

THE FINANCIAL CRISIS OF 2007/8: MISALIGNED INCENTIVES, BANK MISMANAGEMENT, AND TROUBLING POLICY IMPLICATIONS

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IBGYBG (“I’ll be gone, you’ll be gone”)
The Financial Crisis Inquiry Report (2011)

success = talent + luck

great success = a little more talent + a lot of luck

Favorite equations of Daniel Kahneman, *Thinking Fast and Slow* (2011)

Abstract

After briefly reviewing the major changes in the financial structure as well as the focal events that characterized the 2007 - 2008 global financial crisis, this paper considers the evidence for the crucial role played by misaligned incentives. Presumably because compensation was predicated on short-term performance to the neglect of long-term outcomes, participants in the mortgage funding and investment banking industries as well as among credit-rating agencies focused only on their annual activities and disregarded the future impact of their actions on their own firms. Evidence that such indeed is the case is amply spelled out in the text at least for those **not** serving in senior executive capacities. However, this paper argues that while senior management and especially CEOs were ultimately responsible for such pay policies and handsomely benefitted from them, they themselves were not driven by the short-term/long-term pay conflict. The collapse and near-collapse of many financial institutions cannot be attributed to incentive issues at the leadership level, especially as the compensation structures were pervasive throughout the industry while collapse was not. Moreover, CEOs in the investment banking industry were all intelligent, hard-working, inspirational, and successful – at least until 2008. Hence, in explaining why some CEOs succeeded and others failed – and examining the CEOs of Lehman and Goldman Sachs in limited detail – an alternative explanation emerges. The paper rejects the suggestion that risk management staff, especially Chief Risk Officers, were able to restrain some CEOs from overly-risky behavior. Nor did boards of directors make a difference. Instead, for a few CEOs and their firms, the wheel of fortune stopped at “Collapse,” while for most others, the pointer landed on “Safe for Now.” Luck rather than skill determined outcomes. Hence, the paper suggests that constraints on compensation policies both in the US and the EU as well as the broad reforms mandated by the Dodd-Frank Act of 2010 will be of limited value.

JEL codes: G21, G28, G34

Comments from the members of the Austrian Colloquium at NYU immeasurably improved a prior draft.

Introduction. The opening citations cryptically delineate two views concerning the causes of the recent financial crisis. On the one hand, the role of incentives is perceived to play a crucial if not the major causal role. Specifically, the argument that will surely find sympathy among economists advances the proposition that misaligned incentives – the focus on short-term rewards without considering long-term consequences – played the critical role in fomenting the crisis as well as being the driving force behind its ultimate severity. My intention is to provide mostly anecdotal evidence for this proposition; the limited empirical work that is available as well as other anecdotes suggests that the cause lies elsewhere.

The alternative explanation and the one I favor and will try to support – again anecdotally – focuses on management failures. The distinction between financial institutions that survived and those that failed can be directly related to be senior managements’ comprehension of the risks of amassing large holdings of “toxic” assets and dealing successfully with minimizing the presence of these assets on their banks’ balance sheets. The contrast is clearest in the behavior of JPMorgan Chase and Goldman Sachs on the one hand and Bear, Stearns, Lehman, and AIG on the other. The distinction lies primarily in the behavior of the CEOs. Furthermore, I contend that boards of directors, which presumably are responsible for corporate policy and should play a significant monitoring role, were most often ill-suited to undertake this function. Indeed, given the nature of financial institutions, whose balance-sheet values and liquidity positions can vary by large percentages on a day-to-day basis, boards can never monitor management behavior in a timely fashion.

If I am correct, I come to Kahneman’s point in the second introductory citation: great success, while obviously not unrelated to talent, hinges mostly on luck. Conversely, failure hinges heavily (predominantly?) on ill-luck rather than skill. A persuasive argument can be made

that the reasons Chase and Goldman Sachs survived and Bear, Stearns, Lehman, and AIG succumbed was attributable to the former being headed by lucky leaders in contrast to ill-starred management in the latter.

That leads me to a very pessimistic conclusion. To have the right management group in the right place at the right time cannot be preordained; that, too, is a matter of luck. Hence, corporate boards of directors, even with the best of will and with excellent personnel information, cannot be certain that the CEOs they appoint will be able to avert a catastrophe to their corporation. Nor can present public policy, which in the guise of the Dodd-Frank Act and similar regulations elsewhere is heavily focused on limiting incentives to prevent another crisis, be very effective. Indeed, no public policy is capable of securing lucky outcomes.

The plan of this paper is as follows. A necessarily brief survey of the crisis opens, highlighting the various components that were deemed by consensus to have been critical, followed by a terse review of the major events that transpired during 2007 and 2008. Section II highlights the role of incentives in each of the areas mentioned in Section I. It will be evident that a convincing case can be made for misaligned incentives at each juncture of the financial marketplace. Section III examines more critically the role of incentives for top-level management, and dismisses incentives as significant drivers explaining their behavior. If that account is inadequate, then an explanation must be provided to clarify why senior management permitted the misaligned structure to persist. Were they not aware of what was going on? Were they aware but were blinded by false hopes as to the consequences of their policies? Did some managements succumb to hubris? All these questions can be answered affirmatively with the anecdotal evidence assembled in this section. Section IV examines first the role of risk

management officers and why they fared poorly at some banks and better at others. It continues with the role of the boards of directors and why they were ineffective in preventing management failure. In section V we examine all too briefly the policies introduced by the Dodd-Frank Act as well as similar legislation in the European Community. Section VI concludes by reasserting the pessimistic outcome suggested in the prior paragraph.

I. The crisis outlined

That the Great Moderation of the mid-1980s to the late-2000s ended with the Great Recession that began in December 2007 is not entirely irrelevant to this discussion. The general macroeconomic weakness of 2007/09 that is summarily highlighted in Figures 1 and 2 (*all figures will be found at the end of this paper*) exacerbated the financial crisis; surely the financial crisis weakened the overall U.S. (and global) economy. However, discussing these linkages will take us well beyond the purview of this essay, and so will be ignored henceforth. Instead, we focus our attention on the financial meltdown that occurred over 2007 and 2008.

The evolution of the financial marketplace in the United States during the early 21st century has been documented extensively; a summary will suffice here. Among the highlights are:

- the rise of the “shadow banking system,” that unregulated mechanism that includes the off-the-balance sheet entities of commercial banks, investment banks, mutual funds, and similar financial institutions.¹ One of the noteworthy features of these shadow banks was their relatively high leverage (Figure 3). Some of the investment banks were levered in the 25 - 30+ range, which translates into a capital-asset ratio of ~3+ to 4 percent so that a small

¹ Pozsar *et. al.* (2) define shadow banks as “financial intermediaries that conduct maturity, credit, and liquidity transformation without access to central bank liquidity or public sector credit guarantees.”

decline in the value of their assets would eliminate their capital. A related salient point is that these institutions hovered below the radar of the regulatory authorities. Finally, as indicated by Figure 4, they became an ever-stronger presence in the U.S. financial system.

- the expansion of the housing market into a real estate bubble. While it is easier to identify a bubble in retrospect, the rapid rise in housing prices that defied an explanation based upon population and income growth as well as their subsequent steep fall (Figure 5) strongly supports the thesis of a ballooning and then bursting bubble.
- Figure 5 also points out the low interest-rate environment that has been considered another crucial foundation of the buildup to the crisis. Figure 6 shows that phenomenon more clearly, focusing on the decline in interest on 30-year mortgages, reaching historic lows during the early and mid-2000s. Such low interest rates both encouraged new borrowing, and, insofar as they reflect the general interest rate environment (they do!), led savers and financial institutions to search out higher-yielding opportunities.
- Financial innovation – the combined impact of securitization and the “originate-to-sell” model – led to a reduction in the quality of mortgages and promoted a disconnect between the mortgage lender and the ultimate investor. While packaging loans of various sorts, including mortgages, into marketable assets is not a recent phenomenon, there were some notable differences between past practices and pre-crisis activities. First, in the past, lenders typically either retained mortgages on their own books or sold them off to one of the government-sponsored enterprises (GSE) such as Fannie Mae or Freddie Mac. The GSEs fostered market quality at the lender end because they imposed strict constraints on the nature of the mortgages they were willing to acquire. In either case, one major consideration in granting the mortgage

was the borrower's ability to pay. But under originate-to-sell, as lenders passed off the loans and hence the credit risk to others, they were less concerned about the quality of the borrowers. As a result, a host of subprime mortgages (with fascinating names such as "liar loans" and "ninja [No income, no job or assets] loans") and a variety of mortgage terms such as 2/28 adjustable rate mortgages and interest-only loans entered the market and began to play a more significant role over the later years of the decade (Figure 7).

Moreover, the packaging and repackaging of subprime mortgages by the investment banking community – aided and abetted by the credit rating agencies (CRAs) – led to an opaque system of derivatives. Mortgage-backed securities (MBS) gave rise to collateralized debt obligations (CDO) that were often repackaged (CDO-squared and -cubed) (Figure 8), especially for those tranches (viz. components of the issue) whose credit ratings were below AAA. Indeed, one of the sleight-of-hand tactics practiced by the investment community and the CRAs was to take the so-called mezzanine (B-range tranches) of MBSs and transform them into AAA-rated CDOs.

