NLWJC - Kagan
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Mergers

Mergers

DRAFT

January X, 1999

MEMORANDUM FOR

FROM:

SUBJECT: INTERIM REPORT ON NEC REVIEW OF MERGERS, CONCENTRATION AND COMPETITION

I. Introduction and Summary

At your request, in late May the NEC undertook a review of the economic issues raised by the recent wave of corporate mergers. Since then, additional large mergers have been proposed, some of which have elicited expressions of concern by the public. Although we have concluded some aspects of our review of mergers, concentration and competition, work on other aspects continues. This memo provides an interim report on our work. To summarize:

- The U.S. is in the midst of its fifth merger wave in the last hundred years. Most recent mergers are driven primarily by business strategy (as opposed to financial considerations) -- specifically, the need to respond quickly to fundamental shifts in the economy, including deregulation, globalization and technological change. Such mergers have the potential to enhance the nation's economic welfare.

- As Janet Yellen testified in June, despite historic levels of merger activity, economists do not see any serious trend toward greater concentration of economic power ***in the aggregate***, nor do they believe that broad economic indicators (economic growth, inflation or unemployment) are significantly affected by the levels of merger activity we have witnessed recently.

- The main route by which mergers affect economic performance is through their impact on competitive conditions in specific markets. However, mergers do not necessarily increase concentration even in specific markets -- e.g., merging firms often are not competitors.

- In contrast to earlier Administrations, since 1993 the Antitrust Division and the FTC have been aggressive in enforcing the antitrust laws, bringing substantially more challenges to mergers than in the 1980s. This more aggressive stance reflects, in part, fundamental changes in the way leading economists now think about antitrust (the "post-Chicago" school) and the related use of sophisticated models that incorporate actual pricing data to predict merger effects. Recent challenges also reflect the increased importance of R&D and innovation in the new economy.

- The current merger review process can nevertheless be improved in several ways, by ensuring that all mergers are subject to at least joint review by the antitrust authorities (railroad mergers currently are subject to review only by railroad regulators), and through greater reliance on structural remedies in place of regulatory oversight by non-antitrust agencies that review mergers.

- Although the international dimensions of mergers and competition policy are significant, current Administration policies are appropriate and should be pursued energetically.

- NEC principals concurred with the views of Assistant Attorney General for Antitrust Joel Klein and FTC Chairman Robert Pitofsky that the underlying antitrust laws do not need to be changed to deal with recent merger activity, (although the merger review process can be improved in the ways noted). It was also the principals' considered judgment that current antitrust enforcement is appropriate.

We are still examining key issues, including whether there are non-antitrust effects of mergers (e.g., employments effects) that merit concern. We anticipate completing the review in March.

II. Overview of Current Merger Wave: How Many and Why

The current merger wave, the fifth in the last hundred years, is substantial by any quantitative measure. The value of all deals announced in 1997 was $957 billion, and activity in 1998 totaled $1.63 trillion. Measured as a percent of GDP, the current boom is matched only by the spurt of trust formation at the turn of the century. Measured as a share of the market value of U.S. companies, 1998 merger activity was about 12 percent (up from less than nine percent in 1997) -- the same as that for 1988, the peak year of 1980s merger activity.

Qualitatively, the current merger wave is similar to those that occurred prior to the 1980s, in that it has taken place in a strong stock market, with stock rather than cash the preferred funding source. But, unlike pre-1980s transactions, many recent mergers are neither purely horizontal (as in the 1890s and the 1920s) nor purely conglomerate (as in the 1960s and early 1970s). Rather, they represent market-extension mergers (companies in the same industry that serve different and currently non-competing markets) or mergers seeking "synergy," in which companies in related markets expect to take advantage of "economies of scope." In contrast to the 1980s, when many mergers were primarily motivated by financial considerations, today's mergers are primarily motivated by business strategy -- the need to respond to fundamental developments in a rapidly changing economy. Five factors are key:

Falling Regulatory Barriers: Mergers have followed the recent removal of regulatory barriers in banking, radio, telecommunications and electricity, among other industries. This may reflect natural market forces that have been constrained by the artificial restrictions of regulation. Moreover, as deregulation produces structural change and heightened competition, mergers enable firms to acquire quickly the assets and other capabilities needed to expand into new product or geographic markets, and to gain entry across industry lines (e.g., as banks seek to offer other financial services).

Globalization: A merger may enhance a firm's ability to compete in foreign markets by providing rapid access to an established distribution system, knowledge of local markets, complementary products, and economies of scale (that said, competition authorities are wary of the argument that firms need to be bigger to compete internationally). For example, if foreign firms are more vertically integrated in certain sectors -- say, financial services -- U.S. firms may find it necessary to integrate in order to compete for foreign customers who prefer one-stop shopping. Although some mergers aimed at enhancing global competitiveness are cross-border (e.g., Daimler-Benz and Chrysler), most are not.

Technological Change: In a fast-moving, technology-driven industry, a merger may enable a firm to acquire quickly the assets or capabilities to enter a new market or compete more effectively in the existing market. And because rapid technological change often means that it is uncertain which of several competing technologies will prevail, firms may want to merge -- e.g., a local wire telecom firm with a wireless provider -- in order to hedge their bets.

Declining Demand/Excess Capacity: In response to encouragement from the Department of Defense, the defense industry, has consolidated dramatically in the last decade in an effort to reduce capacity in keeping with smaller, post-Cold War defense budgets. Parts of the health care industry also have seen considerable downsizing and consolidation in response to changes in health care practices, such as shorter hospital stays. In certain commodity markets -- e.g., oil, autos and agribusiness -- mergers are partly a response to excess domestic and/or global capacity.

High Stock Market: High stock market values (price-earnings ratios are at near-record levels) may make it seem attractive to finance an acquisition with stock, which has been the funding source in most recent mergers. Indeed, merger filings with the FTC were down by 40 percent in September -- seemingly, a reaction to falling stock prices in the late summer and early fall -- and rose again with the late fall rebound in the stock market.

III. Mergers, Concentration and Economic Performance

Aggregate Economic Performance. Heightened merger activity tends to call attention to the importance of large firms in the economy and raise popular concerns that economic power is becoming increasingly concentrated in a few mega-corporations. This country's first two merger waves (turn of the century and the late 1920s) almost certainly produced significant increases in economic concentration in steel, oil, utilities and other industries. However, economists do not believe that broad economic indicators (economic growth, inflation or unemployment) are affected in any significant way by the levels of merger activity we have witnessed recently nor by the negligible changes in the share of aggregate economic activity accounted for by the largest 100 or 200 firms as the result of the more recent merger waves. Large firms, and the merger of large firms, are an important feature of the American economy; but this has been true for decades, and there is little evidence of any serious trend toward greater concentration of economic power in the aggregate.

Industry-Specific Economic Performance. ***Concentration*:** Economic analysis suggests that the main route by which mergers affect economic performance is through their impact on competitive conditions in specific markets. However, mergers do not necessarily increase concentration in such markets. Merging firms may be in different businesses, non-competing regions, or supplier-buyer relationships. In banking, for example, national concentration has increased dramatically as a result of mergers, but concentration measures for local banking deposits have been extremely stable (the average four-firm concentration ratio has remained between 65 and 68 percent), because most mergers have been between banks serving different regions. Even when a merger occurs among competitors, concentration in the relevant market may not increase significantly, because of the offsetting effects of global competition or domestic entry. Finally, the structural characteristics of a market, and not just the number of firms, determine how competitive that market will be. For example, Boeing and Airbus have generally competed far more intensely than firms in many industries that are less concentrated.

Given that many if not most mergers do not increase concentration in the specific markets, the challenge to antitrust authorities, as discussed below, is to distinguish between those mergers that would give firms the market power (either monopoly or monopsony) to influence prices and those that would reduce costs, rejecting the former and approving the latter.

