprint newspapers, including the rise of the Internet, and expressing doubt towards a narrow market definition).

2. *Conclusions Regarding AM/FM and HD Radio.* After considering the claims and evidence of both parties, a court must conclude that AM/FM and HD radio are reasonably interchangeable products for consumers of satellite radio. The merging firms' evidence of demand elasticity, presented in the study of the relationship between the proportion of satellite subscriptions and the number of AM/FM signals, reveals that consumers' view of AM/FM radio strongly supports this conclusion.¹⁷⁴ Although such evidence is not the ideal econometric data available in some cases, a court must undertake an analysis of what is available.¹⁷⁵ The *ssnip* test shows how consumers react to other competitive variables and thus comports with court decisions and the Merger Guidelines.¹⁷⁶

Additionally, the combination of documents and competitive responses in advertising, marketing, and product development demonstrates how satellite and AM/FM radio (including HD radio) view one another as competition. Despite merger opponents' arguments to the contrary, the case law and Merger Guidelines reveal the relevance of such evidence.¹⁷⁷ The process of defining a relevant product market attempts to identify producers of similar products who "have the ability . . . to take significant amounts of business away from each other."¹⁷⁸ The evidence presented by the merging firms reveals that these products are a reasonable substitute that consumers would switch to in the face of an *ssnip*.

B. *Wireless Phones*

In addition to traditional AM/FM radio, XM and Sirius state that wireless phones must be included in the relevant product market because these products compete with satellite radio and create potential demand substitution.¹⁷⁹ Predictably, merger

174. See *supra* Part V.A.1 (discussing the study's methodology and how it relates to demand substitution between the two products).

175. See *Reilly*, 107 F. Supp. 2d at 1200 (balancing the available information with regard to recent changes in the availability of information).

176. See *supra* Part IV.C.

177. See *Whole Foods*, 502 F. Supp. 2d at 36 (observing "how the players in the marketplace view each other and how their conduct reflects those views" is an additional factor in determining which products to include in the product market); see also *Merger Guidelines*, *supra* note 67, § 1.11 (declaring "evidence that sellers base business decisions on the prospect of buyer substitution between products in response to relative changes in price or other competitive variables" may be considered).

178. *SmithKline Corp. v. Eli Lilly & Co.*, 575 F.2d 1056, 1063 (3d Cir. 1978).

179. CRA I, *supra* note 35, at 21; see also Joint Opposition to Petitions to Deny and Reply Comments of Sirius Satellite Radio Inc. and XM Satellite Radio Holdings Inc. at 37, *In re XM Satellite Radio Holdings Inc.*, MB Docket 07-57 (FCC July 24, 2007), available at

critics believe otherwise.¹⁸⁰ In making a decision on whether to include wireless phones in the relevant product market, a court undertakes the same analysis as described in the preceding section: it must consider evidence of reasonable interchangeability and determine if a hypothetical monopolist could profitably impose an *ssnip*.¹⁸¹

1. *Evidence for and Against Including Wireless Phones in the Relevant Product Market.* As with the analysis previously undertaken for the inclusion or exclusion of AM/FM radio, reliable econometric data of cross-elasticity of demand is unavailable.¹⁸² The swift and constant change in technology and lack of price changes in satellite radio contribute to this issue.¹⁸³ The merging firms attempt, however, to show how the success of this rapid product development evinces proof of demand substitution.¹⁸⁴ Support for this position can be found in *Reilly v. Hearst Corp.*, a case involving one newspaper company acquiring another.¹⁸⁵ In discussing the relevant market, the court identified several media forms that served as viable substitutes. Specifically, the court observed how the development of AM/FM radio, cable television, and the Internet undermined a narrow market definition.¹⁸⁶

To support their claim for inclusion, the merging firms note the robust growth of audio content-enabled phones and audio services.¹⁸⁷ These phones allow users to upload their own music files and can also receive streaming music, news, and sports¹⁸⁸—a

http://fjallfoss.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6519560249.

