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The Big Banks: Background, Deregulation, Financial Innovation, and 'Too Big to Fail,'

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THE BIG BANKS: BACKGROUND, DEREGULATION, FINANCIAL INNOVATION, AND "TOO BIG TO FAIL"

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ABSTRACT

The U.S. economy is still reeling from the financial crisis that exploded in the fall of 2008. This Article asserts that the big banks were major culprits in causing the crisis by funding the non-bank lenders that created the toxic mortgages, which the big banks securitized and sold to unwary investors. Ironically, banks that were then too big to fail are even larger today.

The Article briefly reviews the history of banking from the Founding Fathers to the deregulatory mindset that has been present since 1980. It then traces the impact of deregulation, which led to the savings and loan crisis of the 1980s and the current financial crisis. Prior to deregulation, the country had gone fifty years without a financial crisis. The Article briefly examines the causes of the crisis and analyzes in depth the financial innovation, such as adjustable-rate mortgages and credit default swaps, that former Fed Chairman Alan Greenspan extolled but that led us into a near financial meltdown. It traces the growth of the big banks and asserts that breaking them up would improve efficiency, permit risk to be priced appropriately, increase competition, and eliminate many conflicts of interest, including those of management who pursue greater financial rewards by ignoring the potential for catastrophic risk. It also asserts that regulation cannot be left in the hands of regulators who do not believe in regulation.

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I. INTRODUCTION

If they're too big to fail, they're too big.

—Federal Reserve Chairman Greenspan[1]

When former Federal Reserve Chairman Alan Greenspan made the above comment, some listeners were shocked. However, if Greenspan were viewed as a true conservative, such an approach should not be shocking because, until the Reagan Administration in 1980, conservatives generally were strong advocates of antitrust enforcement and viewed excessive size and power with suspicion.[2] On the other hand, until he recently "got religion,"[3] Greenspan was more a libertarian than a

1. Alan Greenspan, Chairman, Fed. Reserve, Remarks at the C. Peter McColough Series on International Economics: The Global Financial Crisis: Causes and Consequences (Oct. 15 2009), http://www.cfr.org/publication/20417/c_peter_mccolough_series_on_international_economics.html.

2. *See Republican Party Platform of 1972*, AM. PRESIDENCY PROJECT, http://www.presidency.ucsb.edu/ws/index.php?pid=25842#axzz1W4javJKZ (last visited Jan. 5, 2013) ("We will press on for greater competition in our economy. The energetic antitrust program of the past four years demonstrates our commitment to free competition as our basic policy. The Antitrust Division has moved decisively to invalidate those 'conglomerate' mergers which stifle competition and discourage economic concentration. The 87 antitrust cases filed in fiscal year 1972 broke the previous one-year record of more than a decade ago, during another Republican Administration.... Small business, so vital to our economic system, is free enterprise in its purest sense. It holds forth opportunity to the individual, regardless of race or color, to fulfill the American dream. The seedbed of innovation and invention, it is the starting point of many of the country's large businesses, and today its rol[e] in our increasingly technological economy is crucial. We pledge to sustain and expand that role.").

3. Alan Greenspan, Chairman, Fed. Reserve, Address to the Economic Club of New York 3 (Feb. 17, 2009), http://online.wsj.com/public/resources/documents/EconClub.PDF ("But in August 2007, the risk management structure cracked. All of the sophisticated mathematics and computer wizardry essentially rested on one central premise: that enlightened self interest of owners and managers of financial institutions would lead them to maintain a sufficient buffer against insolvency by actively monitoring and managing their firms' capital and risk positions. When in the summer of 2007 that premise failed, I was deeply dismayed. I still believe that self regulation is an essential tool for market effectiveness—a first line of defense. But, it is clear that the levels of complexity to which market practitioners, at the height of their euphoria, carried risk-management techniques and risk-product design were too much for even the most sophisticated market players to handle properly and prudently. Accordingly, I see no alternative to a set of heightened federal regulatory rules for banks and other financial institutions.").

conservative, and it was his libertarian instincts that were part of the cause of the financial crisis that unfolded in 2007 and 2008, and continues through today. Besides the lack of regulation embodied in Greenspan's philosophy, another major cause of the crisis was the greed and incompetence of the big banks. These banks financed the non-bank mortgage companies that generated many of the toxic loans, which were then securitized into toxic securities by the big banks and sold to unwary investors. The incompetence continued as Jamie Dimon initially characterized J.P. Morgan's potential $9 billion[4] trading loss as a "tempest in a teapot."[5] What has transpired is that profits have been privatized but losses have been socialized.

When President Barack Obama took office, monthly job losses exceeded 700,000 jobs, and a worldwide economic collapse had been averted only by the prior action of the Bush Administration in arranging a $700 billion bailout of financial and other systemically important institutions.[6] But the $700 billion was only the tip of the iceberg in terms of the financial assistance provided to the big banks. Bloomberg reported that the federal government pledged over $12.8 trillion to avoid a financial meltdown.[7] President Obama then undertook an inadequate stimulus package in an attempt to restart the rest of the economy but thereafter turned his focus to health care.

A macro approach to the causes of the financial crisis was not undertaken until comprehensive legislation, namely the Dodd–Frank Wall Street Reform and Consumer Protection Act, was finally enacted in July 2010.[8] Although this legislation probably would have precluded the current financial crisis by requiring originators to implement mortgage-underwriting standards, by requiring securitizers to have some skin in the game, and by exposing credit-rating agencies to liability, it may not pre-

4. Ambereen Choudbury & Dawn Kopecki, *JPMorgan Slips on Report Trading Loss Widened to $9 Billion*, BLOOMBERG (June 28, 2012, 7:11 AM), http://www.bloomberg.com/news/2012-06-28/jpmorgan-slips-on-report-of-trading-loss-widening-to-9-billion.html.

5. Jonathon Weil, *What Jamie Dimon Doesn't Know Is Plain Scary*, BLOOMBERG (May 11, 2012, 8:02 AM), http://www.bloomberg.com/news/2012-05-11/what-jamie-dimon-doesn-t-know-is-plain-scary.html (internal quotation marks omitted).

6. Emergency Economic Stabilization Act of 2008, Pub. L. No. 110-343, 122 Stat. 3765 (codified in scattered sections of U.S.C.). The Emergency Economic Stabilization Act was passed by the Senate on October 1, 2008 and by the House on October 3, 2008, and signed into law by President Bush on October 3, 2008. *Id.*; Press Release, Office of the Press Sec'y, President Bush Signs HR 1424 Into Law (Oct. 3, 2008), http://georgewbush-whitehouse.archives.gov/news/releases/2008/10/20081003-17.html.

7. Mark Pittman & Bob Ivry, *Financial Rescue Nears GDP as Pledges Top 12.8 Trillion*, BLOOMBERG (Mar. 31, 2009, 2:20 PM), http://www.bloomberg.com/apps/news?pid=newsarchive&sid=armOzfkwtCA4.

8. Dodd–Frank Wall Street Reform and Consumer Protection Act, Pub. L. No. 111-203, 124 Stat. 1376 (2010).

vent future crises because it did not adequately address the power of the big banks and their culture of risk taking.[9]

Part II of this Article is a short history of the attitude toward large banks and their power in this country, from the time of our Founding Fathers to the present. It first looks at the period up to the Great Depression, during which, for the most part, banking power was viewed with suspicion. The Article then examines the impact of inflationary and other pressures of the 1970s upon banking, which then led to deregulation under President Ronald Reagan in 1980 and in the following years. Part III examines the causes of the financial crisis and the aftermath of the crisis, which has devastated our economy. Part IV examines financial innovation, which was extolled by Chairman Greenspan, but which in large part led to the current financial crisis. Part V examines the growth of the "too big to fail" banks, the impact of too big to fail on competition and the creation of financial innovations. Finally, the Article examines proposals to limit their size and the benefits of breaking up the big banks, including less complexity, better monitoring by the markets and creditors, and reduced conflicts of interest. The Article concludes that it was the failure of the banking system, not business cyclicality, that led to our depressed economy, and that the approach in Dodd–Frank does not adequately deal with the problem of too big to fail. The mega banks need to be downsized, voluntarily or by legislation, to create entities that are manageable, transparent, and able to assess risk properly. Moreover, we need to change the mentality that government is the problem, not the solution. The "Appendix," in Part VII, provides a history of the consolidation activity of the big banks.

II. SHORT HISTORY OF BANKING: HOW WE GOT TO "TOO BIG TO FAIL"

A. Founding Fathers to 1980

Going back to our Founding Fathers, there has been concern about the nature of our banking system and the potential for abuse arising from the power of banks. Alexander Hamilton favored a publicly chartered bank similar to the Bank of England, and Congress passed legislation in 1791 to create a bank with a twenty-year charter.[10] However, Thomas Jefferson was deeply suspicious of banks and lobbied President George Washington to veto the legislation.[11] A brief by Hamilton convinced

9. *See generally* Charles W. Murdock, *The Dodd–Frank Wall Street Reform and Consumer Protection Act: What Caused the Financial Crisis and Will Dodd–Frank Prevent Future Crises?*, 64 SMU L. REV. 1243, 1250–51 (2011) (analyzing the likelihood of success or failure of the Dodd–Frank legislation at preventing future financial crises).

10. *See* 1 JERRY W. MARKHAM, A FINANCIAL HISTORY OF THE UNITED STATES 88–89 (2002); *Hamilton vs. Jefferson*, COUNTRY STUDIES, http://countrystudies.us/united-states/history-41.htm (last visited Jan. 4, 2013).

11. 1 MARKHAM, *supra* note 10, at 89–90.

Washington to sign the legislation.[12] Later, however, the charter of the First Bank was allowed to expire.

After the War of 1812, it became clear that a national bank was needed, particularly to provide funding for war.[13] Legislation creating the Second Bank of the United States, again with a twenty-year charter, was adopted in 1816 and signed into law by President James Madison.[14] Nicholas Biddle was in charge of the bank and alienated Andrew Jackson, who was elected president in 1828 because he used the bank's economic power to curry favor with members of Congress. Jackson was a believer in a strong presidency and thought that the Second Bank's monopoly over government finances gave Biddle and his friends undue profits and power. Jackson is reported to have said, "The bank is trying to kill me, . . . but I will kill it!"[15] He vetoed the recharter bill on the basis that the bank enjoyed undue economic privilege.[16]

Jackson's opponent in the 1832 election was Henry Clay, who was aligned with Biddle and sought to renew the Second Bank's charter four years early to make it an issue in the presidential campaign. Jackson again won the presidency, and thus his prior veto was not overturned. Biddle sought to retaliate. According to one commentator, Biddle's actions demonstrated that Jackson's fear of the power of the Second Bank was well founded:

> When Jackson began transferring the federal government's deposits out of the Second Bank to his favored "pet banks," the Second Bank demanded payment of bills issued by state banks and reduced its loans by over \$5 million, contracting the money supply and causing interest rates to double to 12 percent. Biddle hoped, by damaging the economy, to stir up opposition to Jackson; in the process, he showed that Jackson had not been wrong to fear the power of a major bank to distort the economy for its own purposes.[17]

Even though there was no central bank, the state banking system rapidly expanded, and industry experienced incredible growth during the rest of the nineteenth century notwithstanding the disruption of the Civil War. Some would say that industry grew too big because the last couple of decades of the nineteenth century were the Gilded Age, or the age of trusts;[18] this in turn led to the enactment of the Sherman Antitrust Act of

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12. *See* Letters Between Alexander Hamilton & George Washington (1791), *in* HAMILTON AND THE NATIONAL DEBT 71–78 (George Rogers Taylor ed., 1950).

13. SIMON JOHNSON & JAMES KWAK, WHITE HOUSE BURNING 3–7 (2012).

14. *See* RICHARD H. TIMBERLAKE, MONETARY POLICY IN THE UNITED STATES: AN INTELLECTUAL AND INSTITUTIONAL HISTORY 28–33 (1993) (discussing the Second Bank generally).

15. SIMON JOHNSON & JAMES KWAK, 13 BANKERS: WALL STREET TAKEOVER AND THE NEXT FINANCIAL MELTDOWN 20 (2010).

16. *Id.*

17. *Id.*

18. *See generally* D.C. Shouter, *Part II: America in the Gilded Age*, CLASSIFICATION OF AM. WEALTH, http://www.raken.com/american_wealth/trusts/the_trusts1.asp (last visited Jan. 4, 2013)

1890,[19] and subsequent "trust busting" by President Theodore Roosevelt.[20]

The rise of the trusts was funded by the investment bankers, the most powerful of whom was John Pierpont Morgan. His arrogance and power were reflected in his alleged statements to President Roosevelt: "If we have done anything wrong, send your man to my man, and they can fix it up."[21]

Roosevelt's trust busting was interrupted by the Panic of 1907, which was triggered by an attempt by insiders and their bankers to manipulate the stock price of United Copper Company.[22] When the attempt failed, it triggered a run on those banks involved in the scheme and then spread to other banks. To satisfy their customers' demand for deposits, the banks were forced to sell assets, thus pushing down their stock prices and exacerbating the situation in a manner similar to what we have experienced in this current crisis. Because there was no central bank available to step in and provide credit to the banks, J.P. Morgan tried to stem the tide by providing credit. Unfortunately, at least for some banks, because he could not muster enough funds to save all the banks, in effect Morgan decided which banks would survive and which would not. However, even Morgan's actions did not stem the tide, and the federal government provided $25 million to New York banks to provide the necessary liquidity.[23]

The Panic brought both bankers and industry in general to the realization that there was a need for a central bank. Understandably, what the bankers wanted from a central bank was an entity that could bail out banks when they were in trouble; they certainly did not want more regulation. However, the Pujo committee concluded that control of credit was in the hands of a small number of Wall Street bankers who had considerable economic power.[24] Louis Brandeis, who was an adviser to President Woodrow Wilson, was also leery of the power of big banks and favored stronger regulation.[25] Unfortunately, the compromise bill that passed in

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(discussing the rising concentration of wealth in the United States during the late nineteenth century).

19. 1 MARKHAM, *supra* note 10, at 363.

20. 2 JERRY W. MARKHAM, A FINANCIAL HISTORY OF THE UNITED STATES 27 (2002).

21. EDMUND MORRIS, THEODORE REX 91 (2002).

22. 2 MARKHAM, *supra* note 20, at 27–31.

23. RON CHERNOW, THE HOUSE OF MORGAN: AN AMERICAN BANKING DYNASTY AND THE RISE OF MODERN FINANCE 123–24 (1990).

24. 2 MARKHAM, *supra* note 20, at 48; LOUIS D. BRANDEIS, OTHER PEOPLE'S MONEY AND HOW THE BANKERS USE IT 49 (Melvin I. Urofsky, ed., Bedford Books of St. Martin's Press 1995) (1914). The Pujo Committee was a subcommittee of the House Committee on Banking and Currency, which, in 1912–1913, investigated the ties between financial leaders and major industrial companies that had consolidated control in a few hands. BRANDEIS, *supra*, at 24.

25. *See* BRANDEIS, *supra* note 24, at 18–19, 22–23.

1913[26] gave the banks access to public funds when needed but was not particularly strong on the regulatory side. Although the first chief executive officer of the Federal Reserve Board of New York, Benjamin Strong, was allied with J.P. Morgan,[27] he is generally regarded as having been a good chairman, even though he did not stem the credit that was leading to the Great Depression.

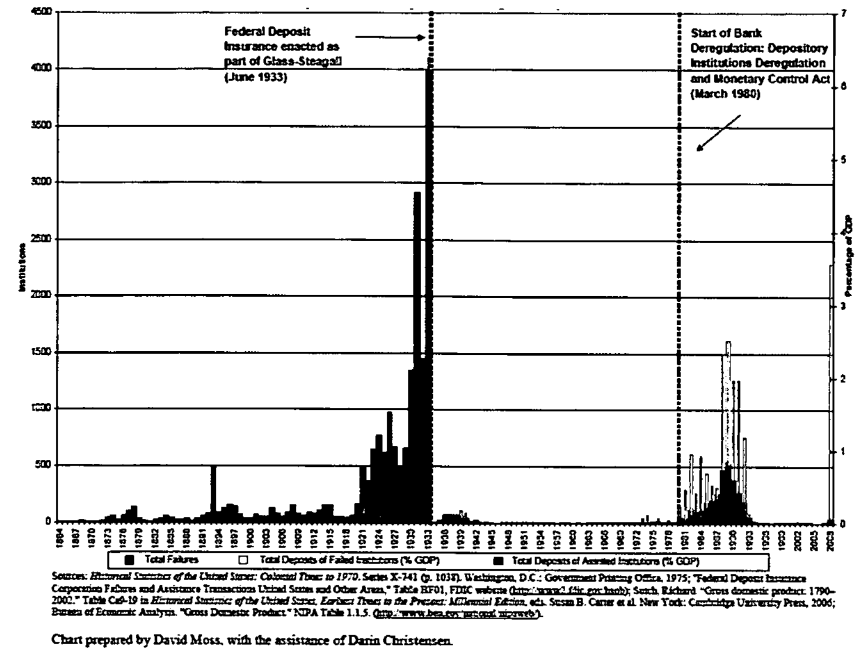
Because of the implicit government guarantee and weak regulation, banks were able to provide cheap money for the speculation that led to the market crash of 1929. President Franklin Roosevelt, Teddy Roosevelt's cousin, was elected president in 1932 and quickly shepherded the Glass–Steagall Act through Congress in 1933.[28] One of the major provisions of this Act was to separate investment banking and commercial banking. Commercial banks were protected against depositor runs by the Federal Deposit Insurance Corporation (FDIC) but, in return, were subjected to strict federal regulation. This regulatory regime provided approximately fifty years without a serious financial crisis. See Figure 1 below.

26. Federal Reserve Act, Pub. L. No. 63-43, 38 Stat. 251 (1913) (codified as amended at 12 U.S.C. §§ 221–522 (2006)).

27. Russ Roberts & Barry Eichengreen, *Eichengreen on the Dollar and International Finance*, ECONTALK, at 33:02, (June 6, 2011), http://www.econtalk.org/archives/2011/06/eichengreen_on.html.

28. Banking Act of 1933, Pub. L. No. 73-66, 48 Stat. 162 (codified as amended at 12 U.S.C. §§ 24, 78, 377–78 (1994)) (repealed 1999).

Figure 1. Bank Failures and Suspensions, 1864–2008 (with data on deposits starting in 1921)



Source: David Moss, *Bank Failures and Suspensions in the United States, 1864–2008: Three Charts*, HARV. BUS. SCH. (Dec. 14, 2009), http://fcic-static.law.stanford.edu/cdn_media/fcic-testimony/2009-1116-Moss-charts.pdf.

