



# Federal Trade Commission

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## **“Antitrust Regulation Of Innovation Markets”**

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### **I. INTRODUCTION**

My remarks this afternoon will focus on whether and to what extent restraints respecting pure innovation markets (as opposed to product markets) are or should be challenged by the agencies as anticompetitive conduct under the antitrust laws. It has often been said that innovation is critical to the long-term success of American industry and the health of the American economy.<sup>1</sup> As one scholar recently noted, “[e]very study in the past fifty years has shown that innovation is far more important than any other

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<sup>1</sup> The views stated here are my own and do not necessarily reflect the views of the Commission or other Commissioners. I am grateful to my attorney advisor, Amanda Reeves, for her invaluable assistance preparing this paper.

<sup>1</sup> Anne K. Bingaman, Assistant Attorney General, Dep’t of Justice Antitrust Division, Competition and Innovation: Bedrock of the American Economy (Sept. 19, 1996), *available at* <http://www.usdoj.gov/atr/public/speeches/0877.htm> (“The term [innovation] is applied to basic scientific breakthroughs, important commercial inventions, product modifications and new production techniques. All are important to society. Innovation, whether in the form of improved product quality and variety or production efficiency that allows lower prices, is a powerful engine for enhancing consumer welfare.”).

economic efficiency in fostering growth.”<sup>2</sup> What market conditions best foster innovation, however, has been described as “one the most heated discussions in economic circles in recent years” and thus a topic of much debate.<sup>3</sup>

In his landmark 1942 work, *Capitalism, Socialism and Democracy*, Joseph Schumpeter famously theorized that concentration was essential to promoting innovation.<sup>4</sup> In particular, he suggested that firms with substantial market power—which did not have to think in terms of short-term response to rivals—were the most likely to invest in the long-range research and development that leads to major innovation. Echoing Schumpeter, the Supreme Court recently held in *Trinko* that a private plaintiff did not state a Section 2 claim against Verizon based on allegations that Verizon failed to share its network with its competitors.<sup>5</sup> Writing for the Court, Justice Scalia emphasized in dictum that monopoly power was, in some cases, itself pro-competitive because it attracted more innovation by concomitantly allowing a party to charge monopoly prices and thus “induces risk taking that produces innovation and economic growth.”<sup>6</sup>

The Schumpeter view has not been without its critics. In 1976, Kenneth Arrow took the opposite view, arguing that “the incentive to invent is less under monopolistic

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<sup>2</sup> Michael A. Carrier, *Two Puzzles Resolved: Of the Schumpeter-Arrow Stalemate and Pharmaceutical Innovation Markets*, 93 Iowa L. Rev. 393, 399 & n. 8 (2008).

<sup>3</sup> *Id.* at 396.

<sup>4</sup> JOSEPH R. SCHUMPETER, *CAPITALISM, SOCIALISM, AND DEMOCRACY* 81-106 (Harper & Row Publishers, Inc. 1975) (1942).

<sup>5</sup> *Verizon Commc’ns Inc. v. Law Offices of Curtis V. Trinko, LLP*, 540 U.S. 398 (2004).

<sup>6</sup> *Id.* at 407.

than under competitive conditions.”<sup>7</sup> He asserted that because the costs of innovation are very high, a competitor has the economic benefit of receiving the technology from a prior invention without incurring the costs, while a monopolist has a “strong disincentive for further innovation.”<sup>8</sup> Similarly, more recently Professor Mike Scherer has concluded that very high market concentrations are “apt to retard progress by restricting the number of independent sources of initiative and by dampening firms’ incentive to gain market position through accelerated R&D.”<sup>9</sup>

Compounding the disagreement over whether antitrust laws should regulate innovation, there has likewise been disagreement over whether patents are critical to innovation. Professor Scherer argues that patents have been relatively unimportant to the decision-making processes of large corporations in deciding when to innovate and, in some cases, have inhibited innovation.<sup>10</sup> Scherer contends that while patent protection does increase the expectation of profit in some specific industries (like pharmaceuticals, where there is a direct correlation between patent power and market position), more often than not, the fact that patents protect a handful of firms weakens the incentives for upstart

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<sup>7</sup> Kenneth J. Arrow, “Economic Welfare and the Allocation of Resources for Invention,” in *ESSAYS IN THE THEORY OF RISK BEARING* 144, 157 (3d ed. 1976).

<sup>8</sup> *Id.* at 158.

<sup>9</sup> F. M. Scherer & David Ross, *INDUSTRIAL MARKET STRUCTURE AND ECONOMIC PERFORMANCE* 660 (3d ed. 1990); *see also* F. M. Scherer, “Antitrust, Efficiency, and Progress,” in *REVITALIZING ANTITRUST IN ITS SECOND CENTURY* 130, 148 (Harry First, Eleanor M. Fox & Robert Pitofsky eds., 1991) (noting that monopolies often generate inefficiencies because monopolies do not tend to be a source of innovation and progress).

<sup>10</sup> F.M. Scherer, “The Political Economy of Patent Policy Reform in the United States,” AEI Brookings Joint Center for Regulatory Studies (October 2006), *available at* [http://aei-brookings.org/admin/authorpdfs/redirect-safely.php?fname=../pdffiles/WP06-22\\_topost.pdf](http://aei-brookings.org/admin/authorpdfs/redirect-safely.php?fname=../pdffiles/WP06-22_topost.pdf).

competitors to engage in vigorous innovation.<sup>11</sup> In contrast, James Langenfeld has suggested that “[p]atents and other intellectual property rights are critical in stimulating innovation and ensuring dynamic competition” and “must be protected.”<sup>12</sup>

But that is a debate for another day. Today I will address three topics relevant to the consideration of whether the antitrust laws should regulate innovation markets. First, I will address the history of agency interest in restraints on competition respecting innovation. Second, I will address the practical issues in challenging those restraints as antitrust violations. Finally, I will address the legal issues arising under such challenges, including possible limiting principles.