180. See *SIDAK I*, *supra* note 33, at 30–32 (offering three reasons why exclusion is proper).

181. See *supra* Part IV.B.1.

182. See *supra* Part V.A.1 (noting how the youth of the industry, lack of price variation, and fast-paced innovation restrict availability).

183. See *CRA II*, *supra* note 36, at 14–15 (explaining factors resulting in the absence of econometric data); see also *CRA II*, *supra* note 36, at 22–26 (detailing nearly thirty customized packages of digital sports, news, and music offerings from every major wireless provider only two years later); Press Release, Cingular Wireless & MobiTV, Inc., Cingular and MobiTV Announce First Radio Service for the Nation's Largest Digital Voice and Data Network (Nov. 14, 2005), available at <http://www.prnewswire.com/mnr/cingular/22669/> (announcing the ability to receive forty channels of digital music on a mobile phone—the initial offering of such a product).

184. See *CRA I*, *supra* note 35, at 21–22 (describing the options available to wireless users and explaining how this causes competition).

185. *Reilly v. Hearst Corp.*, 107 F. Supp. 2d 1192, 1193 (N.D. Cal. 2000).

186. *Id.* at 1200.

187. *CRA II*, *supra* note 36, at 15.

188. See, e.g., John Biggs, *Transmit Your Music to FM Right From Your Cellphone*, N.Y. TIMES, July 12, 2007, at C8 (describing Sprint's latest offering, the Musiq, which can download music wirelessly and transmit audio through a car's FM radio).

fact demonstrating the substitutability of the products. All major wireless service providers now offer subscribers the ability to choose among a variety of packages at different prices.¹⁸⁹ For example, a Sprint customer gains access to ten commercial-free music channels, “NFL Mobile,”¹⁹⁰ and several other features such as Internet and e-mail access for \$15 per month.¹⁹¹ If a wireless subscriber desires more channels or a package containing greater variety, they may choose from several different options at prices ranging from an additional \$2.99 a month to \$5.99 a month.¹⁹² Many analysts expect the recent increase in audio content-enabled phones to remain steady, if not increase.¹⁹³ The introduction and success of Apple’s iPhone best exemplifies the evolution of the wireless phone. With the ability to hold thousands of songs, access the Internet, play movies, and serve as a wireless phone, the iPhone epitomizes the dramatic development of the union between music and phones.¹⁹⁴ Certainly new products will continue to expand upon iPhone’s features.¹⁹⁵ As they do, the appeal of a satellite radio subscription, relative to a wireless phone subscription enhanced with equivalent features, will diminish.¹⁹⁶ Thus, if faced with an increase in price by the merged firm, the decision to substitute becomes much easier.

Merger critics argue the introduction or extension of phone services does not speak to demand-side substitution because it is not a response to a price change in satellite radio.¹⁹⁷ This criticism, however, ignores the fact that success of these phones reveals a demand for a product capable of performing several features, one of which is high-quality, commercial-free music and

189. See CRA I, *supra* note 35, at 21–26 (detailing the programs and prices offered by Sprint, AT&T, Alltel, and Verizon).

190. NFL Mobile is a program dedicated to NFL news and discussions. See Press Release, Sprint Nextel, Sprint Offers NFL Mobile (July 24, 2006), available at http://newsreleases.sprint.com/phoenix.zhtml?c=127149&p=irol-newsArticle_newsroom&ID=1034677&highlight=.

191. See CRA I, *supra* note 35, at 22 (describing the basic program as well as premium options available to subscribers).

192. *Id.* at 22–23.

193. *Id.* at 21–22. Almost 1.2 million listeners have subscribed to Sprint’s audio content packages. Moreover, mSpot claims its subscribers have exceeded one million. *Id.* at 26 n.91.

194. Apple, iPhone Features, <http://www.apple.com/iphone/features> (last visited Nov. 14, 2008).

195. See Matt Hartley, *The Battle for the Dashboard*, GLOBE & MAIL (Canada), Jan. 9, 2008, at B1 (discussing the automotive industry’s recognition of the importance of incorporating high performance audio equipment and Wi-Fi into vehicles).