- The ultimate investors – sophisticated buyers of investment products who surprisingly also included some of the very financial institutions that themselves were originators and marketers of these mortgage-related investments – were apparently lulled into acquiring these derivatives partly on the basis of their excellent credit ratings. Some, in addition, protected themselves by relying on another financial innovation, credit default swaps (CDS), that essentially is insurance against specified adverse outcomes, including default, on the derivatives.
- The size of the derivatives market was immense (Figure 9). No less important, its opacity meant that no lender to the shadow banks active on the market was clear about the

counterparty to its loans. Since much of the lending involved short-term (often overnight) loans, a potential liquidity risk existed. There is no evidence that this risk was perceived by many of the significant players in this market.

The crisis. Precipitating the collapse of global financial markets was the deceleration of housing prices in 2005 that was followed by a downturn in housing prices in mid-2006 (Figure 10). In and of itself, a market downturn in one segment of the economy, even an important one, should not have led to a financial crisis. Indeed, such was the conventional wisdom of the time, represented by the remark made to the Joint Economic Committee of Congress by Federal Reserve chairman Bernanke in March 2007: “At this juncture... the impact on the broader economy and financial markets of the problems in the subprime market seems likely to be contained.”

It seems, though, that both speculators in housing and subprime borrowers who were counting on a continued rise in housing prices to refinance their mortgages reacted to the price fall by delaying loan repayments or defaulting entirely (again, see Figure 10). Notable events during 2007, starting in the second quarter and continuing through the second half of the year are the widespread decline in the value of MBSs (Figure 11) and as a consequence, writedowns and ultimate bankruptcy of two Bear Stearns funds concentrating in MBSs as well as not-inconsequential writedowns in the MBS portfolios by among others Citibank, Morgan Stanley, and Merrill, Lynch; the failure of a leading California mortgage lender, New Century Financial; and the seizing up of short-term loan markets as indicated by the sharp rise in short-term interest rates (Figure 12). While Figure 12 indicates some easing during the third quarter of 2007, this relief is short-lived. By January 2008, Bank of America acquires a near-bankrupt Countrywide Financial, the largest of the subprime lenders. (Hindsight must view as ludicrous the acquisition of a major originator of subprime

mortgages when the market for such loans had already peaked months earlier.) March sees the failure of Bear Stearns, which is unable to fund its short-term debt as lenders lose confidence in its survival; Bear Stearns, the fifth largest U.S. investment bank is picked up by JP Morgan Chase for \$2 a share.² Values of MBSs continue to fall (Figure 11, again), weakening the portfolios of most of the shadow banks as well as the largest of the commercial banks, who had acquired directly or indirectly significant amounts of derivatives.

That weakness is also evident in the commercial paper market, which is heavily dominated by loans to the shadow banks (Figure 14). After peaking in the first half of 2007 at \$2.2 trillion, it declines by almost a fifth through the first half of 2008.

Then, a lull, which in retrospect is more akin to the eye of the storm. And while the TED spread declines, it doesn't revert to June '07 levels. Similarly, the commercial paper market stabilizes, declining only slightly from March through September.

The week that begins on 7 September when the U.S. Treasury nationalizes – technically, places into conservatorship – the GSEs. The mortgage guarantees and MBS holdings of Fannie Mae and Freddie Mac have forced them into insolvency. The Lehman Brothers failure occurs on 15 September after a futile weekend of rescue attempts. Merrill, Lynch is acquired by Bank of America over that weekend. Figures 13 and 14 demonstrate clearly their impact both on interest rates and on commercial paper market volume; a pervasive flight to safety occurs as lenders seek to avoid short-term lending to financial institutions. Indeed, the shock of the Lehman bankruptcy is so disruptive

² From January through early March, daily liquid assets held by Bear Stearns ranged in the \$15 to \$21 billion range. The liquid asset portfolio dropped precipitously on 10 March to \$12 billion and on 13 March to \$2 billion as some lenders requested increased collateral on their loans while others simply refused to rollover their overnight and other short-term loans.

The per-share price of Bear Stearns in June 2007 was \$140. Note, too, that the final price paid by Chase was \$10 a share as a result of some contractual issues that forced Chase to raise its offer.

that AIG, whose credit default swaps ostensibly stood behind the failing derivatives, is taken over on 16 September by the U.S. Treasury with the aid of the Federal Reserve, because AIG cannot make good on its obligations. A massive liquidity drain faced by the money market mutual fund industry is relieved only after the U.S. Treasury announces its support to them on 18 September. Morgan Stanley and Goldman Sachs, the two remaining independent investment banks, seek a safe haven after watching their stock prices diminish by 24 and 14 percent respectively; they become bank holding companies under Federal Reserve System supervision on 21 September. The term common at the time was: “the markets have seized up,” referring not only to financial markets in the United States, but in Europe and Asia as well. Figure 15 depicts the behavior of the S&P 500 index; on 15 September, the Dow-Jones industrial index plummeted by over 4 percent while Figure 16 contrasts the common share stock prices of some major players in the financial market place on 30 June ‘07 and 30 December ‘08.³

Stewart sums it up nicely:

Lehman Brothers begat the Reserve [Fund, a MMMF] collapse, which begat the money-market run, so the money-market funds wouldn’t buy commercial paper. The commercial-paper market was on the brink of destruction. At this point, the banking system stops functioning. You’re pulling four trillion dollars out of the private sector ... and giving it to the government in the form of T-bills [viz. a flight to safety]. That was commercial paper funding GE, Citigroup, FedEx, all the commercial-paper issuers. This was systemic risk. Suddenly, you have a global bank holiday.⁴

³ The literature on this September week is voluminous. A short and noteworthy piece is Stewart. See also Paulson, Wessel, and the DVD *Too Big to Fail*.

⁴ A very detailed chronology from February 2007 to June 2011 may be found in Lybeck, (29 - 94).

II. The role of incentives in the financial crisis

The reward structure in each facet of the buildup to the crisis stressed short-term compensation at the expense of the longer-term consequences. In this section, we survey compensation policies in mortgage lending, the investment banks that issued the derivatives (MBS, CDO, and CDS), and the credit-rating agencies.⁵ In general, bonuses were based on annual performance; the largest share was paid out immediately.⁶ While some financial institutions also required their employees to defer some part of their compensation and/or to take some part of the annual bonus in company stock, none (to the best of my knowledge) mandated clawbacks should employee actions have led to an adverse impact on their companies that became evident only later. Hence, the potential losses suffered by their firms did not play an active role in deciding whether to engage in any activity, how significant should that activity be, and whether and when to reduce the scale of that activity.

1. In the mortgage-origination market. IBGYBG typifies the attitude of many of the lenders' employees and agents. By the time the poor-quality loans soured, the initiating employee would long be gone as would be with their bonuses that were based on volume of loans, not loan quality.⁷

⁵ "Compensation structures were skewed all along the mortgage securitization chain, from people who originated mortgages to people on Wall Street who packaged them into securities." *The Financial Crisis Inquiry Report* (henceforth, FCIC), (64).

⁶ The same holds true for the hedge funds, whose annual charges are 2 and 20, that is, a flat 2 percent fee of invested funds plus 20 percent of the annual increment in portfolio value.

⁷ A sales and marketing trainer cited in FCIC (8) testified that he taught his trainees: "You had no incentive whatsoever to be concerned about the quality of the loan...." Similarly, "For [mortgage] brokers, compensation generally came as up-front fees ... so the loan's performance mattered little." (90) Again, "The mortgage originators profited when they sold loans for securitization. Some of this profit flowed down to employees – particularly those generating mortgage volume.... 'The originators, the loan officers, account executives, basically the salespeople [who] were the reason our loans came in ... were compensated very well,' New Century's Patricia Lindsay told the FCIC. And volume mattered more than quality." (117). See also the remarks of FDIC chair Bair and SEC chair Schapiro in FCIC (64).

Lawrence G. McDonald, a Lehman Brothers vice-president of distressed debt and convertible securities trading, traveled with a colleague to California in June 2006 to visit New Century Financial, the subprime mortgage originator that went bankrupt in 2008. He had been suspicious of their viability, and decided to do some personal investigation. McDonald rather vividly describes his first impression of the New Century headquarters parking lot, full of expensive vehicles – “Mercedeses were two for a penny.” He then managed to meet some of the New Century salesman, who told him “that mortgage brokerage was the greatest business on earth. Bar none. They were all earning between \$300,000 and \$600,000. ... They cheerfully confirmed that they were all on double commission: *Takes a tough man to sell this stuff, and New Century is prepared to pay for the best.*” As to the possibility of defaults by mortgagees, “They dismissed this with even more panache. *Not our concern, pal. Our job is to sell the mortgage policy. Period. Right after that it’s someone else’s problem.*” (McDonald and Robinson, 181, 184 - 185; italics in the original)

2. *On Wall Street.* Wall Streeters had typically been compensated on a salary plus bonus basis, with annual compensation based on their annual performance.⁸ The FCIC notes, however, an increasing emphasis in incentive pay that the FCIC related to the change of ownership form from partnership to the corporate organization –

When the investment banks went public in the 1980s and 1990s, the close relationship between bankers’ decisions and their compensation broke down. They were now trading with shareholders’ money. Talented traders and managers, once tethered to their firms were now free agents who could play companies against each other for more money. To keep them from leaving, firms began providing aggressive incentives, often tied to the

⁸ FCIC, p. 285: “At Bear, compensation was based largely on th return to equity in a given year.”

price of shares and often with accelerated payouts. (62)⁹

Consider a few examples of annually-based compensation:

1. Jared Dillian (239), an ETF trader for Lehman, writes about his 2005 “comp day,” the day traders are informed about their annual compensation.

Last year your total compensation was two hundred seventy-five thousand dollars, and this year it will be six hundred and fifty thousand dollars.

What?

Mark slid a piece of paper across the table toward me.