***Efficiency*:** Evidence on the effect of mergers on economic efficiency is mixed, and much of the evidence from earlier merger waves may be of dubious value in assessing current mergers. The best known study of those mergers that occurred in the 1960s and 1970s suggests that acquired lines of business performed worse following the merger. By contrast, a recent study of the 50 largest mergers of the early 1980s finds significant improvements in asset productivity subsequent to the merger, particularly for firms with highly overlapping businesses. The difference may reflect the fact that mergers in the 1960s and 1970s tended to be conglomerate mergers, whereas many of the early 1980s mergers were deconglomerate in nature.

IV. Mergers and U.S. Antitrust Enforcement

Current Enforcement is Aggressive but Not Heavy Handed. Enforcement philosophy and merger law itself have changed considerably in the last 50 years. The Celler-Kefauver Amendments of 1950 expanded the coverage of the Clayton Act and ushered in a restrictive era in merger law. The Supreme Court condemned every merger that came before it in the 1960s, discouraging most horizontal mergers during the 1970s. Thereafter, during the Reagan Administration, merger enforcement was consciously more lax, and relatively few cases were brought, despite the fact that there were a significant number of mergers involving firms whose business overlapped. Enforcement philosophy was only somewhat more activist during the Bush Administration.

By contrast, during this Administration, the Antitrust Division of the Department of Justice and the Federal Trade Commission have been aggressive in enforcing the antitrust laws, including those governing mergers and acquisitions: Justice and the FTC are bringing substantially more challenges than in the 1980s, including challenges to types of mergers that would have gone uncontested then. This more aggressive stance does not, however, mean a return to the earlier, big-is-bad era. Rather, recent cases and investigations suggest that Justice and the FTC are taking a considered approach, challenging a merger only when thorough investigation and analysis reveal a substantial threat to competition.

During FY 1997 and 1998, the Antitrust Division challenged 82 proposed mergers, and the FTC challenged 63, compared to 29 and 19, respectively, in FY 1985 and 1986. Proposed mergers that the Antitrust Division successfully challenged include:

--the $11.6 billion Lockheed Martin/Northrop Grumman transaction, which was the largest merger ever challenged in contested litigation;

--the $1.1 billion Primestar/News Corp. merger, which would have put the last of only three direct broadcast satellite (DBS) slots in the hands of five of the largest cable companies at a time when DBS offers the most effective competition to local cable monopolies; and

--the $44 billion WorldCom/MCI merger, in which parties agreed to sell $1.75 billion of assets -- the largest divestiture in U.S. merger history -- so that their combination would not injure competition in the developing Internet backbone market.

Similarly, the FTC:

--went to court to block the merger of Staples and Office Depot, the two leading office supply superstore chains in the U.S., whose transaction threatened to cost consumers more than $1 billion; and

--restructured the $63 billion merger of the Swiss pharmaceutical giants Ciba-Geigy Limited and Sandoz Ltd., to ensure continued innovation in life-saving gene therapy products for cancers and other intractable diseases.

In part, this more activist approach reflects fundamental changes in the way leading economists now think about antitrust. Known as the "post-Chicago" school, these economists are firm believers in market forces, but they reject the philosophy of University of Chicago economists that markets will erode most monopolies more quickly and effectively than will governments. Philosophy aside, post-Chicago thinking utilizes, among other tools, sophisticated models that use actual pricing data to predict what will happen if a merger goes ahead. For example, in challenging the Staples/Office Depot merger, the FTC demonstrated that the relevant product market was the sale of office supplies through office superstores, rather than all sales of office products. The FTC's statistical analysis, based on government-obtained data from check-out scanners, showed that other retailers were not a competitive constraint on the pricing of Staples and Office Depot. Because the merging companies were the two largest of only three firms in the superstore market, the court agreed to block the merger as anticompetitive.

The dynamics of the new economy make it especially important that merger analysis be rigorous and forward-looking. In 1995-96, the FTC held a series of public hearings to address whether antitrust analysis should be modified in light of competitive conditions in the new high-tech, global marketplace. The hearings considered: whether antitrust analysis recognized the international nature of competition; merger review in industries that were downsizing; standards for strategic alliances and joint ventures; and evaluation of cost-savings, or efficiency, claims. The hearings produced a comprehensive report and a general consensus that antitrust policy is on the right course. This consensus reflects the basic fact that the antitrust laws have been and continue to be sufficiently flexible to accommodate new economic learning and a changing business environment. In particular, the report found little inconsistency or conflict between the goal of the antitrust laws to protect U.S. consumers and competition in domestic markets, on the one hand, and the imperatives of global competition, on the other.

The antitrust agencies also have adapted their enforcement policy to reflect the important role of technological innovation in the new economy. This is significant in part because the relationship between market concentration and innovation is far more complex than the relationship between concentration and short-term price competition. For example, when the FTC challenged the Ciba-Geigy/Sandoz merger, no gene therapy products were yet on the market, making conventional antitrust analysis inapplicable; nevertheless, the FTC argued that Ciba and Sandoz were two of only a few entities capable of the R&D necessary to ***enter*** the gene therapy market. The Commission declined to order either Ciba or Sandoz to divest its gene therapy subsidiary, for fear that divestiture would be disruptive and counterproductive for innovation. Instead, Ciba and Sandoz agreed to license technology and patents sufficient for one of their major rivals to compete against the merged entity in the development of gene therapy products. Similarly, the Antitrust Division allowed the merger of Monsanto and DeKalb Genetics Corp. to proceed only after Monsanto agreed to license its technology for inserting genes into corn seeds to the University of California at Berkeley, which can sublicense the technology. That condition was key to protecting competition because DeKalb claims a patent on the other prominent technology for inserting genes into corn seeds. The Antitrust Division's successful challenge to the Lockheed/Northrop Grumman merger reflected comparable concerns about innovation in military aircraft.[1]

[1]The Council of Economic Advisers' 1998 ***Economic Report of the President*** devotes a chapter to discussing "Recent Initiatives in Antitrust Enforcement," including the Boeing-McDonnell Douglas merger and the FTC challenge to the proposed Staples-Office Depot merger. The 1999 ***Economic Report of the President*** will look further at how recent initiatives have expanded antitrust policy beyond its conventional focus on price and output benefits of competition to include consideration of the long-run benefits of technological innovation.

While the antitrust agencies are aggressive in challenging anticompetitive mergers, they have been careful not to impede mergers that do not appear to raise substantial competitive concerns. Thus, for example, after careful investigation, the Antitrust Division decided not to challenge the Bell Atlantic/Nynex telecommunications merger, and the FTC did not challenge the Boeing/McDonnell Douglas transaction.

Can the Process be Improved? As part of the NEC's review, interagency working groups looked at two aspects of the merger review process. The first has to do with the role of federal regulatory agencies in merger reviews. Most mergers in regulated industries are subject not only to antitrust review by the antitrust agencies but also to regulatory review by a federal regulatory agency. The regulatory review is generally governed by a specific statute that establishes a "public interest" standard for approving the merger; that standard typically encompasses both antitrust and non-antitrust concerns and allows the regulatory agency to impose conditions on the proposed merger. Mergers in the railroad industry are unique in that they are subject ***only*** to regulatory review -- by the Surface Transportation Board (STB), the successor to the Interstate Commerce Commission (ICC). The antitrust agencies participate as outsiders: They have no special standing before the STB, and their views are not given any additional weight.

The principals concluded, based on the work of the interagency group, that there is an unavoidable tension in regulatory merger reviews between the desire to promote competition and need to protect other public interest concerns -- e.g., when two railroad lines are allowed to merge, reducing competition in an already concentrated industry, in order to protect employees or preserve rail service to certain communities. That said, the principals agreed that the process can be improved in several ways.