Although the banking system was not perfect, and there were flaws that needed correction, the mindset on regulation dramatically changed in 1980 when President Reagan uttered his often repeated phrase "government is not the solution to our problem; government is the problem."[29]

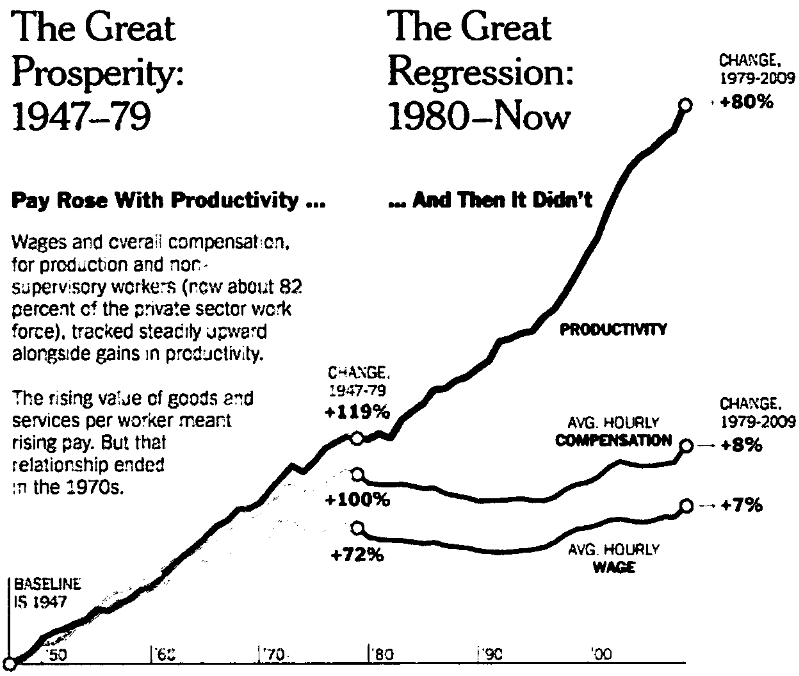
B. 1980–2007: Deregulation and the Dominance of Finance

1. Prelude: Changing Times in the 1970s

The 1930s were the era of depression; the early 1940s were the era of war; and the period from the end of World War II to the 1970s was the era of prosperity and the growth of the middle class.[30] The contrast between this period and the period following deregulation in the 1980s and thereafter is illustrated by Figure 2 below:

29. President Ronald Reagan, First Inaugural Address, 121 CONG. REC. 151 (1981)
30. Robert B. Reich, Op-Ed., *The Limping Middle Class*, N.Y. TIMES, Sept. 4, 2011, at SR6.

Figure 2. The Great Prosperity and the Great Regression



Source: Robert B. Reich, Op-Ed., *The Limping Middle Class*, N.Y. TIMES, Sept. 4, 2011, at SR6.

Education and technological innovation, not financial innovation, drove this new prosperity. Banking was boring, giving rise to the 3-6-3 caricature: borrow at 3%, lend at 6%, and hit the golf course by 3 o'clock. Both commercial and investment banking were effective in funneling capital to industry. Moreover, governmental programs made home ownership a reality for most Americans[31] and were responsible for the growth in higher education.[32]

At this time, investment banks were partnerships.[33] Because investment bankers were personally liable, they had their own wealth at risk, not just that of other people. This created a more conservative mindset.

31. National Housing Act, Pub. L. No. 73-479, 48 Stat. 1246 (1934) (codified as amended at 12 U.S.C. §§ 1701–1750 (2006)).

32. *See, e.g.*, 20 U.S.C. § 1070A (2006 & Supp. V 2011) (providing federal Pell grants to students of institutions of higher education); 38 U.S.C. § 3001–3035 (2006) (providing education benefits to veterans); Economic Opportunity Act of 1964, Pub. L. No. 88-452, 78 Stat. 508 (repealed 1981); 38 C.F.R. §§ 21.1029–21.9770 (2009) (providing education benefits to veterans and their dependents).

33. *See* Claire Hill & Richard Painter, *Berle's Vision Beyond Shareholder Interests: Why Investment Bankers Should Have (Some) Personal Liability*, 33 SEATTLE U. L. REV. 1173, 1177–78 (2010) ("Until the 1980s, most investment banks were general partnerships run by partners who were personally liable for the debts of their firms. A partner of Lehman Brothers did not want or need the government to tell him how to run his business; if the business failed, the partner paid.").

Bankers' compensation was comparable to that of other private sector jobs.[34]

Although this was an era of unmatched general prosperity, this is not to say that all was well. Not only were there the Korean and Vietnam Wars but also there was the Cold War, or nuclear detente with Russia, carrying with it the fear of a nuclear holocaust. Nevertheless, government funded innovation, which was transferred to industry, and industry in turn invested in domestic jobs,[35] median income grew,[36] unions were powerful,[37] and the top average pay of a chief executive officer (CEO) was only about twenty-five times that of the average worker.[38] This ratio of CEO pay to worker pay surged in the 1990s, and in the 2000s had increased to as much as 531 times the average worker pay.[39]

Then came the uncertainty of the 1970s. Upon being elected in 1968, President Richard Nixon was confronted with a recession[40] and scandals in the securities markets[41] that, in part, led to a two-tiered stock market.[42] Large-capitalization stocks did well, but small-capitalization stocks were pummeled, leading to the going-private phenomenon of the mid-1970s.[43] Nixon experimented with price controls, and, when he took the lid off, prices soared,[44] also sparked by the OPEC oil embargo.[45]

34. JOHNSON & KWAK, *supra* note 15, at 115 fig.4.

35. *See generally* CLYDE PRESTOWITZ, THE BETRAYAL OF AMERICAN PROSPERITY 55–61, 66–69 (2010) (discussing the U.S. government's rejection of laissez-faire economics and investment in major industries and innovations from the Civil War through World War II as a driving force behind economic growth).

36. *See* Reich, *supra* note 30.

37. JOHN KENNETH GALBRAITH, AMERICAN CAPITALISM: THE CONCEPT OF COUNTERVAILING POWER 137–39 (1952).

38. Lawrence Mishel, *CEO-to-Worker Pay Imbalance Grows*, ECON. POL'Y INST. (June 21, 2006), http://www.epi.org/publication/webfeatures_snapshots_20060621/ (demonstrating that in 1965, CEOs earned about twenty-five times more than an average worker);

39. *See* Eric Wahlgren, *Spreading the Yankee Way of Pay*, BUSINESSWEEK (Apr. 18, 2001), http://www.businessweek.com/careers/content/apr2001/ca20010419_812.htm (offering a global perspective on the recent historical increase in CEO pay).

40. *See generally* Transcript of Interview by PBS Commanding Heights with Paul Volcker, Former Chairman, Fed. Reserve 3–7 (Sept. 26, 2000) [hereinafter Volcker Interview], http://www.pbs.org/wgbh/commandingheights/shared/pdf/int_paulvolcker.pdf (chronicling Volcker's views on the recession that greeted President Nixon when he took office, the surprising inflation that followed, and the imposition of wage and price controls, as well as the "stagflation"—inflation coupled with a stagnant economy—that confronted President Carter).

41. *See, e.g.*, SEC v. Tex. Gulf Sulphur Co., 446 F.2d 1301, 1304–05 (2d Cir. 1971) (discussing company officers who, after learning of a significant find, misrepresented the results of testing at the site while making large purchases of company stock).

42. Lewis D. Solomon, *Institutional Investors: Stock Market Impact and Corporate Control*, 42 GEO. WASH. L. REV. 761, 762 (1973) (describing the two-tiered market as one "in which institutional security favorites enjoy ever mounting prices, while other companies languish at low price-earnings multiples").

43. A.A. Sommer, Jr., Comm'r, SEC, Law Advisory Council Lecture at the Notre Dame Law School: "Going Private"; A Lesson in Corporate Responsibility 4–6, 8, 11, 13 (Nov. 14, 1974).

44. Volcker Interview, *supra* note 40, at 3–5.

45. *Arabs Threaten Oil Embargo in Week if Demand Isn't Met*, L.A. TIMES, Feb. 8, 1971, at D10.

At this time, the Securities and Exchange Commission (SEC) moved to modernize the securities industry. Institutions such as pension funds and mutual funds, which had grown as a result of the country's overall prosperity, chafed at the fixed commission structure of the New York Stock Exchange (NYSE).[46] If you traded 100,000 shares, you paid about 1,000 times as much commission as if you traded 100 shares. Although this was arguably inefficient, it had one salutary effect: institutions were investors rather than traders. And commercial banks could not trade because of Glass–Steagall. Twenty million shares were a good trading day on the NYSE.[47] This all changed with the elimination of fixed commissions by the Securities Act Amendments of 1975.[48] The average trading volume the past few years has been about 1.5 billion shares a day, but on October 10, 2008, it reached over 7 billion shares.[49]

Also, at this time, Republicans were the party of small business: this meant they believed in effective antitrust enforcement.[50] The Securities Acts Amendments of 1964 introduced a regime of public disclosure to the over-the-counter (OTC) market.[51] Prior to this development, if you wanted to do due diligence in an acquisition, you needed to bargain for it in a negotiated transaction. But with public disclosure of financial and business information in the OTC market, hostile takeovers, sometimes referred to as "overhead tender offers," became a prudent opportunity.[52]

46. *See In the Midst of Revolution: the SEC, 1973–1981*, SEC HISTORICAL SOCIETY, http://www.sechistorical.org/museum/galleries/rev/rev02c.php (last visited Jan. 5, 2013).

47. *See NYSE Daily Share Volume 1970 Through 1979, NYSE Statistics Archive*, N.Y. STOCK EXCHANGE, http://www.nyse.com/marketinfo/stats/vol70-79.dat (last visited Jan. 5, 2013).

48. Pub. L. No. 94-29, § 4, 89 Stat. 97, 107 (1975).

49. *See NYSE Group Volume Records—Top 10 Days, NYSE Statistics Archive*, N.Y. STOCK EXCHANGE, http://www.nyxdata.com/nysedata/asp/factbook/viewer_edition.asp?mode=table&key=3007&category=3 (last visited Jan. 5, 2013) (showing over 7 billion shares traded on October 10, 2008); *see also Daily Market Summary*, N.Y. STOCK EXCHANGE, http://www.nyse.com/financials/1108407157455.html (last visited Jan. 5, 2013) (showing a sample day from April 2011 with nearly 1.5 billion shares traded); *NYSE Statistics Archive*, N.Y. STOCK EXCHANGE, http://www.nyse.com/financials/1143717022567.html (follow "Historical NYSE Euronext Volume" hyperlink; then see "Monthly US Volumes" tab) (last visited Jan. 5, 2013) (dividing Handled Volume by Trading Days for each month equals about 1.5 billion shares per day). On one recent day, 236,314,500 shares of just one stock, Bank of America, were traded. *Most Active New York Stock Exchange-traded Stocks*, BLOOMBERG BUSINESSWEEK (Sept. 1, 2011), http://www.businessweek.com/ap/financialnews/D9PG02Q81.htm.

50. *See Republican Party Platform of 1972*, *supra* note 2.

51. Act of August 20, 1964, Pub. L. No. 88-467, § 6, 78 Stat. 565, 570.

52. When one company seeks to acquire another, it wants to ensure that it knows what it is buying. Prior to the 1964 amendments to the Securities Exchange Act, companies generally engaged in negotiated transactions in which an agreement was executed that, prior to closing, enabled the acquirer to do due diligence. In addition, extensive representations and warranties were included in the acquisition agreement, the breach of which would either excuse closing or provide a cause of action. After the amendments created some 10,000 OTC companies that were required to file annual, quarterly, and current reports, an acquirer, who was thwarted by management of a target corporation that would not enter into a negotiated transaction, could make an "overhead tender offer" directly to the shareholders. Now, in such a situation, the acquiring company would not be flying blind because of the public availability of information.

Although acquisitions increased, merger mania had not yet begun. Antitrust was still something to be reckoned with.

2. 1980–2000 Deregulation: The Savings and Loan Crisis, "Greenspanomics," and Squelching Derivative Regulation

Economic stagnation, historically high interest rates, and inflation characterized the 1970s. The Iranian hostage crisis was the last straw, and President Reagan turned President Jimmy Carter into a one-term president in the 1980 election. Reagan's goal was to restore prosperity by getting government off peoples' backs.[53] A major tool was deregulation.[54]

Inflation was problematic for savings and loan institutions. In effect, they had their assets long and liabilities short; for example, on the asset side of the balance sheet, the savings and loan association (S&L) had a thirty-year mortgage yielding 6%, but by 1980, on the liability side, some certificates of deposit were commanding 12% or more.[55] Whereas in *It's A Wonderful Life* Jimmy Stewart was able in 1946 to explain where the depositor's money had gone, depositors in the 1980s were not appeased by the fact that their mortgage interest was at 6%; they wanted a market rate of return on their certificates of deposit.

Deregulation actually began under President Carter. At the end of his term, the Depository Institutions Deregulation and Monetary Control Act of 1980 was passed.[56] The Regulation Q limit on the interest that could be paid on traditional savings accounts was phased out and banks could now compete with money market funds,[57] government bonds,[58] and other investment vehicles. The Act also expanded the permissible range of investments by S&Ls[59] and preempted state usury laws.[60]

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53. *See* Reagan, *supra* note 29.

54. President Ronald Reagan, Remarks on Signing the Garn–St. Germain Depository (Oct. 15, 1982), *available at* http://www.reagan.utexas.edu/archives/speeches/1982/101582b.htm.

55. *See, e.g.*, Eric N. Berg, *Bowery Savings Bank Is Sold for $200 Million*, N.Y. TIMES, Oct. 6, 1987, at A1 ("Beginning in the early 1980's, in a story replayed at thrift institutions nationwide, the Bowery fell onto hard times as interest earnings from its portfolio of old, low-paying, fixed-rate mortgages were inadequate to finance high-rate deposits.").

56. Depository Institutions Deregulation and Monetary Control Act of 1980, Pub. L. No. 96-221, 94 Stat. 132 (codified as amended at 12 U.S.C. § 1464(c) (2006)).

57. *See Money Market Funds*, SEC.GOV, http://www.sec.gov/answers/mfmmkt.htm (last modified Sept. 9, 2009).

58. In the 1980s, I was retained as an expert by the attorney for an elderly and poorly educated widow who had $100,000 from her husband's estate to invest. Her broker put her in a variety of risky securities. The expert for the broker opined that it was necessary to buy risky securities to meet her objective of receiving $12,000 a year to live on. In my testimony I pointed out that U.S. Treasury bonds were paying 12% in 1980, when the broker invested her savings. The broker settled and gave her money back.

59. *See* Depository Institutions Deregulation and Monetary Control Act of 1980 § 401, 94 Stat. at 151–55.

60. *See id.* § 501, 94 Stat. 161–62.

Under President Reagan, the Controller of Currency (OCC) in 1981 authorized national banks to offer adjustable-rate mortgages (ARMs),[61] and Congress passed the Garn–St. Germain Depository Institutions Act of 1982, which further enabled savings and loan institutions to expand their lending activities into commercial lending and even junk bonds.[62] The Act also authorized state-chartered banks to issue ARMs,[63] putting them on parity with national banks, and gave the OCC the authority to lift restrictions on loan-to-value ratios, maturities, and amortization schedules. The Controller exercised this authority the following year.[64]

Although President Reagan hailed deregulation,[65] it led to the collapse of thousands of savings and loans and a federal bailout of about $160 billion,[66] as well as the Keating Five scandal, in which Charles Keating, the former CEO of Lincoln Savings and Loan Association, went to jail, but the highly publicized charges against Senator McCain were dropped.[67] The impact of deregulation on the savings and loan industry was summarized in *History of the Eighties—Lessons for the Future*:

> Most political, legislative, and regulatory decisions in the early 1980s were imbued with a spirit of deregulation. The prevailing view was that S&Ls should be granted regulatory forbearance until interest rates returned to normal levels, when thrifts would be able to restructure their portfolios with new asset powers. To forestall actual insolvency, therefore, the [Federal Home Loan Bank Board] lowered net worth requirements for federally insured savings and loan associations from 5 percent of insured accounts to 4 percent in November 1980 and to 3 percent in January 1982. At the same time, the existing 20-year phase-in rule for meeting the net worth requirement, and the 5-year-averaging rule for computing the deposit base, were retained. The phase-in rule meant that S&Ls less than 20 years old had capital requirements even lower than 3 percent. This made chartering de novo federal stock institutions very attractive because the required $2.0 million initial capital investment could be leveraged into $1.3 billion in assets by the end of the first year in operation. The 5-year-averaging rule, too, encouraged rapid deposit growth at S&Ls, be-

61. *See* Adjustable-Rate Mortgages, 46 Fed. Reg. 18,932 (Mar. 27, 1981).

62. Garn–St. Germain Depository Institutions Act of 1982, Pub. L. No. 97-320, 96 Stat. 1469.

63. *See id.* § 801, 96 Stat. at 1545–46.

64. *See* Real Estate Lending by National Banks, 48 Fed. Reg. 40,698 (Sept. 9, 1983) (codified as amended at 12 C.F.R. pts. 7, 34).

65. *See* Reagan, *supra* note 54.

66. *See* FED. DEPOSIT INS. CORP., AN EXAMINATION OF THE BANKING CRISES OF THE 1980S AND EARLY 1990S, at 169 (1997).

67. *See Times Topics: Keating Five*, N.Y. TIMES, http://topics.nytimes.com/topics/reference/timestopics/subjects/k/keating_five/index.html (last visited Jan. 5, 2013); *see also* Tom Fitzpatrick, *McCain: The Most Reprehensible of the Keating Five*, PHOENIX NEWTIMES NEWS, Nov. 29, 1989, http://www.phoenixnewtimes.com/1989-11-29/news/mccain-the-most-reprehensible-of-the-keating-five/.

> cause the net worth requirement was based not on the institution's existing deposits but on the average of the previous five years.[68]

One way to alleviate the banking conundrum of having assets long and liabilities short would be to enable banks to get the long assets, such as thirty-year mortgages, off their books by selling them, thus converting them to cash and enabling further lending. But, if the mortgage can be sold without recourse (i.e., without any liability on the seller in the event of default by the borrower), there is the problem of moral hazard because the lender, not having the risk of loss, could be indifferent to the creditworthiness of the borrower. This is what happened in the 2000s.

The Government National Mortgage Association, a federal agency,[69] first securitized mortgages. It would buy mortgages, combine them in pools, and then sell securities backed by the pools. These were pristine mortgage-backed securities in that the securities that were issued each had an undivided interest in the pool of mortgages. Tranching the pools and creating priorities of payment was yet to come.[70]

The investment banks wanted to get into the securitization game but were stymied by state regulations and concerns about the taxation of these securitized instruments. However, the Secondary Mortgage Market Enhancement Act of 1984[71] and the Tax Reform Act of 1986[72] eliminated these concerns, and the investment banks became players, eventually the most significant players, in securitizing mortgages.

This period also reflected a blurring of the lines between investment banking and commercial banking. Commercial banks sought to underwrite securities, and investment banks sought to emulate savings and checking accounts. The investment banks accomplished the latter by creating cash management accounts that provided customers with check-writing privileges against their accounts with the investment bank, thus competing directly with the savings and commercial banks. Investment banks also competed indirectly with savings and loan associations and commercial banks by funding the non-bank lenders or mortgage bankers. Because these "non-banks" received funds from commercial lenders rather than from depositors, they escaped the regulation to which the commercial banks and S&Ls were subject. On the other hand, commercial banks, as a first step, sold commercial paper for their corporate clients. After litigation[73] ultimately upheld this practice, the Federal Reserve (the

68. FED. DEPOSIT INS. CORP., *supra* note 66, at 173 (footnotes omitted).

69. Act of August 1, 1968, Pub. L. No. 90-448, 82 Stat. 536 (1968) (codified at 12 U.S.C. § 1717 (2006)).

70. *See infra* text accompanying notes 146–48.