\$650,000.

That is an insane amount of money.

I assume you're happy with the results

Oh, yeah. This is great. *\$650,000.*

*What the hell am I going to do with all this money?*¹⁰

2. Dillian being informed about one young man who ran his own proprietary trading account for Lehman:

he cut a deal that paid him a percentage of what he made for the firm. I don't know what it was – ten, probably fifteen percent. Last I heard, he was making eighty million bucks for Lehman and that was a few years ago. He's probably over a hundred million by now.

3. Such compensation apparently was not an outlier. The head of Citigroup's energy-trading unit reportedly received over \$100 million in 2008 and was in line for a similar payment in 2009, in each case based upon the prior year's performance of his unit. (Siconolfi and Davis)

⁹ The same held true at Morgan Stanley. As an executive related to the FCIC (63): “When I first started at Morgan Stanley, it was a private company. When it's a private company, you don't get paid until you retire. I mean you get a good, you know, year-to-year compensation.’ But the big payout was ‘when you retire.’” When Goldman Sachs was constituted as a partnership, all bonuses were added to the partners' equity and could be withdrawn only upon retiring from the firm, and even then, they still retained some equity.

“Levy [Goldman's senior partner from 1969 - 1976] once explained the Goldman partnership economics: ‘We've got a hard and fast rule. We pay salaries – modest by today's salary levels. On top of that, we pay six percent interest on capital. On the profit at the end of the year, we pay partners' taxes. The balance stays in the firm.’” Cohan, (120; all references are to 2011) Partners' shares depended on a variety of considerations and were not fixed over time. The partnership structure, however, limited the firm's capital, which was substantially expanded when Goldman Sachs went public in 1999.

¹⁰. McDonald (204) writes similarly. On his comp day in 2006, having brought in about \$50 million in revenues to Lehman, his reward was “a glistening seven-figure bonus.”

In none of these instances is there any mention of possible adverse consequences to the recipients should it have turned out that their decisions and actions had backfired. Every indication points to their irrevocability.¹¹

4. Perhaps the most egregious instance of avoiding penalties for failure was the case of AIG Financial Product's Joseph Cassano. Early in 2008, the year that AIG was taken over by the U.S. government as a result of the calamitous decisions made by this head of AIGFP, Cassano was dismissed and rewarded: a \$34 million bonus and a \$1 million monthly consulting contract. "This was in addition to the \$280 million that Cassano had garnered over the previous eight years." (U.S. House of Representatives, cited in Lowenstein, 122)¹²

The not-surprising consequence: little, if any attention was paid to the transactions risk insofar as the fruits of such actions would emerge only later. Indeed, an internal Citigroup document (thought to be composed in 2006) "questioned one of the practices of Citigroup's investment bank, which paid traders on its CDO desk for generating deals without regard to later losses." (FCIC, 119)¹³ Similarly, Alastair Turner, former chair of the UK's Financial Services Authority, wrote (80):

It is nevertheless likely that past [i.e., prior to 2009] remuneration policies ... have

¹¹ barring exceptional circumstances such as fraud. The FCIC notes (p. 198) that Citigroup's clawback provisions existed "under narrowly specified circumstances.... But despite Citigroups' eventual large losses, no compensation was ever clawed back under this policy."

¹² A similar case is that of the two heads of the Bear Stearns funds that failed in March 2007. Ralph Cioffi and Matthew Tannin, whose funds lost over \$1 billion for their investors (510; \$1.6 billion is mentioned on 557, "approximately \$1.4 billion," 19 of the indictment, United States of America against Ralph Cioffi and Matthew Tannin, U.S District Court, Eastern District). Cioffi redeemed \$2 million of his own investment in the hedge funds without disclosing it to investors, while Tannin pocketed a \$750,000 bonus. Incidentally, Cioffi and Tannin were found not guilty in criminal prosecution in 2010, and both settled with the SEC for disgorgement and fines in 2012.

¹³ Similarly at Merrill, Lynch, about which Lowenstein wrote (74): "Wittingly or not, O'Neal [Merrill's CEO] managed an incentive system that rewarded the troops for gambling the franchise. Traders' bonuses were paid at year-end, but the 'profits' on which the bonuses were based derived from trades whose true profitability would not be known for many years."

Clementi *et. al.* (198 - 199) cite a specific case at United Bank of Switzerland (UBS) concerning CDOs, concluding that "These facts meant that the CDO desk had the incentive to grow the balance sheet as large as possible because, by construction, their bonuses were tied to instant [i.e., annual] profits with no recognition of any risk."

created incentives for some executives and traders to take excessive risks and have resulted in large payments in reward for activities which seemed profit making at the time but subsequently proved harmful to the institution, and in some cases to the entire system.

However, it would be misleading to imply that these investment bankers received all their compensation immediately in cash. It was not unusual for the investment banks to pay part of the bonuses in corporate stocks that could not be sold immediately but over a multi-year period. For example, Bear Stearns's policy noted by the FCIC (285) was as follows: "For senior executives, about half of each bonus was paid in cash, and about half in restricted stock that vested over three years and had to be held for five." Lehman had a similar plan, so much so that when an employee left, she risked losing the deferred portion of her bonus.¹⁴ Goldman Sachs's policy requires that "executives ... hold 75% of awarded shares until they retire." (Bebchuk *et. al.*, 276)

3. *In the credit-ratings agencies.* In contrast to their behavior in rating corporate bond issues, where reputation for accuracy seemed paramount, that was not the case when it came to structured products. The massive downgrades of MBSs and CDOs by the rating agencies in 2008 suggests a less-than-stellar performance in the original ratings.¹⁵ One explanation for the poor performance of the CRA relates to the incentive structure at the rating agencies.

By way of background, it should be noted that investment bankers shopped the rating agencies

¹⁴ McDonald writes (216): "Lehman had us in golden handcuffs. Our equity holdings in the firm were growing, but even if we left, it would be months, maybe years, before we could get our hands on the money. Each year we left behind enormous sums payable only in the firm's stock sometime in the future." He mentions there that one of his departing colleagues, and while she could sell some of her stock, presumably the segment that was vested, had to leave the rest in her account. A friend of mine who left Lehman shortly before it went bankrupt was advised by his immediate superior early in his career there to sell his Lehman shares as soon as he could, enabling him to diversify his portfolio. Needless to say, those who retained ownership in their Lehman stocks lost their entire holdings upon Lehman's bankruptcy.

¹⁵ McLean and Nocera mention a chart (footnote on 306) that I have been unable to locate showing "that 91 percent of triple-A-rated subprime residential mortgage-backed securities issued in 2007, and 93 percent of those issued in 2006, were subsequently downgraded to junk status." FCIC's Figure 11.4 (229 and text there) deals with a different time period, the 2005 - 2007 MBSs and CDOs performance at year-end 2009. The AAA-rated securities fared better, with only 10 percent of the Alt-A and 4 percent of the subprime MBS "materially impaired," although the percentage rises to 71.3 for the AAA-rated CDOs. The overwhelming lower-rated securities (over 95 percent of Baa tranches of the Alt-A and subprime tranches) were impaired as were over 90 percent of the Baa CDOs.

for ratings that would enable them to market their derivative products. (FCIC, 150) The better the ratings carried by an issue, the easier to sell it. As such, the securitizers had some negotiating power, enabling them to play the major CRAs against each other. Since CRA sales personnel were rewarded for bringing in business to their employers – volume, not quality mattered – their incentive was volume-directed. Later downgrades would not retroactively affect their bonuses.

Compensation of the analysts at the CRAs, who were responsible for the ratings recommendations, was not directly related to sales volume. Indeed, the proverbial Chinese wall was erected between the analysts and the sales representatives so that the analysts would provide objective ratings.¹⁶

It has been claimed that this wall was permeable and the analysts were complicit in exaggerating the ratings. After all, the analysts understood that they indirectly profited from their sales colleagues' efforts – larger firm profits meant larger bonuses for everyone, analysts included. And during the middle of the 2000s, CRA profits skyrocketed.¹⁷

Thus, directly or indirectly, CRA staff also were provided with one-sided incentives: to examine only the short-term and ignore the long-term consequences of their actions.

Up the ladder. The bonus pool was not merely distributed among the lower echelons of the financial institutions. Revenues brought in by the mortgage brokers, derivative traders, security sales personnel, and CRA employees also provided bonuses for the next level and so up to the most senior echelons. The Options Group, which compiles compensation figures for investment banks, examined

¹⁶ “[CRA] policies generally provide that an analyst may not be compensated or evaluated based upon the amount of revenue that the rating agency derives from issuers or issues that the analyst rates, or with whom the analyst regularly interacts... [A]nalytsts' salaries generally were based on seniority and experience, and bonuses were determined both by individual performance and the overall success of the firm. The Staff's review did not find indications that rating agencies compensated analysts in a manner contrary to their stated policies. (SEC, 27)

¹⁷ McDonald (200) reports Moody's revenues of \$800.7 million in 2001, \$1.73 billion in 2005, and \$2.037 billion in 2006.

the mortgage-backed securities sales and trading desks at 11 commercial and investment banks from 2005 to 2007.

It found that associates had average base salaries of \$65,000 to \$90,000 from 2005 through 2007, but received bonuses that could well exceed their salaries. On the next rung, vice presidents averaged base salaries and bonuses from \$200,00 to \$1,150,000. Directors averaged \$625,000 to \$1,625,000. At the top was the head of the unit. For example, in 2006, Dow Kim, the head of Merrill's Global Markets and Investment Banking segment, received a base salary of \$350,000 plus a \$35 million bonus.... (FCIC, 118)¹⁸

Thus, the incentive to focus on annual income without considering risk and long-term consequences pervaded the institutional structure of the financial marketplace.