First, ***the antitrust laws should apply to all industries unless there are compelling reasons to grant special treatment to a particular industry***. Thus, railroad mergers, like all other mergers, should be subject to antitrust review by the antitrust agencies. In 1995, when the ICC was eliminated, the Administration tried to have the Commission's merger review authority transferred to Justice (much as authority to review airline mergers was transferred to DOJ following the sunset of the Civil Aeronautics Board). However, Congress kept responsibility for reviewing rail mergers entirely with the residual STB. ***As part of next year's STB reauthorization bill, we will seek to give the Antitrust Division joint review authority over rail mergers.***

Second, in the antitrust context, conduct proscriptions and other forms of regulatory oversight -- the common preference of regulatory agencies -- often are less effective in promoting competition than structural remedies, which enable competitive market forces to determine prices and output, as in other markets. (For example, the STB approved the Union Pacific-Southern Pacific rail merger, subject to trackage rights and regulatory oversight; the Antitrust Division opposed the merger absent divestiture of parts of Southern Pacific.) Granted, structural remedies have high costs in some cases, which means that the availability of conduct remedies is important. But ***structural remedies generally should be the preferred approach to merger review in telecommunications, electric power, financial services and other industries,*** the principals concluded. That said, the principals concluded that regulatory agencies should remain vigilant following mergers, where appropriate, given their authorization. For example, the bank regulatory authorities should monitor compliance by merged banks with their merger-related obligations under the Community Reinvestment Act.

A second aspect of the merger review process that was the subject of interagency review has to do with whether current antitrust standards are up to the task of analyzing mergers in rapidly deregulating markets. The concern is that merger analysis under the Clayton Act is necessarily predictive -- asking if a merger is ***likely*** to lessen competition substantially -- whereas the lack of prior competition in a previously regulated industry makes it impossible to know what future competition will look like. Various approaches to addressing this concern have been suggested, including a short-term moratorium on mergers in such industries, a shift in the burden of proof to the merging parties, and a higher standard for approving mergers (e.g., Sen. Kerrey has proposed legislation that would prevent antitrust authorities from approving any large telecommunications merger that would not significantly enhance competition). Although the task is complex, the principals concluded that ***current antitrust laws are fully capable of addressing competitive concerns in markets undergoing rapid deregulation***: Because their approach relies on an intensely fact-based analysis, antitrust authorities can give sufficient attention to the special characteristics of individual industries.

Conclusion: Stay the Course. In sum, the NEC principals concluded that, while the merger review process can be improved in the ways noted above, the underlying antitrust laws do not need to be changed to deal with the recent wave of merger activity. This is consistent with the views expressed by Assistant Attorney General for Antitrust Joel Klein and FTC Chairman Robert Pitofsky, to which the principals gave considerable weight. It is also the considered judgment of the principals that current antitrust enforcement is appropriate.

V. International Dimensions of Mergers and Competition Policy

An NEC staff paper identified three issues for consideration on the international dimensions of mergers and competition policy. Despite the importance of these issues in a rapidly globalizing economy, there was little disagreement about them, and the NEC principals concluded that current Administration policies are appropriate and should be pursued energetically.[2] The three issues are as follows:

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[2]The issue of whether U.S. merger review standards need to be adapted in light of global competition was ***not*** included in the NEC paper. DOJ and FTC believe that the 1992 merger guidelines are flexible enough to define geographic markets in global terms, and the FTC's 1996 report on antitrust policy reached the same conclusion, following two months of public hearings on how antitrust agencies could keep pace with the changing economy. The report ***did*** recommend that the FTC and DOJ reexamine their traditional skepticism toward arguments that a proposed merger could have economic efficiencies with competitive significance. As a result of this recommendation and subsequent study by a FTC/DOJ task force, the "1992 Horizontal Merger Guidelines" were revised in 1997 to incorporate the concept of "merger-specific efficiencies."

Multi-jurisdictional Merger Reviews. The rapid growth of transnational mergers and the proliferation of competition agencies mean that, increasingly, a single transaction is reviewed by competition authorities in several different countries. Reducing the procedural burden associated with multi-jurisdictional review (transaction costs) is an important goal, even though the costs are generally small in relation to the value of the transaction. More important, however, the different paperwork requirements largely reflect very different substantive regulations that cannot easily be harmonized in the foreseeable future, in the view of the Antitrust Division and the FTC. It was the considered judgment of the principals that the most productive course for reconciling the substantive differences is enhanced cooperation between antitrust agencies on a case-by-case basis. This will not only effectively reduce the potential for parallel merger reviews to produce divergent outcomes, but also pave the way for better understanding of different approaches. In fact, we should look for opportunities to narrow differences in conceptual approaches. While complete convergence among the major merger review regimes is many years away, the EU approach is in some ways moving closer to that of the U.S., and day-to-day cooperation among competition authorities sometimes allows them to agree on a particular case even when they disagree on the underlying principle.[3]

Competition Policy and Trade Policy. As trade liberalization agreements have eliminated tariffs and other governmental barriers, private business practices (sometimes aided by government action or inaction) have loomed larger as an impediment to foreign market access by U.S. and other firms. Nevertheless, the principals concluded that extraterritorial application of our antitrust laws to pry open foreign markets for U.S. exporters should be done sparingly, because it undermines our efforts both to work cooperatively with foreign competition authorities and to "export" our consumer-based approach to competition law. By contrast, "positive comity" -- asking a foreign competition authority to challenge a local practice that violates its own law -- provides a way to make incremental progress in opening foreign markets. But even that approach should be used cautiously, because of the potential for other countries to make inappropriate comity requests of the U.S. Finally, the principals agreed that we should continue to work with other countries to help them strengthen their own antitrust regimes.[4]

International Harmonization of Competition Policy. The EU advocates greater harmonization of national/regional competition laws and policies through a WTO framework and dispute settlement mechanism. Although the EU maintains that harmonization of competition policies in the WTO would address problems associated both with multi-jurisdictional merger reviews and with market discrimination, the principals concluded that there are serious downsides of any such approach. Among other things, the difficulty of getting consensus among 130-odd WTO members means that the lowest common denominator would likely prevail, thereby codifying weak and ineffective competition laws. And dispute settlement could result in a second-guessing

[3]In November 1997, Attorney General Reno appointed the International Competition Policy Advisory Committee (ICPAC) to study these issues; the committee's report, due at the end of 1999, is expected to address them.

[4]ICPAC's report is expected to address these issues as well.

of prosecutorial and judicial decision-making, which the U.S. could not accept. Although trade and competition agencies bring slightly different perspectives to this issue and the one above, these agencies are in agreement that we should reject the EU proposal but should keep talking about the broader issues of trade and competition policy and how they interact, both bilaterally with the EU and other countries and in international fora such as the WTO.

VI. Non-Antitrust Effects of Mergers

Merger reviews focus principally on the likely aggregate effect on competition of a proposed merger within relevant product and geographic markets. An important question raised by the current wave of merger activity is whether corporate consolidation is having significant, adverse effects unrelated to competition and consumer prices. To answer that question, an interagency group is examining reported effects of recent mergers in selected sectors to see if they warrant concern. The implication of this analysis is not that antitrust authorities should broaden the focus of merger reviews to include these effects, or that otherwise efficient mergers should be judged more harshly. Rather, the aim is to see whether adverse side effects of otherwise beneficial mergers can be better understood and alleviated.

The focus is on three possible effects: job losses; changes in ownership structure, including reduced diversity of ownership (e.g., radio stations); and localized service disruptions that might harm some consumer segments within a geographical area due to changes in the nature and proximity of available goods or services following a merger. We are analyzing the degree to which these adverse effects are caused by mergers as opposed to other economic forces (e.g., technological change) and whether policies outside of the antitrust process (e.g., worker adjustment assistance) address the problem. We are also analyzing whether there are beneficial side effects of recent mergers that can be documented.

VII. Enhancing Competition Generally

We are looking at a variety of policies that may enhance competition in key industries. Some of these are policies that we were already pursuing (e.g., legislation to remove restrictions on competition in electric power generation). Others are a direct result of recent concerns about mergers and alliances and/or lack of adequate competition: For example, we are considering options for enhancing competition in rail freight and commercial aviation.