71. Pub. L. No. 98-440, 98 Stat. 1689 (codified in scattered sections of 12 and 15 U.S.C.).

72. Pub. L. No. 99-514, § 671, 100 Stat. 2085, 2309–18 (codified at 26 U.S.C. § 860A–G (2006 & Supp. V 2011)).

73. *See, e.g.*, Sec. Indus. Ass'n v. Bd. of Governors, 468 U.S. 137, 139–40 (1984); Sec. Indus. Ass'n v. Bd. of Governors, 807 F.2d 1052, 1055 (D.C. Cir. 1986); Simon Kwan, *Cracking the*

Fed), in a series of rulings, undercut the Glass–Steagall prohibition on underwriting by commercial banks.[74]

The Fed, under Alan Greenspan from 1987 to 2006, eschewed regulation, and when the Fed expanded the percentage of revenue that banks could earn from the securities operation of their subsidiaries from 10% to 25%, the demise of Glass–Steagall was well underway. Ultimately, President Bill Clinton signed the Gramm–Leach–Bliley Act in 1999, which enabled financial holding companies to engage in financial and ancillary activities, including banking, insurance, and securities.[75] Glass–Steagall was no more.[76]

In the Clinton Administration, financial deregulation became the norm. Deregulation was also the norm for the Fed during the years that it was led by Alan Greenspan. The Riegle–Neal Act of 1994 basically eliminated restrictions on interstate banking.[77] On the other hand, also in 1994, Congress passed the Home Ownership and Equity Protection Act, which amended the Truth in Lending Act to provide that credit should not be extended "without regard to the consumers' repayment ability, including the consumers' current and expected income, current obligations, and employment."[78] In other words, predatory lending was prohibited. However, in 1998, the Federal Reserve Board decided not to "conduct consumer compliance examinations of, nor to investigate consumer complaints regarding, nonbank subsidiaries of bank holding companies."[79] Had the Fed enforced the provision of the Truth in Lending Act that credit not be extended to those who did not have the ability to repay, we would not have had the plethora of "liars' loans" that, in part, led to the financial crisis.

The most foolhardy example of a deregulatory mindset occurred with respect to derivatives. Brooksley Born, the head of the Commodity Futures Trading Commission (CFTC), foresaw the risks that these instruments posed to the economy and sought to regulate them. However, the Clinton Administration, led by Treasury Secretary Robert Rubin and Deputy Treasury Secretary Larry Summers joined with Alan Greenspan

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Glass–Steagall Barriers, FED. RES. BANK OF S.F. ECON. LETTER 97-08 (Fed. Reserve Bank of S.F., S.F., Cal.), Mar. 21, 1997, *available at* http://www.frbsf.org/econrsrch/wklyltr/el97-08.html.

74. CHARLES R. GEISST, UNDUE INFLUENCE: HOW THE WALL STREET ELITE PUT THE FINANCIAL SYSTEM AT RISK 223, 245, 249 (2005); Kwan, *supra* note 73.

75. *See* Gramm–Leach–Bliley Act, Pub. L. No. 106-102, § 103, 113 Stat. 1338, 1342 (1999).

76. Interestingly, the drive for the repeal of Glass–Steagall was the acquisition by Citicorp of Travelers Insurance because Glass–Steagall would have required the new Citigroup to be broken up. Paradoxically, Citigroup eventually spun off Travelers's insurance business.

77. Riegle–Neal Interstate Banking and Branching Efficiency Act of 1994, Pub. L. No. 103-328, § 101, 108 Stat. 2338, 2339 (codified at various sections of 12 U.S.C.).

78. Home Ownership and Equity Protection Act of 1994, Pub. L. No. 103-325, § 152(d), 108 Stat. 2160, 2190–91, 2193 (codified at 15 U.S.C. § 1639(h)).

79. *See* Binyamin Appelbaum, *As Subprime Lending Crisis Unfolded, Watchdog Fed Didn't Bother Barking*, WASH. POST, Sept. 27, 2009, at A1.

to derail her proposal.[80] Ms. Born's proposals were not that onerous: basically, she wanted more transparency and a requirement of reserves to cushion losses.

Consider American International Group (AIG), a multinational insurance company. The "quants"[81] who developed credit default swaps (CDSs)[82] believed there was a 99% probability that AIG would never need to pay out on them.[83] Consequently, AIG maintained no loss reserves for these instruments. Accordingly, when the subprime mortgage market collapsed, AIG did not have the funds to honor its credit guarantees, and the federal government was stuck with a $135 billion bailout of AIG. But the people who were sold CDSs were rewarded handsomely with millions in commissions and other compensation.

Unfortunately, Larry Summers argued that Born's proposals would lead to a financial crisis. Greenspan, Rubin, and Arthur Levitt, then Chairman of the SEC, convinced Congress to bar Ms. Born's attempt to regulate derivatives. The following year, Senator Phil Gramm attached a rider to an 11,000-page appropriations bill to limit CFTC authority to regulate derivatives, which passed with no discussion on this issue.[84]

History has proven Born was correct, and it was the deregulatory mindset of Rubin, Summers, and Greenspan that led to a financial crisis. Thus, profit was privatized and risk was socialized.

3. The Continuing Pattern of Deregulation into the 2000s

In 2000, Edward Gramlich, a former Federal Reserve Board member, suggested to Chairman Greenspan that the Fed examine consumer finance lenders that were units of federally regulated bank holding companies. Greenspan opposed this action because it might undermine the availability of subprime lending.[85] This deregulatory attitude persisted during the 2000s. According to Paul Krugman, a Nobel Prize-winning economist, at a 2003 press conference, "[r]epresentatives of four of the five government agencies responsible for financial supervision used tree shears to attack a stack of paper representing bank regulations. The fifth representative, James Gilleran of the Office of Thrift Supervision, wield-

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80. Peter S. Goodman, *Taking Hard New Look at a Greenspan Legacy*, N.Y. TIMES, Oct. 9, 2008, at A1.

81. In the financial industry, persons who do quantitative analysis are frequently called "quants." *See* SCOTT PATTERSON, THE QUANTS: HOW A NEW BREED OF MATH WHIZZES CONQUERED WALL STREET AND NEARLY DESTROYED IT 3 (2010).

82. For a discussion of CDSs, see *infra* text accompanying notes 146–55.

83. Brady Dennis & Robert O'Harrow, Jr., *A Crack in the System*, WASH. POST, Dec. 30, 2008, http://www.washingtonpost.com/wp-dyn/content/article/2008/12/29/AR2008122902670.html.

84. *See* Goodman, *supra* note 80.

85. Greg Ip, *Did Greenspan Add to Subprime Woes?*, WALL ST. J., Jun. 9, 2007, at B1.

ed a chainsaw."[86] This interesting visual was emblematic of the attitude of the Fed and the Bush Administration toward regulation.

In 2001, the OCC, the FDIC, the Federal Reserve, and the Office of Thrift Supervision issued a joint release that authorized the use of "credit ratings from the rating agencies to measure relative exposure to credit risk and determine the associated risk-based capital requirement."[87] For example, if a security were rated AAA, a factor of 20% would be applied to the asset securitization in determining the amount of capital the bank would need to hold. In effect, the determination of risk assessment was transferred from the governmental regulators to the credit-rating agencies, which were beholden to the financial industry. As a result, the financial firms had securities that were rated AAA, against which they held minimal capital but which turned out to be junk.[88]

Building upon this deregulatory mindset, the SEC, in 2004, modified the net capital rules for brokers to enable five major firms to nearly double their leverage.[89] According to Lee Pickard, a former SEC regulator who participated in formulating the old rule:

> The SEC's basic net capital rule, one of the prominent successes in federal financial regulatory oversight, had an excellent track record in preserving the securities markets' financial integrity and protecting customer assets. There have been very few liquidations of broker-dealers and virtually no customer or interdealer losses due to broker-dealer insolvency during the past 33 years.
>
> Under an alternative approach adopted by the SEC in 2004, broker-dealers with, in practice, at least $5 billion of capital (such as Bear Stearns) were permitted to avoid the haircuts on securities positions and the limitations on indebtedness contained in the basic net capital rule. Instead, the alternative net capital program relies heavily

86. Paul Krugman, Op-Ed., *Blindly into the Bubble*, N.Y. TIMES, Dec. 21, 2007, at A37.

87. Risk-based Capital Guidelines; Capital Adequacy Guidelines; Capital Maintenance: Capital Treatment of Recourse, Direct Credit Substitutes and Residual Interests in Asset Securitizations, 66 Fed. Reg. 59,614, 59,625 (Nov. 29, 2001) (codified as amended at 12 C.F.R. pts. 3, 208, 225, 325, and 567).

88. One study found that the value of AAA-rated mortgage-backed securities (as measured by the corresponding credit-default-swaps prices) had fallen by 70% between January 2007 and December 2008. *See* Marco Pagano & Paolo Volpin, Credit Ratings Failures: Causes and Policy Options 1 (Columbia Univ. Italian Academy for Advanced Studies in Am., Working Paper, 2009), *available at* http://www.italianacademy.columbia.edu/publications/working_papers/2008_2009/pagano_volpin_seminar_IA.pdf. According to another report, by August 2008, Moody's had downgraded 90% of all asset-backed CDO investments issued in 2006 and 2007, and Standard & Poor's had downgraded 84% of the CDO tranches it rated. *See* Cormick Grimshaw, *Bringing Down Wall Street as Ratings Let Loose Subprime Scourge*, MARKET PIPELINE (Sept. 25, 2008, 7:58 PM), http://marketpipeline.blogspot.com/2008/09/bringing-down-wall-street-as-ratings_25.html. Moreover, they had downgraded 85% and 76%, respectively, of the AAA securities they had rated. *Id.*

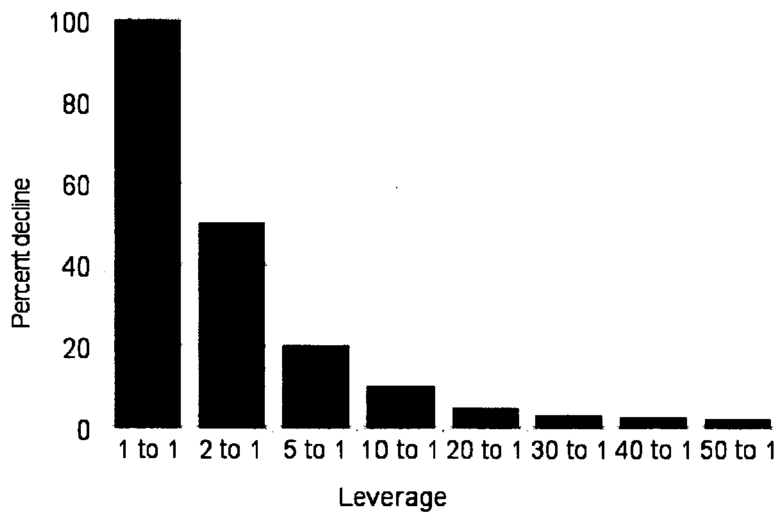
89. *See* Julie Satow, *Ex-SEC Official Blames Agency for Blow-Up of Broker-Dealers*, N.Y. SUN, Sept. 18, 2008, at Bus. 1; *see also* Lee A. Pickard, Op-Ed., *SEC's Old Capital Approach Was Tried—and True*, AM. BANKER, Aug. 8, 2008, at Viewpoints 10.

on a risk management control system, mathematical models to price positions, value-at-risk models, and close SEC oversight.[90]

The SEC's staff was supposed to monitor the risk assessment activities of the brokers but never adequately supervised the program.[91]

When a firm's leverage ratio is in the mid-thirties, a 3% drop in the value of assets could impair its capital.[92] The relationship between the leverage ratio and drop in the value of the assets necessary to wipe out a bank's capital is illustrated by Figure 3 below:

Figure 3. Decline in Assets that Will Wipe Out a Bank's Capital at Different Leverage Levels



Source: Ezra Klein, *Explaining Financial Regulation: Leverage and Capital Requirements*, WASH. POST, Apr. 19, 2010, http://voices.washingtonpost.com/ezra-klein/2010/04/explaining_financial_regulatio.html.

Once again, federal regulators were relying upon the regulated to monitor themselves, with disastrous consequences, as Bear Stearns and Lehman Brothers demonstrated. Both firms had leverage ratios of over thirty-to-one at the time of their collapse.

Whereas federal regulators were oblivious to the problem of subprime lending, state regulators were more vigilant. In 1999, North Caro-

90. Pickard, *supra* note 89.

91. *See* FIN. CRISIS INQUIRY COMM'N, FINAL REPORT OF THE NATIONAL COMMISSION ON THE CAUSES OF THE FINANCIAL AND ECONOMIC CRISIS IN THE UNITED STATES 153–54 (2011).

92. *See* Ezra Klein, *Explaining Financial Regulation: Leverage and Capital Requirements*, WASH. POST, Apr. 19, 2010, http://voices.washingtonpost.com/ezra-klein/2010/04/explaining_financial_regulatio.html.

lina passed a predatory lending law[93] and, in 2002, Georgia did the same.[94] The OCC, in its ruling preempting Georgia law, summarized the Georgia law as follows:

> "High-cost home loans" were subject to the restrictions on "home loans" [prohibitions on the financing of credit insurance, debt cancellation or suspension coverage, and limitations on late fees and payoff statement fees] and "covered home loans," [restrictions on the number of times a loan could be refinanced and the circumstances in which a refinancing could occur] as well as numerous disclosure requirements and restrictions on the terms of credit and loan-related fees. Creditors were required to disclose to borrowers that the loan is high-cost, and borrowers were required to be provided with certain loan counseling before the creditor could make the loan. In addition, the [Georgia Fair Lending Act] prohibited certain pre-payment penalties; balloon payments; negative amortization; increases in interest rates after default; advance payments from loan proceeds; fees to modify, renew, extend, amend, or defer a payment; and accelerating payments at the creditor's or servicer's sole discretion.[95]

The practices that the states sought to outlaw, but that the OCC permitted, were the ones that led to the toxic mortgages, which in turn led to the real estate bubble bursting.

In preempting the state regulation, the OCC first exempted the national banks from Georgia's lending restrictions; previously, the Office of Thrift Supervision had concluded that federal law preempted both the Georgia law and a New Jersey statute.[96] Later, in 2003, the OCC also preempted the New Jersey law and, the following year, generally exempted national banks from any state mortgage regulations.[97]

The attempted state regulation would have reined in some of the predatory lending practices that led to the financial meltdown. The federal regulators not only shut down state regulatory enforcement but also failed to exercise the supervisory power they possessed.[98] For example, consider the following material-loss assessment with respect to Flagship National Bank:

> OCC performed timely examinations of Flagship in accordance with examination guidelines but did not report or take actions to address the bank's [commercial real estate] concentrations or its inadequate credit risk management, liberal underwriting, and poor credit admin-

93. N.C. GEN. STAT. § 24-10.2 (2012).

94. GA. CODE ANN. § 7-6A-6 (2012).

95. Preemption Determination and Order, 68 Fed. Reg. 46,264, 46,267 (Aug. 5, 2003).

96. News Release, Office of Thrift Supervision, OTS Says New Jersey Law Does Not Apply to Federal Thrifts (July 23, 2003), http://www.ots.treas.gov/_files/77322.html.

97. Bank Activities and Operations; Real Estate Lending and Appraisals, 69 Fed. Reg. 1904, 1904 (Jan. 13, 2004) (codified as amended at 12 C.F.R. pts. 7 and 34).

98. *See* Eric Dash, *Pathology of a Crisis*, N.Y. TIMES, Nov. 19, 2009, at B1.

> istration until the 2008 examination. These conditions had existed before—from 2005 through 2007—but OCC did not address them during the earlier examinations.[99]

Not everybody in the 2000s was oblivious to the impact of deregulation and the complexity of our banking system. Alan Greenspan was honored at an annual gathering of high-powered economists in September 2005 in Jackson Hole, Wyoming. Raghuram Rajan, a graduate business school professor at the University of Chicago, delivered a working paper entitled *Has Financial Development Made the World Riskier?* He was concerned about the managerial incentives to take undue risk and stated that "the kinds of risks that can most easily be concealed, given the requirement of periodic reporting, are risks that generate severe adverse consequences with small probability but, in return, offer generous compensation the rest of the time."[100] Those few words describe the moral hazard among banking executives that led to the economic meltdown we experienced. He identified credit default swaps as instruments with high profitability but little *apparent* risk. This was the AIG problem. He also identified the risk posed by financial institutions that retain some of the toxic securities they produced: when the securities started to fail, banks would not deal with each other. Again, he was prescient: consider the discussion of Bear Stearns and Lehman Brothers in Part III.[101]

What was the reaction to his paper? He was scorned.[102] But as the following Parts demonstrate, deregulation and financial innovation brought us to the edge of economic collapse.

III. THE FINANCIAL CRISIS: CAUSES AND AFTERMATH

I have chronicled the causes of the financial crisis in an earlier article.[103] Basically, worldwide assets available for investment doubled between 2001 and 2006.[104] However, interest rates were historically low, reflecting Chairman Greenspan's desire to keep the economy growing. The Bush tax cuts were supposed to spur the economy, but growth, particularly as measured by jobs, was anemic. Because of the Fed's policies, U.S. bonds were paying only 1% to 4 %, depending upon the issuance date and maturity.[105] The low interest rates motivated investors to find

99. *See* DEP'T OF TREASURY, OFFICE OF INSPECTOR GEN., AUDIT REPORT: MATERIAL LOSS REVIEW OF FLAGSHIP NATIONAL BANK 5 (2011).

100. Raghuram Rajan, Has Financial Development Made the World Riskier? 3 (Nat'l Bureau of Econ. Research, Working Paper No. 11728, 2005).

101. *See infra* text accompanying notes 112–14.

102. Justin Lahart, *Mr. Rajan Was Unpopular (But Prescient) at Greenspan Party*, WALL ST. J., Jan. 2, 2009, at A7.

103. *See* Murdock, *supra* note 9, at 1244.

104. *See* INT'L FIN. SERV. LONDON, FUND MANAGEMENT REPORT 7 (2008).

105. *See* U.S. CENSUS BUREAU, STATISTICAL ABSTRACT OF THE UNITED STATES: 2009, at 728 tbl.1158 (2009).

other investments that were supposedly safe but carried a higher return than government bonds.

Prior to 2000, real estate had been a relatively safe investment. Relying on the old data, rating agencies began to issue AAA ratings to a variety of mortgage-backed securities. Unfortunately, the mortgage market of 2003–2007 bore little relation to the pre-2000 market. The number of subprime loans jumped from 456,631 in 2000 to 2,284,420 in 2005.[106] Similarly, Alt-A loans increased from 78,183 in 2000 to 1,447,782 in 2005.[107] Subprime loans were among the financial innovations that Chairman Greenspan extolled. Other products, such as pick-a-pay loans, came into the market. A pick-a-pay loan permitted a borrower to choose the amount of the mortgage payment, which could be even less than the accruing interest, thereby creating a negative amortization situation. ARMs supplanted the traditional thirty-year fixed-payment mortgage. When they reset to a higher interest rate, the buyer often could not make the higher monthly payment. And "no doc," or liars' loans, became prevalent. Mortgage lenders stopped verifying the borrower's financial information. As one lender stated: "Whatever they wanted to state for their income. The bank accepted that at face value and made the loan based on that income."[108]

Loans were churned out, not underwritten. The Financial Crisis Inquiry Commission reported: "Several of these factories were originating, packaging, securitizing and selling at the rate of $1 billion a day. The quality control process failed at a variety of stages during the manufacturing, distribution and on-going servicing."[109] Profits for mortgage lenders and investment bankers increased dramatically, as did CEO compensation, sales and finder commissions, and bonuses. Rating agencies sold their AAA ratings to the investment bankers, who compensated the rating agencies handsomely for their ratings. Volume, not quality, was the touchstone. Everybody was making money hand over fist. Financial professionals apparently expected the joyride to go on forever.

