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DEREGULATION REDUX

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EXPANSION OF BANKING ACTIVITIES: "SHATTERER OF GLASS-STEAGALL"

By the mid-1990s, the parallel banking system was booming, some of the largest commercial banks appeared increasingly like the large investment banks, and all of them were becoming larger, more complex, and more active in securitization. Some academics and industry analysts argued that advances in data processing, telecommunications, and information services created economies of scale and scope in finance and thereby justified ever-larger financial institutions. Bigger would be safer, the argument went, and more diversified, innovative, efficient, and better able to serve the needs of an expanding economy. Others contended that the largest banks were not necessarily more efficient but grew because of their commanding market positions and creditors' perception they were too big to fail. As they grew, the large banks pressed regulators, state legislatures, and Congress to remove almost all remaining barriers to growth and competition. They had much success. In 1994 Congress authorized nationwide banking with the Riegle-Neal Interstate Banking and Branching Efficiency Act. This let bank holding companies acquire banks in every state, and removed most restrictions on opening branches in more than one state. It preempted any state law that restricted the ability of out-of-state banks to compete within the state's borders.1

Removing barriers helped consolidate the banking industry. Between 1990 and 2005, 74 "megamergers" occurred involving banks with assets of more than \$10 billion each. Meanwhile the 10 largest jumped from owning 25% of the industry's assets

to 55%. From 1998 to 2007, the combined assets of the five largest U.S. banks—Bank of America, Citigroup, JP Morgan, Wachovia, and Wells Fargo—more than tripled, from \$2.2 trillion to \$6.8 trillion.² And investment banks were growing bigger, too. Smith Barney acquired Shearson in 1993 and Salomon Brothers in 1997, while Paine Webber purchased Kidder, Peabody in 1995. Two years later, Morgan Stanley merged with Dean Witter, and Bankers Trust purchased Alex. Brown & Sons. The assets of the five largest investment banks—Goldman Sachs, Morgan Stanley, Merrill Lynch, Lehman Brothers, and Bear Stearns—quadrupled, from \$1 trillion in 1998 to \$4 trillion in 2007.³

In 1996, the Economic Growth and Regulatory Paperwork Reduction Act required federal regulators to review their rules every decade and solicit comments on "outdated, unnecessary, or unduly burdensome" rules.⁴ Some agencies responded with gusto. In 2003, the Federal Deposit Insurance Corporation's annual report included a photograph of the vice chairman, John Reich; the director of the Office of Thrift Supervision (OTS), James Gilleran; and three banking industry representatives using a chainsaw and pruning shears to cut the "red tape" binding a large stack of documents representing regulations.

Less enthusiastic agencies felt heat. Former Securities and Exchange Commission chairman Arthur Levitt told the FCIC that once word of a proposed regulation got out, industry lobbyists would rush to complain to members of the congressional committee with jurisdiction over the financial activity at issue. According to Levitt, these members would then "harass" the SEC with frequent letters demanding answers to complex questions and appearances of officials before Congress. These requests consumed much of the agency's time and discouraged it from making regulations. Levitt described it as "kind of a blood sport to make the particular agency look stupid or inept or venal."⁵

However, others said interference—at least from the executive branch—was modest. John Hawke, a former comptroller of the currency, told the FCIC he found the Treasury Department "exceedingly sensitive" to his agency's independence. His successor, John Dugan, said "statutory firewalls" prevented interference from the executive branch.⁶

Deregulation went beyond dismantling regulations; its supporters were also disinclined to adopt new regulations or challenge industry on the risks of innovations. Federal Reserve officials argued that financial institutions, with strong incentives to protect shareholders, would regulate themselves by carefully managing their own risks. In a 2003 speech, Fed Vice Chairman Roger Ferguson praised "the truly impressive improvement in methods of risk measurement and management and the growing adoption of these technologies by mostly large banks and other financial intermediaries." Likewise, Fed and other officials believed that markets would self-regulate through the activities of analysts and investors. "It is critically important to recognize that no market is ever truly unregulated," said Fed Chairman Alan Greenspan in 1997. "The self-interest of market participants generates private market regulation. Thus, the real question is not whether a market should be regulated.

Rather, the real question is whether government intervention strengthens or weakens private regulation."8

Richard Spillenkothen, the Fed's director of Banking Supervision and Regulation from 1991 to 2006, discussed banking supervision in a memorandum submitted to the FCIC: "Supervisors understood that forceful and proactive supervision, especially early intervention before management weaknesses were reflected in poor financial performance, might be viewed as i) overly-intrusive, burdensome, and heavy-handed, ii) an undesirable constraint on credit availability, or iii) inconsistent with the Fed's public posture."9

To create checks and balances and keep any agency from becoming arbitrary or inflexible, senior policy makers pushed to keep multiple regulators. In 1994, Greenspan testified against proposals to consolidate bank regulation: "The current structure provides banks with a method . . . of shifting their regulator, an effective test that provides a limit on the arbitrary position or excessively rigid posture of any one regulator. The pressure of a potential loss of institutions has inhibited excessive regulation and acted as a countervailing force to the bias of a regulatory agency to overregulate." Further, some regulators, including the OTS and Office of the Comptroller of the Currency (OCC), were funded largely by assessments from the institutions they regulated. As a result, the larger the number of institutions that chose these regulators, the greater their budget.