VIII. Next Steps

We will produce papers summarizing our conclusions on the non-antitrust effects of mergers and our policy proposals to enhance competition in key industries. We expect to complete these papers, as well as a final report on our broader review of mergers, by late Spring.

Mergers

THE WHITE HOUSE

WASHINGTON

Mergers, Concentration and Competition
NEC PRINCIPALS MEETING
May 27, 1998

AGENDA

I. Purpose of Meeting: Gene Sperling (5 min.)

II. Overview of Council of Economic Advisers Papers

- A. Janet Yellen (10 min.)
- B. Comments: Larry Summers (5 min.)

III. Agency Views on Selected Sectors

- A. Robert Rubin: Banking and Financial Industries (10 min.)
- B. William Daley: Telecommunications and Computers (10 min.)
- C. Nancy McFadden: Airlines and Railroads (10 min.)
- D. Dan Glickman: Agriculture (10 min.)

IV. Discussion

- A. Comments and Observations by Joel Klein and Robert Pitofsky (15 min.)
- B. General Discussion (20 min.)

V. Next Steps: Gene Sperling

What that means is
that we've been
applying Hyde-plus;
applying the current
Hyde would be a
liberalization!

That makes life simple.

Very helpful.

This is so much fun —
Nancy-Ann v. Harriet

Sooner we do this,
the better.

Mergers: Law and Enforcement since 1950
Council of Economic Advisers
May 22, 1998

Enforcement philosophy and merger law itself have changed considerably since 1950. Historically, most merger enforcement is public: private suits are rare in large part because rivals generally benefit from the anti-competitive mergers that the law bans.

I. The Big is bad era.

The Celler-Kefauver Amendments of 1950 modified the Clayton Act, expanding the coverage of section 7 to include all mergers, regardless of whether they involved an asset or stock purchase. This change ushered in a more restrictive era in merger law. The Supreme Court condemned every merger that came before it during the 1960s. This included the Brown Shoe decision, which held illegal the vertical acquisition by a manufacturer with a 4 percent market share of a distributor which had a market share of only 1 1/2 percent. Later, in 1968, in the Von's Grocery case, the Court blocked the merger of two grocery chains in Los Angeles that each controlled only 4 percent of the market. And not surprisingly, competitors seldom merged during the 1970s. Even some of the conglomerate mergers that were then so common met with challenges from the Nixon administration's antitrust division. Most economists today view the fears of concentration during this era as extreme.

II. The Reagan years.

Merger enforcement during the Reagan years was consciously more lax. The 1982 merger guidelines issued by the antitrust division made clear that the division would only oppose mergers that increased concentration among competitors significantly more than would have been required to raise concerns under the 1968 guidelines. These guidelines sought to insure that mergers were only blocked when concentration increases made it plausible that prices might rise significantly, and when there were no offsetting factors such as entry or efficiencies that would keep prices low. Relatively few cases were brought during these years, despite the fact that there were a significant number of mergers involving firms that did overlapping business.

III. Post Reagan.

Enforcement philosophy became more interventionist during the Bush and still more so during the Clinton Administration. The number of merger challenges has risen and both the Justice Department and the FTC have challenged mergers such as Continental Baking Co. /Interstate Bakeries Corp. and Staples/Office Depot, that would probably have gone unchallenged during the Reagan years. Judicial philosophies may have moved in the opposite direction, however, which may explain why the federal enforcement agencies now lose a majority of their contested merger cases. Their losses testify to their aggressiveness and to the constraints posed by current law.

Is Sylvia
going to OMB?

Mergers: Causes and Consequences
Council of Economic Advisers
May 22, 1998

I. Overview

The economic analysis of mergers, takeovers, and divestitures focuses on the motives of corporate managers and the private and social consequences of the decisions they make in deploying the assets they control.

- One major strand of analysis looks at managers' efforts to maximize the value of their firms. Mergers are undertaken when managers believe that combining two companies' assets will boost profitability (and hence stock market value). This can occur because the combined company is expected to achieve greater efficiency (lower costs) or because the combined company is expected to enjoy enhanced market power (higher prices) or other advantages that do not reflect improved operating efficiency (such as tax advantages).

- A different strand of analysis recognizes that managers' interests and shareholders' interests may diverge. Managers may pursue mergers because they expect to derive personal benefits, irrespective of the impact on shareholders.

- In either case, the evaluation of mergers from a public policy perspective does not focus on whether mergers turn out to be profitable but how they affect economic efficiency and other public policy objectives.

This memo analyzes the three main motives for mergers in greater detail and assesses possible explanations for the current merger wave. It then analyzes the consequences of mergers.

II. Motives for Mergers

1. Shareholder gains through efficiencies.

The main reason managers give for undertaking mergers is to increase efficiency. And studies of mergers show that, on average, the combined equity value of the acquired company and the purchasing company rises as a result of the merger. Ways in which mergers can increase efficiency include the following:

- Reductions in excess capacity. This justification has been invoked in hospital mergers, defense mergers, and banking mergers among others. If these cost savings are passed along in the form of lower prices, consumers can benefit as well. However, in some cases, excess capacity before a merger may have been what kept prices low.

- Economies of scale/network externalities. Economies of scale can exist in purchasing, making strategic decisions, building computer software, and forming distribution or service networks. An example is the hub and spoke networks of airlines. Running daily flights between San Jose, Houston, Miami, and Buffalo, is considerably cheaper if one has a hub, say in Chicago: with a hub, only eight flights a day are required instead of 12—economies are increased even more dramatically as more cities are added.

  Scale economies also arise on the demand side: the value of some goods rises with market size. For example, the network of computer users who trade information means that the value of a computer program is higher the more people use it.

  Mergers, however, are not the only way to achieve network efficiencies. For example, airlines can form code sharing agreements, or banks can form reciprocal agreements to eliminate ATM fees at foreign ATM machines.

- Synergies/economies of scope. Two different businesses may require similar expertise. Synergies also exist if a customer prefers one-stop shopping: for example, a corporate client may prefer dealing with a bank that can make commercial loans and do investment banking.

- Management improvements. When a better-managed firm takes over a poorly managed one, economic performance is likely to improve. Thus, in the market for corporate control, takeovers (or the threat of takeovers) can serve as a disciplining device for managers. When mergers are financed with debt, the debt payments can be a form of commitment, providing a greater incentive for managers to perform well. Unlike the 1980s, however, most mergers today are financed by issuing stock.

- Eliminating double markups. A vertical merger between a firm and its supplier can eliminate double markups—in which a supplier sells its product at a markup over cost, and the buyer who resells the product or uses it to produce another product marks up this price still further. Double markups cause economic inefficiency and high prices. Sometimes, it is possible to eliminate double markups with contractual solutions instead of mergers; such solutions can be problematic, however.

Even if mergers do not affect market power (as discussed in the next section), an increase in the value of stock arising from a merger does not always represent an efficiency gain. Sometimes shareholder gains comes at the expense of other claimants.

- Employees. Layoffs sometimes follow a merger (on average 2.5 percent of the target firm's labor force was laid off during the 1980s).

- Debt holders. When a takeover is financed with debt (as was common during the 1980s, some of the increase in stock value could also come at the expense of existing debt holders, whose claim may be devalued by the merger

- Government revenue. Historically, mergers sometimes provided tax advantages. Before the repeal of the General Utilities doctrine in the Tax Reform Act of 1986, an acquiring firm could get a stepped-up basis that could be depreciated or amortized (saving taxes) without the target corporation owing taxes on the capital gain. After 1986, this loophole was closed and corporations could no longer have their cake and eat it too in this way. Taxes could still be saved by using net operating loss carryover's (NOL's), but this tax savings was also largely eliminated, first by congressional action and later by the Treasury's Goldome regulations finalized in 1991.