But then came the mortgage defaults. Although some commentators have blamed the Federal National Mortgage Association (Fannie Mae) for the crisis, the private-label securities produced by Wall Street defaulted at twice the rate as those of Fannie Mae. See Figure 4 below for

106. U.S. GOV'T ACCOUNTABILITY OFFICE, GAO-09-848R, CHARACTERISTICS AND PERFORMANCE OF NONPRIME MORTGAGES 24 (2009). Subprime loans are those made to a borrower with a low credit score at an interest rate above that generally provided to borrowers using traditional mortgages. Alt-A loans are those made without traditional documentation.

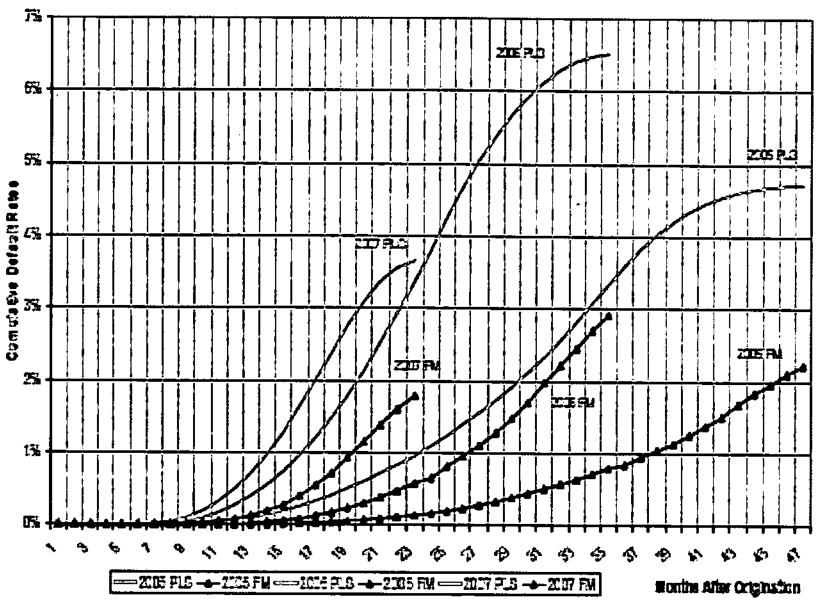
107. *Id.*

108. *See 60 Minutes: House of Cards; The Mortgage Mess* (CBS television broadcast January 27, 2008), *available at* http://www.cbsnews.com/video/watch/?id=3756665n.

109. *See Hearing Before the Fin. Crisis Inquiry Comm'n*, 111th Cong. 2 (2010) (testimony of Keith Johnson, Former Pres., Clayton Holdings, Inc. & Wash. Mut.'s Long Beach Mortg.)

the comparative data for 2005 through 2007.[110] In the ensuing three years, the default rates nearly tripled:[111]

Figure 4. Cumulative Default Rates for Fannie Mae Alt-A and Private Label Alt-A for 2005, 2006, and 2007 Cohorts



Source: FANNIE MAE, 2008 CREDIT SUPPLEMENT 12 (2009).

As the default rates increased, down came the price of mortgage-backed securities and, as a consequence, down came Bear Stearns in March 2008.[112] The bailout of Bear Stearns seemed to settle the situation temporarily, but then came Lehman Brothers.[113] Treasury Secretary Henry Paulson decided not to rescue Lehman Brothers; it went bankrupt, and the Primary Reserve Fund "broke the buck."[114] A worldwide economic meltdown was in the offing.[115]

110. FANNIE MAE, 2008 CREDIT SUPPLEMENT 12 (2009).

111. FANNIE MAE, 2011 FIRST QUARTER CREDIT SUPPLEMENT 13 (2011).

112. *See* WILLIAM D. COHAN, HOUSE OF CARDS *passim* (2009) (chronicling in great detail the ten days in March that led to the collapse of Bear Stearns).

113. *Big Banks Fail, Signaling More Economic Troubles Ahead*, PBS NEWSHOUR (Sept. 16, 2008), http://www.pbs.org/newshour/extra/features/us/july-dec08/banks_9-16.pdf.

114. Diana B. Henriques, *Buck Broken, but Timing May Affect Reductions*, N.Y. TIMES, Nov. 26, 2008, at B4. "Breaking the buck" means that the value of a share in the mutual fund fell below one dollar. Money is invested or borrowed in a money-market system on a short-term basis, sometimes overnight. The return from a money market investment is not as much as from a long-term investment; consequently, investors do not expect to lose any money. Money-market funds were regarded as totally safe. Companies park their money in them overnight and rely upon them as a source of credit when they need short-term funds. All companies oscillate between having cash on hand and needing to borrow cash on a particular day. Thus, when the Lehman Brothers debt was

Congress responded in October 2008 with a $700 billion bailout,[116] and the Fed made trillions of dollars of credit available to the banks.[117] The government bailed out the banks but essentially asked for nothing in return. The banks later rewarded the federal largess by aggressively resisting the Dodd–Frank reform legislation.[118] The bailout avoided the specter of another Great Depression, but the economy was in shambles. The new Obama Administration responded in February 2009 with an inadequate stimulus package,[119] which turned out to be a palliative rather than a cure.[120]

President Obama also sought to provide some relief for beleaguered homeowners to help them avoid foreclosure.[121] This program turned out to be a failure because banks had no incentive to accept a modest fee for modifying mortgages when such modification would impact their assets and their earnings.[122] At the time, probably most banks were "legally" insolvent—assets were less than liabilities—but we will never know for certain because an accounting change saved them from revaluing their assets to the then current market value.[123] The Fed saved the banks from being "equitably" insolvent—not being able to pay their debts as they

written down, first to $0.80 on the dollar and then to zero, it created a panic as investors rushed to get their money out of money-market funds.

115. Treasury Secretary Paulson responded to the crisis by calling congressional leaders together and informing them that "[u]nless you act, the financial system of this country and the world will melt down in a matter of days." *Frontline*: *Inside the Meltdown* (PBS television broadcast Feb. 17, 2009).

116. *See* Emergency Economic Stabilization Act of 2008, Pub. L. No. 110-343, § 115, 122 Stat. 3765, 3780.

117. *See* Pittman & Ivry, *supra* note 7.

118. *Times Topics: Financial Regulatory Reform*, N.Y. TIMES, http://topics.nytimes.com/topics/reference/timestopics/subjects/c/credit_crisis/financial_regulatory_reform/index.html (last updated Sept. 20, 2011).

119. *See* American Recovery and Reinvestment Act of 2009, Pub. L. No. 111-5, 123 Stat. 115. The original stimulus amount was $787 billion. *See Breakdown of Funding by Category: Total Funds Allocated*, RECOVERY.GOV, http://www.recovery.gov/Transparency/fundingoverview/Pages/fundingbreakdown.aspx (last visited Jan. 5, 2013).

120. *See* Shaila Dewan, *Zero Job Growth Latest Bleak Sign for U.S. Economy*, N.Y. TIMES, Sept. 2, 2011, at A1.

121. *See* Phyllis Caldwell, *Making Home Affordable Campaign to Help America's Homeowners*, WHITE HOUSE BLOG (Dec. 1, 2009, 5:48 PM), http://www.whitehouse.gov/blog/2009/12/01/making-home-affordable-campaign-help-america-s-homeowners; *see also* Tami Luhby, *Obama Expands Mortgage Modification Effort*, CNNMONEY (Mar. 26, 2010, 3:44 PM), http://money.cnn.com/2010/03/26/news/economy/Obama_mortgage_relief/.

122. *See* Neil M. Barofsky, Op-Ed., *Where the Bailout Went Wrong*, N.Y. TIMES, Mar. 30, 2011, at A27 (discussing the program's failure and noting that Barofsky was the Troubled Asset Relief Program (TARP) Inspector General until March 2011); *see also* OFFICE OF THE SPECIAL INSPECTOR GENERAL FOR THE TROUBLED ASSET RELIEF PROGRAM, QUARTERLY REPORT TO CONGRESS 64, 67 (2011) (showing TARP's limited success, with less than 20% of estimated homeowners to be affected obtaining relief).

123. *See* DETERMINING FAIR VALUE WHEN THE VOLUME AND LEVEL OF ACTIVITY FOR THE ASSET OR LIABILITY HAVE SIGNIFICANTLY DECREASED AND IDENTIFYING TRANSACTIONS THAT ARE NOT ORDERLY, Staff Position No. FAS 157-4 (Fin. Accounting Standards Bd. 2009) (affording financial institutions significant leeway in "determining fair value when the volume and level of activity for the asset or liability have significantly decreased").

came due—by creating profits for banks by lending them funds, in some cases at almost a zero interest rate.[124]

As the foreclosures exploded,[125] it became apparent that the mortgage servicers—many of which were subsidiaries of the big banks—had inadequate records and often had no idea where the underlying notes resided.[126] So, in many instances, they falsified court documents when foreclosures were initiated. Litigation ensued.[127]

In 2008–2010, the much-maligned Democrat-controlled U.S. House of Representatives (which lost control to the Republicans in 2010 due, in part, to voter anger over Wall Street being bailed out but nothing being done for Main Street) actually passed legislation that might have stemmed the decline of the housing market. The Helping Families Save Their Homes Act of 2009[128] would have, in effect, enabled homeowners to file bankruptcy but retain their homes with a modified mortgage reflecting the current value of the property. However, the Democrat-controlled U.S. Senate, which unfortunately needed sixty votes to pass legislation because of Republican filibusters, failed to pass the legislation.

By giving homeowners the option to file bankruptcy and keep their homes with a modified mortgage, lenders would have had an incentive to negotiate private modifications outside bankruptcy. This could have substantially reduced the rate of foreclosures. However, this approach was opposed by many as involving moral hazard, because it could reward those who had borrowed more than they could repay in order to buy a home that was beyond their means.

On the other hand, when a lender forecloses, the most the lender will realize is the current market value of the foreclosed property, and oftentimes substantially less. The glut of foreclosures has left neighborhoods with empty homes, encouraged vandalism, and triggered further drops in property values.[129] In addition, foreclosures have increased the

124. Jesse Eisinger, *How the U.S. Shelters and Subsidizes the Banking Industry*, N.Y. TIMES, June 30, 2011, at B7 ("When the Federal Reserve lowers interest rates to help buoy the economy during a slowdown, banks are the first beneficiaries. As the Fed lowers short-term rates, banks borrow cheaply and lend out for a lot more, making any new lending highly profitable . . . .").

125. Barofsky, *supra* note 122 (noting the estimates that foreclosures will number between eight million and thirteen million filings before the crisis runs its course).

126. *See* John Carney, *A Primer on The Foreclosure Crisis*, CNBC.COM (Oct. 11, 2010, 2:48 PM), http://www.cnbc.com/id/39617381/A_Primer_On_The_Foreclosure_Crisis.

127. *See* Margaret Cronin Fisk & Kathleen M. Howley, *The Foreclosure Mess Could Last For Years*, BLOOMBERG BUSINESSWEEK (Oct. 6, 2010, 11:00 PM), http://www.businessweek.com/magazine/content/10_42/b4199043406256.htm.

128. H.R. 1106, 111th Cong. (2009). A different version of the Helping Families Save Their Homes Act of 2009, Pub. L. No. 111-22, 123 Stat. 1632, was eventually passed that May.

129. Christine Vidmar, *Seven Ways Foreclosures Impact Communities*, NEIGHBORWORKS AMERICA (Aug. 2008), http://www.nw.org/network/neighborworksprogs/foreclosuresolutions/reports/documents/7ForeclosureImpacts.pdf.

supply of homes in the market at a time when there are fewer buyers because of the stagnant economy. Thus, foreclosures exacerbate the downward pressure on housing prices, which not only depresses the housing market but also impedes economic recovery.[130]

Although the Obama Administration has come up with another mortgage modification plan,[131] and the recent settlement between the state attorneys general and the big banks provides some relief to borrowers,[132] these small steps are a long way from resolving the foreclosure problem.

Basically, this situation is what innovation has wrought. The impact of innovation will be further explored in Part IV.

IV. FINANCIAL INNOVATION

A. Has Financial Innovation Created Value?

Alan Greenspan, while Chairman of the Federal Reserve Board, was a strong advocate for financial innovation:

> Alan Greenspan has presented a free market defence of financial innovations based on Joseph A. Schumpeter's theory that innovations initiate a dynamic process of "creative destruction" in a capitalistic system. . . .
>
> As Chairman of the Federal Reserve Board, Greenspan's interpretation of the Schumpeterian role of financial innovations in the "New Economy" has had important consequences. It had an influence on the Fed's passive response to the emergence of a speculative bubble in the financial markets, on the one hand, and its proactive response to the collapse of a large hedge fund which suffered huge losses on derivative contracts, on the other. It was reflected in Greenspan's testimonies that influenced the U.S. Congress to exempt over-the-counter financial derivatives from government regulation and to re-

130. *See* Robert J. Barro, Op-Ed., *How to Really Save the Economy*, N.Y. TIMES, Sept. 11, 2011, at SR8.

131. *See* Don Lee, *Obama Pushes Housing Plan in Weekly Address*, L.A. TIMES, Feb. 4, 2012, http://articles.latimes.com/2012/feb/04/news/la-pn-obama-weekly-address-20120204 (explaining President Obama's new proposal to allow homeowners to refinance mortgages at lower interest rates, even if they owe more than the house is worth); *see also* Kenneth R. Harney, *Some Refinancing Ideas Have an Inside Track*, WASH. POST, Feb. 10, 2012, at E04 (describing the various portions of President Obama's mortgage proposal and discussing the likelihood of passage for each proposal).

132. *See* Nelson D. Schwartz & Shaila Dewan, *$26 Billion Deal Is Said to be Set for Homeowners*, N.Y. TIMES, Feb. 9, 2012, at A1 (explaining the settlement agreed to by government officials and five large banks); *see also* NAT'L MORTG. SETTLEMENT, http://www.nationalmortgagesettlement.com/ (last visited Jan. 5, 2013) (containing specific details about the mortgage settlement, along with resources for borrowers). For a graphic depicting how the settlement money will be used, see *Help for Some Homeowners*, N.Y. TIMES, Feb. 8, 2012, http://www.nytimes.com/interactive/2012/02/09/business/help-for-some-homeowners.html

peal the Glass–Steagall Act's separation of commercial and investment banking.[133]

But derivatives were not the only innovation favored by Chairman Greenspan. He was also a strong advocate of the "benefits" of subprime lending. In 2005, when subprime lending was gearing up to sink the economy, he stated:

> Innovation has brought about a multitude of new products, such as subprime loans and niche credit programs for immigrants. . . . With these advances in technology, lenders have taken advantage of credit-scoring models and other techniques for efficiently extending credit to a broader spectrum of consumers. . . . Where once more-marginal applicants would simply have been denied credit, *lenders are now able to quite efficiently judge the risk posed by individual applicants and to price that risk appropriately.* These improvements have led to rapid growth in subprime mortgage lending[,] . . . fostering constructive innovation that is both responsive to market demand and beneficial to consumers.[134]

With a bias such as this, it is no wonder that Greenspan took no steps to regulate the banking industry's predatory subprime loans.

But isn't innovation good? Americans generally hold innovation in high regard. However, there are substantial differences between financial innovation and technological innovation. Technological innovation often starts in the lab, garage, or basement. It is tested, challenged, and scaled up. It is generally based upon scientific principles that have been developed, tested, and replicated over time. Its development is frequently funded by outside sources that provide another level of accountability.

This is not to say that technological innovation has not had its dark side. Decades ago, the dangers of the DDT pesticide were brought to the public by Rachel Carlson's *Silent Spring.*[135] Today, the whole world is aware of the risks of nuclear power from the meltdown in Japan.[136] But, on balance, although technical innovation has produced great private profit, it also has produced extraordinary social benefits. Health care advances have saved millions of lives,[137] agricultural developments have enabled us to grow 200 bushels of corn per acre where formerly we

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133. Charles G. Leathers & J. Patrick Raines, *The Schumpeterian Role of Financial Innovations in the New Economy's Business Cycle*, 28 CAMBRIDGE J. ECON. 667, 667–68 (2004) (citation omitted).

134. Alan Greenspan, Chairman, Fed. Reserve, Address at the Federal Reserve System's Fourth Annual Community Affairs Research Conference (Apr. 8, 2005) (emphasis added), *available at* http://www.federalreserve.gov/BoardDocs/speeches/2005/20050408/default.htm.

135. *See generally* RACHEL CARSON, SILENT SPRING *passim* (1962) (bringing awareness to the public and helping to facilitate the ban of the pesticide DDT in 1972).

136. *See generally* Floyd Norris, *2 Meltdowns with Much in Common*, N.Y. TIMES, Mar. 18, 2011, at B1 (discussing the recent nuclear meltdown in Japan).

137. *See* Dan Childs & Susan Kansagra, *10 Health Advances that Changed the World*, ABC NEWS (Sept. 20, 2007), http://abcnews.go.com/Health/TenWays/story?id=3605442.

could only grow twenty,[138] and the computer and the Internet have created whole new industries and millions of jobs.[139]

To put financial innovation on the same continuum as technological innovation is disingenuous. Financial innovation was never initiated in the garage but by overpaid quants working for billion-dollar corporations.[140] More importantly, it has not had the testing and required replication necessary before technological innovation is opened to the market. One of the world's most distinguished quants, Paul Wilmott, in discussing models based upon correlation and volatility, stated:

> With models, you want to see where things go wrong . . . .You want to see the dirt. But HJM [the model] is actually just a big rug for [mistakes] to be swept under. . . . In the end, we should all like models that wear their faults on their sleeves.
>
> . . .
>
> They built these things [collateralized debt obligations] on false assumptions without testing them, and stuffed them full of trillions of dollars. How could anyone have thought that was a good idea?
>
> . . .
>
> We need to get back to testing models rather than revering them . . . . That's hard work, but this idea that there are these great principles governing finance and that correlations can just be plucked out of the air is totally false.[141]

There is no question that financial innovation has created incredible private wealth.[142] However, any benefits are difficult to quantify. Supposedly, financial innovations can match risk and return, or the timing of cash flows. For example, the creation of structured financial products could enable an insurance company or pension fund to better match its liabilities—the maturities of payment obligations—with its assets by fine-tuning the maturities and target returns of its assets.

But, insurance companies and pension funds have functioned adequately with less "sophisticated"—read complicated and possibly incomprehensible—products in the past. Because of the complexity of

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138. *See* MICHAEL POLLAN, THE OMNIVORE'S DILEMMA 36–37 (2006).

139. *See* Michael J. Mandel, *Jobs: The Lull Will Linger*, BUSINESSWEEK (Oct. 24, 2004), http://www.businessweek.com/magazine/content/04_43/b3905044_mz011.htm.

140. *See* Matthew Philips, *Revenge of the Nerd*, DAILY BEAST (May 28, 2009, 8:00 PM), http://www.thedailybeast.com/newsweek/2009/05/28/revenge-of-the-nerd.html; *see also* PATTERSON, *supra* note 81, at 3.

141. Philips, *supra* note 140 (second alteration in original).

142. *Times Topics: Executive Pay*, N.Y. TIMES, http://topics.nytimes.com/top/reference/timestopics/subjects/e/executive_pay/index.html (last updated Oct. 10, 2012).

these products,[143] they became the province of our huge, well-capitalized and diversified big banks, thus giving them another competitive advantage over the smaller and mid-sized banks.[144] In addition, the financial incentives to selling these products led the big banks to continue to push the envelope in terms of risk.