## **II. HISTORY OF AGENCY REGULATION OF COMPETITION IN INNOVATION MARKETS**

In the nearly 120-year history of antitrust law, the concept of “innovation markets” is relatively new. Indeed, the question of whether the antitrust laws should even be in the business of regulating competition in innovation appears to have first arisen in the mid 1970s when, to my knowledge, the first significant challenge to a merger on a theory that the consolidation would harm competition in an innovation market occurred following the merger of Xerox and Rank-Xerox.

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<sup>11</sup> See also Adam B. Jaffe & Josh Lerner *Innovation & Its Discontents* 1 (Princeton University Press 2004) (“In the last two decades, ... the role of patents in the U.S innovation system has changed from fuel for the engine to sand in the gears. Two apparently mundane changes in patent law and policy [creation of CAFC and PTO service fee arrangement] have subtly but inexorably transformed the patent system from a shield that innovators could use to protect themselves, to a grenade that firms lob indiscriminately at their competitors, thereby increasing the cost and risk of innovation rather than decreasing it.”).

<sup>12</sup> James Langenfeld, *Antitrust: New Economy, New Regime*, 52 Case W. Res. 91, 96 (Fall 2001).

In *Xerox*, the Commission alleged that Xerox violated Section 5 of the FTC Act by creating and preserving a noncompetitive market structure in the market for plain paper copiers by, among other things, developing an extensive patent portfolio, through acquisition of control over Rank Xerox, a joint venture in which Xerox had previously held a non-majority stake.<sup>13</sup> Because Xerox had acquired patents to all of the technologies needed to engage in xerography, the Commission alleged that Xerox was eliminating the competition in the development and creation of office copiers. The Commission settled the *Xerox* suit in 1975 with a consent decree that required Xerox to permit the use of any three of its dry paper copier patents on a royalty-free basis and to desist in pursuing certain of its infringement suits.<sup>14</sup>

Following *Xerox*, the agencies went for nearly two decades without any significant challenges to restraints on innovation markets. In part this was likely because the rise of the Chicago School theory of economics during the Reagan and Bush Administrations. Because the Chicago School theory grounds antitrust enforcement in price theory, efficiencies, and the idea that markets essentially take care of themselves, its proponents believe that the market (and not the government, with limited exceptions) should regulate competition. As a result, Chicago School adherents likely had little appetite for arguments that the government should seek to engage in more aggressive enforcement and supply additional protections for the more amorphous innovation markets that I am discussing today. In any event, whatever the reason, history tells us

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<sup>13</sup> See Complaint, Xerox Corp., Docket No. 8909, reprinted in Xerox Corp., 86 F.T.C. 364, 364-68 (1975) (hereinafter “Complaint”), ¶¶14(a)-(c), 15. The *Xerox* case is discussed in detail in Willard K. Tom, *The 1975 Xerox Consent Decree: Ancient Artifacts and Current Tensions*, 68 Antitrust L. J. 967 (2001).

<sup>14</sup> *Id.*

that Chairmen Daniel Oliver and James Miller at the Commission, and Professor William Baxter, who served as Assistant Attorney General for the Antitrust Division, had little interest in bringing cases that alleged competitive harm to innovation markets.

Beginning with Anne Bingaman's tenure as Assistant Attorney General for the Antitrust Division in 1993, however, the agencies began to chart a different course.<sup>15</sup> In *United States v. General Motors Corp.*, Bingaman and the DOJ challenged the proposed acquisition of General Motors' Allison Transmission Division by ZF Friedrichshafen AG, a German company on innovation grounds.<sup>16</sup> Although the transaction would have resulted in very high levels of concentration in a few application-specific bus and truck transmission markets, as Bingaman later noted, the DOJ's concern was "not limited to these narrow product markets where the two firms presently were alternative sources of supply."<sup>17</sup> Instead, the DOJ alleged that the acquisition would stifle competition in "worldwide technological innovation in the design and production of automatic transmissions for medium and heavy duty commercial and military vehicles" because ZF would not engage in the same vigorous research and development after the merger.<sup>18</sup> The

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<sup>15</sup> Richard M. Brunell, *Editor's Note*, 64 Antitrust L.J. 1 (1995) ("The centerpiece of the Clinton Administration's 'new thinking' on innovation was its development of an 'innovation market' approach to merger enforcement; that is, an approach that specifically analyzes the effect of proposed mergers on innovation.").

<sup>16</sup> *United States v. General Motors Corp.*, Civ. No. 93-530 (D. Del. filed Nov. 16, 1993) ("*General Motors Complaint*").

<sup>17</sup> Anne K. Bingaman, Assistant Attorney General, Dep't of Justice Antitrust Division, *Antitrust and Innovation in a High Technology Society* (January 10, 1994) available at <http://www.usdoj.gov/atr/public/speeches/0108.htm> (hereafter "Bingaman Remarks").

<sup>18</sup> *General Motors Complaint*. See also Bingaman Remarks ("In this manner, our complaint captured the scope of the feared anticompetitive effect – innovation over the entire line of heavy-duty truck and bus transmissions, not just those few product lines that had been the subject of direct sales competition in the past."); see also Anne K.

DOJ's challenge, however, proved short-lived: after the DOJ sought a preliminary injunction in federal district court in 1993, the parties abandoned the merger.