The reward structure had another outcome: talent moved to the best-paying employers. While this is hardly surprising, its unanticipated consequences exacerbated the crisis. First, during the pre-crisis years when investment bankers were earning bonuses that were considerably larger than those paid to CRA personnel, the more sought-after talent moved away from the CRAs. That left both fewer and less qualified analysts to rate the ever-more complex derivatives.¹⁹

Second, this same phenomenon existed vis-a-vis the regulatory agencies. Federal regulators are compensated along federal (and Federal Reserve) guidelines that provides for a fixed pay schedule (albeit with numerous steps and promotion possibilities) but lack incentive payments. It is not unusual for novice employees to enter the federal service (a situation not limited to the bank/security regulatory

¹⁸ The FCIC reports (259) that Kim, "who oversaw the strategy that left Merrill with billions in losses, had left in May 2007 after being paid \$40 million for work in 2006, which was a profitable year for Merrill as a firm."

¹⁹ "Brian Clarkson, who oversaw the structured finance group before becoming president of Moody's Investor Service, explained to FCIC investigators that retaining employees was always a challenge, for the simple reason that the banks paid more." "Yuri Yoshizawa, a Moody's team managing director for U.S. derivatives in 2005, ... identified 13 out of 51 analysts – about 25% of the staff – who had left Moody's to work for investment or commercial banks." FCIC,(150). Morgenson and Rosner (280 - 281) put it more graphically: "[The CRAs] paid their analysts far less than the big brokerage firms did and, not surprisingly, wound up employing people who were often looking to befriend, accommodate, and impress the Wall Street clients in hopes of getting hired by them for a multiple increase in pay."

The oft-quoted statement of Citigroup's CEO Prince that "As long as the music is playing, you've got to get up and dance," (*Financial Times*) was said to explain a similar phenomenon: not paying competitive salaries meant valuable employees would depart for hedge funds or to set up independent shops. (Rajan, 143)

agencies), gain experience therein, and then move to the higher-paying private sector. One could surmise that as the rewards in the financial sector rose dramatically during the early to mid-'00s, this tendency was exacerbated. While this is hardly the only explanation of why the regulatory agencies performed poorly during the build up to the crisis, it is not a reason that is easily dismissible.

The upshot of this section is that significant financial incentives were available to a variety of participants in the financial marketplace. But these were fundamentally lower-level players, who responded to the compensation structure fashioned by the senior levels of management.²⁰ Hence, a convincing argument about the critical nature of the incentive structure requires an examination of the incentives as they affected senior management. If it can be shown that the same incentives were pervasive at the senior level, then a case can be made for the crucial nature of the incentive structure. But if, in fact, senior management were complicit in arranging for the incentive structure at the lower levels but were not driven by the same motivation, we need to discern what precisely drove the upper levels. Why did they not impose policies that related compensation to risk?

The next section examines rewards at the highest echelons - CEOs and senior management.

III. Senior management in financial institutions

Data on the uppermost echelons of U.S. corporations derive for the most part from formal documents such as company annual reports and SEC filings such as forms 10-K and DEF 14A, which is conveyed prior to annual meetings and which contains detailed information deemed necessary for stockholders to vote intelligently. Among the information released to the SEC are the compensation arrangements for five “named executive officers,” the leading corporate officers including the CEO and the CFO. This information has two flaws for analyzing upper-echelon incentives. First,

²⁰We disregard for now the role of the boards of directors.

information on the top five is too confining; the primary decision-makers in corporations are not necessarily the named executive officers. Second and perhaps more important, the data preclude information on other significant earning executives, who presumably have some voice in corporate decision-making. Traders and division heads have not infrequently received total compensation that exceeded that of higher-ups on the corporate ladder. Nevertheless, the disclosed information has provided some insights into the pecuniary rewards of senior management in U.S. financial firms.

Two studies have creatively-mined available information and are frequently cited in the literature. We briefly review first the seminal piece by Lucian A. Bebchuk, Alma Cohen, and Holger Spamann and then Rudiger Fahlenbrach and Rene M. Stulz, “Bank CEO incentives and the credit crisis.”

Bebchuk , Cohen, and Spamann limit their focus to senior management in Bear Stearns and Lehman, two of the investment banking firms that did not survive the banking crisis intact. They contend that the top five executives in both firms were able to withdraw via cash bonuses and equity sales “substantially” more than the value of the stocks they owned prior to 2000.²¹ Despite the immense losses suffered by the top managers, Bebchuk *et. al.* contend that the senior managers’ ability to cash out may have distorted their decisions “by excessive focus on short-term results.” (265) The authors further note that bonuses were based on annual performance, and that “no part of the cash bonus compensation was clawed back even though the ‘record’ financial results [in 2006 and 2007] that served as the basis for the bonuses largely evaporated.” (266 - 267)

Insofar as selling their equity positions in their firms, Bebchuk *et. al.* point out that these

²¹ They estimate (261) for the Bear Stearns top 5 withdrawals approximating \$1.4 billion compared to these executives ownership state at about \$800 billion. The corresponding numbers for Lehman was in the order of \$1 billion and \$600 million.

executives were regularly selling shares, implying that “executives had incentives to place some weight on short-term stock market prices throughout the period.” (268) And they do not feel that any significance should be attached to the constraints imposed on both Bear Stearns and Lehman managers, who were prohibited from selling their stock bonuses for five years from the date of the award (although Lehman’s option grants could be exercised earlier depending upon the firm’s stock price performance). (269)

The authors conclusion appears to be overly cautious, indeed lame:

The question is whether the executives ... had incentives to run the firms in a way that involved an excessive probability (though by no means a certainty) of large losses at some uncertain date down the road. Our analysis indicates that the pay arrangements at the firms ... did provide some such incentives.... [But while] the firms’ executives had incentives to take excessive risk, it should be stressed, [that] does not imply that their decisions were in fact affected by such incentives. (274 - 275)

Fahlenbrach and Stulz (F-S) examine compensation mechanisms in a broader sample of banks – about 100 – at the end of 2006 for the CEOs and the four other named executive officers. They carefully calculate not only salary and bonuses, but also the share of the bonuses paid in deferred stocks and estimate the current value of available options.²² F-S calculate that cash bonuses for the top five were on average almost three times the amount of salary, but that 40 percent of these bonuses were in deferred equity. Moreover, F-S emphasize that most “equity incentives stem from the existing portfolio of stocks and options, and not from annual grants ... [the former being] voluntarily held.” (17)

Having estimated the incentives at the end of 2006, F-S proceed to examine with a variety of regressions bank performance from mid-2007 to the end of 2008. The methodology is not important

²²The process is complex for a number of reasons among them being reported compensation is often not only due to annual performance but also current payments made for prior year awards and the need to value both restricted shares and equity options when they are out of the money.

here, but the results are. F-S find no evidence to support an incentive-based explanation of bank performance. Indeed, some of their regressions indicate that the better aligned were CEO incentives, the worse was bank performance! (20 - 21)

More important in terms of the Bebchuk *et. al.* study, is Figure 17 (F-S's Figure 2, p. 24), which plots changes in CEO ownership during 2007 and 2008. Had CEOs anticipated financial disaster, F-S rightly note that the CEOs should have sold off substantial amounts of their holdings. This is just not borne out by Figure 17, which indicates small percentage changes in CEO stock ownership in their own financial institutions except for the third quarter of 2008, the period including the Lehman bankruptcy and the seizure of financial markets.²³ Indeed, F-S calculate that the medium CEO lost almost \$30 million dollars from not acting. (23 - 24) We might note that both James Cayne and Richard Fuld, the CEOs of Bear Stearns and Lehman, respectively, suffered equity losses in the neighborhood of \$1 billion each as their firms tanked.²⁴

In short, while Bebchuk *et. al.* themselves suggest that incentives might have played a role in financial firms focusing on short-term results, they are unwilling to conclude that such was indeed the case. Fahlenbrach and Stultz find no evidence that the incentive structure of senior management led to risk-taking that benefitted themselves at the expense either of shareholders or other stakeholders in the firms. Instead, they argue that given the significant stakes held in their firms by senior management,

²³ Options are not included, but there is no indication in the text that F-S distinguished between those held outright and those shares that were owned but not yet available for sale because of their deferred status. However, it is quite likely that the latter were but a small proportion of the total equity ownership. Moreover, insofar as some deferred shares became available for sale during the 2007 - 2008 period, the actual percentages noted in the figure would even have been smaller.

²⁴ Some support to F-S may be adduced from Bolton *et. al.* They find that the higher riskiness to the CEO of bank failure (as measured by the percentage of deferred compensation and pension payments total compensation), the lower is the CDS spread, a proxy of the riskiness of the institution.
Prager, THE FINANCIAL CRISIS OF 2007/8

their long-term interests were appropriately aligned to those of the stockholders.²⁵

Unfortunately, both these studies, which creatively utilize the available data, must be qualified by the data paucity, which is too limited to reach a conclusive response to the question: How significant a cause of the financial crises were the incentive effects in the top echelons of financial institutions?

An alternative explanation: Management flaws and/or failures. What, then, drove senior management's actions? Perhaps the easiest way to respond to this question is to understand why some of the firms survived well and came out stronger after the crisis (notably Goldman Sachs and JP Morgan Chase), others barely pulled through and probably would have failed had they not been bailed out (Citigroup, Morgan Stanley), while others either did not survive independently (Countrywide Financial, Bear Stearns) or failed (Lehman).