Emboldened by success and the tenor of the times, the largest banks and their regulators continued to oppose limits on banks' activities or growth. The barriers separating commercial banks and investment banks had been crumbling, little by little, and now seemed the time to remove the last remnants of the restrictions that separated banks, securities firms, and insurance companies.

In the spring of 1996, after years of opposing repeal of Glass-Steagall, the Securities Industry Association—the trade organization of Wall Street firms such as Goldman Sachs and Merrill Lynch—changed course. Because restrictions on banks had been slowly removed during the previous decade, banks already had beachheads in securities and insurance. Despite numerous lawsuits against the Fed and the OCC, securities firms and insurance companies could not stop this piecemeal process of deregulation through agency rulings. Edward Yingling, the CEO of the American Bankers Association (a lobbying organization), said, Because we had knocked so many holes in the walls separating commercial and investment banking and insurance, we were able to aggressively enter their businesses—in some cases more aggressively than they could enter ours. So first the securities industry, then the insurance companies, and finally the agents came over and said let's negotiate a deal and work together.

In 1998, Citicorp forced the issue by seeking a merger with the insurance giant Travelers to form Citigroup. The Fed approved it, citing a technical exemption to the Bank Holding Company Act,¹⁴ but Citigroup would have to divest itself of many Travelers assets within five years unless the laws were changed. Congress had to make a decision: Was it prepared to break up the nation's largest financial firm? Was it time to repeal the Glass-Steagall Act, once and for all?

As Congress began fashioning legislation, the banks were close at hand. In 1999, the financial sector spent \$187 million lobbying at the federal level, and individuals and political action committees (PACs) in the sector donated \$202 million to federal election campaigns in the 2000 election cycle. From 1999 through 2008, federal lobbying by the financial sector reached \$2.7 billion; campaign donations from individuals and PACs topped \$1 billion.¹⁵

In November 1999, Congress passed and President Clinton signed the Gramm-Leach-Bliley Act (GLBA), which lifted most of the remaining Glass-Steagall-era restrictions. The new law embodied many of the measures Treasury had previously advocated. The *New York Times* reported that Citigroup CEO Sandy Weill hung in his office a hunk of wood—at least 4 feet wide—etched with his portrait and the words The Shatterer of Glass-Steagall.

Now, as long as bank holding companies satisfied certain safety and soundness conditions, they could underwrite and sell banking, securities, and insurance products and services. Their securities affiliates were no longer bound by the Fed's 25% limit—their primary regulator, the SEC, set their only boundaries. Supporters of the legislation argued that the new holding companies would be more profitable (due to economies of scale and scope), safer (through a broader diversification of risks), more useful to consumers (thanks to the convenience of one-stop shopping for financial services), and more competitive with large foreign banks, which already offered loans, securities, and insurance products. The legislation's opponents warned that allowing banks to combine with securities firms would promote excessive speculation and could trigger a crisis like the crash of 1929. John Reed, former co-CEO of Citigroup, acknowledged to the FCIC that, in hindsight, "the compartmentalization that was created by Glass-Steagall would be a positive factor," making less likely a "catastrophic failure" of the financial system.¹⁸

To win the securities industry's support, the new law left in place two exceptions that let securities firms own thrifts and industrial loan companies, a type of depository institution with stricter limits on its activities. Through them, securities firms could access FDIC-insured deposits without supervision by the Fed. Some securities firms immediately expanded their industrial loan company and thrift subsidiaries. Merrill's industrial loan company grew from less than \$1 billion in assets in 1998 to \$4 billion in 1999, and to \$78 billion in 2007. Lehman's thrift grew from \$88 million in 1998 to \$3 billion in 1999, and its assets rose as high as \$24 billion in 2005. 19

For institutions regulated by the Fed, the new law also established a hybrid regulatory structure known colloquially as "Fed-Lite." The Fed supervised financial holding companies as a whole, looking only for risks that cut across the various subsidiaries owned by the holding company. To avoid duplicating other regulators' work, the Fed was required to rely "to the fullest extent possible" on examinations and reports of those agencies regarding subsidiaries of the holding company, including banks, securities firms, and insurance companies. The expressed intent of Fed-Lite was to eliminate excessive or duplicative regulation.²⁰ However, Fed Chairman Ben Bernanke told the FCIC that Fed-Lite "made it difficult for any single regulator to reliably see the whole picture of activities and risks of large, complex banking institutions."²¹