The next step in the agencies' formal recognition that innovation markets were a proper target for the antitrust laws followed in 1995 when the FTC and DOJ jointly issued the Antitrust Guidelines for the Licensing of Intellectual Property ("Intellectual Property Guidelines"), which asserted that, as a general matter, intellectual property should be treated like any other kind of property for antitrust purposes.<sup>19</sup> The Intellectual Property Guidelines recognized three different markets that licensing arrangements might affect: goods markets, technology markets, and, of relevance here, innovation markets. The Intellectual Property Guidelines defined those markets as consisting of "the research and development directed to particular new or improved goods or processes, and the close substitutes for that research and development."<sup>20</sup> "The close substitutes," the Guidelines stated, consist of "research and development efforts, technologies, and goods that significantly constrain the exercise of market power with respect to the relevant research and development . . . ."<sup>21</sup> The Intellectual Property Guidelines further asserted that "[t]he agencies" would "delineate an innovation market only when the capabilities to engage in the relevant research and development can be associated with specialized assets

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Bingaman, Assistant Attorney General, Dep't of Justice Antitrust Division, Speech Before the Commonwealth Club of Cal. (July 29, 1994), *available at* <http://www.usdoj.gov/atr/public/speeches/innovate.htm> ("Firms that prosper are more likely to be those that face fierce rivalry in their home markets than the sheltered monopolists. In a very real sense, it seems, the fear of being left behind is more likely to spur innovation than the security bred of stable market power.").

<sup>19</sup> Dep't of Justice and Federal Trade Comm'n, Antitrust Guidelines for the Licensing of Intellectual Property ("IP Guidelines") (April 6, 1995), *available at* <http://www.usdoj.gov/atr/public/guidelines/0558.htm>.

<sup>20</sup> IP Guidelines, § 3.2.3.

<sup>21</sup> *Id.*

or characteristics of specific firms.”<sup>22</sup> The Guidelines limited the impact of the innovation market analysis by suggesting that a “safe harbor” should exist if five potential innovators exist in the market.<sup>23</sup>

Thereafter, under Chairman Pitofsky at the FTC and Joel Klein at DOJ, the agencies routinely required the divestiture<sup>24</sup> or compulsory licensing<sup>25</sup> of intellectual

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<sup>22</sup> *Id.* Although the Intellectual Property Guidelines did not apply the concept of an innovation market to anything other than the licensing of intellectual property, in their well-recognized article released around the same time as the Intellectual Property Guidelines, *Incorporating Dynamic Efficiency Concerns in Merger Analysis: The Use of Innovation Markets*, Richard Gilbert and Steven Sunshine explained how the innovation market should apply to traditional merger review. Richard J. Gilbert & Steven C. Sunshine, *Incorporating Dynamic Efficiency Concerns in Merger Analysis: The Use of Innovation Markets*, 63 *Antitrust L.J.* 569 (1994).

<sup>23</sup> *Id.* at § 4.3 (explaining that the agencies will not challenge a restraint that may affect competition in an innovation market if, among other things, “four or more independently controlled entities in addition to the parties to the licensing arrangement possess the required special assets or characteristics and incentive to engage in research and development that is a close substitute of the research and development activities of the parties to the licensing agreement”).

<sup>24</sup> *See United States v. Allied Signal Inc. and Honeywell Inc.*, No. 99-2959, 2000 U.S. Dist. LEXIS 15099 (D.D.C. March 22, 2000) (consent order required the parties, the two leading competitors in the development of certain aerospace products, to divest businesses and assets relating to those products); *Baxter Internat’l*, 123 F.T.C. 904 (March 24, 1997) (consent order requiring Baxter International to, among other things, divest certain treatment assets in connection with Baxter’s acquisition of Immuno International, which combined two of the leading commercial developers of the Factor VIII inhibitor treatments used to treat antibodies in hemophiliacs).

<sup>25</sup> *See United States v. Miller Indus.*, No. 00-0305 (TPJ), 2000 U.S. Dist. LEXIS 19542 (D.D.C. Dec. 12, 2000) (requiring Miller, in conjunction with its acquisition of Chevron—which increased Miller’s ownership of valuable patent rights related to improvements in light-duty tow trucks and light-duty car carriers—to offer any third party nonexclusive licenses); *Summit Tech.*, FTC Docket No. 9286 (Feb. 23, 1999) (consent order), *available at* <http://www.ftc.gov/os/1999/03/d09286summit.do.htm> (requiring Summit and VISX, as a condition of a partnership arrangement, to license to each other, on a royalty free basis, the patents that each firm contributed to the partnership in order to recreate the incentive to conduct research and development that existed prior to the pooling arrangement); *In the Matter of Ciba-Geigy Ltd.*, 123 F.T.C. 842 (1997) (consent order in connection with the merger of Ciba-Geigy and Sandoz, the two leading commercial developers of gene therapy products, which required the



property, particularly in pharmaceutical mergers, which resulted in a number of consent decrees.

The agencies' practice of challenging innovation markets, however, mostly stopped during the Bush Administration when Tim Muris became Chairman of the FTC in 2001 and Hew Pate became Assistant Attorney General for Antitrust at the DOJ in 2003. Indeed, while innovation cases involving mergers in the pharmaceutical industry permeated the FTC's case load during the 1990s,<sup>26</sup> claims of innovation harm virtually evaporated from complaints filed by the FTC from 2004-2008. During this period, the FTC pursued an innovation harm claim in just one case (*Genzyme/Ilex*) in 2005.<sup>27</sup>

### **III. PRACTICAL CONSIDERATIONS THAT UNDERLIE ATTEMPTS TO REGULATE INNOVATION MARKETS UNDER THE ANTITRUST LAWS**

Next I would like to discuss the practical issues that underlie any attempt to regulate innovation markets. I have identified at least three such considerations.

First, the most fundamental practical consideration is whether, from a policy standpoint, the application of antitrust laws to innovation markets provides consumers with better products or products that are developed more quickly. Critics of applying antitrust laws to regulate "innovation markets" assert that while it is generally accepted

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combined firm to license the specified gene therapy technology and patent rights to Rhone-Poulenc so that Rhone-Poulenc could compete with the combined firm).

<sup>26</sup> See David A. Balto & Andrew M. Wolman, *Intellectual Property and Antitrust: General Principles*, 43 IDEA 395, 424-25 (2003) ("From 1990 to 1994, the FTC and DOJ identified innovation concerns in their challenges of four mergers, while from 1995 to 1999, the agencies cited innovation concerns in challenging 47 different proposed mergers.").