Mergers do not inevitably produce more efficient companies; they may create inefficiencies as well.

- Disorganization and coordination failures are endemic to large organizations. Well-intentioned and hard-working people often work at cross purposes. Also, large firms may have more difficulties motivating their workers or managers than small firms.

- In principal, in a large conglomerate, such as those that were typically formed by mergers in the 1960s and 1970s, each business could be run on its own, and the central office might interfere only when that was advantageous. Some scholars have argued, however, that such selective intervention is impossible and that the central office cannot help intervening and meddling even when doing so results in poor business decisions.

- Small organizations can be lithe and agile. If mergers create slow-moving monoliths, they will probably be out-competed on the product market by new smaller organizations. One prominent example is IBM: after many years of dominance in the mainframe market in the 1960s and 1970s, IBM was unable to maintain dominance in the PC market in the 1980s. Even if a large inefficient firm is not out-competed on the product market, the large firm may invite another takeover similar to those seen in the 1980s, in which the firm is broken up into smaller parts and sold off at a profit.

Given these countervailing factors, are efficiencies generally realized? The evidence on the subsequent performance of merged firms is mixed, and much of the evidence from earlier merger waves may be of dubious value in assessing current mergers. Today's mergers tend to be in closely related industries or the same industry, whereas the mergers of the 1960s and 1970s tended to be conglomerate mergers. The following are some illustrative findings:

- A study of the 13 leading manufacturing conglomerates (ranked by the number of acquisitions) showed that these firms outperformed the market between 1965 and 1983 but that the gains were concentrated in the first few years. These same firms underperformed relative to the market between 1968 and 1983.

- A study of a large sample of acquisitions during 1970-1989, found that when an acquiring company used its own stock to take over another company, subsequent performance of the merged firm was substantially below market expectations. By contrast, companies that issued debt to make a cash takeover substantially outperformed expectations. One interpretation is that managers who used stock had reason to think that their companies were overvalued.

- Accounting measures of performance suggest that acquired lines of business performed worse after the mergers in the 1960s and 1970s. A recent study of the subsequent performance of the 50 largest mergers of the early 1980s, by contrast, finds significant improvements in asset productivity subsequent to the merger, particularly for firms with highly overlapping businesses. This difference may reflect the fact that mergers in the 1960s and 1970s tended to be conglomerate mergers. Also, accounting data are imperfect measures of economic performance and these results should be judged with caution.

2. *Shareholder gains through the elimination of competition.*

In principle, mergers may be motivated by a desire to eliminate competition, gain market power, and raise prices and profits.

- Certainly, this was a strong motivation in the mergers to monopoly at the turn of the century in industries such as tobacco and oil. Market power may still be a significant factor in some cases. For example, a study of 14 airline mergers in the mid-1980s finds that prices rose by an average of 10 percent more on routes where the merging airlines competed than on routes unaffected by mergers.

- Evidence from stock price reactions to merger challenges suggests, however, that reducing competition is not the motivation for most mergers. If a merger is anticompetitive, nonmerging firms in the industry benefit from reduced competitive pressures, so the stock prices of nonmerging firms should increase in response to an anticompetitive merger and decrease in response to the announcement of an antitrust challenge. Yet studies from the 1980s find that, on average, nonmerging firm stocks do *not* fall, and may actually rise, with the announcement of merger challenges.

- One reason firms may not merge for anticompetitive reasons is the presence of antitrust enforcement designed to prevent anticompetitive mergers. The antitrust authorities keep a close watch on such mergers and challenge them when they can show in court that the merger is likely to substantially lessen competition. Other agencies can sometimes block particular types of mergers under a weaker standard. For example, the FCC can block mergers among telecommunications companies when they do not benefit the public interest.

3. *Managerial self-interest*

Managers have enormous discretion and do not necessarily act in shareholders' interest. Part of the motivation for any merger could be managers pursuing their own interests.

- Empire building. Managers may acquire other firms simply so that they can run a larger firm to satisfy their egos. Also, to the extent that managerial salaries increase with increasing firm size, managers may have a personal incentive to create a larger firm.

- Entrenchment. Managers may take over other firms to increase their salary or job security. For example, as discussed above, a local telecommunications company might merge with a cable television provider out of fear that cable might become dominant in Internet connection services and ultimately in Internet telephony. Mergers motivated by risk diversification may not be in shareholders interest because in publicly held companies, shareholders are probably able to diversify risks more efficiently by selling some shares in one company and buying shares in other companies. Nonetheless, such mergers may preserve a manager's job because at least one company should prosper.

4. Possible Factors in the Current Merger Wave

There is no single reason why so many firms are merging today. Each merger has its own explanation and often several explanations. Some of the prevalent explanations today include:

- Adjusting to falling regulatory barriers. Mergers have followed the removal of branching restrictions in banking and ownership restrictions in radio. For example, under the Riegle-Neil Act of 1994, virtually full interstate branch banking became possible in June 1997. Banks have merged as restrictions have been removed, first intra-state restrictions and later interstate restrictions. Banks are probably achieving efficient scale by merging. Absent our history of regulation, the U.S. banking industry would probably have far fewer small banks and look more like the banking system in most other countries.

  Mergers in the telecommunications industry are also tied to the breakup of AT&T and to the deregulation and market-opening steps that followed the Telecommunications Act of 1996.

- Technological change. Some mergers may be motivated by the widely touted, but still nascent, phenomenon of "convergence" in the information technology industry. For instance, as textbook publishers begin to supplement their materials with multimedia software, they may acquire small software companies. Cable television providers may combine with Internet service providers in anticipation of the possibility that cable becomes the prevalent means to connect homes to the Internet. Also, to the extent that rapid technological change means that it is unclear what technologies will be used in the near future, firms may hedge their bets: this may explain why a local telecommunications company might merge with a cable television provider.

- Globalization. The emergent global economy may demand large scale to participate. A European and American firm may combine to take advantage of the distribution networks that each has on its own continent. Also, to the extent that European or Asian firms are more integrated in certain sectors such as the financial sector, U.S. firms may find it necessary to integrate more to provide one-stop shopping for foreign customers who demand that.

- High stock market. Price-earnings ratios have increased to near-record levels during the current merger wave, and some economists feel that the market may be overvalued. Could high stock market prices explain the current merger wave? If a given manager knows her own stock to be overvalued then she will fund acquisitions with stock, which has been the dominant funding source in the current merger wave. But an overvalued stock market does not necessarily lead to more mergers, because if other firms are also overvalued then there are fewer attractive targets to acquire.

III. Concentration Effects of Mergers

Although the U.S. is in the midst of a large merger wave, concentration will not necessarily increase. Mergers do not necessarily increase concentration in any well-defined market. Merging firms may be in different businesses, non-competing regions, or in supplier-buyer relationships. Even when the merger is among competitors, increasing global competition or domestic entry could be simultaneously driving concentration down.

- Non-competing regions. Many mergers in banking, telecommunications, and elsewhere do not increase concentration in a relevant market because the firms serve different regions or market segments. However, even in such cases, a merger may increase concentration in the future if it precludes future competition. The FCC emphasized this factor, for example, in its August 14, 1997 Order on the NYNEX-Bell Atlantic merger to justify the FCC's demand that Bell Atlantic make various market opening concessions.

- Global competition. Global competition is decreasing concentration by making relevant markets broader. Mergers that would increase concentration significantly absent this global competitiveness, do not necessarily do so today. Although there are no reliable measures of the changes in the concentration of typical markets over time, it is easy to imagine that emerging global markets are decreasing concentration at a faster rate than mergers increase concentration.

- Sell-offs/corporate divorces. Not all mergers last forever. "Bust-ups" were common in the late 1980s, when a firm was bought only to be sold off in pieces within a couple of years. Up to 40 percent of mergers in the 1970s ended in divorces. However, it is unclear how often spinoffs occur when firms are in the same business—we do know that the rate of sell-offs was much higher, perhaps 60 percent, for mergers in the 1970s when the asset acquisitions were unrelated.