It is instructive to point out that the incentive structure for senior management in virtually all these firms was similar. Bonuses were a multiple of salaries, equity grants and options were common, and to a smaller or lesser extent, deferred annual compensation was in place. Hence, *prima facie*, the compensation structure could not be a significant reason for the differing results.²⁶

The fundamental distinctions can be categorized as management flaws and/or failures. Under

²⁵Here's a lengthy excerpt by Stulz from an on-line dialogue between Stulz and Bebchuk. "Let's take the example of Dick Fuld, long-time CEO of Lehman Brothers. Dick Fuld sold equity and options worth approximately \$470 million during 2000-2006. At the end of 2006, he held Lehman shares and options worth approximately \$950 million, all of which he lost when Lehman went bankrupt. In my paper with Rudiger Fahlenbrach, we focus on the \$950 million in vested equity that Dick Fuld voluntarily held at the end of 2006, and argue that this, together with his reputation, provided powerful incentives to maximize long-term shareholder value going forward. We say, given relatively low cash compensation in investment banks, it is not too surprising that the CEO cashed out one third of his equity holdings to diversify his stake and reduce his exposure to the company. In contrast, Bebchuk, Cohen, and Spamann focus on the \$470 million liquidated between 2000 and 2006, and indirectly argue that this, together with short vesting conditions, gave Dick Fuld such a large wealth that he would be willing to take on excessive risks. What Bebchuk, Cohen, and Spamann cannot explain is why Dick Fuld voluntarily held \$950 million in equity in his own bank if he knew that he was taking excessive risks. It is simply not true that Dick Fuld had no skin in the game." (Stulz blog)

²⁶ Paulson might be an extreme case in that he wrote (Paulson, 35): "During my final three years as CEO, my bonus was paid entirely in stock. ...I decided that as long as I remained CEO, I would not sell a single share of stock I had received in exchange for my partnership interest when we went public, nor would I sell those shares I received for my annual compensation."

that broad heading are two subcategories: (1) lack of knowledge and control and (2) (overly?) self-confident senior management.

In at least two instances, senior management was simply unaware of the extreme risk some financial activities imposed on their entire institutions. Two glaring cases have been documented. In the case of AIG, where the implosion in late 2008 was caused by AIG's inadequate liquidity, itself a consequence of the miscalculation of AIGFP London operations, AIG's CEO Sullivan stated that "he knew virtually nothing about the insurance company's vast exposure to complex financial insurance products until the credit crunch sparked early signs of a meltdown at the near bankrupt firm."²⁷

The second instance of a severe information gap concerns Citigroup.

In September 2007, with Wall Street confronting a crisis caused by too many souring mortgages, Citigroup executives gathered in a wood-paneled library to assess their own well-being. There, Citigroup's chief executive, Charles O. Prince III, learned for the first time that the bank owned about \$43 billion in mortgage-related assets. He asked Thomas G. Maheras, who oversaw trading at the bank, whether everything was O.K. Mr. Maheras told his boss that no big losses were looming, according to people briefed on the meeting who would speak only on the condition that they not be named.²⁸

While it is true, as Prince later testified to the FCIC (April 8, 2010), that these holdings were only two percent of total Citigroup assets and that they were highly-rated, these toxic assets brought Citigroup to its knees.

One can never know whether policy at AIG or Citigroup would have changed had their CEOs been adequately informed. The evidence from other major financial corporations is decidedly mixed. To generalize, the CEOs at all these firms were charismatic and highly-competitive, indeed driven

²⁷ *The Guardian*. Cohan (575) reports that Greenberg, who had been forced out as CEO of AIG in 2005, testified to a Congressional committee in October 2008 that the weekly meetings to review all AIG investments and risks were suspended soon after he left. That meant no one at AIG's headquarters kept tabs on AIGFP activities, so that "Cassano [the head of AIGFP] appear[ed] to be free of management scrutiny." See also FCIC (243) and McLean and Nocera (327 - 328).

²⁸ Dash and Creswell. See also FCIC (260, 264). A similar situation concerning Merrill Lynch is discussed later. Prager, *THE FINANCIAL CRISIS OF 2007/8*

individuals whose personal performance, while measured in dollars, transcended financial rewards. By the early 2000s, the major players were already quite wealthy.²⁹ If the CEOs were concerned with money, it was the record of their firms and their ranking vis-a-vis their peers that mattered (Rajan, 143) They had for the most part risen through the ranks on the basis of their abilities (Paulson and Blankfein of Goldman Sachs, O'Neal of Merrill Lynch, and Prince of Citigroup are examples) or were self-driven innovators who built up their own firms from scratch (Mozillo of Countrywide). They surrounded themselves with highly-competent but loyal acolytes who replicated their bosses' qualities.³⁰

Let's take a few examples, beginning with Angelo Mozillo, who with his partner, David Loeb, founded Countrywide Financial in 1968 as a mortgage bank with a single office in Los Angeles. By 2000, the year Loeb retired and left the company in Mozillo's hands, Countrywide indeed had attained a national presence with revenues of \$1.7 billion. Revenues rose to \$8 billion in 2003 and by 2004 Countrywide was the country's largest mortgage lender, concentrating in subprime loans and responsible for almost a quarter of all mortgage originations in the U.S. Morgenson and Rosner quote one Countrywide executive concerning its lending strategy: "The sole criterion used to determine whether an applicant got a loan, he explained, was if a person could fog a mirror."³¹

Mozillo himself earned \$58 million in salary and bonuses from 2001 to 2004, but reaped far

²⁹ F-S's Table 3 (16) reports the median CEO equity portfolio in 2006 for their sample of banks at \$35.6 million and the mean at \$87.5 million. Considering that we are focusing on the top tier of bankers, even the mean underestimates the CEO equity portfolio. And equity in their own firm is but one component of the CEOs' total wealth.

³⁰ An extensive survey of the personal qualities of each of the bankers would take us far afield. However, the interested reader might wish to consult the plethora of books that have emerged in the last few years that for the most part tangentially confirm this description. In addition to the McDonald, Dillian, Cohan, McLean and Nocera, Lowenstein, and Morgenson and Rosner cited in earlier footnotes, see Cohan (2010), Greenberg, Lewis, Mayo, Paulson, Sorkin, and Tett.

³¹ This paragraph and the next are based on Morgenson and Rosner, Ch. 11; the quote is from (194). (See also Lowenstein (30 -31) on Countrywide's lending practices.)

more – over \$400 million – from his Countrywide stock sales. Indeed, a former executive at Countrywide stated: “His attitude was – ‘I’m from the Bronx. I made my \$500 million and it’s your problem if you haven’t made yours.’”³² Nevertheless, the compelling force behind Mozillo was his desire to become the largest mortgage lender in the U.S. in all aspects of the mortgage business. It also was his Achilles heel, for, in the final instance, Mozillo either ignored or failed to rein in his subordinates even though he was well aware of the risks their actions might cost Countrywide.³³ By 2008, Countrywide was bought at a fire-sale price by Bank of America, having succumbed to the financial crisis.

On to Lehman and Richard S. Fuld, Jr.³⁴ Fuld’s career began at Lehman as an intern upon graduation from the University of Colorado in 1969. He was soon trading under the tutelage of the legendary Lewis L. Glucksman, and by 1983 rose to even-greater prominence when Glucksman became Lehman’s CEO. Fuld continued trading, becoming “Lehman’s top trader” by the early 1990s; by 1993 he had been appointed co-president and co-CEO of Shearson Lehman Brothers Holdings. Ultimately, American Express, which had acquired Lehman in 1984, spun-off Lehman, and by 1996, Fuld became the dominant voice in the now-independent investment bank. Fuld revitalized the firm (including successfully shepherding it through the 1997 Asian financial crisis), increased internal

³² I do not mean to cast aspersions on Mozillo. It seems that he seriously believed, as Lowenstein phrases it, that “every citizen was entitled to a mortgage.” Lowenstein (28 - 29) characterizes Mozillo as “a powerful motivator – visionary and determined but possessed of a relaxed, easy manner. His ambition seemed a part of his charm....”

³³ “A 2006 email from Mozillo called no-money-down mortgages ‘the most dangerous product in existence and there can be nothing more toxic.’” p. 194 note. A slightly different quotation is cited in FCIC (20), which further notes that Mozillo was “nervous” and responded to colleagues who claimed competitors were doing the same: “‘There was a time when savings and loans were doing things because their competitors were doing it,’ he told the other executives. ‘They all went broke.’” Even more telling is Mozillo’s warning to senior executives concerning loans made to investors and speculators rather than to those who planned to live in their homes: “These loans could bring ‘financial and reputational catastrophe.’” FCIC (108)

As early as September 2004, “the company’s credit-risk management team ... advised top management that risky lending practices were imperiling the company.” (Morgenson and Rosner, 193)

³⁴ The characterization of Fuld in the following paragraphs is based on Sorkin, McDonald, and Paulson.

cohesion, attracted new clients, and broadened its activities especially into proprietary investments.

Lehman's stock price movement is one telling indication of success, rising from the \$51 at the end of the fiscal year in November, 1996 to over \$87 in November, 2004.

Sorkin depicts Fuld as follows:

Although Fuld stands no more than five feet ten inches tall, he has an intimidating presence.... A fitness buff and a weightlifter, Fuld looked like someone you didn't want to take on in a fight, and he had the intensity to match.... Within Lehman, Fuld earned a reputation as a single-minded trader who took gruff from no one.