Let us consider financial innovation in more depth. Banks do not create value. They are intermediaries who direct funds from investors into productive investments. But, instead of fulfilling this function, they created financial products and, in the process, consumed large amounts of capital. In 1978, banks and related institutions "borrowed $13 in the credit markets for every $100 borrowed by the real economy; by 2007, that had grown to $51."[145] This measures only balance sheet assets; it does not take into account derivatives, which have grown exponentially from the 1990s to today.[146] The capital that flowed into structured financial products was capital that was not available for more productive investment.

Consider financial products. Start with 1,000 homes. Create 1,000 mortgages. Put 100 of the mortgages into an asset-backed security. Repeat ten times. We now have ten pools of mortgages and each pool can be divided into units and sold to numerous investors. We have now created ten pristine mortgage-backed securities (MBSs), each unit of which would have the same undivided interest in each mortgage. Alternatively, we could divide each mortgage pool into three tranches: senior, intermediate, and junior, creating what are known as collateralized debt obligations (CDOs). The senior tranche would be paid before the holders of the intermediate and junior tranches and, subject to the prior right of the senior tranche holders, the holders of the intermediate tranche would be paid before the holders of the junior tranche. Assume, because of their relative riskiness, securities in the senior tranche would earn 4.5%; in the intermediate tranche, 6%; and the junior tranche, 7.5%. Assuming all three tranches were entitled to one-third of the income from the mortgages and one-third of the principal upon repayment, subject to the above prioritization, one might intuitively think that the senior tranche would be rated AAA because of its preferred claim to income and assets, the intermediate tranche rated A, and the junior tranche rated B.

The above description reflected a cylinder analogy, with three slices or segments, each of which is equal to the others in size. But in the real

143. *See infra* text accompanying notes 146–48.

144. *See infra* notes 207–09 accompanying text.

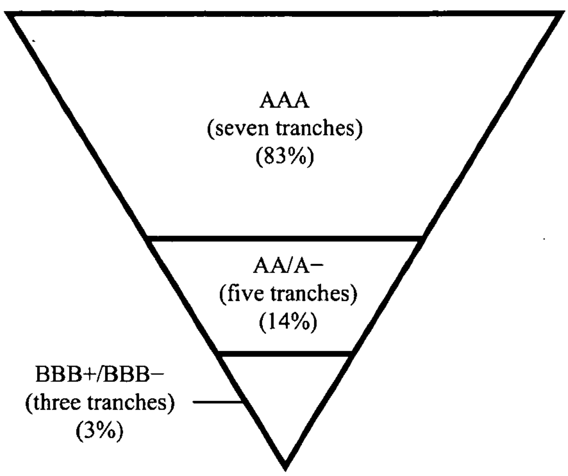
145. JOHNSON & KWAK, *supra* note 15, at 59–60; *see also* FED. RESERVE, CREDIT MARKET DEBT OUTSTANDING 64 tbl.L1 (2012) (listing current data on credit market debt outstanding).

146. The volume of OTC derivative contracts was $80 trillion in 1999. The volume has grown to $600 trillion in ten years. BANK FOR INT'L SETTLEMENTS, BIS QUARTERLY REVIEW A141 tbl.19 (2012), http://www.bis.org/statistics/otcder/dt1920a.pdf.

world, this analogy fails because not all tranches have equal value. A more accurate analogy would be that of an inverted cone.

Moreover, there would be many more tranches than three. One security I examined had fifteen tranches. Seven of the tranches had AAA credit ratings, but these seven tranches composed 83% of the value of the offering. The lowest three tranches were rated BBB+/BBB− but comprised only 3% of the offering. These lower three trenches were the "foundation" upon which the AAA-rated securities above rested.[147]

Figure 5. Illustrative Tranching of Collateralized Debt Obligation



Source: Ameriquest Mortg. Sec. Inc., Prospectus Supplement (Form 424B5), at S-1, S-5 (Dec. 15, 2005), http://www.sec.gov/Archives/edgar/data/1347199/000089109205002534/e23035_424b5.txt.

But we are not yet done. In the simple illustration of three tranches, we could take the BBB-rated tranches from three different pools, put them in a new container (sometimes called a CDO-squared), and re-tranche. Now, even though all the securities are rated BBB, the new senior tranche could be rated AAA and even carry a higher interest rate than the AAA-rated security in the predecessor MBS because of the greater interest entitlement of the new CDO (e.g., its underlying securities might pay 7.5% interest).

147. *See, e.g.*, Ameriquest Mortg. Sec. Inc., Prospectus Supplement (Form 424B5), at S-1, S-5 (Dec. 15, 2005), http://www.sec.gov/Archives/edgar/data/1347199/000089109205002534/e23035_424b5.txt. In this $1,793,610,000 offering of mortgage-backed securities, five tranches totaling $1,483,410,000 were rated AAA, and another seven tranches totaling $251,650,000 were rated A− or better. The last three tranches, rated BBB+ to BBB−, totaled only $58,550,000. So, although there were twelve tranches below the AAA tranches, they totaled only 17% of the offering. *Id.*

But, yet, there is more. We could now write credit default insurance against the failure of the CDOs to pay out: thus the creation of CDSs and synthetic CDOs. We could create another pool of investor funds, which would guarantee the payments of the CDO in exchange for a premium.

One way to bet against the housing market would be to buy protection in the form of CDSs. This is essentially what occurred in the Abacus transaction in which the SEC sued Goldman Sachs for creating a synthetic CDO without disclosing that the CDO was created at the insistence of hedge fund manager John Paulson, who wanted to bet against the housing market.[148] Thus, it was in his interest to have the CDO guarantee securities that were likely to default. Goldman Sachs permitted Paulson to participate in the selection of securities without disclosing his adverse interest to investors. Although Goldman earned commissions and fees up front, it also "earned," or rather paid, a $550 million settlement.[149]

Where is the value in the foregoing chain? One rationale is that it is possible to manufacture securities with varying rates of return commensurate with different levels of risk. But at what cost? These banking innovations have brought the world economy, not just that of the United States, to the brink of collapse. What has also been demonstrated by the financial meltdown is that financial managers greatly overestimated their ability to measure and control risk.

Recently, JPMorgan Chase, which came through the 2008 financial meltdown relatively unscathed and thus was lauded for its risk management, unexpectedly announced that its chief investment office had lost $2 billion in trading, then reported a $4.4 billion loss, and finally revised its own estimate to almost $6 billion, with speculation that it could go as high as $9 billion.[150] Jamie Dimon, the chief executive of JPMorgan Chase, first dismissed the problem as a "tempest in a teapot" but, as the scope of the loss became public, he acknowledged that it was an "egregious mistake."[151] However, hewing to his deregulatory mindset, he ar-

148. SEC v. Goldman Sachs & Co., 790 F. Supp. 2d 147, 150 (S.D.N.Y. 2011).

149. Press Release, SEC, Goldman Sachs to Pay Record $550 Million to Settle SEC Charges Related to Subprime Mortgage CDO (July 15, 2010), http://www.sec.gov/news/press/2010/2010-123.htm.

150. *See* Stephen Gandel, *JPMorgan's Trading Debacle: Why $2 Billion Is Just the Start*, CNNMONEY (May 13, 2012), http://finance.fortune.cnn.com/2012/05/11/jpmorgan-2-billion-just-start/; Dawn Kopecki and Michael J. Moore, *JPMorgan's $4.4 Billion CIO Loss Drives Profit Down 9%*, BLOOMBERG (July 13, 2012), http://www.bloomberg.com/news/2012-07-13/jpmorgan-s-4-4-billion-cio-loss-drives-profit-down-9-percent.html; Jessica Silver-Greenberg & Susanne Craig, *JPMorgan Trading Loss May Reach $9 Billion*, N.Y. TIMES DEALBOOK (June 28, 2012), http://dealbook.nytimes.com/2012/06/28/jpmorgan-trading-loss-may-reach-9-billion/.

151. *See* Jessica Silver-Greenberg & Peter Eavis, *JPMorgan Discloses $2 Billion in Trading Losses*, N.Y. TIMES DEALBOOK (May 10, 2012, 10:11 PM), http://dealbook.nytimes.com/2012/05/10/jpmorgan-discloses-significant-losses-in-trading-group/?nl=todaysheadlines&emc=edit_th_20120511. One of the persons who was largely responsible for the trading losses was Bruno Iksil, who was known as the "London whale," and the debacle is sometimes referred to as the London whale trading loss. *See id.* The scope of this egregious mistake is now detailed in a 307-page study by a congressional committee. U.S. S. COMM. ON HOMELAND

gued that "[j]ust because we're stupid doesn't mean everybody else was . . . . There were huge moves in the marketplace but we made these positions more complex and they were badly monitored."[152]

The problem appears to have occurred when J.P. Morgan re-hedged the original hedge, and it was this re-hedging that was acknowledged to be "flawed, complex, poorly reviewed, poorly executed, and poorly managed."[153] The transactions now look more like trading than hedging because the Senate investigation revealed that J.P. Morgan had "failed to identify the assets or portfolios being hedged, test the size and effectiveness of the alleged hedging activity, or show how the [synthetic credit portfolio] lowered rather than increased bank risk."[154] J.P. Morgan invested not just in CDSs but also in credit indices and credit index tranches.[155] A credit index is a more complicated form of credit derivative, in which the index references a basket of selected credit instruments, typically credit default swaps or similar credit instruments.[156]

This is another example of financial innovation run amok. Mr. Dimon acknowledged the complexity of the transactions and the inability of J.P. Morgan to effectively assess and monitor risk. Apparently, particular risks were not hedged, but rather the bank engaged in what is sometimes euphemistically referred to as portfolio hedging. The line between hedging, market-making, and proprietary trading is indeed a thin one in the operations of these big banks.[157]

There continue to be financial incentives in the big banks to take large risks. Ina Drew, who oversaw the unit that experienced the trading losses, earned over $31.4 million the past two years, and is eligible for nearly $14.7 million of deferred equity awards.[158] Unlike what occurred in 2008–2009, some of this compensation may be clawed back.[159]

SEC. & GOV'T AFFAIRS, PERM. SUBCOMM. ON INVESTIGATIONS, JPMORGAN CHASE WHALE TRADES: A CASE HISTORY OF DERIVATIVES RISKS AND ABUSES *passim* (2013) [hereinafter SENATE REPORT], *available at* http://www.hsgac.senate.gov/subcommittees/investigations/hearings/chase-whale-trades-a-case-history-of-derivatives-risks-and-abuses.

152. *See* Nelson D. Schwartz, *A Shock from JPMorgan Is New Fodder for Reformers*, N.Y. TIMES DEALBOOK (May 10, 2012, 9:32 PM), http://dealbook.nytimes.com/2012/05/10/a-shock-from-jpmorgan-is-new-fodder-for-reformers/?nl=todaysheadlines&emc=edit_th_20120511.

153. *See* Matt Levine, *Whale Sushi on the Menu at J.P. Morgan Executive Lunchroom for Next Few Months*, DEALBREAKER.COM (May 12, 2012, 6:21 PM), http://dealbreaker.com/2012/05/whale-sushi-on-the-menu-at-jpmorgan-executive-lunchroom-for-next-few-months/.

154. SENATE REPORT, *supra* note 151, at 15.

155. *Id.* at 29–34.

156. *Id.*

157. *See* Ben Protess, *After Loss, JPMorgan Regulators in Spotlight*, N.Y. TIMES DEALBOOK (June 5, 2012 8:24 PM), http://dealbook.nytimes.com/2012/06/05/jpmorgan-regulators-in-spotlight-after-firms-huge-loss/?nl=todaysheadlines&emc=edit_th_20120606 ("J.P. Morgan officials say the chief investment office initially hedged the bank's broad exposure to the markets, until the positions morphed into a proprietary bet.").

158. *See* Mia Lamar, *JP Morgan's Drew Retires; Zames to Take CIO Post*, WALL ST. J. (May 14, 2012, 1:52 PM), http://online.wsj.com/article/SB10001424052702304192704577403911410998528.html; Matt

Although the benefits from financial innovation are tenuous—except for the compensation packages they generated—the social costs were disastrous. The end result of these innovations was the worst financial crisis since the Great Depression. Growth in gross domestic product (GDP) dropped to a negative 9%[160] and unemployment approached 10%.[161] Underemployment was even higher.[162]

B. Economic and Political Costs of Financial Innovation

We are now almost four years past the September–October 2008 meltdown, and unemployment has finally dropped to about 8%.[163] Job losses, which approximated 780,000 in January 2009, have been reversed and the private sector has added jobs for thirty-six consecutive months, but only at a modest level,[164] as reflected in Figure 6 below:

Scuffham & David Henry, *JPMorgan CIO Retires, Obama Says Proves Reform Case*, REUTERS, (May 14, 2012, 7:56 PM), *available at* http://www.reuters.com/article/2012/05/14/us-jpmorgan-departures-idUSBRE84C0EP20120514.

159. *See* Dawn Kopecki, *JPMorgan's Drew Forfeits 2 Years' Pay as Managers Ousted*, BLOOMBERG BUSINESSWEEK (July 13, 2012), http://www.businessweek.com/news/2012-07-13/dimon-says-ina-drew-offered-to-return-2-years-of-compensation.

160. Jared Bernstein, *The Impact of the Recovery Act, in a Few Easy Charts*, ON THE ECON. BLOG (Aug. 31, 2011, 5:23 PM), http://jaredbernsteinblog.com/the-recovery-act-worked-in-a-few-easy-charts/.

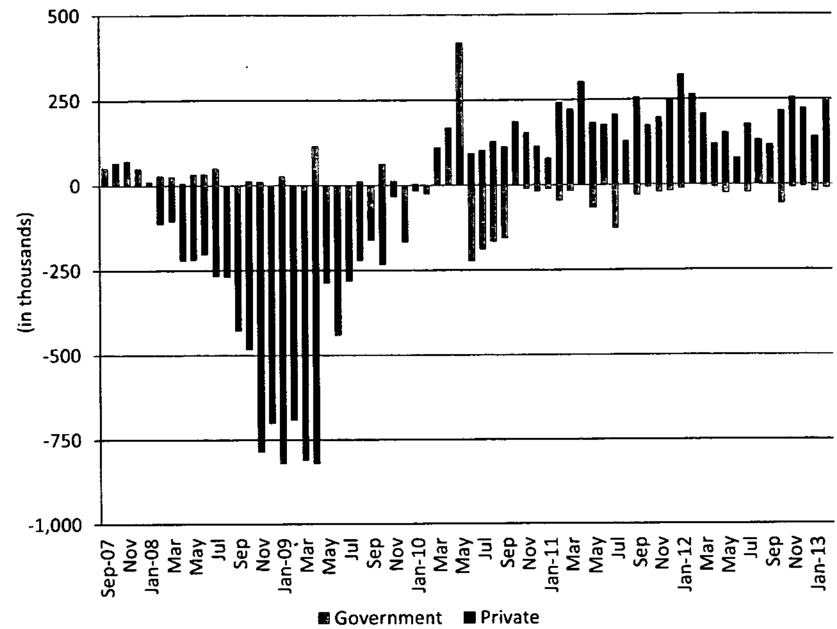
161. *Id.*

162. *See* U.S. BUREAU OF LABOR STATISTICS, HOUSEHOLD DATA ANNUAL AVERAGES 46, 51 (2011).

163. Jared Bernstein, *Jobs Day . . . First Impressions (with Reflections on the Fiscal Cliff)*, ON THE ECON. BLOG (Oct. 5, 2012, 8:35 PM), http://jaredbernsteinblog.com/jobs-day-first-impressions-with-reflections-on-the-fiscal-cliff/.

164. *See* Megan M. Barker & Adam A. Hadi, *Payroll Employment in 2009: Job Losses Continue*, MONTHLY LAB. REV., Mar. 2010, at 23, 23; Rich Exner, *Private-sector Jobs Rise, Government Jobs Shrink over Last 3 Years: Sunday's Numbers*, CLEVELAND.COM (Mar. 17, 2013, 9:03 AM), http://www.cleveland.com/datacentral/index.ssf/2013/03/private-sector_jobs_rise_gover.html.

Figure 6. Private and Government Monthly Job Changes, 2007–2013



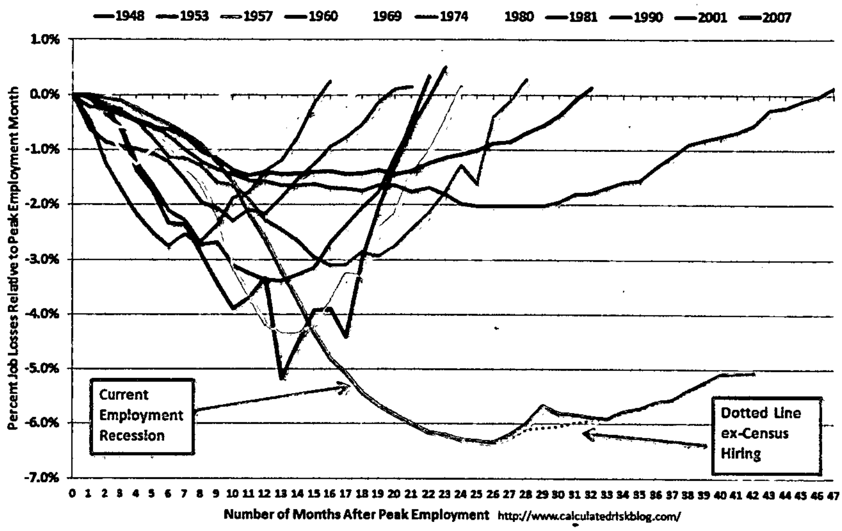
Note: Data is based on total private and government revised, seasonally adjusted monthly employment changes. January and February 2013 statistics are based on preliminary data.

Source: News Release, Bureau of Labor Statistics, U.S. Dep't of Labor, The Employment Situation—February 2013 (Mar. 8, 2013), http://www.bls.gov/news.release/pdf/empsit.pdf; *Government: All Employees; Seasonally Adjusted*, BUREAU LAB. STAT., ftp://ftp.bls.gov/pub/suppl/empsit.compaes.txt (last visited Mar. 29, 2013); *Total Private: All Employees; Seasonally Adjusted*, BUREAU LAB. STAT., ftp://ftp.bls.gov/pub/suppl/empsit.compaes.txt (last visited Mar. 29, 2013).

The depth of the downturn and the tepidness of the recovery are far worse than any other downturn since the Great Depression.[165]

165. *See* Bill McBride, *September Employment Report: 114,000 Jobs, 7.8% Unemployment Rate*, CALCULATED RISK BLOG (Oct. 5, 2012, 8:30 AM), http://www.calculatedriskblog.com/2012/10/september-employment-report-114000-jobs.html; *see also* Bob Willis, *U.S. Recession Worst Since Great Depression, Revised Data Show*, BLOOMBERG (Aug. 1, 2009), http://www.bloomberg.com/apps/news?pid=newsarchive&sid=aNivTjr852TI (discussing a report issued by the U.S. Department of Commerce).

Figure 7. Percentage Job Losses in Post-WWII Recessions



Source: Bill McBride, *Percent Job Losses: Great Recession and Great Depression*, CALCULATED RISK BLOG (July 7, 2012, 10:04 PM), http://www.calculatedriskblog.com/2012/07/percent-job-losses-great-recession-and.html.