Indeed, the regulators, including the Fed, would fail to identify excessive risks and unsound practices building up in nonbank subsidiaries of financial holding companies such as Citigroup and Wachovia.²²

The convergence of banks and securities firms also undermined the supportive relationship between banking and securities markets that Fed Chairman Greenspan had considered a source of stability. He compared it to a "spare tire": if large commercial banks ran into trouble, their large customers could borrow from investment banks and others in the capital markets; if those markets froze, banks could lend using their deposits. After 1990, securitized mortgage lending provided another source of credit to home buyers and other borrowers that softened a steep decline in lending by thrifts and banks. The system's resilience following the crisis in Asian financial markets in the late 1990s further proved his point, Greenspan said.²³

The new regime encouraged growth and consolidation within and across banking, securities, and insurance. The bank-centered financial holding companies such as Citigroup, JP Morgan, and Bank of America could compete directly with the "big five" investment banks—Goldman Sachs, Morgan Stanley, Merrill Lynch, Lehman Brothers, and Bear Stearns—in securitization, stock and bond underwriting, loan syndication, and trading in over-the-counter (OTC) derivatives. The biggest bank holding companies became major players in investment banking. The strategies of the largest commercial banks and their holding companies came to more closely resemble the strategies of investment banks. Each had advantages: commercial banks enjoyed greater access to insured deposits, and the investment banks enjoyed less regulation. Both prospered from the late 1990s until the outbreak of the financial crisis in 2007. However, Greenspan's "spare tire" that had helped make the system less vulnerable would be gone when the financial crisis emerged—all the wheels of the system would be spinning on the same axle.

LONG-TERM CAPITAL MANAGEMENT: "THAT'S WHAT HISTORY HAD PROVED TO THEM"

In August 1998, Russia defaulted on part of its national debt, panicking markets. Russia announced it would restructure its debt and postpone some payments. In the aftermath, investors dumped higher-risk securities, including those having nothing to do with Russia, and fled to the safety of U.S. Treasury bills and FDIC-insured deposits. In response, the Federal Reserve cut short-term interest rates three times in seven weeks.²⁴ With the commercial paper market in turmoil, it was up to the commercial banks to take up the slack by lending to corporations that could not roll over their short-term paper. Banks loaned \$30 billion in September and October of 1998—about 2.5 times the usual amount²⁵—and helped prevent a serious disruption from becoming much worse. The economy avoided a slump.

Not so for Long-Term Capital Management, a large U.S. hedge fund. LTCM had devastating losses on its \$125 billion portfolio of high-risk debt securities, including the junk bonds and emerging market debt that investors were dumping.²⁶ To buy these securities, the firm had borrowed \$24 for every \$1 of investors' equity;²⁷ lenders

included Merrill Lynch, JP Morgan, Morgan Stanley, Lehman Brothers, Goldman Sachs, and Chase Manhattan. The previous four years, LTCM's leveraging strategy had produced magnificent returns: 19.9%, 42.8%, 40.8%, and 17.1%, while the S&P 500 yielded an average 21%.²⁸

But leverage works both ways, and in just one month after Russia's partial default, the fund lost more than \$4 billion—or more than 80% of its nearly \$5 billion in capital. Its debt was about \$120 billion. The firm faced insolvency.²⁹

If it were only a matter of less than \$5 billion, LTCM's failure might have been manageable. But the firm had further leveraged itself by entering into derivatives contracts with more than \$1 trillion in notional amount—mostly interest rate and equity derivatives. With very little capital in reserve, it threatened to default on its obligations to its derivatives counterparties—including many of the largest commercial and investment banks. Because LTCM had negotiated its derivatives transactions in the opaque over-the-counter market, the markets did not know the size of its positions or the fact that it had posted very little collateral against those positions. As the Fed noted then, if all the fund's counterparties had tried to liquidate their positions simultaneously, asset prices across the market might have plummeted, which would have created "exaggerated" losses. This was a classic setup for a run: losses were likely, but nobody knew who would get burned. The Fed worried that with financial markets already fragile, these losses would spill over to investors with no relationship to LTCM, and credit and derivatives markets might "cease to function for a period of one or more days and maybe longer."

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To avert such a disaster, the Fed called an emergency meeting of major banks and securities firms with large exposures to LTCM.³² On September 23, after considerable urging, 14 institutions agreed to organize a consortium to inject \$3.6 billion into LTCM in return for 90% of its stock.³³ The firms contributed between \$100 million and \$300 million each, although Bear Stearns declined to participate.³⁴ An orderly liquidation of LTCM's securities and derivatives followed.