196. See CRA I, *supra* note 35, at 29–30 (detailing the projected growth of wireless phone subscriptions due to enhanced music features).

197. Sidak III, *supra* note 34, at 30–33.

news. Although not evidence of substitution based on price changes, the popularity of audio content-enabled phones may reveal potential substitution based on “other competitive variables.”¹⁹⁸ Other concerns about the incompatibility of wireless phones with a car’s sound system are unpersuasive considering recent innovation and product offerings.¹⁹⁹

Courts also consider evidence that an industry or the general public perceives certain products as competing in determining reasonable interchangeability.²⁰⁰ How and whom a firm considers as competition is also relevant.²⁰¹ In this regard, several industry commentators believe satellite radio and music-enabled phones compete.²⁰² Furthermore, XM and Sirius now offer radio streams of their respective music channels to wireless providers²⁰³—an action that implies they view wireless phones as competition.

2. Conclusions Regarding Wireless Phones. The ultimate decision about whether to include or exclude wireless phones in the relevant product market likely hinges on the degree to which the reviewing court considers the future of the market.²⁰⁴ The *Whole Foods* court’s emphasis on the future of the market seems to resolve this issue in favor of the merging parties.²⁰⁵ Thus, an examination of the current state of wireless phones reveals that subscribers have the ability to choose from a variety of music, sports, and news programs at price levels that compete with

198. As previously noted, the Merger Guidelines specifically address the relevance of evidence that buyers have or would shift products in response to other competitive variables. *See supra* Part IV.C; *see also Merger Guidelines, supra* note 67, § 1.11.

199. *See* Hartley, *supra* note 195 (describing the auto industry’s push to allow drivers complete synchronization between cars and phones); Mike Musgrove, *Car Gadgets at Your Command*, WASH. POST, Dec. 12, 2007, at F1 (praising Ford’s *Sync* system—a step towards integrating cars and phones).

200. *See, e.g.,* FTC v. PPG Indus., Inc., 798 F.2d 1500, 1504 (D.C. Cir. 1986) (defining the relevant market based on views held by buyers and sellers of the product).

201. *See, e.g.,* FTC v. Swedish Match, 131 F. Supp. 2d 151, 164 (D.D.C. 2000) (giving weight to defendant’s internal memo declaring that another tobacco firm did not compete).

202. *See* Olga Kharif, *Everyone’s Aiming at Satellite Radio*, BUS. WK., Jan. 13, 2006, http://www.businessweek.com/technology/content/jan2006/tc20060113_897980.htm (commenting on how Motorola’s product development poses a threat to satellite radio).

203. CRA I, *supra* note 35, at 26–27.

204. *See* FTC v. Arch Coal, Inc., 329 F. Supp. 2d 109, 116–17 (D.D.C. 2004) (declaring cases must be resolved on the basis of the record evidence relating to the market and its probable future); *see also* CRA I, *supra* note 35, at 28 (suggesting the likelihood of an increase in demand substitution as the next generation of audio entertainment “devices blend and become less differentiated”).

205. *See* FTC v. Whole Foods Mkt., Inc., 502 F. Supp. 2d 1, 15 (D.D.C. 2007) (observing that the court must consider the realities, unique characteristics, and probable future in defining the relevant market).

satellite radio subscriptions.²⁰⁶ Consumer demand for integration of phones, music, and cars has and will continue to spur innovation.²⁰⁷ To remain competitive, satellite radio now offers subscriptions to wireless phone users in an effort to avoid losing customers who place value in the ability to receive high quality music on their phones.²⁰⁸ All of this evidence indicates wireless phones are reasonable substitutes that may affect the profitability of an *ssnip*.