Sorkin also comments on Fuld's fierce loyalty to his subordinates, but such loyalty was repaid by their fealty to Fuld. Although those edges appear to have been moderated after Fuld became the CEO,³⁵ one retains the impression that Fuld's self-confidence reigned supreme and that he never questioned his own abilities. "Still, there was something about Fuld that made him [i.e., Hank Paulson, by then the Secretary of the Treasury] nervous. He was a risk taker – recklessly so, in Paulson's view." (Sorkin, 51)

McDonald reinforces this views in his chapter titled "King Richard Thunders Forward."

Now, Dick had either been born or somehow evolved into a very strange character, remote from his key people, apparently allergic to the engine room of the business, and obsessively jealous of his hold on power.³⁶

The 31st floor of Lehman Brothers seemed totally disconnected from the rest of the firm.

³⁵ "To his own surprise Fuld proved to be good at massaging egos, wooing new talent, and perhaps most shocking for a trader, schmoozing clients." Sorkin, (26)

³⁶ McDonald, (213). McDonald describes the frustration of Mike Gelband, Lehman's head of fixed income and a member of Lehman's executive committee, in trying to convince Fuld that "This is not going to be just a credit crunch. This is going to be the granddaddy of all credit crunches. And you're trying to buy into it." Fuld's response, according to McDonald, was "I don't want you tell me why we can't.... I want you to be creative and tell me how we can. You're much too cautious. What are you afraid of?" (pp. 234 - 235; dates are unclear; apparently this took place over a period of early through mid-2007). Gelband resigned in May 2007. He was called back by the new president, Mike McCabe after Fuld's long-reigning president and friend, Joseph Gregory, was deposed in June 2008. However, Fuld was still the CEO, the titular head of the firm and the ultimate decision-maker.

I am not arguing with the benefit of hindsight that Gelband was right and Fuld was wrong. In any organization, the buck stops somewhere – decisions are made by the chief executive – and at Lehman that was Fuld. I am arguing that the very nature of this or any corporation with a strong leader faces turning points in its life, and there is no way to predict whether decisions will go well or not. As Kahneman says, luck plays a very significant role. More on this point later.

A recurring theme by many of the commentators is Fuld's fierce determination not to play second fiddle to Goldman Sachs and the Blackstone Group, whose co-head, Peter Peterson had been forced out of Lehman by Glucksman, and who had achieved both immense wealth and prestige at Blackstone. That inner drive and his professional background as a risk-taker led Fuld to pay attention only to those of his subordinates who supported his views and to disregard, if not browbeat the opposition.

This characteristic becomes most evident in the months and weeks prior to the Lehman collapse. Fuld was impervious to the downturn in the derivative markets in 2007 and the decline of Lehman share prices. He refused offers to sell Lehman in 2008 because he thought the bids were underpriced.³⁷ He was shocked that Paulson refused to bail out Lehman even though the Secretary of the Treasury had been pushing Fuld to sell. And, as the residential housing market turned down, Fuld bet on an upturn in the commercial real estate market. As Dr. Henry Kaufman, the only economist and financial expert on the Lehman board of directors testified to the U.S. Bankruptcy Court:

The bank's management told the board that, in spite of trouble in the subprime market, 'the current distressed environment provides substantial opportunities.' As a result, Lehman Brothers decided to embark on a 'countercyclical strategy....'

that intensified its exposure to commercial property. Peter Chapman, from whose book this citation is taken, comments that despite Kaufman's reputation for caution (and presumably qualms about this policy), "Such qualities at this time ... did not seem to have much influence."

The well-known result: the markets turned against Lehman during 2008, the other banks failed to come to its rescue despite strong prodding from the U.S. Treasury and the Federal Reserve, last-

³⁷ See Paulson's recollections (158 and 173).

minute efforts to sell Lehman either to the Korean Development Bank or to Barclays came to nought, and Lehman was forced into bankruptcy in September 2008.

In contrast, Goldman Sachs fared relatively well. True, it borrowed from the TARP funds in September, 2008, but apparently was compelled to do so by Paulson.³⁸ It was also the first to pay off its TARP loans by the summer of 2009. It recognized the decline in housing prices early, and protected its assets by a combination of shorting derivatives and insurance via credit default swaps. That Goldman has taken substantial public heat for putting its own interests ahead of those of its clients as it practiced a classic form of cut-throat capitalism and hewed to the principle of *caveat emptor* – that in July 2010 resulted in a record \$550 million *nolo contendere* settlement with the SEC – is not relevant for this paper. Once again, our concern is how did this investment bank, headed during this period first by Hank Paulson and then by Lloyd Blankfein, although Paulson came from the investment banking side of the business and Blankfein from the trading side, manage to survive if not thrive?

Paulson's rise to prominence at Goldman was due to his outstanding "revenue-generating ability" combined with an unusual work ethic even at Goldman. "The word around Goldman was that *nobody* worked harder than Paulson."³⁹ He joined Goldman in 1974 after a brief stint in policy-oriented positions in the federal government, was made partner in 1982, took on ever-more responsible management roles, and was promoted to the second-in-command to Jon Corzine in 1994. Among the noteworthy accomplishments of the pair that was to play a key role during the crisis was a "new system

³⁸ "Cohn, even claimed, publicly, that Goldman Sachs had never actually needed government help...." Lewis (262).

³⁹ Cohan (352), italics in the original. Much of the following paragraphs on both Paulson and Blankfein stem from Cohan.

Cohan writes a few lines further: "His brash, take-charge mentality offended some of his partners who thought he spoke too quickly or made decisions too impulsively. 'He's an action-oriented person, and one of his great skills was identifying smart people and absorbing good ideas that they had, and then pulling the trigger,' was how one of Paulson's rivals at Goldman described him, choosing every word very carefully." These qualities vividly come to the fore in Paulson's dealing with the financial crisis especially during late August and early September 2008 as described in Paulson's *On the Brink*.

of risk controls, accountability, internal police, and open lines of communication.”(Cohan, *Money and Power*, 371). ⁴⁰ By 1998, Paulson became Corzine’s co-CEO and co-chairman, and then engineered a coup that deposed Corzine in January 1999. Paulson reigned supreme until he became the Treasury Secretary in early 2006.

It was during Paulson’s tenure that Goldman played an active role in the creation and marketing of MBSs and CDO as well in the emerging CDS trade,⁴¹ but the crisis played itself out with Blankfein at the helm.

Blankfein, a success-oriented young man who attended Harvard on a work-study scholarship, was not a stellar student, but did well enough to be admitted to and in 1978 he graduated from Harvard Law, again without notable distinction. Upon graduation, Blankfein worked for a few years in a law firm, but then, deciding upon a career change, joined a small Wall St. trading company, J. Aron & Co., a subsidiary of Goldman Sachs. (It was the only offer he had.) It was at Aron that Blankfein’s star began to emerge. He was not a trader, but, as one of his managers commented, “He was clearly bright and energetic, even dynamic and passionate.” (Cohan, 460) By 1984, Blankfein was in charge of Aron’s foreign trading desk; “his career took off as a manager of traders. He seemed to have a sixth sense about when to push them to take more risk and when to take their collective feet off the accelerator.” (Cohan, 461) Blankfein became a Goldman partner in 1988, the CEO of J. Aron in 1994, and in 1997, the co-head of Goldman’s fixed-income business. Blankfein became COO in 2004. According to Cohan, Paulson was impressed with Blankfein’s “tenacity, his ambition, and his hands-

⁴⁰ Cohan quotes (372 - 373) Paulson: “I didn’t say, ‘I’m a banker, I don’t understand this stuff’.... I was at every risk committee meeting, I was doing everything I could to understand the firm’s risk. I did that right up until I left the firm.”

⁴¹ A summary of Goldman’s derivative activities may be found in FCIC (142 - 146). Profitability of Goldman, primarily due to its securitization and trading activities (headed by Blankfein) from 2002 to 2004 gave rise in the investment banking community to “Goldman envy.” (Tett, 133 - 134)

on management of the business,”(Cohan, 464)⁴² and ultimately found Blankfein his fitting successor.⁴³

Goldman began withdrawing from its proprietary interest in the housing derivatives market in late 2006 in light of the concern of some of the personnel on the fixed-income trading desks. As more senior managers became convinced of a brewing problem, attention was brought to the highest echelons.

“One of my jobs at the time was to make sure [Gary D.] Cohn [the COO], David [Viniar, the CFO] and Lloyd [Blankfein] knew what was going on,” Sparks [head of Goldman’s 400-strong mortgage trading desk] said. “They don’t like surprises, so they need to know in real time if there’s good or bad things happening. They were the kind of guys that I think were good enough managers so if you tell them that, then they can deal with it.” (Cohan, 500)

In a December 2006 meeting called by the CFO and attended by the heads of the fixed income group, Goldman’s exposures were assessed, the direction of the mortgage markets was explored, and a conclusion was reached: “reduce Goldman’s risk as close to zero as possible.” (Cohan, 502) That became Goldman mantra throughout 2007 and 2008, although it turned out to be practically impossible. Yet it succeeded in palpably reducing Goldman’s losses.

Where was Blankfein during this time? Cohan, barely mentioning Blankfein , intimates that Cohn and Viniar were the primary decision-makers. In late October, for example, they responded to Blankfein’s query about the results of a review of Goldman’s mortgage and CDO activities:

“Extremely well. You will be pleased.”(Cohan, 567) It is possible that Blankfein was a hands-off manager, leaving decisions to his trusted, senior colleagues. But in light of Blankfein’s background at Goldman on the fixed-income side and his direct involvement during his years prior to becoming CEO

⁴² An almost identical story may be found in Sorkin (170 - 172).