William McDonough, then president of the New York Fed, insisted "no Federal Reserve official pressured anyone, and no promises were made." The rescue involved no government funds. Nevertheless, the Fed's orchestration raised a question: how far would it go to forestall what it saw as a systemic crisis?

The Fed's aggressive response had precedents in the previous two decades. In 1970, the Fed had supported the commercial paper market; in 1980, dealers in silver futures; in 1982, the repo market; in 1987, the stock market after the Dow Jones Industrial Average fell by 26% percent in three days. All provided a template for future interventions. Each time, the Fed cut short-term interest rates and encouraged financial firms in the parallel banking and traditional banking sectors to help ailing markets. And sometimes it organized a consortium of financial institutions to rescue firms.³⁶

During the same period, federal regulators also rescued several large banks that they viewed as "too big to fail" and protected creditors of those banks, including uninsured depositors. Their rationale was that major banks were crucial to the financial markets and the economy, and regulators could not allow the collapse of one

large bank to trigger a panic among uninsured depositors that might lead to more bank failures.

But it was a completely different proposition to argue that a hedge fund could be considered too big to fail because its collapse might destabilize capital markets. Did LTCM's rescue indicate that the Fed was prepared to protect creditors of any type of firm if its collapse might threaten the capital markets? Harvey Miller, the bankruptcy counsel for Lehman Brothers when it failed in 2008, told the FCIC that "they [hedge funds] expected the Fed to save Lehman, based on the Fed's involvement in LTCM's rescue. That's what history had proved to them."³⁷

For Stanley O'Neal, Merrill's CFO during the LTCM rescue, the experience was "indelible." He told the FCIC, "The lesson I took away from it though was that had the market seizure and panic and lack of liquidity lasted longer, there would have been a lot of firms across the Street that were irreparably harmed, and Merrill would have been one of those."³⁸

Greenspan argued that the events of 1998 had confirmed the spare tire theory. He said in a 1999 speech that the successful resolution of the 1998 crisis showed that "diversity within the financial sector provides insurance against a financial problem turning into economy-wide distress." The President's Working Group on Financial Markets came to a less definite conclusion. In a 1999 report, the group noted that LTCM and its counterparties had "underestimated the likelihood that liquidity, credit, and volatility spreads would move in a similar fashion in markets across the world at the same time." Many financial firms would make essentially the same mistake a decade later. For the Working Group, this miscalculation raised an important issue: "As new technology has fostered a major expansion in the volume and, in some cases, the leverage of transactions, some existing risk models have underestimated the probability of severe losses. This shows the need for insuring that decisions about the appropriate level of capital for risky positions become an issue that is explicitly considered." An are the surface of the probability of severe losses. This shows the need for insuring that decisions about the appropriate level of capital for risky positions become an issue that is explicitly considered."

The need for risk management grew in the following decade. The Working Group was already concerned that neither the markets nor their regulators were prepared for tail risk—an unanticipated event causing catastrophic damage to financial institutions and the economy. Nevertheless, it cautioned that overreacting to threats such as LTCM would diminish the dynamism of the financial sector and the real economy: "Policy initiatives that are aimed at simply reducing default likelihoods to extremely low levels might be counterproductive if they unnecessarily disrupt trading activity and the intermediation of risks that support the financing of real economic activity."

Following the Working Group's findings, the SEC five years later would issue a rule expanding the number of hedge fund advisors—to include most advisors—that needed to register with the SEC. The rule would be struck down in 2006 by the United States Court of Appeals for the District of Columbia after the SEC was sued by an investment advisor and hedge fund.⁴³

Markets were relatively calm after 1998, Glass-Steagall would be deemed unnecessary, OTC derivatives would be deregulated, and the stock market and the economy would continue to prosper for some time. Like all the others (with the exception

of the Great Depression), this crisis soon faded into memory. But not before, in February 1999, *Time* magazine featured Robert Rubin, Larry Summers, and Alan Greenspan on its cover as "The Committee to Save the World." Federal Reserve Chairman Greenspan became a cult hero—the "Maestro"—who had handled every emergency since the 1987 stock market crash.⁴⁴

DOT-COM CRASH: "LAY ON MORE RISK"

The late 1990s was a good time for investment banking. Annual public underwritings and private placements of corporate securities in U.S. markets almost quadrupled, from \$600 billion in 1994 to \$2.2 trillion in 2001. Annual initial public offerings of stocks (IPOs) soared from \$28 billion in 1994 to \$76 billion in 2000 as banks and securities firms sponsored IPOs for new Internet and telecommunications companies—the dot-coms and telecoms.⁴⁵ A stock market boom ensued comparable to the great bull market of the 1920s. The value of publicly traded stocks rose from \$5.8 trillion in December 1994 to \$17.8 trillion in March 2000.⁴⁶ The boom was particularly striking in recent dot-com and telecom issues on the NASDAQ exchange. Over this period, the NASDAQ skyrocketed from 752 to 5,048.