C. iPods and Other MP3 Players

The merging parties contend iPods and other MP3 players serve as viable substitute products.²⁰⁹ Like audio-enabled wireless phones, these products represent the convergence of several features into one and have a propensity to increase demand substitution from one-dimensional products.²¹⁰ As consumer experts in the audio entertainment market, the competing firms recognize the need to introduce products that retain current customers as well as attract new ones.²¹¹ Most criticism directed towards the inclusion of MP3 players revolves around arguments previously addressed; opponents claim there is no correlation between the demand for MP3 players and price changes in satellite radio.²¹² Having resolved that issue in favor of the merging parties, a closer look at the evidence presented is required.²¹³

Mirroring the development of audio-enabled cell phones, many MP3 players now have the ability to access Wi-Fi networks and receive music streams.²¹⁴ Microsoft's Zune, like other MP3 players, now comes with an FM transmitter in addition to a

206. CRA I, *supra* note 35, at 22–26 (detailing a myriad of offerings from various wireless providers).

207. Hartley, *supra* note 195 (describing the wide range of technological innovations integrated into new and future automobiles).

208. CRA I, *supra* note 35, at 22–26.

209. *Id.* at 4–5.

210. *See id.* at 26–28 (observing the pervasiveness of additional features available for MP3 players and how that generates consumer demand).

211. Antitrust commentators recognize this as relevant evidence of demand elasticity. *See Baker, supra* note 93, at 141 (declaring that buyer substitution as recognized by sellers is relevant).

212. Sidak III, *supra* note 34, at 26.

213. *See supra* Part IV.C (detailing the support for evidence of demand substitution from other competitive variables).

214. *See* Edward C. Baig, *Zune, the Next Generation, Is Enhanced: But Latest Release Still Has Room for Improvement*, USA TODAY, Nov. 15, 2007, at 4B (comparing and contrasting the latest product innovation in MP3 technology).

subscription plan that allows for regular music downloads.²¹⁵ Looking toward the next generation of iPods and MP3 players, a court could reasonably expect manufacturers will continue to enhance the ability of their products to receive real-time content.²¹⁶ Thus, attempting to argue for exclusion based on a lack of access to streaming music is short sighted and unpersuasive.²¹⁷

Additionally, the increasing ease of integrating iPods and other MP3 players into car stereo systems suggests the possibility of demand substitution. Over seventy percent of new cars produced in the United States now come with ports allowing MP3 owners to play music directly from these devices through the car's audio system.²¹⁸ For owners of older vehicles, nearly all electronics stores sell products that allow MP3 players to play over the car's speakers.²¹⁹

Critics claim substantial switching costs would prohibit listeners of satellite radio from substituting products if faced with an *ssnip*.²²⁰ This criticism is not without merit, for the Merger Guidelines specifically list "timing and costs of switching products" as a factor in determining a buyer's response to an *ssnip*.²²¹ MP3 players capable of accessing wireless networks do not come cheap. Often these products cost in excess of \$200.²²² This fact, however, limits only one way in which MP3 players compete; it does not affect the ability to integrate older model players with a car's stereo system. Similarly, playing any MP3 player through a home stereo merely requires the purchase of a \$10 cable.²²³ Specifically, an MP3 player can play through the car's speakers via an auxiliary cable or FM transmitter.²²⁴

215. *Id.*

216. The success of the iPhone, with its ability to connect to the Internet, access e-mail, and receive real-time content supports such a conclusion.

217. See SIDAK I, *supra* note 33, at 30 (emphasizing the inability of an MP3 player to receive real-time content).

218. Editorial, *Sirius, XM: Tough Luck?*, CHI. TRIB., Feb. 23, 2007, § 1, at 24.

219. See, e.g., Crutchfield, iPod/MP3 Car Adaptors, <http://www.crutchfield.com/App/Product/Category/GroupMenu.aspx?g=770&tp=15> (last visited Nov. 14, 2008) (listing several methods for integrating an MP3 player with a car stereo system).

220. Sidak III, *supra* note 34, at 28–29.

221. *Merger Guidelines*, *supra* note 67, § 1.11.

222. See, e.g., Crutchfield, MP3 Players, http://www.crutchfield.com/g_158150/MP3-Players.html?showAll=Y&c=7&tp=242&avf=N (last visited Nov. 14, 2008) (listing MP3 players with wireless capability ranging in price from \$150 to over \$300).