<sup>27</sup> Compiled from information obtained from "Overview of FTC Antitrust Actions in Pharmaceutical Services and Products" (Sept. 2008), available at <http://www.ftc.gov/bc/0809rxupdate.pdf>.

that increases in concentration do tend to detrimentally affect *prices*, the relationship between concentration and *innovation* is far more ambiguous.<sup>28</sup> Put another way, while there is generally agreement about what type of market structure fosters competition in product markets, as I've said, "[t]here is not yet a universally accepted consensus as to the kind of market structure that best facilitates innovation."<sup>29</sup> Is it better to lock scientists from competing firms in a room and let intellectual fermentation occur? Will that result in more innovation or at least quicker innovation than challenging such collaboration as an antitrust violation under Section 1 or Section 7? Or, conversely, are consumers better off when the agencies use antitrust laws to increase competition's role in innovation because innovation declines when concentration increases? The jury is still out on that fundamental question. It bears noting, however, that we let a similar kind of collaboration occur in the standard-setting process and, to some degree, when patent pools are formed.

A second practical consideration was raised by Chairman Muris in the *Genzyme-Novazyme* merger—namely, whether it is even possible to accurately measure market shares in innovation markets, particularly when the agency's theory of the case is that a merger will threaten potential competition in an as-yet undefined market. *Genzyme-Novazyme*, for example, was a post-acquisition investigation<sup>30</sup> into a merger between the

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<sup>28</sup> See M. Howard Morse, *The Limits of Innovation Markets*, Antitrust & Intellectual Property (Spring 2001); Richard Rapp, *The Misapplication of the Innovation Market Approach to Merger Analysis*, 64 Antitrust L.J. 19 (1995).

<sup>29</sup> Ronald W. Davis, *Innovation Markets and Merger Enforcement: Current Practice in Perspective*, 71 Antitrust L. J. 677, 681 (2003).

<sup>30</sup> The acquisition did not trigger the notification requirements of the Hart-Scott-Rodino Act and the Commission therefore did not have the ability to investigate the merger until after the transaction closed.

only two companies engaged in preclinical research related to Pompe disease—a rare, often fatal disorder affecting infants and children for which there was no known treatment. Despite the relatively early stage of research and development that Genzyme and Novazyme were engaged in, there was no dispute that enzyme replacement treatment (or “ERT”) was the only therapeutic approach that showed promise for treating Pompe disease. As a result, the “universe” of research and development efforts was well-defined: before the merger, there were two companies engaged in that universe of research; afterwards, there was just one. Notwithstanding that fact, in a January 2004 3-1-1 decision, the FTC refused to challenge the merger.<sup>31</sup>

Chairman Muris voted with the majority and explained in a separate statement that there was little empirical research to suggest a direct relationship between concentration in research and development and the level of innovation.<sup>32</sup> Thus, he believed, the Merger Guidelines’ “rebuttable presumption” that significant market concentration is anticompetitive should not apply to innovation merger analysis.<sup>33</sup> He stated that “neither economic theory nor empirical research supports an inference regarding the merger’s likely effect on innovation (and hence patient welfare) based

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<sup>31</sup> FTC Press Release, *FTC Closes Its Investigation of Genzyme Corporation’s 2001 Acquisition of Novazyme Pharmaceuticals*, available at <http://www.ftc.gov/opa/2004/01/genzyme.htm>.

<sup>32</sup> See Statement of Chairman Timothy J. Muris in the Matter of Genzyme Corporation/Novazyme Pharmaceuticals, available at <http://www.ftc.gov/os/2004/01/murisgenzymestmt.pdf>.

<sup>33</sup> *Id.* (“There is no reason to believe, a priori, that a particular merger is more likely to harm innovation than to help it—which is, of course, simply another way of saying that there is no empirical basis for a [rebuttable] presumption.”).

simply on observing that the merger changed the number of R&D programs.”<sup>34</sup>

“Rather,” he wrote, “one must examine whether the merged firm was likely to have a reduced incentive to invest in R&D, and also whether it was likely to have the ability to conduct R&D more successfully.”<sup>35</sup>

As a practical matter, Muris’s statement points out, first, the possibility that research and development does not lend itself to market share analysis (which I will expand on more fully shortly) and, second, to the extent that research and development can be analyzed under a market share analysis, it tells us nothing about the ultimate question of whether consolidation will negatively affect research and development and, thus, innovation. Muris thus posits that whatever “share” of a particular innovation market that a company possesses is not necessarily indicative of whether R&D will rise or fall. Given that antitrust analysis relies heavily on market definition and market shares in determining whether a merger will have anticompetitive effects, Muris’s observation poses a stumbling block at the very least.

A third practical consideration is whether, notwithstanding the Intellectual Property Guidelines, it is accurate to consider all intellectual property (i.e. patents, trade secrets, know-how, trademarks, etc.) as akin to other species of property. Are there any limiting principles and what are they? For example, one limiting principle might be that we should limit our conception of property to patented intellectual property rights. This

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<sup>34</sup> *Id.* at 5-6. In reaching that conclusion, Muris relied heavily on a 1996 report prepared by the Commission’s staff which, he observed, acknowledged that “economic theory and empirical investigations have not established a general causal relationship between innovation and competition.” *Id.* at 2-3 (citing FTC Staff Report, *Anticipating the 21st Century: Competition Policy in the New High-Tech Global Marketplace* (May 1996)).