In the spring of 2000, the tech bubble burst. The "new economy" dot-coms and telecoms had failed to match the lofty expectations of investors, who had relied on bullish—and, as it turned out, sometimes deceptive—research reports issued by the same banks and securities firms that had underwritten the tech companies' initial public offerings. Between March 2000 and March 2001, the NASDAQ fell by almost two-thirds. This slump accelerated after the terrorist attacks on September 11 as the nation slipped into recession. Investors were further shaken by revelations of accounting frauds and other scandals at prominent firms such as Enron and Worldcom. Some leading commercial and investment banks settled with regulators over improper practices in the allocation of IPO shares during the bubble—for spinning (doling out shares in "hot" IPOs in return for reciprocal business) and laddering (doling out shares to investors who agreed to buy more later at higher prices).⁴⁷ The regulators also found that public research reports prepared by investment banks' analysts were tainted by conflicts of interest. The SEC, New York's attorney general, the National Association of Securities Dealers (now FINRA), and state regulators settled enforcement actions against 10 firms for \$875 million, forbade certain practices, and instituted reforms.48

The sudden collapses of Enron and WorldCom were shocking; with assets of \$63 billion and \$104 billion, respectively, they were the largest corporate bankruptcies before the default of Lehman Brothers in 2008.

Following legal proceedings and investigations, Citigroup, JP Morgan, Merrill Lynch, and other Wall Street banks paid billions of dollars—although admitted no wrongdoing—for helping Enron hide its debt until just before its collapse. Enron and its bankers had created entities to do complex transactions generating fictitious earnings, disguised debt as sales and derivative transactions, and understated the firm's leverage. Executives at the banks had pressured their analysts to write glowing

evaluations of Enron. The scandal cost Citigroup, JP Morgan, CIBC, Merrill Lynch, and other financial institutions more than \$400 million in settlements with the SEC; Citigroup, JP Morgan, CIBC, Lehman Brothers, and Bank of America paid another \$6.9 billion to investors to settle class action lawsuits.⁴⁹ In response, the Sarbanes-Oxley Act of 2002 required the personal certification of financial reports by CEOs and CFOs; independent audit committees; longer jail sentences and larger fines for executives who misstate financial results; and protections for whistleblowers.

Some firms that lent to companies that failed during the stock market bust were successfully hedged, having earlier purchased credit default swaps on these firms. Regulators seemed to draw comfort from the fact that major banks had succeeded in transferring losses from those relationships to investors through these and other hedging transactions. In November 2002, Fed Chairman Greenspan said credit derivatives "appear to have effectively spread losses" from defaults by Enron and other large corporations. Although he conceded the market was "still too new to have been tested" thoroughly, he observed that "to date, it appears to have functioned well." The following year, Fed Vice Chairman Roger Ferguson noted that "the most remarkable fact regarding the banking industry during this period is its resilience and retention of fundamental strength." 51

This resilience led many executives and regulators to presume the financial system had achieved unprecedented stability and strong risk management. The Wall Street banks' pivotal role in the Enron debacle did not seem to trouble senior Fed officials. In a memorandum to the FCIC, Richard Spillenkothen described a presentation to the Board of Governors in which some Fed governors received details of the banks' complicity "coolly" and were "clearly unimpressed" by analysts' findings. "The message to some supervisory staff was neither ambiguous nor subtle," Spillenkothen wrote. Earlier in the decade, he remembered, senior economists at the Fed had called Enron an example of a derivatives market participant successfully regulated by market discipline without government oversight.⁵²

The Fed cut interest rates aggressively in order to contain damage from the dotcom and telecom bust, the terrorist attacks, and the financial market scandals. In January 2001, the federal funds rate, the overnight bank-to-bank lending rate, was 6.5%. By mid-2003, the Fed had cut that rate to just 1%, the lowest in half a century, where it stayed for another year. In addition, to offset the market disruptions following the 9/11 attacks, the Fed flooded the financial markets with money by purchasing more than \$150 billion in government securities and lending \$45 billion to banks. It also suspended restrictions on bank holding companies so the banks could make large loans to their securities affiliates. With these actions the Fed prevented a protracted liquidity crunch in the financial markets during the fall of 2001, just as it had done during the 1987 stock market crash and the 1998 Russian crisis.