223. See *Playing MP3s Through Your Home Stereo*, <http://tech.yahoo.com/gd/playing-mp3s-through-your-home-stereo/153093> (last visited Nov. 14, 2008) (explaining the simple steps needed to connect an MP3 player or computer to a home sound system).

224. See Crutchfield, Universal, FM & Cassette Adaptors, http://www.crutchfield.com/g_771/Universal-FM-Cassette-Adaptors.html?tp=121 (last

Although no survey or study reveals the percentage of satellite owners who also own MP3 players, an examination of the overall number of MP3 owners, in addition to some logical inferences, allows one to conclude that many satellite subscribers would not face substantial switching costs.

In 2006, market analysts estimated MP3 ownership to be between 46 million and 76 million people over the age of twelve.²²⁵ Moreover, total MP3 ownership is expected to climb by over 60 million by 2009.²²⁶ Even the most conservative estimate of MP3 owners exceeds the current satellite radio subscriber levels by four times.²²⁷ Satellite subscribers' willingness to pay a monthly fee for a premium radio service suggests that a significant portion would also embrace a product that allows for portable music. If true, the costs of switching would be negligible and would not serve as a reason for excluding MP3 players from the market.

A reviewing court, properly analyzing the structure, history, and probable future of the market, should find the evidence set forth by the merging parties persuasive. The ability for people to utilize their MP3 players in automobiles and the promise of continued product developments undercut arguments for exclusion. As with the analysis of wireless phones, the convergence of technology and competitive responses of the market participants indicate that iPods and other MP3 players serve as reasonable substitutes.

D. Application of the snip to the XM-Sirius Merger

The evidence indicates that AM/FM radio, HD radio, audio content-enabled wireless phones, iPods, and other MP3 players are reasonable substitutes for satellite radio. The merging firms have presented surveys and studies indicating demand substitution, noting the competitive responses taken by market participants, and observing how those competitors base business decisions on their view of demand substitution.

The satellite radio industry exhibits dynamic demands, and ignoring these unique market characteristics would lead to "misleading answers to the economic questions raised under the

visited Nov. 14, 2008) (offering devices capable of playing MP3s through a car stereo for as low as \$29.99).

225. See CRA I, *supra* note 35, at 11.

226. *Id.* at 27.

227. See *id.* at 2, 17, 27 (stating that as of year end 2006, the XM and Sirius combined subscription total was less than 14 million).

antitrust laws.”²²⁸ Thus, in evaluating the profitability of the *ssnip*, careful consideration must be given to the long-term effects of any loss of current or potential subscribers. Commentators suggest the evaluation of an *ssnip* is best viewed as a “conceptual guide” rather than “as an algorithm for implementation.”²²⁹ Given the prevalence of reasonable substitutes and satellite radio’s heavy reliance on penetration pricing, a reviewing court must conclude that sufficient consumers would switch to alternative audio entertainment products such that it would not be profitable for a hypothetical monopolist to impose an *ssnip*.²³⁰ As such, the relevant market must constitute all audio entertainment products.

VI. MARKET CONCENTRATION

The definition of a relevant product market is not an end sought by antitrust analysis. Rather, it is a useful tool that allows courts to assess the effect that a proposed merger may have on competition.²³¹ Mergers leading to an increase in market concentration²³² are presumed unlawful because they enhance the likelihood that one firm may raise prices above a competitive level.²³³ An insignificant amount of market power diminishes a merged firm’s ability to profitably raise prices and thus creates a negligible threat for antitrust purposes.²³⁴ This section attempts to highlight the relevant law and divergent arguments raised by the opposing parties. Additionally, it recommends that a reviewing court find the merger between XM and Sirius poses little threat to competition because of a lack of market power.

A. *The Market Power Standard and Evaluation of the XM–Sirius Merger*

The Merger Guidelines measure market share as a ratio of dollar sales, unit sales, or physical capacity, whichever most

228. *Merger Guidelines*, *supra* note 67, § 0.

229. Baker, *supra* note 93, at 142.

230. See *supra* Part V.A–C (showing that consumers view AM/FM and HD radio, wireless phones, and MP3 players as reasonable substitutes).