- Entry. Entry of new firms into the market can sometimes offset concentration increases from mergers, particularly if the merging firms try to raise prices. The *merger guidelines* required that entry be probable to be counted.

- Vertical mergers. Mergers between a firm and its supplier do not increase concentration, because these firms are not competitors. So, for example, when a soft drink firm like Pepsi buys a restaurant chain like California Pizza Kitchen, concentration does not rise in either the restaurant or soft drink business, except in so far as Pepsi owns other restaurant chains. Sometimes, however, such mergers may nonetheless raise antitrust concerns, such as when the merger causes a third firm to be excluded from a market.

Banking provides an excellent example of how mergers do not necessarily increase concentration. Although there have been a large number of bank mergers in the past 20 years, concentration measures for local banking deposits have remained extremely stable: in metropolitan statistical areas, the average four-firm concentration ratio has remained between 65 and 68 percent. One major reason is that mergers have often been between banks that serve different regions. To the extent that banks were serving the same region and concentration initially increased, domestic and foreign entry may have helped to offset such concentration increases.

In those cases where a merger does increase concentration in the relevant market, possible effects are:

- Higher prices. Concentration increases market power. Firms can raise prices on their own, or in some cases successfully collude with other firms to raise prices. The extent to which prices increase with concentration depends greatly upon the nature of competition and the price sensitivity of demand in a given market. When products are differentiated, instead of homogeneous, a merger could raise prices significantly. This danger led the Justice Department to force a restructuring in the recent merger of Continental Baking Co. and Interstate Bakeries Corp. after the Justice Department determined that the market for white bread was highly differentiated despite appearances.

  Evidence from a variety of sources supports the view that increases in concentration increase price. As mentioned previously, the increases in concentration due to mid-1980s airline mergers led to average price increases of 10 percent on routes affected by the mergers. According to a study of grocery stores in Vermont, prices are about 2 percent higher in two-firm markets than they are in markets with four stores of equal size. And a study of small-town retail and professional service industries concludes that decreases in concentration significantly increase the competitiveness of the market; most of the competitive gain comes with the introduction of the second and third firm into the market.

- Lower service. Just as firms may raise prices in a concentrated industry, they also may lower quality. When a firm has fewer competitors, the calculus of comparing costs savings from reduced service on existing customers with revenue losses from customers who flee to high service firms changes, and a firm may be much more apt to cut the quality of service.

- Less variety. Fewer firms may mean fewer products from which to choose. The cereal industry, however, shows that this is not always the case.

- A different pace of innovation. The effect of mergers on the rate of innovation is highly ambiguous. Most economists believe that competition drives innovation and concentration inhibits it. Judge Learned Hand wrote: "Unchallenged economic power deadens initiative." The British economist John Hicks wrote: "the best of all monopoly profits is a quiet life." On the other hand, concentration could speed innovation. A monopolist may in some cases invest more in research and development than would a competitive firm, because the monopolist can capture more of the returns to investments, worrying less about the benefits to others of the technological spill overs.

Evidence on the effects of mergers on innovation is limited, but one study of acquisitions in the 1980s suggests that current mergers may have little impact on innovation. This study finds small, marginally significant declines in R&D intensity following acquisitions, but concludes that the declines were due to the associated increases in leverage rather than to the acquisitions themselves.

- New regulatory concerns.

  - *Benchmarking*. Having multiple competitors can help regulators benchmark costs, using the cost gain of one firm as a measure of what another could accomplish. Also, if one company makes a claim that something is impossible (such as having a telephone number be portable when a customer switches local phone companies), this claim can be falsified if another company is successful.

  - *Cross-subsidization*. In some cases a merged and regulated firm may be able to profit by some form of cross subsidization. For example, if a long distance carrier and local telephone carrier merge, the merged firm might be able to shift some long distance costs into the local rate base.

  - *Safety and soundness*. Bigger banks create bigger problems when they fail.

Mergers, Concentration, and Market Power: Some Facts
Council of Economic Advisers
May 22, 1998

I. Overview

The United States is in the midst of its fifth major merger wave in a hundred years. The magnitude and volume of recent transactions have raised anew issues of the dominance of large firms over economic activity and the concentration of economic activity in particular markets. This memo first provides a historical perspective on the current merger wave. It then addresses two of the issues raised by heightened merger activity: the extent to which aggregate economic activity in the U.S. economy is concentrated in a relatively few large corporations and the extent to which particular markets are dominated by one or a few sellers.

II. The Current Merger Wave in Historical Perspective

By almost any measure the merger boom of 1997-98 is substantial. Exhibit 1 provides a sample of recent mergers.

- The largest deal announced so far is the $70 billion Travelers Group-CitiCorp merger, but the $62 billion SBC-Ameritech and the $60 billion Bank America-Nation's Bank merger are also huge in dollar terms. (The total value of all deals announced in 1992—a year of especially low activity—was only $150 billion.)

- The value of all deals announced in 1997 ($957 billion) was equivalent to about 12 percent of GDP, and activity so far in 1998 suggests another record year by this measure (Exhibit 2, upper panel). The last time merger activity was this large a share of GDP was during the Great Merger Wave at the beginning of this century.

- So far this merger wave is smaller than the wave in the 1980s when mergers are expressed as a percentage of the total market value of U.S. companies (Exhibit 2, lower panel). The run up in stock prices in the past few years is one reason why the current merger wave is such a large share of GDP.

The current merger boom is the fifth in the past century.

- The Great Merger Wave of 1887-1904 represented the culmination of the trust movement. It was a time when numerous small and mid-sized firms were consolidated into single dominant firms in a number of industries, including Standard Oil and U.S. Steel. One estimate is that this merger wave encompassed at least 15 percent of all plants and employees in manufacturing at the turn of the century. An estimated 75 percent of merger-related firm disappearances occurred as a result of mergers involving at least five firms, and about a quarter involved 10 or more firms at a time. Merger activity declined sharply during 1903 and 1904 at the same time as a severe recession and the Northern Securities case, which established a legal precedent for prohibiting market-dominating mergers under the antitrust laws.

- The merger movement of the 1920s saw the consolidation of many electric and gas utilities and manufacturing and minerals mergers that created a relatively strong number two firm in a number of industries (such as Bethlehem Steel).

- The 1960s conglomerate wave may have represented a deflection of the "urge to merge" away from horizontal (same-industry) mergers due to stronger antitrust enforcement. The constant-dollar value of mergers in manufacturing and minerals surpassed the prior peak attained in 1899. The 1960s boom was also fueled by a strong stock market and financial innovation (such as convertible preferred stocks and debentures). This merger wave ended with a decline in stock prices that was especially severe for companies that had aggressively pursued conglomerate mergers.

- The 1980s saw another boom in merger activity, but this time it began in a depressed stock market in which stock prices were low relative to the cost of building new capacity, and it was cheaper to expand by takeover. The 1980s boom was also marked by an explosion of hostile takeovers and financial innovation (such as junk bonds and leveraged buyouts). The 1980s wave was unique in the prevalence of cash purchases (as opposed to acquisition through stock). Finally, the antitrust environment was more permissive and companies became more willing to attempt horizontal mergers.

- The current merger wave appears to be a reversion to earlier patterns in some ways: it is taking place in a strong stock market, and stock rather than cash is the preferred medium for making acquisitions. Many of the prominent mergers are neither purely horizontal (in general large horizontal mergers would raise antitrust issues) nor purely conglomerate. Rather they represent market extension mergers like SBC-Ameritech (companies in the same industry that serve different and currently non-competing markets) or mergers seeking "synergy," like Travelers-Citicorp, which presumably expects to achieve "economies of scope" in offering a full line of financial services.