The costs associated with bailing out the big banks have been not just economic but also political. Republicans have touted their 2010 victory as vindicating their policies of cutting spending and rejecting tax increases.[166] However, an alternative reading of the 2010 election may be that it reflected anger toward a political system that bailed out bankers but not homeowners,[167] and held no one in the banking system accountable.[168] Unlike the savings and loan crisis, no senior executive has gone to jail, and compensation remains at obscene levels in the banking industry.[169]

On the other hand, the Bush tax cuts of 2001 and 2003, the stimulus programs following the 2008 meltdown, and decreased tax revenues caused by the severe recession that followed have contributed to the bulk

166. *Republicans Win House Majority, Make Senate Gains in Wave Election*, FOXNEWS.COM (Nov. 2, 2010), http://www.foxnews.com/politics/2010/11/02/poll-closing-key-east-coast-races-balance-power-line/ (explaining that Republican candidates were "[r]iding a wave of voter frustration over the economy and federal government itself," and quoting the newly elected House Republican leader John Boehner as promising to fulfill the Republican pledge to cut government spending and reduce the size of the federal government).

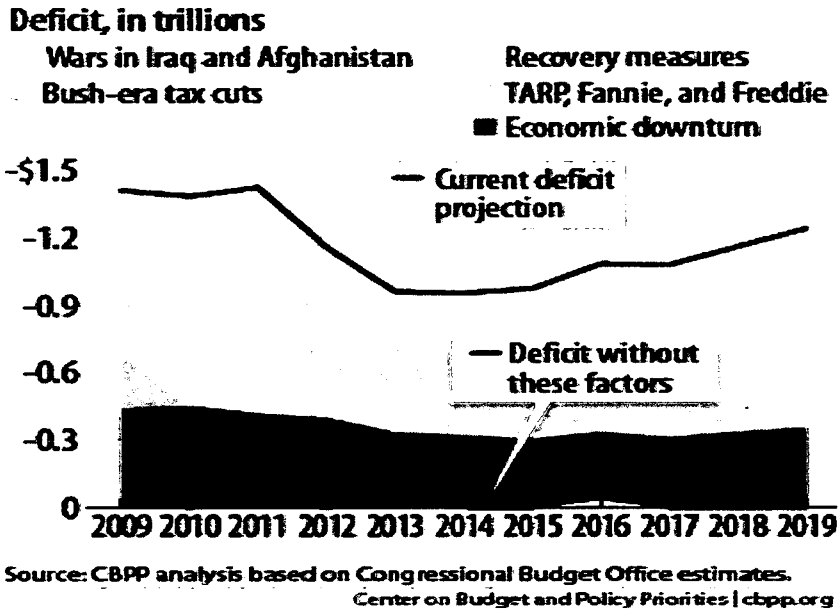
167. *See* Adam Nagourney, *Bracing for a Bailout Backlash*, N.Y. TIMES, Mar. 16, 2009, at A1.

168. Gretchen Morgenson & Louise Story, *A Financial Crisis with Little Guilt*, N.Y. TIMES, Apr. 14, 2011, at A1.

169. *Id.*; *see also* Peter Lattman, *Holder Defends Efforts to Fight Financial Fraud*, N.Y. TIMES, Feb. 24, 2012, at B1 (explaining that although President Obama announced his commitment to combat financial fraud, the Justice Department has not pursued criminal cases against banking executives involved in the 2008 global financial crisis).

of the budget deficits that approximated $1.4 trillion in fiscal year 2009 and $1.3 trillion in fiscal year 2010.[170] The increase in costs and decrease in revenue are not sustainable. See Figure 8 below:

Figure 8. Factors Driving Budget Deficits, 2009–2019



Source: *Hearing on "Spend Less, Owe Less, Grow the Economy" Before the Joint Econ. Comm. of the U.S. Cong.*, 112th Cong. 90 fig.1 (2011) (testimony of Chad Stone, Chief Economist, Ctr. on Budget & Policy Priorities).

Although the deficits are projected to decrease in the near term, the net effect of the economic downturn and governmental response was that we reached our debt limit of $14.3 trillion in August 2011.[171] This generated a near impasse on raising the debt ceiling, with Republicans initially refusing to raise the limit unless spending was cut.[172] As a consequence of

170. *Hearing on "Spend Less, Owe Less, Grow the Economy" Before the Joint Econ. Comm. of the U.S. Cong.*, 112th Cong. 90 fig.1 (2011) (testimony of Chad Stone, Chief Economist, Ctr. on Budget & Policy Priorities).

171. Jackie Calmes & Carl Hulse, *As the Federal Government Hits Its Debt Limit, Lawmakers Spar over Solution*, N.Y. TIMES, May 17, 2011, at A19 (explaining that the government reached its debt limit in May 2011, but that due to "extraordinary measures," default would not occur until approximately August 2, 2011).

172. *See* NIKOLA G. SWANN, STANDARD & POOR'S, UNITED STATES OF AMERICA LONG-TERM RATING LOWERED TO AA+ ON POLITICAL RISKS AND RISING DEBT BURDEN; OUTLOOK NEGATIVE 3 (2011) (explaining the position of Standard & Poor's that "the prolonged controversy over raising the statutory debt ceiling and the related fiscal policy debate indicate that further near-term progress containing the growth in public spending, especially on entitlements, or on reaching an agreement on raising revenues is less likely than we previously assumed and will remain a contentious and fitful process"); *see also* Damian Paletta & Matt Phillips, *S&P Strips U.S. of Top Credit Rating*, WALL ST. J., Aug. 6, 2011, at A1; *ABC This Week* (ABC television broadcast Apr. 25, 2010), *available at*

the ensuing rancor, it is highly unlikely that substantial federal funds will be available to alleviate continued unemployment or to stimulate growth.[173]

Whereas spending as a percentage of GDP has hovered around 20%–22% for the past three decades, in fiscal year 2009 it rose to 25%.[174] Similarly, revenues for the past three decades have hovered around 18% of GDP but fell to 14.9% in fiscal year 2009.[175] Although it has been fashionable to assert that we have a spending problem and not a revenue problem,[176] the reality is that there is both a serious spending and a serious revenue problem as a result of the financial crisis.

Warren Buffett's characterization of derivatives as "financial weapons of mass destruction"[177] has proved all too true. Moreover, the misallocation of capital to risky mortgages instead of to productive investment has devastated household net worth,[178] exacerbated household debt, and crippled consumer spending as a vehicle out of our present malaise.[179] Our economy cannot afford the mammoth "diversified" financial institutions that we have permitted to conglomerate, and thereby create and market the financial innovations that have privatized profit and socialized risk.

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http://abcnews.go.com/ThisWeek/week-transcript-goolsbee-brown-corker/story?id=10469580 (featuring Austan Goolsbee, member of President Obama's Council of Economic Advisers, and Senators Bob Corker and Sherrod Brown).

173. President Obama signed into law the Middle Class Tax Relief and Job Creation Act of 2012, Pub. L. No. 112-96, 126 Stat. 156, which extended the payroll tax reduction of two percentage points and jobless benefits to cover between 63 and 73 weeks. See *id.* § 1001, 126 Stat. at 158–59. However, additional fiscal stimulus or federal bailout money is extremely unlikely. *See* Annalyn Censky & Charles Riley, *What's in Obama's Stimulus Plan*, CNNMONEY (Sept. 8, 2011, 9:39 PM), http://money.cnn.com/2011/09/08/news/economy/obama_stimulus_plan/index.htm (explaining how President Obama's recent proposal for $447 billion in fiscal stimulus "has almost no chance of passing" the Republican-controlled House of Representatives).

174. OFFICE OF MGMT. & BUDGET, HISTORICAL TABLES: BUDGET OF THE U.S. GOVERNMENT FISCAL YEAR 2011, at 24–25 tbl.1.2 (2011).

175. *Id.*

176. David Weigel, *"It's Not a Revenue Problem. It's a Spending Problem.": Tracing the History of a GOP Talking Point*, SLATE (Apr. 18, 2011, 6:33 PM), http://www.slate.com/id/2291530/ (quoting Speaker of the House John Boehner, Majority Leader Eric Cantor, and Senator Orrin Hatch, each saying variations of the phrase "Washington does not have a revenue problem. It's got a spending problem").

177. Paul B. Farrell, *Derivatives the New 'Ticking Bomb,'* WALL ST. J. MARKETWATCH (Mar. 10, 2008, 7:31 PM), http://www.marketwatch.com/story/derivatives-are-the-new-ticking-time-bomb?print=true&dist=printTop (quoting Letter from Warren Buffett, Chairman & CEO, Berkshire Hathaway, Inc., to Company Shareholders 15 (2002), *available at* http://www.berkshirehathaway.com/letters/2002pdf.pdf) (internal quotation marks omitted). The use of derivatives is alleged to have contributed to the current economic crisis in Europe because Greece used derivatives developed by Goldman Sachs and other investment bankers to hide its shaky financial position. *See* Louise Story et al., *Wall St. Helped to Mask Debt Fueling Europe's Crisis*, N.Y. TIMES, Feb. 14, 2010, at A1.

178. *See* JESSE BRICKER ET AL., FED. RESERVE BD., SURVEYING THE AFTERMATH OF THE STORM: CHANGES IN FAMILY FINANCES FROM 2007 TO 2009, at 1, 21–22 (2011).

179. *Id.* at 22.

V. ARE BIG BANKS TOO BIG?

The Dodd–Frank Wall Street and Consumer Protection Act was supposed to end the problem of too big to fail by creating an orderly liquidation authority (OLA) to provide the federal government with the power to liquidate banks that have failed without jeopardizing the economy.[180] This provision was designed to end taxpayers footing the bill when a large institution failed. The Act specifically provides that companies put into receivership should be liquidated, that all funds expended in the liquidation should be recovered from the assets of the company or from the financial sector through assessments, and that no part of the losses should be borne by the taxpayers.[181]

This sounds good. The era of privatizing profits and socializing losses is supposedly over. However, not everyone accepts that premise. For example, Standard & Poor's in 2011 opined, "[G]iven the importance of confidence sensitivity in the effective functioning of banks, we believe that under certain circumstances and with selected systemically important financial institutions . . . , future extraordinary government support is still possible."[182] The credit-rating agency also opined that "implementation of OLA could increase uncertainty in the market at a time when confidence needs boosting. For instance, dismantling a large financial firm might spur creditors to pull out of other similar financial firms in times of stress."[183] The report also noted that the history of governmental support reflects a mindset that may not go away. This cynicism was also reflected in a recent report by the Federal Reserve Bank of Dallas (the Dallas Fed), observing that it is difficult "to imagine political leaders sticking to the anti-TBTF [too big to fail] guns, especially if they face a too-many-to-fail situation again."[184] Both reports agreed with Chairman Greenspan that "[i]f they're too big to fail, they're too big."[185]

A. How Big Is Too Big?

The above report by the Dallas Fed contrasted the change in concentration in the banking industry between 1970 and 2010.[186] In 1970, the five largest banks held 17% of banking assets, the next ninety-five banks had 37% of assets, and the 12,500 smallest banks had 48% of assets. By 2010, the share of the five largest banks had increased to 52%,

180. Dodd–Frank Wall Street Reform and Consumer Protection Act, Pub. L. No. 111-203, §§ 201–217, 124 Stat. 1376, 1442–1520 (2010).

181. *Id.* § 214, 124 Stat. at 1518.

182. RODRIGO QUINTANILLA ET AL., STANDARD & POOR'S, THE U.S. GOVERNMENT SAYS SUPPORT FOR BANKS WILL BE DIFFERENT "NEXT TIME"—BUT WILL IT? 2 (2011).

183. *Id.* at 3; *see also supra* text and accompanying notes 114–115 (discussing the effect of Lehman Brothers's bankruptcy).

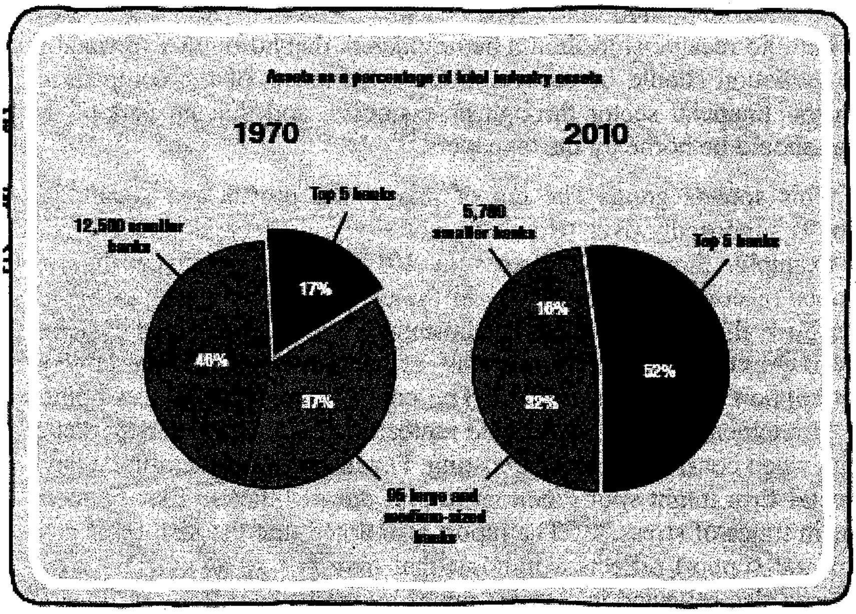
184. FED. RESERVE BANK OF DALL., CHOOSING THE ROAD TO PROSPERITY: WHY WE MUST END TOO BIG TO FAIL—NOW 20 (2011).

185. QUINTANILLA ET AL., *supra* note 182, at 10 (quoting Greenspan, *supra* note 1) (internal quotation marks omitted).

186. FED. RESERVE BANK OF DALL., *supra* note 184, at 6–7.

the share of the next ninety-five had dropped to 32%, and the share of the 5,700 smallest banks had plummeted to 16%. Thus, there was a shrinkage in the number of banks and a tripling of the percentage of assets held by the five largest banks. See Figure 9 below:

Figure 9. U.S. Banking Concentration Increased Dramatically



NOTE: Assets were calculated using the regulatory high holder or top holder for a bank and summing assets for all the banks with the same top holder to get an estimate of organization-level bank assets.

SOURCES: Reports of Condition and Income, Federal Financial Institutions Examination Council; National Information Center, Federal Reserve System.

Source: FED. RESERVE BANK OF DALL., CHOOSING THE ROAD TO PROSPERITY: WHY WE MUST END TOO BIG TO FAIL—NOW 6 (2011).

Another way to appreciate the growth of the big banks is compare the growth of their assets to GDP. When Senator Sherrod Brown asserted that the assets of the six largest banks in this country had grown from 17% of GDP fifteen years earlier to 63% of GDP,[187] PolitiFact compared those numbers with data obtained from the Federal Reserve Bank of Philadelphia (the Philadelphia Fed) and found that Senator Brown was correct. The following is the data from the Philadelphia Fed:[188]

187. 156 CONG. REC. 57, S2519 (daily ed., Apr. 21, 2010) (statement of Sen. Sherrod Brown); *see also ABC This Week*, *supra* note 172.

188. Angie Drobnic Holan, *Six Largest Banks Getting Bigger, Brown Said*, POLITIFACT (Apr. 27, 2010, 3:33 PM), http://www.politifact.com/truth-o-meter/statements/2010/apr/27/sherrod-brown/six-largest-banks-getting-bigger-brown-said/.

Figure 10. Asset Concentration of Top Six U.S. Banks ($ in billions)

	Assets as of Dec. 31, 1994		Assets as of Dec. 31, 2009
Citicorp	$250.5	Bank of America	$2,224.5
BankAmerica	215.5	JPMorgan Chase	2,032.0
Chemical Bank	171.4	Citigroup	1,856.6
Nationsbank	169.6	Wells Fargo	1,243.6
J.P. Morgan	154.9	Goldman Sachs	849.3
Chase Manhattan	114.0	Morgan Stanley	771.5
Top 6 Banks Total	$1,075.9	Top 6 Banks Total	$8,977.5
% of GDP	*14.8%*	*% of GDP*	*62.1%*
Nominal GDP	$7,248.2	Nominal GDP	$14,453.8

Source: Angie Drobnic Holan, *Six Largest Banks Getting Bigger, Brown Said*, POLITIFACT (Apr. 27, 2010, 3:33 PM), http://www.politifact.com/truth-o-meter/statements/2010/apr/27/sherrod-brown/six-largest-banks-getting-bigger-brown-said/.

The June 30, 2011 listing of "large commercial banks" by the Federal Reserve reports the consolidated assets of JPMorgan Chase at $1.79 trillion, Bank of America at $1.45 trillion, Citibank at $1.22 trillion, and Wells Fargo at $1.1 trillion.[189] Goldman Sachs and Morgan Stanley were not listed in this group, apparently because they are investment banks that only elected bank-holding-company status to access federal funds.[190] But U.S. Bank, the fifth-largest bank listed, has only $310 billion in consolidated assets, and there are only two other banks that have over $200 billion in assets. Clearly, the big banks dwarf the rest of the banking system.

How did the big banks get so big? Other than Goldman Sachs, this occurred by acquisition after acquisition, some of which were encouraged by the government during the financial crisis. The "Appendix" traces the acquisition activity that led to this consolidation and indicates the relative size of the combining financial entities in comparison to the GDP of the United States. Most of the present big banks started at 1% to 2% of GDP but, through multiple acquisitions, now have reached 10% or more of GDP.

189. FED. RESERVE, INSURED U.S.-CHARTERED COMMERCIAL BANKS THAT HAVE CONSOLIDATED ASSETS OF $300 MILLION OR MORE, RANKED BY CONSOLIDATED ASSETS AS OF JUNE 30, 2011, at 1 (2011).

190. Robert Schroeder, *Goldman, Morgan to Become Holding Companies*, WALL ST. J. MARKETWATCH (Sept. 21, 2008), http://articles.marketwatch.com/2008-09-21/news/30726602_1_goldman-and-morgan-morgan-stanley-lloyd-blankfein.

B. What Are the Consequences, or Lack Thereof, of "Too Big to Fail"?

The big banks, by financing the non-bank lenders that created the toxic mortgages that the big banks securitized into toxic securities, were largely responsible for the financial crisis.[191] And it was these big banks that absorbed most of the initial bailout money and took advantage of much of the minimal-interest money that the Fed made available.[192] Unfortunately, these big banks, instead of lending to the small- and mid-sized firms that are the engine of job creation,[193] have diverted funds to trading. The losses in the J.P. Morgan–London whale episode, in which J.P. Morgan lost billions of dollars from trading activity,[194] occurred in the chief investment office. This office supposedly engaged in hedging and cash management, operations which should not be profit centers. Instead, J.P. Morgan turned it into a profit center by using depositors' funds for trading rather than for lending.[195]

But unlike the auto bailout, and the failure of smaller banks, there were no consequences for the big banks and their management. As a condition of receiving federal money, General Motors was required to change its business plan, close some plants, renegotiate compensation with employees, and replace its CEO.[196] When smaller banks fail, the FDIC imposes a conservatorship, and generally, their assets are sold to another bank. Management is replaced, and shareholders lose their investment. On the other hand, although we have bailed out the big banks, their management, which oversaw the actions that led to the crisis, is still in place, and the traders who earned bonuses trading complex financial products that helped sink the economy have kept their bonuses and have continued to be rewarded handsomely.[197] Shareholders have suffered market-price losses, but have not been wiped out. Conversely, creditors of financial institutions generally have not suffered, thus rewarding their lack of due diligence in monitoring their loans. As long as government

191. *See* FED. RESERVE BANK OF DALL., *supra* note 184, at 1 ("[The big banks] were a primary culprit in magnifying the financial crisis, and their presence continues to play an important role in prolonging our economic malaise."); *see also* Murdock, *supra* note 9, at 1324.

192. Bradley Keoun et al., *The Fed's Secret Liquidity Lifelines*, BLOOMBERG, http://www.bloomberg.com/data-visualization/federal-reserve-emergency-lending (last visited Jan. 6, 2013).