Why wouldn't the markets assume the central bank would act again—and again save the day? Two weeks before the Fed cut short-term rates in January 2001, the *Economist* anticipated it: "the 'Greenspan put' is once again the talk of Wall Street. . . . The idea is that the Federal Reserve can be relied upon in times of crisis to come to

the rescue, cutting interest rates and pumping in liquidity, thus providing a floor for equity prices." The "Greenspan put" was analysts' shorthand for investors' faith that the Fed would keep the capital markets functioning no matter what. The Fed's policy was clear: to restrain growth of an asset bubble, it would take only small steps, such as warning investors some asset prices might fall; but after a bubble burst, it would use all the tools available to stabilize the markets. Greenspan argued that intentionally bursting a bubble would heavily damage the economy. "Instead of trying to contain a putative bubble by drastic actions with largely unpredictable consequences," he said in 2004, when housing prices were ballooning, "we chose . . . to focus on policies 'to mitigate the fallout when it occurs and, hopefully, ease the transition to the next expansion." ⁵⁴

This asymmetric policy—allowing unrestrained growth, then working hard to cushion the impact of a bust—raised the question of "moral hazard": did the policy encourage investors and financial institutions to gamble because their upside was unlimited while the full power and influence of the Fed protected their downside (at least against catastrophic losses)? Greenspan himself warned about this in a 2005 speech, noting that higher asset prices were "in part the indirect result of investors accepting lower compensation for risk" and cautioning that "newly abundant liquidity can readily disappear." 55 Yet the only real action would be an upward march of the federal funds rate that had begun in the summer of 2004, although, as he pointed out in the same 2005 speech, this had little effect.

And the markets were undeterred. "We had convinced ourselves that we were in a less risky world," former Federal Reserve governor and National Economic Council director under President George W. Bush Lawrence Lindsey told the Commission. "And how should any rational investor respond to a less risky world? They should lay on more risk." ⁵⁶

THE WAGES OF FINANCE: "WELL, THIS ONE'S DOING IT, SO HOW CAN I NOT DO IT?"

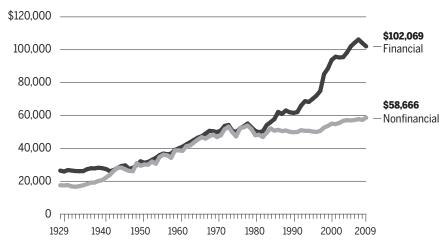
As figure 4.1 demonstrates, for almost half a century after the Great Depression, pay inside the financial industry and out was roughly equal. Beginning in 1980, they diverged. By 2007, financial sector compensation was more than 80% greater than in other businesses—a considerably larger gap than before the Great Depression.

Until 1970, the New York Stock Exchange, a private self-regulatory organization, required members to operate as partnerships.⁵⁷ Peter J. Solomon, a former Lehman Brothers partner, testified before the FCIC that this profoundly affected the investment bank's culture. Before the change, he and the other partners had sat in a single room at headquarters, not to socialize but to "overhear, interact, and monitor" each other. They were all on the hook together. "Since they were personally liable as partners, they took risk very seriously," Solomon said.⁵⁸ Brian Leach, formerly an executive at Morgan Stanley, described to FCIC staff Morgan Stanley's compensation practices before it issued stock and became a public corporation: "When I first

Compensation in Financial and Nonfinancial Sectors

Compensation in the financial sector outstripped pay elsewhere, a pattern not seen since the years before the Great Depression.

ANNUAL AVERAGE, IN 2009 DOLLARS



NOTE: Average compensation includes wages, salaries, commissions, tips, bonuses, and payments for government insurance and pension programs. Nonfinancial sector is all domestic employees except those in finance and insurance.

SOURCES: Bureau of Economic Analysis, Bureau of Labor Statistics, CPI-Urban, FCIC calculations

Figure 4.1

started at Morgan Stanley, it was a private company. When you're a private company, you don't get paid until you retire. I mean, you get a good, you know, year-to-year compensation." But the big payout was "when you retire." ⁵⁹

When the investment banks went public in the 1980s and 1990s, the close relationship between bankers' decisions and their compensation broke down. They were now trading with shareholders' money. Talented traders and managers once tethered to their firms were now free agents who could play companies against each other for more money. To keep them from leaving, firms began providing aggressive incentives, often tied to the price of their shares and often with accelerated payouts. To keep up, commercial banks did the same. Some included "clawback" provisions that would require the return of compensation under narrow circumstances, but those proved too limited to restrain the behavior of traders and managers.