Industries with the largest dollar value of deals in 1997 were telecommunications; commercial banking; investment firms, dealers, and exchanges; hotels and casinos; and business services. Telecommunications and banking and finance continue to be important in 1998. These are sectors in which the regulatory environment has been changing rapidly, opening up new opportunities and challenges, and in which managerial and technological innovations may be particularly important.

III. Aggregate Concentration

A second perspective from which to view the current merger wave is the importance of large firms in the economy. Statistics of Income data from the IRS show that there are a large number of corporations but that a relatively small number account for most corporate activity.

- In 1994 there were about 4.3 million incorporated business enterprises operating in the United States, most of them relatively small (Exhibit 3). About 7,000 corporations (0.2 percent of the total number) had assets of $250 million or more.

- These large corporations held $19.5 trillion of the $23.4 trillion in assets in the corporate sector (83 percent) and their receipts of $7.2 trillion represented 54 percent of the $13.4 trillion aggregate corporate receipts. (Aggregate corporate receipts are larger than GDP because of double counting—steel sold to automobile producers shows up as sales by steel manufacturers, but it is also reflected in the price of automobiles.)

Companies at the top of the Fortune 500 are extremely large.

- General Motors topped the 1998 list with revenues of $178 billion and assets of $229 billion (about 1.5 percent of total corporate revenues and about 1 percent of total corporate assets). Three other firms (Ford, Exxon, and Wal-Mart) had revenues in excess of $100 billion.

- Fannie Mae topped the list of Fortune 500 companies ranked by assets, with $392 billion of assets. Five other companies (Travelers Group, Chase Manhattan Corp., Citicorp, General Electric, and Morgan Stanley Dean Witter Discover) had assets in excess of $300 billion. (The merger of Travelers and Citicorp would move CitiGroup to the top by a wide margin).

- Wal-Mart Stores is by far the largest employer among the Fortune 500, with 825,000 employees. General Motors is second with 608,000 employees, and Ford and United Parcel each have employment in excess of 300,000.

Little research has been done recently on trends in aggregate concentration (the share of total assets or some other measure of size accounted for by the largest 50, 100, 150, or 200 companies). No official, long, consistent data series are currently maintained, but the available evidence does not suggest any alarming trend in aggregate concentration.

- Aggregate concentration in assets generally focuses on nonfinancial corporations, or, more narrowly, manufacturing. Most of the assets in the banking and finance sectors are financial assets that are easier to amass and manage than the physical assets that predominate in other sectors. Also, the bulk of the assets in the financial sector represent claims against the physical assets of nonfinancial corporations.

- Federal Trade Commission estimates of the concentration of assets in the nonfinancial sector show relative stability from the late 1950s to the early 1970s and a modest decline from then until 1988, the last year for which calculations have been made (exhibit 4, upper panel). In 1988 about 19 percent of the assets of nonfinancial corporations were held by the top 50 firms; 32 percent were held by the top 200 firms.

- Data for manufacturing are probably the most reliable. FTC data show a modest increase in the share of manufacturing assets accounted for by the top 100 and top 200 firms between the mid-1970s and the mid-1980s and a modest decline by 1993 (exhibit 4, lower panel). The top 100 manufacturers held 48 percent of manufacturing assets in 1993; the top 200 firms held 60 percent of the assets.

Mainstream economic theory provides little reason to think that the kinds of changes in aggregate concentration observed in the U.S. economy should have much to do with economic performance. Nor is the current merger wave likely to produce radical changes in aggregate concentration.

IV. Concentration in Particular Markets

Large size is not the same as monopoly power. For example, an ice cream vendor at the beach on a hot day probably has more market power than many multi-billion dollar companies in competitive industries (such as Gateway with less than 5 percent of the PC market). Thus, questions about whether market concentration is a problem tend to focus on particular markets rather than on the economy as a whole. As with aggregate concentration, little research has been done recently on trends in the proportion of markets that are relatively concentrated or relatively unconcentrated.

The Bureau of the Census publishes information about concentration (the share of the market accounted for by the largest 4, 8 and 20 firms) for a large number of industries as part of its quinquennial economic censuses (the latest data available are for 1992). However, these industry concentration ratios need to be interpreted with considerable caution. Two major concerns are:

- Industries are classified by similarity of production process. Hence, glass containers and plastic containers are treated as separate industries even though they may be close substitutes in many uses (a monopoly in glass containers would be of little value if users could turn to plastic when the price went up.)

- Industry concentration ratios are reported for the U.S. national market. Such concentration ratios understate the degree of competition when imports are important (automobiles) and they overstate it when markets are local or regional (cement or newspapers).

When the antitrust authorities look at a merger they put considerable effort into defining the appropriate market and its characteristics. For example, when the FTC successfully challenged the merger of Staples and Office Depot, they used statistical analysis to show that even though these firms controlled a very small share of the retail market for office products, they had substantial market power. The relevant market turned out to be "the sale of consumable office supplies through office superstores."

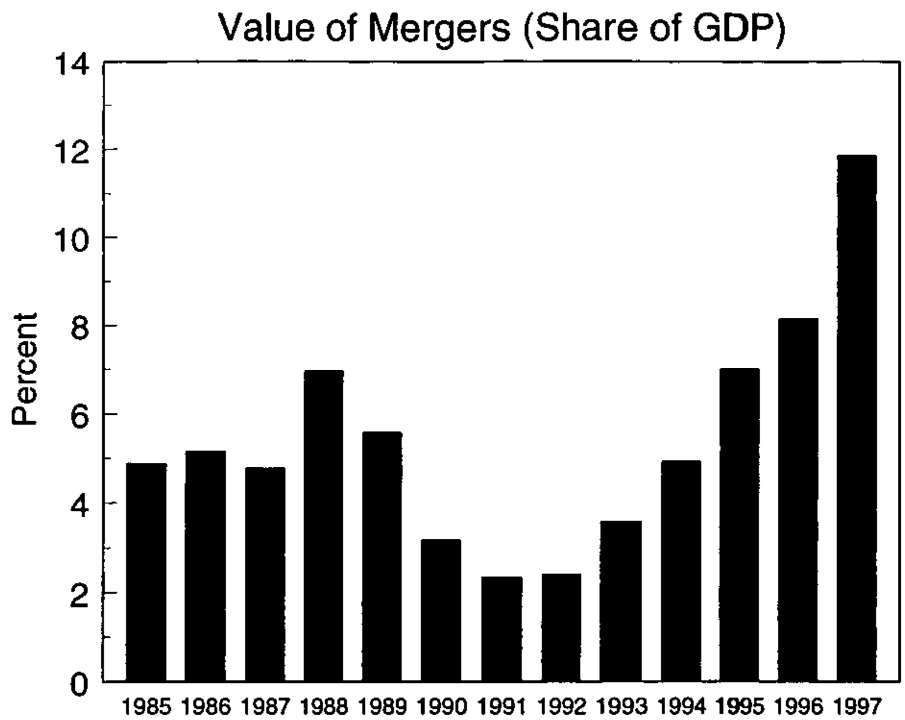
Because such careful analysis is more likely to be done for particular industries (often as a result of an antitrust investigation), there is no reliable comprehensive study of whether markets in the U.S. are generally becoming more concentrated or more competitive. One academic analyst has suggested however, that dominant firms account for less than 3 percent of GDP.