⁴³ McLean and Nocera (156): “Blankfein had all the verbal dexterity Paulson lacked, and although he wasn’t physically prepossessing, tough-talking trader types were drawn to him. One partner described it as a bit of a ‘sun god phenomenon.’”

in May 2006, that's hardly plausible. Indeed, Ellis (674) mentions a more active role for Blankfein, commenting that in early 2007, he ordered Goldman traders to sell off 10 percent of every mortgage-related position.

Different banks, different executives, and different results. The commonality is the nature of the CEOs and their teams – highly-motivated, hard-driving, and extremely-intelligent men working in a stressful, volatile environment managing corporate behemoths. The advice the CEOs received was often contradictory, but the ultimate decision rested with them. Their attention to or lack of concern toward the consequences of their traders' and managers' actions and the compensation policies that spurred them on was ultimately their failure – a failure of senior management and specifically, the CEOs. Need we repeat Kahneman's equation: great success = a little more talent + a lot of luck? That some succeeded while others failed was a matter of luck rather than skill.

IV. The questionable role of risk managers and boards of directors

CEOs are not assumed to be fully independent agents. Where were the risk managers, who were charged with instilling caution? And if one would argue that the risk managers ultimately reported to the CEOs and their warnings could be disregarded, where were the boards of the banks, the legal overseers, who were mandated to monitor management behavior and actions?

The short answer to the first question is that banks differed in the attention they paid to their risk officers. In the case of Lehman, for example, the Chief Risk Officer (CRO) was totally marginalized, while at Goldman, as indicated previously, significant attention was paid to risk. However, that, too, was a matter of CEO decision, and cannot be separated from the commanding role of the CEOs of the various financial institutions that were central to the financial crisis.

As to the boards, they were for the most part, irrelevant. To expect boards of directors of

globally-active financial institutions to be involved in anything other than broad strategic decisions is unrealistic in the dynamically-changing financial marketplace. Financial markets often display appreciable volatility; uncertainty is their predominant characteristic. Management in such an environment must react with hands-on knowledge combined with quick-acting and flexible responsiveness. That cannot be expected of boards. (This stands in contrast to nonfinancial corporations, where flux is not the normal state of affairs, and boards can effectively shape long-term strategy.) Furthermore, as will be shown shortly, the boards themselves were in the vast majority of instances incapable of understanding the finer points of investment banking,⁴⁴ and even if they were, were dependent upon management as their information source.

Risk management. Goldman's approach to risk management can be summarized briefly:

Goldman is well known for having one of the best risk measurement and management systems on Wall Street... One example...[:] all companies engaged in trading activities have to be concerned with trader behavior. At Goldman, there is a parallel organization to the trading group that is charged with pricing trading positions, limiting excessive concentration, and managing risk. That group has people with comparable skill, stature, and compensation.⁴⁵ (Sahlman, 33)

McLean and Nocera (157 - 159) confirm that Goldman "practiced risk management with an unblinking rigor that no other firm on Wall Street came close to matching." In addition to a number of other risk-detering practices such as tempering empirical model results "with the informed judgment of human beings," the authors highlight the importance of communication – the good and the bad – throughout the firm. "Information didn't get stuck in silos, and because Blankfein came from the trading business,

⁴⁴Striking is the question that former president Gerald Ford, who was an honorary director of Citigroup asked at a director's meeting. He wanted to know what precisely was a derivative. (I can't find the precise reference.)

⁴⁵ See also Cohan, (568), quoting a Merrill Lynch investment banking analyst in a *New York Times* article: "At Goldman, the controller's office – the group responsible for valuing the firm's huge positions – has 1,100 people, including 20 Ph.D.s. If there is a dispute, the controller is always deemed right unless the trading desk can make a convincing case for an alternative valuation. The risk controllers are taken very seriously."

he could have a conversation with traders and understand it.”⁴⁶

Finally, Goldman’s Risk Committee was firm-wide, met weekly, and was headed by the COO and CFO, with the CEO in frequent attendance. In short, while ultimately policy decisions were Blankfein’s, they were influenced by the firm’s culture and institutional concern with risk.

No greater contrast to Goldman is that of Lehman under Fuld. McDonald writes of the marginalization of Madelyn Antoncic, the CRO at Lehman during the early part of the crisis. Antoncic, a consummate risk professional,⁴⁷ was “asked to leave the room whenever there were tense issues involving risk being aired in front of the executive committee.” When in late 2006, Antoncic voiced her bearish views on mortgage derivatives to the most senior echelons, Fuld removed her from the CRO position.⁴⁸ His executive committee did not object.

The role of risk managers in other financial institutions – where such positions existed⁴⁹ – was not substantially different. A similar marginalization of a CRO, this time at Merrill Lynch is related by McLean and Nocera (1 - 3). Under CEO O’Neal, the risk management function had been downgraded, and the CRO, John Breit, had lost so much authority that he resigned. Although he was recruited back shortly thereafter, Breit found his access to information limited. After voicing projected multibillion dollar losses for Merrill, Breit was called into a meeting in 2007 with O’Neal, and shocked O’Neal with his loss estimates. “Over and over again, he kept asking Breit how it could have happened... Why

⁴⁶ See also Cohan, chs. 19 - 22. The report of the Senior Supervisors Group (comprising bank regulators from the U.S., France, Germany, Switzerland, and the UK) implicitly appears to use the Goldman Sachs model for effective risk-evaluation and execution policy.

⁴⁷ Among her credentials were an NYU-Stern finance Ph.D., a stint as a New York Federal Reserve Bank economist, and then a Goldman mortgage-backed securities trader and risk-manager. She was the 2005 *Risk Magazine* Risk Manager of the Year.

⁴⁸ “I have been told by two close friends who were in attendance at one of those meetings that Dick Fuld, irritated beyond reasonable endurance by Madelyn’s warnings, resolutely told her to ‘shut up.’” (268 - 269) Antoncic’s marginalization is confirmed in Sorkin (122).

⁴⁹ Ellul and Yerramilli surveyed the 74 largest U.S. BHCs from 2000 to 2008, and found that just over 50 percent had a CRO as an executive officer and in less than 20 percent was the CRO among the five named executive officers.

hadn't the risk managers caught the problems and stopped the trades?... Listening to him, Breit realized that O'Neal seemed to have no idea that Merrill's risk management function had been sidelined."

Typically, the CRO and the risk staff were rewarded far less handsomely than the trading staff; they were considered "back-office" personnel. For example, the FCIC (285) reported that Bear Stearns's CRO in 2006 received less than one-tenth of the compensation of any one of the top three executives of the bank. In an hierarchy where financial reward is indicative of influence, this speaks loudly for the general inconsequence of risk officers. It is not surprising that risk management, which to borrow an analogy from central bank policy, involves removing the punch bowl just as the party is getting exciting, did not play a pivotal role (Goldman Sachs excepted).⁵⁰

In short, risk management at most financial institutions was a function of overall management, which was dominated by strong CEOs. Risk managers had clout only where the CEO wanted or at least acquiesced to strong controls on risk. And where the opposite was true, risk management was titular, not substantive if it existed at all.⁵¹

And where were the boards?

Boards of Directors at Financial Institutions. As noted earlier, because investment banks and the

⁵⁰ Kirkpatrick, who focuses on the OECD notes (12): "At a number of banks, the lower prestige and status of risk management staff vis-a-vis traders also played an important role."

⁵¹ Whether having the CRO report directly to the board as mentioned in Kirkpatrick (20) will make a significant difference depends crucially on the relationship of the CEO to the board. As will become apparent in this section, for the most part boards were weak and tended to be supportive of the CEO, so such a reform would not have mattered much. One noteworthy anecdote – the CRO of MF Global reported to the board a number of times that he was concerned with the riskiness of the firm's sovereign risk bets taken by the CEO, Jon Corzine. The board supported Corzine, demoted the CRO, who left soon after. GF Global went into bankruptcy on October 31, 2011. See Lucchetti and Steinberg and Davidoff,

However, see Aebi *et. al.* (1), who assert: "Our results indicate that banks in which the CRO directly reports to the board of directors and not to the CEO (or other corporate entities) exhibit significantly higher (i.e., less negative) stock returns and ROE during the crisis." Whether the CRO reports to the board or not itself may well be an endogenous variable that is not considered in their analysis.

investment subsidiaries of bank holding companies operated in volatile markets with balance sheets that are marked-to-market and hence capable of moving by billions of dollars daily, and, further, because during the years prior to and during the crisis they operated with their own funds for their own accounts, one should not expect even an experienced board to play a role in the day-to-day operations of the banks. And although it was these routine activities that brought the banks to the precipice, and Lehman over it, it is unrealistic to expect boards to exercise oversight over trading activities or even to set meaningful and enforceable limits to risk. That is the proper role of management, not boards. For boards, the expression goes, “Noses in, fingers out.” (Wong, 8)

“What Do Directors Do?” is briefly discussed by Renee B. Adams, Benjamin E. Hermalin and Michael S. Weisbach. Among their primary answers are ““setting strategy, corporate policies, overall direction, mission, [and] vision [of the company]”” and “the hiring, firing, and assessment of management.” (64 - 65) In setting policy, board members are broadly involved directly and through board committees. Audit and compensation committees are common, and in some banking entities, risk committees, too.⁵² Board members often serve a public relations function whether vis-a-vis government, the not-for-profit sphere, or the private sector. They also serve a networking function, and their Rol-o-dex (nowadays, their Linked-In contacts) opens channels for new business. And yes, it is the board that has the final say on bankruptcy.