193. *See, e.g.*, Joe Nocera, Op-Ed., *Mr. Banker, Can You Spare a Dime?*, N.Y. TIMES, Sept. 10, 2011, at A21; *see also* 156 CONG. REC. 57, S2519–S2528 (daily ed., Apr. 21, 2010) (statement of Sen. Sherrod Brown).

194. *See supra* 150–58 and accompanying text.

195. *See* JPMORGAN CHASE & CO., FINANCIAL RESULTS: 2Q12, at 14 (2012) (showing that there were deposits of $1.116 trillion and loans of $693 billion, and that the chief investment office made a total profit of almost $8 billion in 2009 and 2010), *available at* http://www.sec.gov/Archives/edgar/data/19617/000001961712000248/jpmc2q12exhibit992.htm.

196. *See* Chris Isidore, *GM Bankruptcy: End of an Era*, CNNMONEY (June 2, 2009, 4:03 AM), http://money.cnn.com/2009/06/01/news/companies/gm_bankruptcy/.

197. *See* Stephen Gandel, *How Washington's Bailout Will Boost Wall Street Bonuses*, TIME (Oct. 27, 2008), http://www.time.com/time/business/article/0,8599,1853846,00.html.

will bail out the banks, stakeholders can adopt a "what, me worry"-type approach.

Two Nobel Prize-winning economists have argued that we should have employed a conservatorship model to the big banks, rather than a bailout model.[198] To President Obama's assertion that government ownership is not the American way, Professor Joseph Stiglitz responded:

> But he was wrong: conservatorship, including the possibility of temporary government ownership when all else failed, was the traditional approach; the massive government gifts to banks were what was unprecedented. Since even the banks that were taken over by the government were always eventually sold, some suggested that the process be called preprivatization.[199]

Supporting Professor Stiglitz's argument, the FDIC lists almost 400 banks that have been placed in conservatorship or sold since September 2008.[200]

Although we tend to view the economic experience of other countries with disdain, the experience of Sweden could have been helpful. In 1991, Sweden did not let its banks slowly write off bad assets in the hope that earnings, over time, would return them to solvency, which is basically what we have done. Rather, Sweden forced the banks to recognize their losses and nationalized one-fifth of the banking system, which we have done in the past with insolvent banks that were not too big to fail.[201] As a result, the Swedish economy turned around in two years;[202] on the other hand, our economy is still struggling.

In the current European crisis, Iceland essentially followed the Swedish model, and Ireland rejected it. Iceland was an extreme example of a banking system dwarfing the economy. Between 2002 and 2008, the Icelandic banking system had grown to the point where its assets were eleven times GDP. The Lehman Brothers bankruptcy triggered the collapse of Iceland's shaky banking system, and the Icelandic government responded by seizing the banks, leaving the toxic assets with the old banks, and setting up new ones with clean balance sheets, guaranteeing only domestic deposits.[203]

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198. Paul Krugman, Op-Ed., *All the President's Zombies*, N.Y. TIMES (Feb. 25, 2009, 3:26 PM), http://krugman.blogs.nytimes.com/2009/02/25/all-the-presidents-zombies/.

199. JOSEPH E. STIGLITZ, FREEFALL: AMERICA, FREE MARKETS, AND THE SINKING OF THE WORLD ECONOMY 116–17 (2010) (footnote omitted).

200. *See Failed Bank List*, FED. DEPOSIT INS. CORP., http://www.fdic.gov/bank/individual/failed/banklist.html (last visited Jan. 6, 2013).

201. *See id.*

202. *See* YALMAN ONARAN, ZOMBIE BANKS: HOW BROKEN BANKS AND DEBTOR NATIONS ARE CRIPPLING THE GLOBAL ECONOMY 137–38 (2012).

203. *Id.* at 68.

On the other hand, Ireland, fearing a capital flight, guaranteed the obligations of its banks, whose assets represented twice Ireland's GDP. As a result, the sovereign debt of Ireland increased to the point where Ireland's solvency became questionable, and interest rates on the Irish debt shot up. The European Central Bank opposed any losses on the senior debt. Consequently, the German banks and others who extended credit to the Irish banks were bailed out by the Irish taxpayers, while the Irish people bore the brunt of an austerity program that has kept the country in recession.[204]

C. Why the Big Banks Should Be Broken Up

There is an incredible difference in size between the big banks and the remainder of the banking system,[205] which creates both political and economic concerns arising from the power that untoward size provides. The political implications have been evidenced by the lobbying efforts of the big banks to undercut the provisions of the Dodd–Frank legislation. According to the Center for Responsive Politics, the financial services industry has spent over $570 million on lobbying during the 2011–2012 election cycle.[206] From an economic perspective, in 2009 the Center for Economic and Policy Research estimated that the taxpayer subsidy for large banks was about 60 basis points, or $34 billion a year, because of the borrowing benefit that too big to fail gave these large banks.[207] This, in turn, gave them a substantial advantage over smaller banks. However, a more recent 2012 study estimated that that the current lowered funding costs for the big banks was now 80 basis points,[208] and the editors of Bloomberg News estimated that this provided the largest banks a $76 billion subsidy a year, which was roughly equivalent to the banks' total profits over the four quarters prior to June 2012.[209]

In addition, Professor Rajan, in his working paper on financial innovation and riskiness that was scorned in 2005, pointed out some of the anticompetitive aspects big banks enjoy because of their disparity in size:

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204. *Id.* at 51–52.

205. *See supra* text accompanying notes 186–90.

206. *See* Ctr. for Responsive Politics, *Interest Groups*, OPENSECRETS.ORG, http://www.opensecrets.org/industries/index.php (last updated Nov. 12, 2012).

207. *See* DEAN BAKER & TRAVIS MACARTHUR, CTR. FOR ECON. & POLICY RESEARCH, THE VALUE OF THE "TOO BIG TO FAIL" BIG BANK SUBSIDY 2 (2009). After the Continental Bank bailout in 1984, the too big to fail syndrome created an implicit guarantee for large banks. But, after the financial bailout in 2008, Sheila Bair, the head of the FDIC, stated that the guarantee, which had been implicit, was now explicit and was giving large banks a competitive advantage. Paul Wiseman & Pallavi Gogoi, *Pressure Piles Up on Small Banks*, USA TODAY, Oct. 20, 2009, at 1B.

208. *See* Kenichi Ueda & Beatrice Weder di Mauro, Quantifying Structural Subsidy Values for Systemically Important Financial Institutions 4, 12 (Int'l Monetary Fund, Working Paper No. 12/128, 2012).

209. *Dear Mr. Dimon, Is Your Bank Getting Corporate Welfare?*, BLOOMBERG (June 18, 2012, 5:30 PM), http://www.bloomberg.com/news/2012-06-18/dear-mr-dimon-is-your-bank-getting-corporate-welfare-.html.

> As deregulation has increased competition for the best borrowers, and shaved margins from offering "plain-vanilla" products to these customers, large banks have reached out to nontraditional customers, or to traditional customers with innovative products.[210]

Because creation of these innovative products requires both large amounts of capital and a high-priced staff of quants, it is only the big banks that can offer such products. Thus, in addition to the too big to fail borrowing subsidy, big banks are afforded another competitive advantage over other banks.

Professor Rajan also posited that executives are motivated to engage in risky transactions that produce high returns with an apparently low likelihood of risk even though the risk might be catastrophic. He refers to this as the "Hidden Tail Risk."[211] Consider Goldman Sachs's underwriting of the Abacus 2007-AC synthetic CDO, utilizing CDSs, which has been previously discussed. Underwriting CDOs and CDSs has been highly profitable. But after it was disclosed that the person who approached Goldman about creating the synthetic CDO by writing CDSs against pools of mortgages was an investor who wanted to bet against the real estate market, a fact that was not disclosed to investors, Goldman agreed to a $550 million settlement with the SEC,[212] and faced the risk of suits by investors. Moreover, the foregoing does not measure the cumulative impact upon the economy as a whole of these improvident transactions.

Another example of catastrophic risk was AIG's issuance of CDSs. Management viewed the "premium" it was paid for standing behind the CDSs as almost "free money" because it never expected to pay out and therefore held no reserves against potential loss. But when the mortgages against which the CDSs were written began to default, AIG failed, and the federal government bailed it out with over $100 billion.

As discussed earlier, Standard & Poor's was not convinced that the federal government support for banks "[w]ill [b]e [d]ifferent '[n]ext [t]ime'"[213] and opined that another bailout may be lurking in the future. Professor Stiglitz has asserted that "[t]he financial sector used 'fear' to persuade the administration to impose no controls, just as it used fear to engineer the bondholder and shareholder protection schemes."[214] If another crisis occurs, we can expect the big banks to employ fear once again. In such circumstances, it is the rare politician who would have the courage to run the risk of going against the big banks. This also is the concern raised by the Dallas Fed.[215] Since highly regarded economists

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210. Rajan, *supra* note 100, at 6.
211. *Id.* at 3, 20.
212. *See* Press Release, SEC, *supra* note 149.
213. *See* QUINTANILLA ET AL., *supra* note 182, at 2.
214. STIGLITZ, *supra* note 199, at 124 n.24.
215. *See supra* text accompanying note 184.

and institutions agree that "[i]f they're too big to fail, they're too big," the solution would seem to be to make them smaller (i.e., break them up).

Supposedly, any bank is now limited in size to not having more than 10% of the nation's total bank deposits.[216] But this ceiling has already been breached.[217] Because the 10% of deposits standard currently permits mega-banks, it is too weak a standard. Professors Simon Johnson and James Kwak argue that commercial banks should be limited in size to 4% of GDP and investment banks to 2%.[218] With a GDP of approximately $14 trillion in 2010, commercial banks would be "limited" in size to "only" $560 billion of assets. Although such a suggestion might appear radical, this would not even restore the situation that existed in the 1990s, before the spate of transactions outlined in the "Appendix." The economy functioned quite well in the 1990s. To the argument that such a policy would inhibit innovation, one might respond that millions of unemployed workers would be better off if the financial innovation of the 2000s had never come to pass.

Although some might argue that it is not feasible to break up the big banks, interestingly, Reuters has already proposed a scenario for breaking up Goldman.[219] The suggestion was predicated upon trying to maximize shareholder value since Goldman's shares were trading at depressed levels. The article suggested separating Goldman's investment banking unit, the asset management unit, and the institutional client services arm. Supposedly, the pieces could be worth more than the whole.

The Reuters proposal followed a more extensive analysis by ProPublica, which argued that "breakups that seemed politically impossible [are] no longer unthinkable."[220] The biggest barrier to such breakups is the resistance of top management, who would earn less in smaller institutions.[221] Although the banks' diversified product and service offerings can enhance profits by allowing cross-selling opportunities, such diversification, and the conflicts of interest inherent in it, do not assure that clients are receiving the best services or the best deals.

216. *See* 12 U.S.C. § 1467a(e)(2)(E)(ii) (2006 & Supp. V 2011); 12 U.S.C. 1828(c)(13)(A) (2006 & Supp. V 2011); 12 U.S.C. § 1843(i)(8)(A) (2006 & Supp. V 2011).

217. *Merging Banks Surge Past U.S. Deposit Cap*, N.Y. TIMES DEALBOOK (Oct. 17, 2008, 8:06 AM), http://dealbook.nytimes.com/2008/10/17/merging-banks-surge-past-us-deposit-cap/; *see also* James Kwak, *Banks and the 10% Deposit Cap*, 13 BANKERS (Mar. 18, 2010), http://13bankers.com/2010/03/18/banks-and-the-10-deposit-cap/.

218. JOHNSON & KWAK, *supra* note 15, at 216–17.

219. *See* Rob Cox, *Breaking Up Could Be Good for Goldman Sachs*, N.Y. TIMES, Sept. 8, 2011, http://www.nytimes.com/2011/09/08/business/breaking-up-could-be-good-for-goldman.html.

220. Jesse Eisinger, *Once Unthinkable, Breakup of Big Banks Seems Feasible*, N.Y. TIMES DEALBOOK (July 27, 2011), http://dealbook.nytimes.com/2011/07/27/once-unthinkable-breakup-of-big-banks-now-seems-feasible/.

221. *Id.*

In 2011, additional support for breaking up the big banks came from Herb Allison, the former chief executive officer of Merrill Lynch and assistant secretary of treasury in the Obama Administration, who argued that breaking up the big banks would reduce complexity and risk.[222] In particular, the smaller resulting entities would be easier to understand and control, thereby permitting realistic oversight by the boards of directors of the resulting entities. The cost of integrating, operating, and modifying the complex systems in the conglomerated big banks would be reduced by removing organizational layers and coordination. Each new segment would need to acquire its own funding, which would lead to better assessment of capital and liquidity needs, and the various risks involved. Equally important, such breakups would eliminate the conflicts of interest that are inherent in these large, multifaceted institutions.

Nonetheless, there was not much momentum to take on the big banks. For a time, major regulators were silent on this issue. Then, in March 2012, the Dallas Fed released its *2011 Annual Report*,[223] in which the president of the Dallas Fed noted "an already dangerous trend of increasing banking industry concentration" and concluded that "[i]t is imperative that we end TBTF [too big to fail]. In my view, downsizing the behemoths over time into institutions that can be prudently managed and regulated across borders is the appropriate policy response."[224] Following up on this policy position, the Federal Reserve Bank of St. Louis President James Bullard stated, "I would back my colleague (Dallas Fed President) Richard Fisher in saying that we should split up the largest banks."[225] He added:

> We do not need these companies to be as big as they are. The regulatory system would be much simpler if large firms were broken up, rather than trying to write complicated rules to capture all of the potential risks at complex firms . . . . It would be simpler to have smaller institutions so that they could fail if they need to fail . . . .[226]

Bullard also supported the so-called Volcker rule on the basis that "[y]ou shouldn't be taking insured deposits and be unrestricted in your activities with these insured deposits."[227] Although the Volcker amendments to Dodd–Frank do not reincarnate Glass–Steagall, they do limit the amount of proprietary trading in which financial institutions can en-

222. *See* Herbert M. Allison, THE MEGABANKS MESS 658 (2011), *available at* http://www.amazon.com/Megabanks-Mess-Kindle-Single-ebook/dp/B0051GQX11.

223. *See* FED. RESERVE BANK OF DALL., *supra* note 184.

224. *Id.* at 1.

225. *See Feds Bullard: Breakup J.P. Morgan, Big Banks*, REUTERS (May 17, 2012, 3:47 PM), *available at* http://www.reuters.com/article/2012/05/17/usa-fed-bullard-banks-idUSL1E8GHC6620120517.

226. *Id.*

227. *Id.*

gage.[228] This can itself encourage financial institutions to break themselves up by spinning off trading activities, assuming the regulations presently in process do not emasculate the limitations on trading. Former Fed Chairman Paul Volcker offered a clear choice to financial institutions heavily involved in trading: "[G]ive up either their proprietary trading activity or their banking license."[229]

What Dodd–Frank did not accomplish directly—namely, breaking up the big banks—it may accomplish indirectly by requiring banks to create "living wills." According to former FDIC Chairperson Sheila Bair:

> These rules [with respect to living wills] require that big banks map their business lines to their legal entities. So, for instance, Chase and others would have to identify the legal entities that support their investment-banking operations, their trading and brokerage activities, their commercial and retail lending, and so forth. The idea is to have a credible breakup plan in place if they get into trouble. Meaningful enforcement of this rule and public disclosure of the plans would help to convince the market that too-big-to-fail is over. It would also help shareholders figure out how to start breaking up the Goliaths.[230]

Although it might not have been surprising that some present and former regulators would advocate the breakup of the big banks, the financial community was taken aback when Sandy Weill, the former chairman and CEO of Citigroup, asserted that the big banks should be broken up and commercial and investment banking separated.[231] Weill was the architect of the mega-bank one-stop-shopping model who or-

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228. Dodd–Frank Wall Street Reform and Consumer Protection Act, Pub. L. No. 111-203, § 619, 124 Stat. 1376, 1620–30 (2010).

229. PAUL A. VOLCKER, COMMENTARY ON THE RESTRICTIONS ON PROPRIETARY TRADING BY INSURED DEPOSITARY INSTITUTIONS 3 (2012). Chairman Volcker points out the risks of proprietary trading:

> On its face, proprietary trading entails substantial risks. It is essentially speculative in nature: securities are bought, held and sold in the expectation of profits from changes in market prices. The recent years of financial crisis have seen spectacular trading losses in large commercial and investment banks here and abroad operating on an international scale, with various loss estimates for major international commercial and investment banks ranging to hundreds of billions of dollars.

Id. at 2. Then, and equally important, Volcker highlights the impact such trading has on the culture of banking:

> The need to restrict proprietary trading is not only, or perhaps most importantly, a matter of the immediate market risks involved. It is the seemingly inevitable implication for the culture of the commercial banking institutions involved, manifested in the huge incentives to take risk inherent in the compensation practices for the traders. Can one group of employees be so richly rewarded, the traders, for essentially speculative, impersonal, short-term trading activities while professional commercial bankers providing essential commercial banking services to customers, and properly imbued with fiduciary values, be confined to a much more modest structure of compensation?

Id.

230. Sheila Bair, *Breaking Up Chase: Good for Shareholders and Taxpayers*, CNNMONEY (May 25, 2012, 5:00 AM), http://finance.fortune.cnn.com/2012/05/25/jp-morgan-chase-breakup/.

231. *Wall Street Legend Sandy Weill: Break Up the Big Banks*, CNBC.COM (July 25, 2012, 8:02 AM), http://www.cnbc.com/id/48315170/Wall_Street_Legend_Sandy_Weill_Break_Up_the_Big_Banks.

chestrated the merger of Travelers Insurance and Citicorp when he was chairman of Travelers.[232] He also was a leading advocate for the repeal of the Glass–Steagall Act, which had separated commercial banking and investment banking activities.[233] John Reed, the CEO of Citicorp at the time of the Travelers merger, has also acknowledged the need to break up the big banks, stating: "It wasn't that there was one or two institutions that, you know, got carried away and did stupid things. It was, we all did . . . and then the whole system came down."[234]

But the simplest and surest way to deal with the oversized institutions that are not only too big to fail, but also too big and complex to manage, is to impose objective size limits of the sort suggested by Johnson and Kwak and give management a fixed period of time to come into compliance. The benefits, as discussed above, are manifold: less complexity, easier monitoring by the market and creditors, reduced conflicts of interest, stronger ties with local economies, more competition, less innovation focused on creating incomprehensible financial instruments, and more innovation focused upon servicing manufacturing and the real economy.

D. Regulators Need to Regulate

Politics should not infect the actions of the Federal Reserve Board. But the Fed Chairman is appointed by the President and approved by the Senate.[235] Although the appointment of the Chairman should not be politicized, the lessons of the past decade should make it clear that a libertarian ideologue is not the proper person to be in charge of economic policy.

Professor David Moss of Harvard Business School has suggested that it was the success of the New Deal legislation that lulled us into complacency and made financial regulation seem to be an "unnecessary burden."[236] This legislation provided fifty years of stability for the financial system when, prior thereto, there was a financial crisis every fifteen to twenty years. He analogized the situation to public health: after sharply reducing deadly epidemics through public health measures, should policy makers abandon these measures because major epidemics are not a problem anymore? He offered the following perspective on the past three decades:

232. Mitchell Martin, *Citicorp and Travelers Plan to Merge in Record $70 Billion Deal: A New No. 1; Financial Giants Unite*, N.Y. TIMES, Apr. 7, 1998, http://www.nytimes.com/1998/04/07/news/07iht-citi.t.html.