Exhibit 1

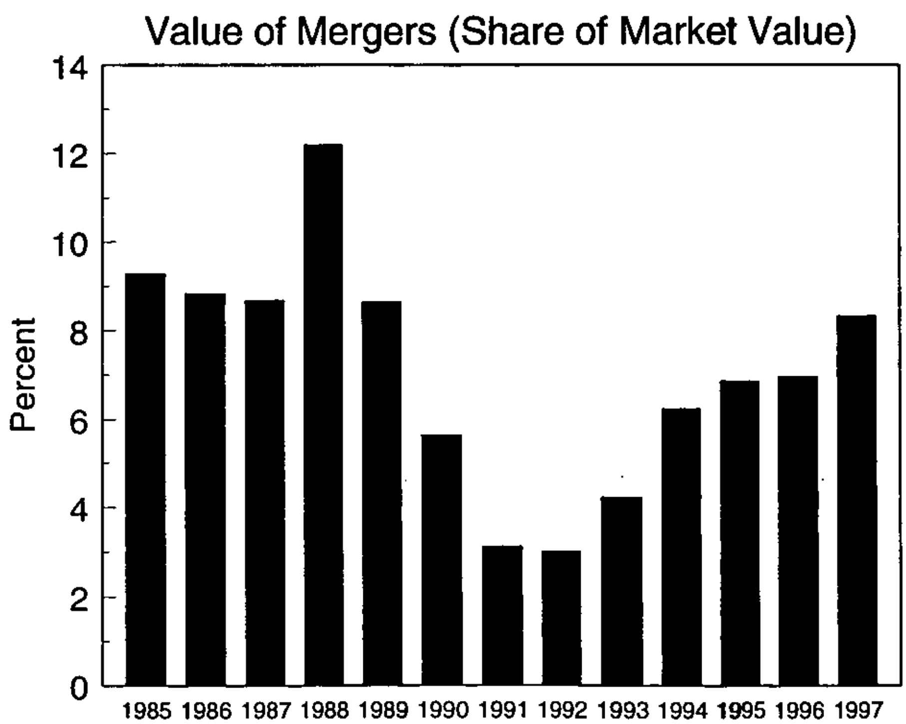
A Sample of Recent Merger Announcements

Date Announced	Target	Acquirer	Announced Value
04/06/98	CitiCorp	Travelers Group'	$70.0 billion
05/11/98	Ameritech	SBC	62.0
04/13/98	NationsBank	Bank America	60.0
05/06/98	Chrysler	Daimler Benz	39.0
04/27/98	MCI	Worldcom	36.5
08/01/97	McDonnell Douglas	Boeing	16.0
05/07/98	Rolls Royce	Volkswagen	0.7
11/18/97	Corestates Financial	First Union	17.1
08/29/97	Barnett Banks	Nationsbank	15.5
05/27/97	HFS	CUC International	11.0
02/05/97	Morgan Stanley	Dean Witter Discover	10.2
10/20/97	ITT	Starwood Lodging Trust	9.8
03/20/97	US Bancorp	First Bank System	9.0
09/24/97	Salomon Inc	Travelers Group	9.0
07/03/97	Northrop Grumman	Lockheed Martin	8.3
01/20/97	First USA	Banc One	7.3
10/29/97	Medpartners	Phycor	6.8
12/01/97	First of America Bank	National City	6.7

Exhibit 2



Value of Mergers (Share of GDP)
Percent
0
2
4
6
8
10
12
14
1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997



Value of Mergers (Share of Market Value)
Percent
0
2
4
6
8
10
12
14
1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997

Exhibit 3

The Importance of Large Corporations, 1994

Number of Enterprises

	Total	Assets > $250 million	Percent of Total
AGRICULTURE, FORESTRY,AND FISHING	146,996	17	0.0%
MINING	35,371	112	0.3%
CONSTRUCTION	432,965	39	0.0%
MANUFACTURING	312,383	1,256	0.4%
TRANSPORTATION AND PUBLIC UTILITIES	186,474	415	0.2%
WHOLESALE AND RETAIL TRADE	1,106,363	507	0.0%
FINANCE, INSURANCE, AND REAL ESTATE	681,671	4,403	0.6%
SERVICES	1,424,394	294	0.0%
ALL INDUSTRIES	4,342,368	7,043	0.2%

Assets

	Total ($billion)	Assets > $250 million ($billion)	Percent of Total
AGRICULTURE, FORESTRY,AND FISHING	80	8	10.6%
MINING	240	186	77.4%
CONSTRUCTION	249	42	16.9%
MANUFACTURING	4,525	3,846	85.0%
TRANSPORTATION AND PUBLIC UTILITIES	1,826	1,668	91.3%
WHOLESALE AND RETAIL TRADE	1,795	996	55.5%
FINANCE, INSURANCE, AND REAL ESTATE	13,895	12,296	88.5%
SERVICES	834	424	50.9%
ALL INDUSTRIES	23,446	19,467	83.0%

Receipts

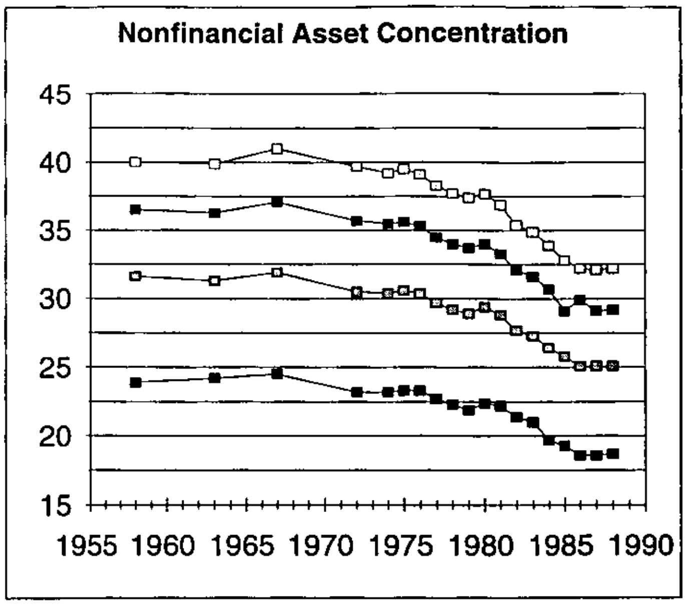
	Total ($billion)	Assets > $250 million ($billion)	Percent of Total
AGRICULTURE, FORESTRY,AND FISHING	101	7	7.3%
MINING	116	72	62.1%
CONSTRUCTION	593	47	8.0%
MANUFACTURING	4,219	2,982	70.7%
TRANSPORTATION AND PUBLIC UTILITIES	1,103	836	75.8%
WHOLESALE AND RETAIL TRADE	4,052	1,405	34.7%
FINANCE, INSURANCE, AND REAL ESTATE	1,976	1,575	79.7%
SERVICES	1,198	271	22.6%
ALL INDUSTRIES	13,360	7,196	53.9%

Source: IRS Statistics of Income

Exhibit 4

Concentration in Assets for the Nonfinancial Sector

	Top 50	Top 100	Top 150	Top 200
1958	23.9	31.6	36.5	40.0
1963	24.2	31.3	36.3	39.9
1967	24.5	31.9	37.1	41.0
1972	23.2	30.5	35.7	39.7
1974	23.2	30.4	35.5	39.2
1975	23.3	30.6	35.6	39.5
1976	23.3	30.4	35.3	39.1
1977	22.7	29.7	34.5	38.3
1978	22.3	29.2	34.0	37.7
1979	21.9	28.9	33.7	37.4
1980	22.4	29.4	34.0	37.7
1981	22.2	28.8	33.3	36.9
1982	21.4	27.7	32.1	35.4
1983	21.0	27.3	31.6	34.9
1984	19.7	26.4	30.7	33.9
1985	19.3	25.8	29.1	32.8
1986	18.6	25.1	29.9	32.2
1987	18.6	25.1	29.1	32.1
1988	18.7	25.1	29.2	32.2



Concentration in Assets for Manufacturing

	Top 100	Top 200
1974	44.4	56.7
1975	45.0	57.5
1976	45.5	58.0
1977	45.9	58.5
1978	45.5	58.3
1979	46.1	59.0
1980	46.8	59.9
1981	46.8	60.0
1982	47.7	60.9
1983	48.9	60.7
1984	49.1	61.0
1985	49.4	61.1
1986	50.0	61.8
1987	49.0	61.1
1988	49.4	61.6
1989	49.8	61.8
1990	49.5	61.6
1991	49.3	61.4
1992	49.1	61.0
1993	48.0	60.1