<sup>35</sup> *Id.*

would have the unifying effect of merely extending the antitrust laws to regulate research and development where there is a pre-existing property right. Such a limiting principle also makes practical sense from a remedy standpoint. The FTC and the DOJ have long recognized that compulsory licensing is one option for parties to remedy anticompetitive effects of their conduct. There is no such similar, pre-existing remedy that could apply to anticompetitive conduct that targets intellectual property that is not yet subject to the protections of the patent laws.<sup>36</sup>

#### **IV. LEGAL CONSIDERATIONS RELEVANT TO DETERMINING WHEN ANTITRUST CHALLENGES TO INNOVATION MARKETS ARE APPROPRIATE**

Finally, I would like to address the legal considerations that bear on when antitrust challenges to innovation markets are appropriate. I will address four considerations in turn.

First, it cannot be ignored that, in the 35 years since the Commission first challenged a merger under an innovation market theory when it contested the Rank-Xerox merger in 1974, there still has not been a successful antitrust challenge (public or private) based on the theory that a defendant stifled or threatened competition in a purely

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<sup>36</sup> Indeed, to take one example, compulsory trademark licensing has never been awarded as a remedy under the antitrust laws. McCarthy's Desk Encyclopedia of Intellectual Property, 88 (3d ed. 2004) ("There is no general statutory or case law rule permitting the compulsory licensing of trademarks in the United States."); *Jack Walters & Sons Corp. v. Morton Bldg.*, 737 F.2d 698, 704 (7th Cir. 1984) (noting that a proposal to impose a compulsory trademark licensing scheme as a remedy to an antitrust claim was an "absurd project").

innovation market (i.e. when there is no product market at the time that the patent is acquired).<sup>37</sup>

Rank-Xerox itself resulted in a consent decree which required compulsory licensing of Xerox's patents. The Second Circuit's 1981 decision in *SCM Corp. v. Xerox Corp.* followed, and, as the main federal court decision to have considered whether and how antitrust laws should regulate innovation markets, has arguably made future challenges more difficult.<sup>38</sup> In *SCM*, relying on the same facts that the FTC pleaded in its *Xerox* challenge, *SCM* alleged that, by 1969, Xerox had willfully acquired monopoly power in a relevant product market that consisted of convenience office copiers using plain and coated paper and that Xerox had excluded *SCM* from that relevant market. *SCM* sought damages back to 1964, the year that *SCM* first requested and was denied a license from Xerox to manufacture its own plain-paper copier.<sup>39</sup>

Following a fourteen-month trial, however, the jury answered several interrogatories and found, among other things, that "the only patent-related conduct of Xerox causally related to *SCM*'s claimed injuries under its 1969 exclusion claim was the 1956 Xerox-Battelle agreement" which transferred title to Battelle's patents to Xerox and eliminated Xerox's obligation to sublicense the patents. Thus, the principal issue on appeal was whether Xerox's acquisition of the patents pursuant to the 1956 agreement constituted anticompetitive conduct that was cognizable under the antitrust laws.<sup>40</sup>

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<sup>37</sup> Antitrust Law Developments, 587 (6th ed. 2007) ("To date, no court has invalidated a transaction solely because it reduced competition in an innovation market.").

<sup>38</sup> *SCM Corp. v. Xerox Corp.*, 645 F.2d 1195 (2d Cir. 1981).

<sup>39</sup> *Id.* at 1201 n.5

<sup>40</sup> *Id.* at 1203.

Relying on the jury’s finding that a relevant product market did not exist in 1964—well after Xerox acquired the patents from Battelle—the Second Circuit held that Xerox did not and could not have violated the antitrust laws in 1954 because acquisition of a patent in a defined market was a predicate to SCM’s antitrust claim. The court noted that “[t]he patent system would be seriously undermined . . . were the threat of potential antitrust liability to attach upon the acquisition of a patent at a time prior to the existence of the relevant market and, even more disconcerting, at a time prior to the commercialization of the patented art.”<sup>41</sup> The court thus held “that were a patent has been lawfully acquired, subsequent conduct permissible under the patent laws cannot trigger any liability under the antitrust laws.”<sup>42</sup> The Second Circuit rejected SCM’s claim that the patents were unlawfully acquired on the grounds that, “whether limitations should be imposed on the patent rights of an acquiring party should be dictated by the extent of the power already possessed by that party in the relevant market into which the products embodying the patented art enter.”<sup>43</sup> Because no product market existed in 1954, Xerox was not liable under the antitrust laws for acquiring patents in a pure innovation market.<sup>44</sup> The court thus held that Xerox’s same acquisitions of all of the

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<sup>41</sup> *Id.* at 1206.

<sup>42</sup> *Id.*

<sup>43</sup> *Id.* at 1208.

<sup>44</sup> More recently, courts have reiterated in cases that did not concern innovation that a pre-existing market is a prerequisite to liability under Section 7 of the Clayton Act. *See also Crucible, Inc. v. Stora Kopparbergs Bergslags AB*, 701 F. Supp. 1157, 1162-63 (W.D. Pa. 1988) (ruling that “the absence of a relevant [product] market . . . at the time of patent acquisition precludes the applicability of Section 7”); *Fraser v. Major League Soccer, LLC*, 97 F. Supp. 2d 130, 140-41 (D. Mass. 2000) (“Where there is no existing market, there can be no reduction in the level of competition . . . Competition that does not exist cannot be decreased.”), *aff’d* 284 F.3d 47, 71 (1st Cir. 2002) (“Even advocates of a broader reading of Section 7 concede that striking down a combination that does not

Battelle plain paper copier patents did not violate Sections 1 and 2 of the Sherman Act or Section 7 of the Clayton Act.<sup>45</sup>

While the FTC and DOJ's appetite for challenging mergers under an innovation market theory demonstrably increased during the 1990s,<sup>46</sup> the agencies have yet to litigate to a conclusion a case that involved an innovation market. Instead, as I observed earlier, the FTC and DOJ's more recent challenges to pharmaceutical mergers and other cases that involved innovation markets all resulted in consent decrees that required divestitures or compulsory licenses. Moreover, in all of those cases, the respondents arguably settled because the innovation markets alleged represented an insignificant part of the entire transaction that they were anxious to consummate.<sup>47</sup>

The FTC's 1997 consent decree that authorized the *Ciba-Geigy/Sandoz* merger is a good example.<sup>48</sup> At the time of the proposed merger, Ciba and Sandoz were the leading contenders in the effort to develop and market gene therapy products in the United States and held proprietary rights to various inputs crucial to the development of gene therapy. When the FTC started its investigation in 1996, the FDA had not approved

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threaten present competition could be justified . . . *only in already concentrated markets.*" (emphasis added)).