231. See *United States v. E.I. du Pont de Nemours & Co.*, 353 U.S. 586, 593 (1957) (noting that the competitive effects of a merger can only be analyzed in terms of an affected market).

232. Market concentration is defined as a “function of the number of firms in a market and their respective market shares.” *Merger Guidelines*, *supra* note 67, § 1.5.

233. See, e.g., *United States v. Phila. Nat’l Bank*, 374 U.S. 321, 363 (1963).

234. See *Merger Guidelines*, *supra* note 67, § 1.51 (detailing the analytical framework for review of market concentration and noting that unconcentrated markets with little market power pose no competitive threat).

accurately identifies a firm's "future competitive significance."²³⁵ Generally, judicial assessment follows the same standards.²³⁶ The next step of analysis for a court is to calculate market concentration based upon the market shares of the respective participants.²³⁷ Courts utilize the Herfindahl-Hirschman Index (HHI), an index calculated by summing the squares of individual shares of all firms within the relevant market, to measure market concentration.²³⁸ Because market concentration reveals the likelihood of anticompetitive harm,²³⁹ mergers resulting in insignificant market power are of little concern. Relying on the Merger Guidelines, courts recognize that if the post-merger HHI of a market remains below 1000 or falls between 1000 and 1800, but the change is less than 100, then the transaction poses little threat to competition and no further analysis is needed.²⁴⁰ A highly concentrated market—one with a post-merger HHI in excess of 1800—creates a presumption that the merger enhances the ability to exercise market power.²⁴¹ Nevertheless, even in such a concentrated market, if the change in HHI from pre- to post-merger is less than fifty, then the merger creates little opportunity to raise prices or decrease output and requires no further analysis.²⁴² Practically speaking, if the merger raises concerns regarding unilateral effects,²⁴³ the DOJ and FTC will rarely challenge the transaction unless the merging firms possess market share in excess of thirty-five percent.²⁴⁴

In the instant case, the dispute over market concentration will undoubtedly center on the appropriate measure of market share. Merger opponents state that capacity provides the most

235. See *id.* § 1.41 (noting that dollar sales are typically used for differentiated products, unit sales are used for products distinguished by advantages in serving consumers, and capacity is used if firms have a relatively equal opportunity of securing sales in the future).

236. See *United States v. Gen. Dynamics Corp.*, 415 U.S. 486, 501–04 (1974) (employing capacity as the appropriate measure of market share because this was the most relevant signal of future competitiveness); *FTC v. Swedish Match*, 131 F. Supp. 2d 151, 166 (D.D.C. 2000) (utilizing yearly sales data for market share calculations).

237. See *Phila. Nat'l Bank*, 374 U.S. at 362–63.

238. See, e.g., *FTC v. H.J. Heinz Co.*, 246 F.3d 708, 716 & n.9, 717 (D.C. Cir. 2001) (applying the HHI to evaluate market concentration).

239. See, e.g., *FTC v. Staples, Inc.*, 970 F. Supp. 1066, 1081–82 (D.D.C. 1997).

240. *Id.* at 1081; see also *Merger Guidelines*, *supra* note 67, § 1.51.

241. *Merger Guidelines*, *supra* note 67, § 1.51.

242. *Id.*

243. The Merger Guidelines consider the potential for unilateral and coordinated effects. *Id.* §§ 2.1–2.2. There is no concern regarding coordinated effects in the merger between XM and Sirius because it is not alleged (or practical) that the market participants can engage in coordinated action to the detriment of consumers.