233. *See* Jed Horowitz & David Henry, *Weill Changes Mind, Calls for Big Banks to Break Up*, REUTERS, July 25, 2012, *available at* http://www.reuters.com/article/2012/07/25/us-citigroup-weill-idUSBRE86O1M220120725.

234. *Id.* (alteration in original).

235. *Board of Governors of the Federal Reserve System*, FED. RESERVE BANK OF N.Y. (Nov. 2008), http://www.newyorkfed.org/aboutthefed/fedpoint/fed46.html (last visited Jan. 6, 2013).

236. David A. Moss, *An Ounce of Prevention*, HARV. MAG., Sept. 2009, at 26 fig.1.

> The magnitude of the current financial crisis reflects the failure of an economic and regulatory philosophy that proved increasingly influential in policy circles during the past three decades. This philosophy, guided more by theory than historical experience, held that private financial institutions not insured by the government could be largely trusted to manage their own risks—to regulate themselves. The crisis has suggested otherwise, particularly since several of the least regulated parts of the system (including non-bank mortgage originators and the major broker-dealer Bear Stearns) were among the first to run into trouble.[237]

As earlier parts of this Article have documented, the regulatory failures in the Reagan and Bush 41 Administrations with regard to the savings and loan crisis, the regulatory failures in the Clinton Administration with respect to derivatives, and the wholesale failures in the Bush 43 Administration among all the banking regulators and the SEC have had a devastating impact upon our economy. This should not be a liberal versus conservative, or Republican versus Democrat, issue. In fact, two of the wisest regulators were conservative Republican women, Brooksley Born, who saw the danger in derivatives,[238] and Sheila Bair, who viewed the implicit government guarantee provided to the too big to fail banks, and the subsidy it provides, as unfair to the rest of the banking system and a threat to financial security.[239] It may be that sex is a better test of good judgment than party affiliation.

Joe Nocera, the highly respected financial journalist, in reviewing Sheila Bair's efforts to get other regulators to take the subprime mortgage practices seriously and to cajole the banks to modify the ARMs that were resetting at levels that homeowners could not afford, concluded:

> My own view is the country would have been far better served if more people in positions of power had been willing to listen to her as the financial crisis unfolded. Hers was a voice of common sense, trying to protect the taxpayer, the bank depositor and the homeowner. If other regulators had taken her early subprime concerns seriously—to cite just one example—the financial world might be a different place today.[240]

Ms. Bair was labeled as "difficult" because she viewed her role as protecting depositors and taxpayers, rather than bankers and bondholders.[241] But protecting depositors and taxpayers is the function given to the FDIC by Congress. Policy should be fact-driven, not ideology-driven. It should be clear that persons aligned with an industry, or whose basic premise is

237. *Id.* at 25.
238. *See* Goodman, *supra* note 80.
239. Joe Nocera, *Sheila Bair's Bank Shot*, N.Y. TIMES, July 9, 2011, at M24.
240. *Id.*
241. *Id.*

that government is not the solution but rather the problem cannot be expected to put the public interest first as regulators.

A serious problem is that our financial regulators frequently come from the financial industry, and often go back to it. There are those in the financial services industry who realize the necessity and benefits of regulation. But there are also ideologues who do not, who have a structural bias, and who are imbued with a limited perspective. Although regulators with expertise are needed, care should be taken to ensure that they are not ideologues. Former Treasury Secretary Paulson, who proposed the bank bailout and sought to extract no conditions in return, was previously the CEO of Goldman Sachs. Robert Rubin, the Secretary of Treasury in the Clinton Administration became the CEO of Citigroup. These are just two examples which illustrate the danger that regulators' private sector interests may override the broader concerns they should have in their governmental roles. The problem of the movement between industry and government has been extensively documented.[242]

All goods have their costs. There is no free lunch. If financial institutions want government insurance or government guarantees, then the price is regulation. As Professor Robert Reich has asserted in tracing the decline of the middle class in America:

> Most telling of all, Washington deregulated Wall Street while insuring it against major losses. In so doing, it allowed finance—which until then had been the servant of American industry—to become its master, demanding short-term profits over long-term growth and raking in an ever larger portion of the nation's profits. By 2007, financial companies accounted for over 40 percent of American corporate profits and almost as great a percentage of pay, up from 10 percent during the Great Prosperity.[243]

Unless we implement effective regulation, we are doomed to repeat the failures of the 2000s, where profit was privatized and risk was socialized. We will also be stuck with a no-growth economy in which resources flow from the economy into the banks instead of from the banks into the economy.

VI. CONCLUSION

After the Great Depression, from the passage of Glass–Steagall in 1933 until the 1980s, relatively few banks failed. The safety and solvency of financial institutions was taken for granted. From the end of WWII until the 1970s was also a period of unmatched general prosperity. The 1970s represented a somewhat discordant note, as the economy slowed and inflation ensued.

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242. JOHNSON & KWAK, *supra* note 15, at 92–97.
243. *See* Reich, *supra* note 30.

In 1980, a new ethic arose: government is not the solution, government is the problem. This ushered in almost three decades of deregulation. Very quickly came the savings and loan crisis, in part driven by the problem of having assets long and liabilities short, but also exacerbated by deregulation. Also, at this time, antitrust enforcement fell out of vogue, and a wave of bank mergers began in the 1990s. This resulted in the six big banks today that are too big to fail. The deregulatory mindset of the Clinton Administration ignored the lethal potential of derivatives, and the libertarian instincts of former Federal Reserve Chairman Alan Greenspan and the Bush 43 Administration were blind to the dangers of financial innovation.

The big banks financed the origination of subprime and other toxic mortgages that Chairman Greenspan extolled as financial innovation. The banks then securitized these toxic mortgages and induced the credit-rating agencies to give them AAA ratings. Mortgage underwriting standards were nonexistent and liars' loans became a norm. Securities due diligence fell by the wayside, and when the toxic mortgages began to default, the economy of the United States imploded. Today, we are still witnessing the impact of these "instruments of mass destruction."[244]

We are in the throes of the worst economy since the Great Depression. Like the Great Depression and unlike recessions after it, the plunge in the current economy was caused not by business cyclicality but by the failure of the banking system. And the failure of the banking system to modify mortgages that are underwater, rather than foreclose on them (sometimes with dubious documentation), has lengthened the downturn and continues to depress the housing market.[245] The function of the banking system is to intermediate capital and channel it into productive investments. To the contrary, it has consumed capital, misallocated capital, and created a real estate bubble that collapsed. Although most bailout money has been repaid, the banks have not been held to account for the devastating losses they have inflicted on the economy as a whole and, in particular, on average citizens who have lost their homes and their jobs.

All the blame cannot be placed on the banking sector. Regulation, or rather lack of it, has been driven by an ideology that markets are always self-correcting and that acting in your own perceived best interest will always be good for the economy as a whole. This philosophy has created tremendous wealth for the few and left the many economically

244. *See* Farrell, *supra* note 177 (quoting Letter from Warren Buffett, *supra* note 177) (internal quotation marks omitted). I have taken the liberty of expanding Buffett's concerns to include other financial innovations, such as subprime loans and pick-a-pay loans.

245. Although there is an impression today that the housing market may be recovering, part of this is due to the fact that banks are holding many foreclosed properties off the market in order not to further depress the market. *See Foreclosed Homes Being Kept off Market by Banks: Santa Monica*, SELECT REAL ESTATE BLOG (Dec. 22, 2012), http://www.select-realestate.com/2012/12/foreclosed-homes-being-kept-off-market-by-banks-santa-monica/.

regressing. The deregulatory mindset at the Fed and the Bush Administration had disastrous consequences for the economy and the average American. But the timidity and deference to the banking industry of banking regulators, with the exception of two women, has been less than exemplary.

What has the past taught and what does the future offer? Apparently, many have learned little from the past because Dodd–Frank is attacked as excessive regulation when, in reality, it did not go far enough. Supposedly the era of too big to fail is over; however, this is not a view held by, for example, Standard & Poor's, which has indicated its concern that future bailouts may be in the offing. Nor did Dodd–Frank adequately deal with the misaligned incentives that motivated bank management to take catastrophic risks.

Chairman Greenspan's opinion that "[i]f they're too big to fail, [then] they're" too big" is beginning to gather some momentum. Whether the political will exists to break up the banks is questionable, but their depressed stock prices, Dodd–Frank's living-will provisions, and the Volcker rule may provide an impetus for the market to demand such action. Irrespective of whether that happens, the mentality that "government is not the solution, government is the problem" must change.

VII. APPENDIX: CONSOLIDATION HISTORY OF THE BIG BANKS

Year	Consolidation Activity
JPMorgan Chase	
1991	• Chemical Bank merged with Manufacturers Hanover.[246]
1995	• First Chicago merged with National Bank of Detroit.[247]
1996	• Chemical Bank (assets valued at 1.98% of GDP)[248] merged with Chase Manhattan (assets valued at 1.35% of GDP).[249]
1998	• In 1998, Bank One merged with First Chicago (assets valued at 0.70% of GDP).[250]

246. Michael Quint, *The Bank Merger; Big Bank Merger to Join Chemical, Manufacturers*, N.Y. TIMES, July 16, at A1.

247. Stephanie Strom, *First Chicago and NBD to Merge as Banks Scurry to Grow*, N.Y. TIMES, July 13, 1995, at D1.

248. Bank assets as a percentage of GDP at the time of consolidation obtained by dividing each respective bank's total assets by national GDP in that year. Total assets were retrieved from *Institution Directory*, FDIC.GOV, http://www2.fdic.gov/idasp/main.asp (last visited Jan. 6, 2013), by performing a database search for the bank in question and running a report for the relevant year. GDP information based on "Current-Dollar and 'Real' GDP" chart from *Gross Domestic Product (GDP)*, U.S. DEP'T OF COM. BUREAU OF ECON. ANALYSIS, http://www.bea.gov/national/ (last visited Jan. 6, 2013).

249. Saul Hansell, *Banking's New Giant: The Deal; Chase and Chemical Agree to Merge in $10 Billion Deal Creating Largest U.S. Bank*, N.Y. TIMES, Aug. 29, 1995, at A1. For calculation of assets-to-GDP ratio, see *supra* note 248.

Year	Consolidation Activity
2000	• In 2000, J.P. Morgan (assets valued at 0.70% of GDP)[251] merged with Chase Manhattan (assets valued at 1.00% of GDP).[252]
2004	• In 2004, JPMorgan Chase (assets valued at 5.64% of GDP)[253] merged with Bank One (assets valued at 2.30% of GDP).[254]
2008	• In 2008, J.P. Morgan (assets valued at 9.40% of GDP)[255] acquired Bear Stearns[256] and Washington Mutual.[257]
Citigroup	
1988	• Commercial Credit purchased Primerica (which owned Smith Barney).[258] These companies kept the name Primerica.
1993	• Primerica merged with Travelers Insurance and took the name Travelers, Inc.[259]
1997	• Travelers, Inc. purchased Salomon Brothers.[260]
1998	• Citicorp merged with Travelers, Inc. to form Citigroup Inc. (assets of Citibank valued at 3.22% of GDP).[261]
2006	• Citigroup (assets valued at 5.60% of GDP)[262] consolidated its branches in the West (assets valued at 1.04% of GDP).[263]
Goldman Sachs	
Post-1990	• No mergers found after 1990.

250. *Banc One–First Chicago Merger Clears Hurdle*, L.A. TIMES (Sept. 9, 1998), at Bus. 3. For calculation of assets-to-GDP ratio, see *supra* note 248.

251. For calculation of assets-to-GDP ratio, see *supra* note 248.

252. Chris Isidore, *Chase Buying J.P. Morgan: Stock Deal Valued by Firms at $33B Joins Two of Banking's Biggest Names*, CNNMONEY (Sept. 13, 2000, 2:46 PM), http://money.cnn.com/2000/09/13/deals/chase_morgan/. For calculation of assets-to-GDP ratio, see *supra* note 248.

253. For calculation of assets-to-GDP ratio, see *supra* note 248.

254. Andrew Ross Sorkin & Landon Thomas, Jr., *Banking Giant: The Overview*, N.Y. TIMES, Jan. 15, 2004, at A1.

255. For calculation of assets-to-GDP ratio, see *supra* note 248.

256. Press Release, JPMorgan Chase, JPMorgan Chase to Acquire Bear Stearns (Mar. 16, 2008), http://investor.shareholder.com/jpmorganchase/releasedetail.cfm?releaseid=299805.

257. Press Release, Fed. Deposit Ins. Corp., JPMorgan Chase Acquires Banking Operations of Washington Mutual (Sept. 25, 2008), http://www.fdic.gov/news/news/press/2008/pr08085.html.

258. Robert J. Cole, *2 Leading Financiers Will Merge Companies in $1.65 Billion Deal*, N.Y. TIMES, Aug. 30, 1988, at A1.

259. Michael Quint, *Travelers Approves Merger Offer by Primerica*, N.Y. TIMES, Sept. 24, 1993, at D1.

260. *Salomon Succumbs at Last*, THE ECONOMIST (Sept. 25, 1997), at 79–80.

261. *Travelers, Citicorp to Unite*, CNNMONEY (Apr. 6, 1998, 2:07 PM), http://money.cnn.com/1998/04/06/deals/travelers/. For calculation of assets-to-GDP ratio, see *supra* note 248.

262. For calculation of assets-to-GDP ratio, see *supra* note 248.

263. For calculation of assets-to-GDP ratio, see *supra* note 248.

Year	Consolidation Activity
Bank of America	
1992	• BankAmerica acquired Security Pacific Corporation,[264] along with other regional banks.
1994	• BankAmerica acquired the Continental Illinois National Bank and Trust Co. of Chicago.[265]
1997	• BankAmerica (assets valued at 1.64% of GDP)[266] was acquired by NationsBank with the new entity retaining the name "Bank of America Corporation."[267]
2004	• Bank of America Corporation (assets valued at 6.51% of GDP)[268] purchased FleetBoston Financial (assets valued at 0.33% of GDP).[269]
2006	• Bank of America Corporation (assets valued at 8.57% of GDP)[270] purchased MBNA (assets valued at 0.06% of GDP).[271]
2006	• Bank of America Corporation (assets valued at 9.36% of GDP)[272] purchased the United States Trust Company from Charles Schwab Corporation (assets valued at 0.09% of GDP)[273] and LaSalle Bank Corporation from ABN Amro (assets valued at 0.78% of GDP).[274]
2008	• Bank of America Corporation (assets valued at 10.55% of GDP)[275] acquired Countrywide Financial Corporation (assets valued at 0.08% of GDP)[276] and Merrill Lynch & Co. (assets valued at 0.72% of GDP).[277]

264. Andrew Pollack, *The Bank Merger; BankAmerica in $4 Billion Deal to Acquire Rival Security Pacific*, N.Y. TIMES, Aug. 13, 1991, at A1.

265. Saul Hansell, *2 Banks Set $1.9 Billion Merger*, N.Y. TIMES, Jan. 29, 1994, § 1, at 135.

266. For calculation of assets-to-GDP ratio, see *supra* note 248.

267. Mitchell Martin, *Nations Bank Drives $62 Billion Merger: A New BankAmerica: Biggest of U.S. Banks*, N.Y. TIMES, Apr. 14, 1998, at D10. For calculation of assets-to-GDP ratio, see *supra* note 248.

268. For calculation of assets-to-GDP ratio, see *supra* note 248.

269. Riva D. Atlas, *Banking Giants: The Overview; Bank of America and FleetBoston Agree to Merger*, N.Y. TIMES, Oct. 28, 2003, at A1. For calculation of assets-to-GDP ratio, see *supra* note 248.

270. For calculation of assets-to-GDP ratio, see *supra* note 248.

271. Krysten Crawford, *Bank of America Inks $35B Card Deal*, CNNMONEY (June 30, 2005, 4:17 PM), http://money.cnn.com/2005/06/30/news/fortune500/boa/. For calculation of assets-to-GDP ratio, see *supra* note 248.

272. For calculation of assets-to-GDP ratio, see *supra* note 248.

273. Josh Lipton, *Bank of America to Buy U.S. Trust*, FORBES.COM (Nov. 20, 2006, 5:02 PM), http://www.forbes.com/2006/11/20/bank-of-america-markets-equity-cx_jl_1120markets12.html. For calculation of assets-to-GDP ratio, see *supra* note 248.

274. Matt Krantz, *Barclays Makes $91B Offer for ABN Amro Biggest Banking Deal Ever Could Spur Other Mergers*, USA TODAY, Apr. 24, 2007, at 1B. For calculation of assets-to-GDP ratio, see *supra* note 248.

275. For calculation of assets-to-GDP ratio, see *supra* note 248.

Year	Consolidation Activity
Morgan Stanley	
1991	• Morgan Stanley acquired Quilter & Co., but sold it in 2006.
1996	• Morgan Stanley acquired Van Kampen American Capital.[278]
2004	• Morgan Stanley acquired Canary Wharf Group.
2009	• Morgan Stanley acquired 51% of Smith Barney from Citigroup and is now operating under the name Morgan Stanley Smith Barney.[279]
Wells Fargo	
1996	• Wells Fargo (assets valued at 0.66% of GDP)[280] merged with First Interstate Bancorp (assets valued at 0.60% of GDP).[281]
1998	• Wells Fargo merged with Norwest and assumed the name Wells Fargo & Company.[282]
1999	• Wells Fargo purchased thirteen companies during the year with assets totaling $2.4 billion.
2000	• Wells Fargo purchased Michigan Financial Corporation, National Bancorp of Alaska, Inc., First Commerce Bancshares, Inc., Ragen MacKenzie Group, Inc., and First Security Corporation.
2008	• Wells Fargo (assets valued at 4.37% of GDP)[283] purchased Wachovia Corporation (assets valued at 3.66% of GDP).[284]

276. *Bank of America to Acquire Countrywide*, MSNBC.COM (Jan. 11, 2008, 2:55 PM), http://www.msnbc.msn.com/id/22606833/ns/business-real_estate/t/bank-america-acquire-countrywide/. For calculation of assets-to-GDP ratio, see *supra* note 248.

277. Binyamin Appelbaum & David Cho, *Bank of America Agrees to Buy Merrill During Frenzied Weekend*, WASH. POST, Sept. 15, 2008, at A01. For calculation of assets-to-GDP ratio, see *supra* note 248.

278. *Van Kampen Nearing Sale to Morgan Stanley*, CHI. TRIB., June 22, 1996, at Bus. 1.

279. Press Release, Morgan Stanley, Morgan Stanley and Citi to Form Industry-Leading Wealth Management Business Through Joint Venture (Jan. 13, 2009), *available at* http://www.morganstanley.com/about/press/articles/af3e409a-e1b7-11dd-84e6-b390c77322d3.html.

280. For calculation of assets-to-GDP ratio, see *supra* note 248.

281. Saul Hansell, *Wells Fargo Wins Battle for First Interstate*, N.Y. TIMES, Jan. 25, 1996, at D1. For calculation of assets-to-GDP ratio, see *supra* note 248.

282. Press Release, U.S. Dep't of Justice, Justice Department Approves Norwest/Wells Fargo Merger After Parties Agree to $1.18 Billion Divestiture (Oct. 13, 1998), http://www.justice.gov/atr/public/press_releases/1998/1984.htm.

283. For calculation of assets-to-GDP ratio, see *supra* note 248.

284. Edward Iwata, *Bank Strife Likely to Spark Mergers, Asset Sales*, USA TODAY, Oct. 13, 2008, at 3B. For calculation of assets-to-GDP ratio, see *supra* note 248.