<sup>45</sup> For a critique of the Second Circuit's decision as outdated and inconsistent with current enforcement policy, see Jonathan M. Jacobson, "Do We Need a 'New Economy' Exception for Antitrust?" 16 Antitrust ABA 89, 90-91 (2001).

<sup>46</sup> See Balto & Wolman, *supra* note 26.

<sup>47</sup> Davis, *supra* note 29, 71 Antitrust L. J. at 694 (discussing innovation cases and noting that "[o]ne might have thought that some of these enforcement actions would be vulnerable to severe judicial scrutiny if tested in the context of a preliminary injunction hearing" and noting that "[t]o date, the enforcement targets have elected to settle rather than fight presumably . . . because the agencies' challenges have, by and large, not involved businesses that were vital.")

<sup>48</sup> *In the Matter of Ciba-Geigy Ltd.*, Decision and Order, 123 F.T.C. 842 (March 24, 1997).



any gene therapy products; as a result, there was no product market relating to gene therapy. The FTC challenged the merger on several grounds, including that the merger would give the new entity power to raise prices in the markets for herbicides used in growing corn and for flea-control products for pets. But the FTC also expressed concern about research and development and the possibility of future innovations in the market for gene therapy products. Specifically, the FTC was concerned that the post-merger entity (Novartis) would not adequately license its proprietary information related to gene therapy thereby preventing other firms from competing in the research and development of new gene therapies.

The end result was a consent decree that preserved the merger, provided that one of the parties divested the overlapping herbicide and flea-control businesses. As to the overlapping gene therapy research and development efforts, the FTC did not compel either side to divest its gene therapy division. Instead it required the parties to license the gene therapy technology and patents so that one of the merged entity's principle rivals could compete against Novartis in the "market" for gene therapy research and development.<sup>49</sup> The parties were thus willing to give up their exclusive control over the intellectual property in order to preserve the merger itself. As a result, in *Ciba-Geigy/Sandoz*—and every merger that has been challenged on innovation market grounds that has since followed—the issue of whether an innovation market was cognizable under Section 7 was not litigated.

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<sup>49</sup> *In the Matter of Ciba-Geigy Ltd.*, Docket No. 3725 (Mar. 24, 1997) (Analysis of Proposed Consent Order to Aid Public Comment) 9, available at <http://www.ftc.gov/os/1996/12/ciba.pdf>.

A second major consideration is whether, as a matter of law, collaboration among competing firms can ever be consistent with the antitrust laws. I would suggest that such collaboration can be and is consistent with the antitrust laws. After all, we not only tolerate but applaud standard-setting activities, which are a form of such collaboration. As the Commission noted in its *Rambus* decision, “[a]lthough standard setting displaces the normal process of selection through market-based competition . . . the efficiency benefits of consensus standard setting easily can outweigh that loss of competition.”<sup>50</sup>

Indeed, standard joint venture analysis considers not only the anticompetitive consequences of such collaboration among competitors, but also its pro-competitive virtues. The Supreme Court’s 1979 decision in *Broadcast Music, Inc. v. CBS* is instructive.<sup>51</sup> In *Broadcast Music*, thousands of authors and composers had joined together and granted nonexclusive rights to two joint venture entities, American Society of Composers, Authors and Publishers (ASCAP) and Broadcast Music, Inc. (BMI), to offer a blanket license to all their musical compositions. Although the Second Circuit held the blanket license arrangements were per se illegal price fixing, the Supreme Court disagreed because the blanket license offered substantial pro-competitive efficiencies that were “potentially beneficial to both sellers and buyers” in the form of integration of sales, monitoring, and enforcement against copyright infringements. The Court has since observed that “*Broadcast Music* squarely holds that a joint selling arrangement may be so efficient that it will increase sellers’ aggregate output and thus be pro-competitive.”<sup>52</sup>

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<sup>50</sup> *In the Matter of Rambus*, Docket No. 9302 at 33, available at <http://www.ftc.gov/os/adjpro/d9302/060802commissionopinion.pdf>

<sup>51</sup> *Broadcast Music, Inc. v. Columbia Broadcasting System, Inc.*, 441 U.S. 1 (1979).

<sup>52</sup> *Nat’l Collegiate Athletic Assoc. v. Bd. of Regents of the Univ. of Okla.*, 468 U.S. 85, 103 (1984). See also *Texaco Inc. v. Dagher*, 126 S. Ct. 1276 (2006) (holding that a

In *Broadcast Music*'s wake, lower courts have repeatedly held that joint venture agreements are not per se unlawful when they plausibly suggest a potential for creating pro-competitive efficiencies by integrating the parties' resources. Courts have thus held the following are not per se unlawful: (1) joint venture agreements among colleges that limited the annual compensation of college basketball coaches on the grounds that those agreements enabled college basketball to exist;<sup>53</sup> (2) joint venture agreements among credit card associations that prevented the member associations from issuing nonmember competitors' credit cards because they were pro-competitive;<sup>54</sup> and (3) joint venture agreements among distributors whereby the distributors agreed to provide one stop service for large buyers that no distributor could provide on its own in the absence of the joint venture.<sup>55</sup>

Perhaps the most significant development in the context of joint ventures was the 2000 release of the Joint DOJ-FTC Antitrust Guidelines for Collaborations Among Competitors.<sup>56</sup> Consistent with the evolving case law, the Guidelines recognize that "such collaborations are not only benign but pro-competitive"<sup>57</sup> and "may enable participants to offer goods or services that are cheaper, more valuable to consumers, or

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joint venture agreement between competitors Texaco and Shell Oil to sell gasoline in the western United States under the two owners' brand names at the same price was per se illegal; where the FTC had approved the joint venture, it was presumptively pro-competitive and the joint venture's pricing decisions unlawful simply because they were the product of a joint venture).