Studies have found that the real value of executive pay, adjusted for inflation, grew

only 0.8% a year during the 30 years after World War II, lagging companies' increasing size. 60 But the rate picked up during the 1970s and rose faster each decade, reaching 10% a year from 1995 to 1999. 61 Much of the change reflected higher earnings in the financial sector, where by 2005 executives' pay averaged \$3.4 million annually, the highest of any industry. Though base salaries differed relatively little across sectors, banking and finance paid much higher bonuses and awarded more stock. And brokers and dealers did by far the best, averaging more than \$7 million in compensation. 62

Both before and after going public, investment banks typically paid out half their revenues in compensation. For example, Goldman Sachs spent between 44% and 49% a year between 2005 and 2008, when Morgan Stanley allotted between 46% and 59%. Merrill paid out similar percentages in 2005 and 2006, but gave 141% in 2007—a year it suffered dramatic losses.⁶³

As the scale, revenue, and profitability of the firms grew, compensation packages soared for senior executives and other key employees. John Gutfreund, reported to be the highest-paid executive on Wall Street in the late 1980s, received \$3.2 million in 1986 as CEO of Salomon Brothers. 64 Stanley O'Neal's package was worth more than \$91 million in 2006, the last full year he was CEO of Merrill Lynch. 65 In 2007, Lloyd Blankfein, CEO at Goldman Sachs, received \$68.5 million; 66 Richard Fuld, CEO of Lehman Brothers, and Jamie Dimon, CEO of JPMorgan Chase, received about \$34 million and \$28 million, respectively. 67 That year Wall Street paid workers in New York roughly \$33 billion in year-end bonuses alone. 68 Total compensation for the major U.S. banks and securities firms was estimated at \$137 billion. 69

Stock options became a popular form of compensation, allowing employees to buy the company's stock in the future at some predetermined price, and thus to reap rewards when the stock price was higher than that predetermined price. In fact, the option would have no value if the stock price was below that price. Encouraging the awarding of stock options was 1993 legislation making compensation in excess of \$1 million taxable to the corporation unless performance-based. Stock options had potentially unlimited upside, while the downside was simply to receive nothing if the stock didn't rise to the predetermined price. The same applied to plans that tied pay to return on equity: they meant that executives could win more than they could lose. These pay structures had the unintended consequence of creating incentives to increase both risk and leverage, which could lead to larger jumps in a company's stock price.

As these options motivated financial firms to take more risk and use more leverage, the evolution of the system provided the means. Shadow banking institutions faced few regulatory constraints on leverage; changes in regulations loosened the constraints on commercial banks. OTC derivatives allowing for enormous leverage proliferated. And risk management, thought to be keeping ahead of these developments, would fail to rein in the increasing risks.

The dangers of the new pay structures were clear, but senior executives believed they were powerless to change it. Former Citigroup CEO Sandy Weill told the Commission, "I think if you look at the results of what happened on Wall Street, it became,

'Well, this one's doing it, so how can I not do it, if I don't do it, then the people are going to leave my place and go someplace else." Managing risk "became less of an important function in a broad base of companies, I would guess."

And regulatory entities, one source of checks on excessive risk taking, had challenges recruiting financial experts who could otherwise work in the private sector. Lord Adair Turner, chairman of the U.K. Financial Services Authority, told the Commission, "It's not easy. This is like a continual process of, you know, high-skilled people versus high-skilled people, and the poachers are better paid than the game-keepers." Bernanke said the same at an FCIC hearing: "It's just simply never going to be the case that the government can pay what Wall Street can pay."

Tying compensation to earnings also, in some cases, created the temptation to manipulate the numbers. Former Fannie Mae regulator Armando Falcon Jr. told the FCIC, "Fannie began the last decade with an ambitious goal—double earnings in 5 years to \$6.46 [per share]. A large part of the executives' compensation was tied to meeting that goal." Achieving it brought CEO Franklin Raines \$52 million of his \$90 million pay from 1998 to 2003. However, Falcon said, the goal "turned out to be unachievable without breaking rules and hiding risks. Fannie and Freddie executives worked hard to persuade investors that mortgage-related assets were a riskless investment, while at the same time covering up the volatility and risks of their own mortgage portfolios and balance sheets." Fannie's estimate of how many mortgage holders would pay off was off by \$400 million at year-end 1998, which meant no bonuses. So Fannie counted only half the \$400 million on its books, enabling Raines and other executives to meet the earnings target and receive 100% of their bonuses.

Compensation structures were skewed all along the mortgage securitization chain, from people who originated mortgages to people on Wall Street who packaged them into securities. Regarding mortgage brokers, often the first link in the process, FDIC Chairman Sheila Bair told the FCIC that their "standard compensation practice . . . was based on the volume of loans originated rather than the performance and quality of the loans made." She concluded, "The crisis has shown that most financial-institution compensation systems were not properly linked to risk management. Formula-driven compensation allows high short-term profits to be translated into generous bonus payments, without regard to any longer-term risks." SEC Chairman Mary Schapiro told the FCIC, "Many major financial institutions created asymmetric compensation packages that paid employees enormous sums for short-term success, even if these same decisions result in significant long-term losses or failure for investors and taxpayers." ⁷⁵

FINANCIAL SECTOR GROWTH: "I THINK WE OVERDID FINANCE VERSUS THE REAL ECONOMY"

