**Testimony of Dr. Janet L. Yellen,**
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**before the Senate Judiciary Committee**

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Mr. Chairman and members of the Committee, it is a pleasure to be here this morning to talk about some of the economic issues raised by the current merger wave. My testimony contains four sections. The first puts the current merger wave into historical perspective. The main message from that section is that merger activity has certainly increased substantially in the past few years, but it is not clear that the level of merger activity is "unprecedented." The second section examines the question of what the current increase in merger activity means for the economy. Here the main message is that mergers affect economic performance primarily through their impact on competitive conditions in specific markets rather than on broader macroeconomic conditions. The third section looks at the causes and consequences of mergers. Here there is no simple conclusion. Many, if not most mergers are motivated by the desire to achieve greater operating efficiencies and lower costs. But it is impossible to rule out anticompetitive motives or simple managerial hubris as explanations for mergers. The final section provides a summary and tentative evaluation of the current merger wave.

## I. Mergers: A Historical Perspective

The United States is in the midst of its fifth major merger wave in a hundred years. The previous four merger waves provide background and perspective for assessing today's merger activity.

- The Great Merger Wave of the 1890s. The first great merger wave at the turn of the last century was the culmination of the trust movement, when numerous small and mid-sized firms were consolidated into single dominant firms in a number of industries. Examples include 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. The sharp decline in merger activity during 1903 and 1904 was probably related to the onset of a severe recession and the legal precedent for prohibiting market-dominating mergers under the antitrust laws that was established by the Northern Securities Case.

- The Roaring Twenties. The merger movement of the 1920s saw the consolidation of many electric and gas utilities as well as manufacturing and minerals mergers. Some of the most prominent manufacturing mergers (such as the one that produced Bethlehem Steel) created relatively large number-two firms in industries previously dominated by one giant.

- The "Go-Go" Sixties. The 1960s conglomerate wave represented a deflection of the "urge to merge" away from horizontal (same-industry) mergers, perhaps due to stronger antitrust enforcement. The constant-dollar value of mergers in manufacturing and minerals surpassed the prior peak attained in 1899 (though it remained much smaller as a share of the economy). 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 Deal Decade of the 1980s. Unlike other merger booms, this one began in a depressed stock market. With stock prices low relative to the cost of building new capacity, it appeared cheaper to expand by

takeover. The 1980s boom was 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). Efforts to dismantle conglomerate firms put together in the previous wave and redeploy their assets more efficiently may have been an important driving force. Finally, the antitrust environment was more permissive and companies were more willing to attempt horizontal mergers.

Qualitatively, the current merger wave appears to be a reversion to pre-1980s form in some ways: It is taking place in a strong stock market, and stock rather than cash is the preferred medium. But many mergers are neither purely horizontal (in general large horizontal mergers would raise antitrust issues) nor purely conglomerate. 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."

By almost any quantitative measure, the current merger boom is substantial. (Exhibit 1 provides a sample of recent mergers.) For example, 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-Nationsbank merger are also huge in dollar terms. (The total value of all deals announced in 1992a year of especially low activitywas 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 turn of the last century.

One reason current merger activity is so large relative to the size of the economy is the run up in stock prices in the past few years. When merger activity is expressed relative to the market value of U.S. companies, its level remains lower than it was in the 1980s (Exhibit 2, lower panel). However, based on the volume of merger activity so far this year, 1998 is likely to show a substantial rise over 1997 in this measure of merger activity as well.

## II. Mergers, Concentration, and Aggregate Economic Performance

What does this merger activity mean for the economy? I think it is fair to say that economists have found little reason to think that broad economic indicators like the rate of economic growth, inflation, or unemployment are much affected by changes in merger activity or the share of aggregate economic activity accounted for by the largest 100 or 200 firms (so-called aggregate concentration) at least on the order of those that have typically been observed in the United States. Economic analysis suggests that the main route by which mergers affect economic performance is through their impact on competitive conditions in specific markets.

Let me elaborate a little on these points. 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. In 1976, for example, the business journalist Andrew Tobias wrote an article in New York magazine entitled, "March 3, 1998: The Day They Couldn't Fill the FORTUNE 500." Well, needless to say, Fortune magazine continues to publish its Fortune 500 with all the spots filled. Indeed, Statistics of Income data from the IRS show that in 1994, there were about 4.3 million incorporated business enterprises operating in the United States. Of course, most of these were 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.) And 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 Service each have employment in excess of 300,000.

We found no comprehensive recent research 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. However, 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 alone compiled by the FTC from Quarterly Financial Reports 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.

Thus, the evidence we have does not suggest any alarming trend toward economic activity being concentrated in large firms. Moreover, 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 individual 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). This is one reason why large size is not the same as monopoly power. A $50 million bank in rural Georgia could have more market power than a multibillion dollar bank in New York City, leading to a situation in which the merger of two small banks could pose greater concern from an antitrust perspective than a merger of two huge banks like Chase and Chemical.