<sup>53</sup> *Law v. Nat'l Collegiate Athletic Assoc.*, 134 F.3d 1010, 1018 (10th Cir. 1998).

<sup>54</sup> *United States v. Visa, U.S.A., Inc.*, 344 F.3d 229, 238 (2d Cir. 2003).

<sup>55</sup> *Augusta News Co. v. Hudson News Co.*, 269 F.3d 41, 48 (1st Cir. 2001).

<sup>56</sup> Federal Trade Comm'n & Dep't of Justice, Antitrust Guidelines for Collaboration Among Competitors (April 2000), available at <http://www.ftc.gov/os/2000/04/ftcdojguidelines.pdf>.

<sup>57</sup> *Id.* at 1.

brought to market faster than would be possible absent any collaboration.”<sup>58</sup> To encourage pro-competitive collaborations, the Collaborative Conduct Guidelines seek to supply businesses with a framework for understanding when collaborative conduct is likely to run afoul of the antitrust laws.<sup>59</sup>

Of particular relevance to my remarks today, the Collaborative Conduct Guidelines speak favorably of research and development collaborations and observe that “[m]ost such agreements are pro-competitive. . . . Through the combination of complementary assets, technology or know-how, an R&D collaboration may enable participants more quickly or more efficiently to research and develop new or improved goods, services, or production processes.”<sup>60</sup> These Collaborative Conduct Guidelines built upon area-specific principles that the agencies promulgated in 1995 in the Joint Antitrust Guidelines for Licensing of Intellectual Property and in 1996 in the DOJ-FTC Joint Statement of Antitrust Enforcement Policy in Health Care.<sup>61</sup> Both sets of guidelines recognized that collaborative conduct in the intellectual property and health care contexts were pro-competitive.<sup>62</sup>

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<sup>58</sup> *Id.* at § 2.1.

<sup>59</sup> *Id.* at 1.

<sup>60</sup> *Id.* at § 3.31(a).

<sup>61</sup> U.S. Dep’t of Justice & Federal Trade Comm’n, Statements of Antitrust Enforcement Policy in Health Care (“Health Care Statements”) (August 01996), *available at* <http://www.usdoj.gov/atr/public/guidelines/0000.htm>.

<sup>62</sup> Intellectual Property Guidelines, § 2.3; *see also id.* §5.1 (“As in the case of joint ventures among horizontal competitors, licensing agreements among such competitors may promote rather than hinder competition if they result in integrative efficiencies.”); Health Care Statements, Statement 2 (“Most hospital joint ventures to purchase or otherwise share the ownership cost of, operate, and market high-technology or other expensive health care equipment and related services do not create antitrust problems. In most cases, these collaborative activities create procompetitive efficiencies that benefit consumers.”).

A third legal consideration is the one that Chairman Muris raised in conjunction with the Commission’s closing of its investigation into the Genzyme-Novazyme merger. In merger cases, the courts typically require upfront market definition. And they certainly require such market definition if the plaintiff wishes to rely on the *Philadelphia National Bank* presumption, under which a merger is presumed illegal if it “produces a firm controlling an undue percentage share of the relevant market.”<sup>63</sup> Arguing over whether the parties to a merger have market power in an innovation market is a bit like trying to fit a square peg into a round hole. Traditional market definition analysis is, as a general matter, static by nature—it requires plaintiffs and courts to identify the market at issue with a snapshot of the products and markets at issue at the time the plaintiff challenges a merger. This is not to say that all product markets are static. Indeed, in *General Dynamics* the Supreme Court recognized that product markets can be dynamic.<sup>64</sup> It is to say, however, that innovation markets are more dynamic than product markets—an innovation market cannot be pinned down and it certainly cannot generally be identified with the certainty that *Philadelphia National Bank* requires.<sup>65</sup> So how does one define a market and measure market shares with sufficient accuracy to satisfy the courts

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<sup>63</sup> *United States v. Philadelphia Nat’l Bank*, 374 U.S. 321, 363 (1963).

<sup>64</sup> *United States v. General Dynamics Corp.*, 415 U.S. 486 (1974).

<sup>65</sup> As *Washington Post* business columnist Steven Pearlstein recently noted in the context of describing the market for innovation in the pharmaceutical industry:

[P]harmaceuticals is an industry that doesn't lend itself to traditional market analysis. Because the bulk of profits in the industry come from temporary monopolies – the government-granted patents – the current marketplace is not where the important competition takes place. Rather, the real rivalry takes place “upstream,” as companies compete to innovate, either by developing medicines in their labs or by buying up promising patents and biotech start-ups.

“Not What the Doctor Ordered,” *The Washington Post*, D1 (Jan. 28, 2009).

when the so-called market is research and development? More succinctly, can the *Philadelphia National Bank* presumptions ever be used when this is the theory?

As I have previously noted, I believe that any analysis that presumes upfront market definition is a necessary prerequisite to a correct merger analysis risks obscuring the ultimate question under Section 7 of the Clayton Act, which is whether the transaction is likely to substantially lessen competition.<sup>66</sup> While upfront market definition may be very helpful in determining the presence or likelihood of market power, I do not believe that it should be a threshold requirement in every instance. Courts, economists, and scholars have emphasized that market definition is merely an indirect means to assist in determining the presence or likelihood of market power.<sup>67</sup> And, in cases brought under the Sherman Act, courts have increasingly focused on direct evidence of competitive effects to determine the lawfulness of completed or ongoing

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<sup>66</sup> J. Thomas Rosch, *Litigating Merger Challenges: Lessons Learned*, Remarks Presented at the Bates White Fifth Annual Antitrust Conference (June 2, 2008), available at <http://www.ftc.gov/speeches/rosch/080602litigatingmerger.pdf>. See also Concurring opinion of J. Thomas Rosch *In the Matter of Evanston Northwestern Healthcare Corp.*, Docket No. 9315 at 8, available at <http://www.ftc.gov/os/adjpro/d9315/070806rosch.pdf> (discussing, in the consummated merger context, the value in examining the merger's anticompetitive effects to determine whether there is a Section 7 violation and noting that "[m]arket definition is a tool for analyzing market power, but it is not the only tool, either as a matter of law or economics").