244. COMMENTARY, *supra* note 88, at 26.

accurate prediction of the market participants' future competitive significance.²⁴⁵ Such a measure, however, is typically confined to industries consisting of homogenous products.²⁴⁶ The electrical power industry provides a paradigm of such a market.²⁴⁷ Electricity is electricity, regardless of who provides it. The same is not true for a market comprised of differentiated products such as satellite radio, AM/FM radio, HD radio, wireless phones, and MP3 players.²⁴⁸ Each of these products possesses several relative advantages that appeal to consumers, which distinguishes them from a homogenous product like electricity.²⁴⁹

The Merger Guidelines suggest that, given the characteristics of this market, unit sales would be preferred over revenue.²⁵⁰ As merger critics correctly point out, revenue as a measure of market share would not supply the best indicator of future competitiveness because the separate firms utilize different business models to generate revenue.²⁵¹ Rather, market share determined by household ownership or, alternatively, by the number of users provides a superior measure.²⁵² The first economic analysis report, CRA I, offers a summary of the market when calculating market shares in such a manner. According to CRA I, when utilizing ownership per household, the satellite radio companies possess approximately five percent of the market—the lowest market share of all participants.²⁵³ With the exception of the statistics relating to XM and Sirius, the report relies on estimates for the market participants.²⁵⁴ As such, an

245. SIDAK I, *supra* note 33, at 37.

246. Gregory J. Werden, *Assigning Market Shares*, 70 ANTITRUST L.J. 67, 83 (2002); *see also Merger Guidelines, supra* note 67, § 1.41 (declaring capacity to be appropriate if that is the distinguishing factor among competitors in the market).

247. Werden, *supra* note 246, at 83.

248. Admittedly, a reason for including all of these products in a single relevant market is the convergence of technology. Nevertheless, the fact remains that these products are differentiated.

249. For example, the ability to access the Internet, make phone calls, and access music differentiates wireless audio-enabled phones from satellite and AM/FM radio.

250. *See Merger Guidelines, supra* note 67, § 1.41 (stating that unit sales is appropriate when “firms are distinguished primarily on the basis of their relative advantages in serving different buyers or groups of buyers”).

251. *See* SIDAK I, *supra* note 33, at 37 (observing satellite radio’s extensive reliance on subscription fees and AM/FM radio’s dependence on advertising).

252. *See Merger Guidelines, supra* note 67, § 1.41 (requiring the use of a ratio that most accurately identifies a “firm’s future competitive significance”).

253. *See* CRA I, *supra* note 35, at Exhibit C, tbl.C6 (concluding that AM/FM radio holds a 48% share, MP3 devices a 13.7% share, Internet radio a 24% share, and audio-enabled wireless phones a 9.5% share).

254. The information relating to other market participants comes from several different sources which prevents adequate overall HHI calculations. *See* CRA I, *supra* note 35, at 49–50 (describing the methodology and sources used to compile the data).

overall HHI cannot be calculated; however, the *change* in HHI from the merging firms can be determined by multiplying XM's and Sirius' market shares together and then multiplying that total by two.²⁵⁵ Under the correct definition of the relevant market, which includes all audio entertainment products, the change in HHI equals eleven.²⁵⁶ Even under a narrower market, restricted to satellite and AM/FM radio, the merger would produce a change in HHI of less than fifty, and thus raises no competitive concerns.²⁵⁷

An analysis based on the number of users appears to give similar results. The exact number of users for satellite radio has been redacted in public documents because the companies apparently desire to keep data relating to multiple listeners from one device outside the public's knowledge.²⁵⁸ Judging from the general statements in CRA I, however, it seems reasonable to conclude that these statistics show that when measuring market shares as a ratio of the number of users, the merged firm lacks market power.²⁵⁹

B. Conclusions Regarding Market Power

As a market comprised of differentiated products, each offering relative advantages over another, market share must be assigned on a unit basis.²⁶⁰ An analysis of the market shares for the respective participants reveals that the merged firm lacks market power.²⁶¹ Specifically, the data suggest the XM-Sirius merger results in a net change of HHI that is less than fifty.²⁶² This is true regardless of whether the market is correctly defined as all audio entertainment products or incorrectly limited to satellite radio and AM/FM radio.²⁶³ Without the ability to unilaterally increase prices above the competitive level, the merger poses no threat to competition, and the Merger Guidelines suggest no further review is necessary.²⁶⁴ Relying on

255. See CRA I, *supra* note 35, at Exhibit C, tbl.C6 n.1.

256. *Id.*

257. *Id.*

258. A court reviewing this merger will certainly have access to the complete data and can scrutinize the data appropriately.