For about two decades, beginning in the early 1980s, the financial sector grew faster than the rest of the economy—rising from about 5% of gross domestic product (GDP) to about 8% in the early 21st century. In 1980, financial sector profits were about 15% of corporate profits. In 2003, they hit a high of 33% but fell back to 27%

in 2006, on the eve of the financial crisis. The largest firms became considerably larger. JP Morgan's assets increased from \$667 billion in 1999 to \$2.2 trillion in 2008, a compound annual growth rate of 16%. Bank of America and Citigroup grew by 14% and 12% a year, respectively, with Citigroup reaching \$1.9 trillion in assets in 2008 (down from \$2.2 trillion in 2007) and Bank of America \$1.8 trillion. The investment banks also grew significantly from 2000 to 2007, often much faster than commercial banks. Goldman's assets grew from \$250 billion in 1999 to \$1.1 trillion by 2007, an annual growth rate of 21%. At Lehman, assets rose from \$192 billion to \$691 billion, or 17%.⁷⁶

Fannie and Freddie grew quickly, too. Fannie's assets and guaranteed mortgages increased from \$1.4 trillion in 2000 to \$3.2 trillion in 2008, or 11% annually. At Freddie, they increased from \$1 trillion to \$2.2 trillion, or 10% a year.⁷⁷

As they grew, many financial firms added lots of leverage. That meant potentially higher returns for shareholders, and more money for compensation. Increasing leverage also meant less capital to absorb losses.

Fannie and Freddie were the most leveraged. The law set the government-sponsored enterprises' minimum capital requirement at 2.5% of assets plus 0.45% of the mortgage-backed securities they guaranteed. So they could borrow more than \$200 for each dollar of capital used to guarantee mortgage-backed securities. If they wanted to own the securities, they could borrow \$40 for each dollar of capital. Combined, Fannie and Freddie owned or guaranteed \$5.3 trillion of mortgage-related assets at the end of 2007 against just \$70.7 billion of capital, a ratio of 75:1.

From 2000 to 2007, large banks and thrifts generally had \$16 to \$22 in assets for each dollar of capital, for leverage ratios between 16:1 and 22:1. For some banks, leverage remained roughly constant. JP Morgan's reported leverage was between 20:1 and 22:1. Wells Fargo's generally ranged between 16:1 and 17:1. Other banks upped their leverage. Bank of America's rose from 18:1 in 2000 to 27:1 in 2007. Citigroup's increased from 18:1 to 22:1, then shot up to 32:1 by the end of 2007, when Citi brought off-balance sheet assets onto the balance sheet. More than other banks, Citigroup held assets off of its balance sheet, in part to hold down capital requirements. In 2007, even after bringing \$80 billion worth of assets on balance sheet, substantial assets remained off. If those had been included, leverage in 2007 would have been 48:1, or about 53% higher. In comparison, at Wells Fargo and Bank of America, including off-balance-sheet assets would have raised the 2007 leverage ratios 17% and 28%, respectively.⁷⁸

Because investment banks were not subject to the same capital requirements as commercial and retail banks, they were given greater latitude to rely on their internal risk models in determining capital requirements, and they reported higher leverage. At Goldman Sachs, leverage increased from 17:1 in 2000 to 32:1 in 2007. Morgan Stanley and Lehman increased about 67% and 22%, respectively, and both reached 40:1 by the end of 2007.⁷⁹ Several investment banks artificially lowered leverage ratios by selling assets right before the reporting period and subsequently buying them back.

As the investment banks grew, their business models changed. Traditionally, investment banks advised and underwrote equity and debt for corporations, financial

institutions, investment funds, governments, and individuals. An increasing amount of the investment banks' revenues and earnings was generated by trading and investments, including securitization and derivatives activities. At Goldman, revenues from trading and principal investments increased from 39% of the total in 1997 to 68% in 2007. At Merrill Lynch, they generated 55% of revenue in 2006, up from 42% in 1997. At Lehman, similar activities generated up to 80% of pretax earnings in 2006, up from 32% in 1997. At Bear Stearns, they accounted for more than 100% of pretax earnings in some years after 2002 because of pretax losses in other businesses.⁸⁰

Between 1978 and 2007, debt held by financial companies grew from \$3 trillion to \$36 trillion, more than doubling from 130% to 270% of GDP. Former Treasury Secretary John Snow told the FCIC that while the financial sector must play a "critical" role in allocating capital to the most productive uses, it was reasonable to ask whether over the last 20 or 30 years it had become too large. Financial firms had grown mainly by simply lending to each other, he said, not by creating opportunities for investment.⁸¹ In 1978, financial companies borrowed \$13 in the credit markets for every \$100 borrowed by nonfinancial companies. By 2007, financial companies were borrowing \$51 for every \$100. "We have a lot more debt than we used to have, which means we have a much bigger financial sector," said Snow. "I think we overdid finance versus the real economy and got it a little lopsided as a result."