<sup>67</sup> See *Toys "R" Us, Inc. v. FTC*, 221 F.3d 928, 937 (7th Cir. 2000) ("The share a firm has in a properly defined relevant market is only a way of estimating market power, which is the ultimate consideration."); 2A Phillip E. Areeda & Herbert Hovenkamp, *Antitrust Law*, ¶ 531a, at 156 (2002) (stating that a relevant market definition simply serves as a surrogate for market power); Dennis Carlton, *Market Definition: Use and Abuse*, *Competition Policy International* (2007) ("[M]arket definition, together with the calculation of market shares, is a crude methodology"); Jonathan B. Baker, "Contemporary Empirical Merger Analysis," 5 *George Mason Law Review* 347-61 (1997) ("If a merger can be shown to harm competition directly, antitrust should not need to spend much effort on market definition . . . . [I]f the likely harm to competition from a merger can be demonstrated directly, there exists a market where harm will occur, but there is little need to specify the market's precise boundaries.").

conduct.<sup>68</sup> Mergers involving innovation markets illustrate another area in which an emphasis on anticompetitive effects rather than market share alone perhaps makes sense. In such cases, direct evidence as to the likely competitive effects of a transaction might be more probative of competitive harm.

A fourth and final legal consideration is how such challenges can be reconciled with the Horizontal Merger Guidelines' teachings respecting entry. The Guidelines impose a two-year time horizon for assessing a merger's anticompetitive effects.<sup>69</sup> If meaningful entry can occur within the first two years of the merger, the merger (provided it meets other requirements) is subject to approval. In many pharmaceutical transactions, however, the intellectual property that a firm acquires is in the early stages of development and may only be in a Phase 1 or Phase 2 clinical trial. As a result, when the merger takes place, the parties might be several years from receiving FDA approval and getting the product to market. In such an instance, is it possible to legitimately challenge acquisition of the intellectual property when it is premature to assess whether the market will ever come to fruition, let alone whether there will be a possibility of meaningful

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<sup>68</sup> *FTC v. Indiana Fed'n of Dentists*, 476 U.S. 447 (1986) ("IFD"); *Conwood Co., L.P. v. United States Tobacco Co.*, 290 F.3d 768, 783 n.2 (6th Cir. 2002) ("Whether a company has monopoly or market power 'may be proven directly by evidence of the control of prices or the exclusion of competition ... .'"); *United States v. Microsoft Corp.*, 253 F.3d 34, 51 (D.C. Cir. 2001) (stating that in a Section 2 case, if "evidence indicates that a firm has in fact [profitably raised prices substantially above the competitive level], the existence of monopoly power is clear."); *Tops Markets, Inc. v. Quality Markets, Inc.*, 142 F.3d 90, 98 (2d Cir. 1993) (market power "may be proven directly by evidence of the control of prices or the exclusion of competition, or it may be inferred from one firm's large percentage share of the relevant market."); *Todd v. Exxon Corp.*, 275 F.3d 191, 207 (2d Cir. 2001) ("use of anticompetitive effects to demonstrate market power . . . is not limited to 'quick look' or 'truncated' rule of reason cases").

<sup>69</sup> Horizontal Merger Guidelines, § 3.2 (entry is considered timely and can reverse any likely anticompetitive effects only if entry will be "achieved within two years from initial planning to significant market impact").

entry within 2, or even 3 or 4 years? For the agencies to plausibly challenge innovation markets in the merger context, the agencies must be able to look out more than 2 years into the future to analyze whether the merger will have anticompetitive effects. But how far out is reasonable? And should there be a defined time limit (such as 4 years)? Or should the anticompetitive effects analysis not be keyed off a specific time frame, but instead be tied to a specific event such as the product's development?

In *SCM v. Xerox*, for example, the Second Circuit adopted a bright line rule under which the acquisition of a patent could not be anticompetitive in the absence of the market. Since innovation markets necessarily assume the absence of defined product market, the *SCM* test would make it impossible for a plaintiff to ever challenge a merger on an innovation market theory. Indeed, as Jon Jacobson has suggested, the Second Circuit's opinion in *SCM* "failed the test of time" because both the FTC and the DOJ do challenge mergers "in which the market has not yet emerged but where its emergence is foreseeable . . . ." <sup>70</sup> Yet perhaps one lesson from *SCM* is that challenges based on anticompetitive conduct in innovation markets should be viewed as stronger the closer the merger is to FDA approval or the commercialization of the patented art. Such a view would also be consistent with an approach, as I have discussed, that emphasizes direct evidence of anticompetitive effects, rather than a static market share analysis.

## V. CONCLUSION

In closing, we now have a new Administration and a new Assistant Attorney General for the DOJ's Antitrust Division. We will soon also have a new FTC Chairman.

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<sup>70</sup> Jonathan M. Jacobson, "Do We Need a 'New Economy' Exception for Antitrust?" 16 Antitrust ABA 89, 91 (2001).



Will we see enforcement policies respecting innovation markets like those of Chairman Pitofsky, Ann Bingaman, and Joel Klein. Or will we see enforcement policies more closely akin to those we have seen in the last eight years? Your guess is as good as mine. All I know is that there exist a host of policy and legal questions that have yet to be answered, and it will be fascinating to see how the agencies—and the courts—answer them.