259. See CRA I, *supra* note 35, at 50-51 (representing that the change in HHI never exceeds fifty under any of the four different measures of market share).

260. *Merger Guidelines*, *supra* note 67, § 1.41.

261. CRA I, *supra* note 35, at 50-51.

262. *Id.* at 51.

263. *Id.* at 50-51.

264. *Merger Guidelines*, *supra* note 67, § 1.51. If a merger falls outside of the HHI safe harbors, a court proceeds to analyze the competitive effects. *Id.* §§ 1.51, 2.0. However,

this knowledge and following the standards of the Merger Guidelines, a court charged with reviewing the XM–Sirius merger must find that it will not harm competition and should not be enjoined or divested.

VII. CONCLUSION

The proposed merger of satellite radio's only providers provokes controversy in a way that would make satellite's loudest personality, Howard Stern, proud. With billions of dollars at stake and the future of audio entertainment hanging in the balance, the merging firms or their opponents could push this case to a federal courthouse.

Following established antitrust analysis, the reviewing court must first determine the relevant product market. To accomplish this, courts ask if a hypothetical monopolist of satellite radio could profitably impose an *ssnip*. In evaluating the profitability of an *ssnip*, the court must consider the dynamic demands of the satellite radio industry to avoid calculating "misleading answers to the economic questions raised under the antitrust laws."²⁶⁵

XM and Sirius provide sufficient evidence of substitute products that consumers would turn to in face of an *ssnip*. Regarding AM/FM and HD radio, the merging firms offer studies and note the competitive responses via product changes.²⁶⁶ Evidence of substitutability for wireless phones comes from a user's ability to integrate these devices into a car stereo as well as the ability to receive music, news, and sports updates in real-time. On a related note, XM and Sirius introduced products capable of storing memory as a direct result of competition from MP3 players.²⁶⁷ The competitive responses and success of these products brought about by consumer demand indicates a trend toward increased demand substitution as a result of diminishing product differentiation. Consequently, the reviewing court must conclude that all of these products are reasonably interchangeable.

in reliance upon the broad market definition and consequential diminutive market power, this Comment's analysis ends here.

265. *Id.* §§ 0, 1.11.

266. See CRA II, *supra* note 36, at 18–19 (discussing the results and methodology of a survey revealing an inverse relationship between satellite radio penetration and AM/FM signals); Kovach, *supra* note 154 (noting a reduction in commercials on the AM/FM airwaves).

267. CRA I, *supra* note 35, at 27.

Examination of the profitability of an *ssnip* involves more art than science.²⁶⁸ The dynamic demand in the satellite radio industry places a premium on generating future listeners. The presence of several reasonable substitutes, in light of the market characteristic that magnifies the loss of a single customer at the present time, shows how a market defined solely as satellite radio is faulty; an *ssnip* would not be profitable because the actual loss in revenue would exceed the critical loss.²⁶⁹ As the Merger Guidelines and courts require, when the *ssnip* is not profitable, the product market definition must be expanded.²⁷⁰ Thus, the product market is properly defined as audio entertainment products.

Having properly defined the market, the reviewing court must determine market share. The XM-Sirius merger, regardless of whether the product market includes all audio entertainment products or is incorrectly restricted to satellite radio and AM/FM radio, results in a change in HHI of less than fifty.²⁷¹ Thus, comporting with the Merger Guidelines, a court should rule that the merger between XM and Sirius will not harm competition because the merged firm lacks sufficient market power to reduce output or decrease prices.²⁷² Without the ability to harm competition, the merger between XM and Sirius must not be prevented.

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268. See Baker, *supra* note 93, at 142–43 (cautioning against a formulaic approach to profitability evaluation).

269. See *supra* Part IV.B (explaining the dynamic demand theory and how it affects pricing in the satellite radio industry).

270. Merger Guidelines, *supra* note 67, § 1.11.

271. CRA I, *supra* note 35, at 50.

272. See Merger Guidelines, *supra* note 67, § 1.51 (stating that no further merger analysis is needed because the merged firm will be unable to harm competition).