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 in the market for "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 U.S. markets are generally becoming more concentrated or more competitive. One analyst has suggested however, that dominant firms account for less than 3 percent of GDP.

Thus, large firms, and the merger of large firms, are an important feature of the American economy. But they have been for over a century and there is little evidence of any alarming trend toward greater concentration of economic power in the aggregate. The analysis of how mergers affect economic performance should probably therefore focus on the impact of mergers in specific, well-defined markets.

## III. Causes and Consequences of Mergers

Keeping that perspective in mind, let me now turn to the causes and consequences of mergers. The main reason managers give for undertaking mergers is to increase efficiency. And studies show that, on average, the combined equity value of the acquired company and the purchasing company rises as a result of the merger. However, an increase in shareholder value can arise for reasons other than greater efficiency, such as increased market power and the resulting ability to increase profits by raising prices. And the separation of ownership from control in the modern corporation means that mergers may serve the interests of managers more than shareholders (e.g., empire-building, increased salary associated with running a larger firm). Finally, even if mergers are designed to enhance efficiency, they often don't work and can instead create inefficiencies (some see the merger of the Union Pacific and Southern Pacific railroads in 1995 as a notable example of such an outcome.)

There are numerous ways that mergers can contribute to economic efficiency. One is by reducing excess capacity (this justification has been invoked in hospital, defense, and banking mergers). Another is by achieving economies of scale or network externalities (the hub and spoke system that emerged following the deregulation of the airline industry is one example, though it is one that raises questions of increased concentration as well) or economies of scope ("synergy") as in the case of investment/commercial banking, where similar risk management techniques and credit evaluation skills are utilized in a wide variety of financial services. Mergers may also improve management (studies suggest large differences in efficiency among seemingly similar firms like banks.)

Most mergers probably are undertaken with the expectation of achieving efficiencies, though the outcomes may sometimes be disappointing and divorces are not uncommon (such as the unraveling of AT&T's 1991 acquisition of NCR). Studies of bank mergers suggest that, in spite of the potential for improved efficiency, in general, they have not improved the efficiency or profitability of banks.

Mergers can also be undertaken to increase market power and reduce competition. In this event consumers could be harmed through higher prices, lower service, reduced variety and, in the view of some, a reduced pace of innovation, although some argue that increased market power should raise innovation due to the increased ability to appropriate the benefits of R&D. Mergers can also work to decrease the potential for future competition. There is abundant evidence that, when one compares markets of a given type, such as local banking markets, the degree of concentration in a market is correlated with such measures of economic performance as prices and profits. And there is some evidence that mergers have raised prices, as in the case of the mid 1980s airline mergers. Other things equal, higher concentration leads to worsened performance, which is why the Merger Guidelines, after assessing what the appropriate definition of the market is from a product and geographical perspective, looks at the impact of a merger on the level of concentration. However, statistical evidence suggests this is not the main motive for most mergers, perhaps reflecting the presence of

antitrust monitoring and enforcement.

Thus far, I have been discussing motives for mergers generally. A natural question is why so many firms are merging now. There is no single reason. The following are some of the prevailing explanations:

- (1) Adjusting to falling regulatory barriers. Mergers have followed the removal of branching restrictions in banking and ownership restrictions in radio. 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.

- (2) Technological change. Innovation can change the size and type of firm that is seen as most profitable. Some mergers today 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. 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. In addition, large scale may be needed to exploit some advances in information technology and telecommunications, such as credit scoring.

- (3) Globalization. The emergent global economy may demand large scale to participate. A European and an 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.

- (4) High stock market. Price-earnings ratios have increased to near-record levels during the current merger wave, and some analysts feel that the market may be overvalued. Such high stock market values may make it seem attractive to fund an acquisition with stock (this is the dominant funding source in the current merger wave). But an overvalued stock market should not necessarily lead to more mergers, because if other firms are also overvalued then there are fewer attractive targets to acquire.

As I mentioned earlier, in evaluating the consequences of mergers we should focus on particular well-defined markets. In this regard, it is important to recognize that 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. In banking, for example, national concentration has increased dramatically due to mergers, but concentration measures for local banking deposits have been extremely stable because most mergers have been between banks serving different regions. Even when the merger is among competitors, increasing global competition or domestic entry could be simultaneously reducing concentration. In addition, the entry of new firms or the threat of entry can offset the potentially anticompetitive impact of a merger. And finally, the structural characteristics of markets, and not just the number of firms, influence the nature of competition in a given market. We cannot automatically conclude that markets with 2 or 3 competitors will be less competitive than those with 20 or 30.

## IV. Conclusion.

To wrap up, the United States is currently in the midst of its fifth major merger wave in the past hundred years. Industries that are particularly prone to mergers include telecommunications, banking, and financial services. These are sectors in which the regulatory environment has been changing rapidly, opening up new

opportunities and challenges. This merger wave 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 (companies in the same industry that serve different and currently non-competing markets) or mergers seeking "synergy" among companies in different industries. Analysis of the economic impacts requires careful analysis of particular markets and defies easy generalizations.



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