But it would be wrong to see the boards as independent entities, poised at the pinnacle of an hierarchical arrangement, with management responsive to its directives and oversight. First, senior

⁵² “Surprisingly and in contrast to most large European banking boards, we find that U.S. banking boards do not seem to view the oversight of risk management and the setting of risk appetite of the institution as a core responsibility of the board. Among our sample, JPM [JP Morgan Chase] is the only bank to provide a clear mandate for the board as a whole to oversee risk management. This contrast with the other five peers, where it seems that all but the broadest (and most formal) risk related issues do not, in principle, reach the entire board.” (Nestor Advisors, 15). The report notes that Goldman Sachs’ board handles risk less formally, while Bear Stearns’ board did not establish a risk committee until early 2007.

corporate managers typically sit on their own boards, and may hold a significant minority of seats thereon.⁵³ Indeed, it is not unusual for the CEO to also serve as the chair of the board, which was common for most of U.S. financial institutions prior and during the crisis.⁵⁴ Nor is it out of the ordinary for the board committee chairs be held by executive (i.e., management-related) directors and even the CEO.⁵⁵ Second, independent directors are most often nominated by management – election of board nominees is virtually assured – making it still more questionable whether they can exert independent oversight. Third, because the directors do not obtain information from their own company sources but through management, the transmittal of incomplete or even incorrect information further leads to questions of independent oversight.⁵⁶ Finally, it is not unheard of that management, even after receiving explicit directives from the board of directors, just ignored them. That may well be due to “the disparity in stature between the chief executive and other board members,” (Wong, 2011), so that the CEO views the board as advisory rather than determinative.

In addition, independent directors’ commitment to their board is limited. Invariably, their directorships are part-time, and so their devotion to their tasks is necessarily part-time. Should they be plied with substantial information, the problem of information overload surfaces. (Wong, “Elevating,” 13) Furthermore, do the directors have the requisite expertise and if so, is their knowledge-base

⁵³New York Stock Exchange rules mandate that a majority of directors be independent. That leaves significant scope for insiders. Moreover, as will be evident immediately, independence of directors hardly suggests that they will be able to institute and implement policies independent of management.

⁵⁴ A 1991 study cited by Adams *et. al.* found that Chairman-CEO duality was present in almost 80 percent of large U.S. corporations. (81).

⁵⁵ Jim Cayne, Bear Stearns’ CEO, told the FCIC that “he set his own compensation and the compensation of all five members of the Executive Committee. According to Cayne, no one, including the board, questioned his decisions.” (285)

⁵⁶Wong (25): “As one financial executive put it, management presentations could be delivered ‘in such a complex way that [the non-executive directors] would be prevented from asking whether the emperor is naked for fear of looking stupid.’” Wong adds: “In recent years, there have been high-profile incidents of CEOs failing to inform or involve their boards on critical developments....” Merrill’s O’Neal was “allowed to resign” after ignoring the board’s request not to pursue a merger. (Lowenstein, 109 -110)

current? As will be shown presently, the backgrounds of directors and hence their ability to monitor specifically the banks varied drastically, leaving one to conclude “No” in all too many instances.⁵⁷

Again, we highlight the contrast between Lehman and Goldman Sachs. The composition of the Lehman board for many years prior to its bankruptcy is, in retrospect, startling. The 10-member board was chaired by CEO Fuld, who was the second longest serving member. By 2007, the majority had served over 10 years. The youngest member was 50, the oldest 80, and the average director age was not quite 70 years. As to the occupational distribution of the nine independent directors, five had held prior to their retirement top-level management positions in the nonfinancial world, one was a senior military officer also active in the non-profit world, one hailed from the entertainment industry, and only two bore some relationship to the financial world. Noteworthy, these two were the 80-year elders, and one might wonder how current they were in the intricacies of complex financial instruments and their risk profiles.⁵⁸

Lehman’s board did have a risk committee; it met infrequently – only twice during 2007. (Nestor, 16) Moreover, given the composition of the board, it is highly questionable whether the risk committee could act independently of management.

If we can rely on the acerbic observations of McDonald (225 - 226), one can obtain a sense of the relationship of the Lehman board to Fuld.

King Richard had even turned Lehman’s board of directors into a kind of largely irrelevant lower chamber. This was yet another group to rubber-stamp his decisions and collect

⁵⁷ Adams (2010, 455) points out a unique difficulty of recruiting bank directors: “Banks often have a difficult time identifying good candidates for directors because they cannot recruit anyone who is affiliated with other banks or investment banks. Furthermore, some candidates with banking experience prefer not to join a bank board because this limits their ability to work with other banks.”

⁵⁸ Nell Minow (FCIC, 327) who rated firms on corporate governance, attributed poor governance at Lehman to the board including “an actress, a theatrical producer, and an admiral, and not one person who understood financial derivatives.” Dina Merrill, the actress, resigned from the board in 2006 at the age of 83, having served for 18 years. See also Berman.

generous fees. It was not for supplying well-meant and lucid wisdom in the current wild marketplace, but for agreeing with the monarch, accepting his all-knowing take on the bank's investments.

In the end, of course, it was the Lehman board who directed the bank's attorneys to file for bankruptcy in September 2008.⁵⁹

The story at Goldman differs markedly. Risk, as mentioned earlier, was a major concern at Goldman and was monitored at the highest management levels. It was natural that this concern pervaded the board as well. Nestor Advisors wrote (15):

The GS audit committee has responsibility for discussing "management's assessment of risk oversight" in all areas of risk. The size (eight) and composition (four FIEs) [Financial Industry Experts] of this committee allows for an integrated approach to risk oversight at the top of the governance pyramid.... We should also underline the practice at GS of having essentially all NEDs [Non-executive directors] attend all committees. From a risk oversight perspective, this practice might be quite effective in providing NEDs with a comprehensive view of key risks and allowing them to have a collective board view on group risk tolerance and appetite.⁶⁰

The details of the Goldman Sachs board (2004) differed in a number of ways from that of Lehman. While the two most senior members of Goldman, Paulson and Blankfein served on the board, the former as chairman, the other eight members were independent and primarily from industry. One was an academic, and three were actively involved in the financial industry. Moreover, the average age of the non-executive board members was 59 years, with the oldest director an outlier at 68. In general, not only were the directors younger than was the Lehman board and more inclined to be active in the financial world, their stature in the corporate universe was also weightier.

Hence, the difference between Lehman and Goldman is palpable. But it is doubtful whether

⁵⁹I have been unable to discover when the board was told that bankruptcy was pending, but I'm under the impression that it was near the end. I have not seen any indication that Fuld informed much less consulted with the board about the severity of the crisis facing Lehman in August and early September although the directors could hardly been unaware of the market's reactions.

⁶⁰See also Ellis (672 - 673).

that made a difference in the respective boards' ability to act as counterweights – if need be – to their banks' senior management.

The situation at other banks varied but the conclusion remains unchanged. In an arbitrary sample of 4 additional financial institutions for 2004 (AIG, Countrywide Financial, IndyMac, and Morgan Stanley), the average age of directors was in the low 60s, except for IndyMac, where the average was 53. In terms of the independent directors' experience, the majority were not current or former financial services industry executives, but in all the boards, a significant minority was. In all, the CEO was also the chair of the board. At first blush, no obvious correlation can be detected between board composition and firm outcome during the crisis. The boards did not vary much either in composition or experience and yet the impact of the crisis on these four firms differed radically – AIG was virtually nationalized, Countrywide was taken over by the Bank of America, IndyMac was closed by FDIC, and Morgan Stanley remained independent although it transformed itself into a bank holding company.

In short, neither CROs or boards are likely to exert a significant counterweight on CEOs for any of reasons suggested in this section. CROs are always subordinate to the CEO even when they report directly to their boards. As for the directors, it is the exceptional board that is not dominated by its CEO either for want of information, for lack of the requisite technical ability, or for inadequate commitment. How much more so is this true in the investment banking industry, where decisions that could bankrupt the firm or make it highly profitable do not always lend themselves to thoughtful prior deliberation. Should we really be shocked by the results of a survey of directors by McKinsey & Co. in 2011 –“In the financial sector ... just 6 percent [of the directors who responded] claimed to fully grasp the operating strategy [of their companies].” (Mayo, 159) And this was after the financial crisis!

CEOs of leading financial institutions before and after the crises were a power unto themselves. Unless they were egregiously derelict in their duties, engaged in criminal acts and were caught, were ousted by ambitious subordinates, or were just unlucky, CEO tenure and power will remain undiminished.

V. Legislative/Regulatory Responses

Reform subsequent to the financial crisis was not limited to the United States. Some regulatory changes in the UK and the EU were implemented, while others remain in the discussion stage. For the most part, these reforms are directed to responding to past deficiencies in the belief (hope?) that repairing the past will prevent future financial debacles. The 2010 Dodd-Frank Act (formally, “The Wall Street Reform and Consumer Protection Act”) is an omnibus piece of legislation that among other provisions aims to identify SIFIs (Systemically-Important Financial Institutions), to strengthen bank capital and liquidity, proposes reducing counterparty risk by clearing derivative transactions through clearing houses, imposes greater “skin in the game” on securitizers, and mandates CRAs, which are to become irrelevant in bank asset evaluations, to reduce conflicts of interests between marketers and analysts. The so-called Volcker amendment included in Dodd-Frank restricts proprietary activities by banks, so that a regulated financial institution cannot trade in any substantial way for its own account. However, while Dodd-Frank and similar EU regulation will set the framework for banking conduct for years to come, they are not my concern here.

Instead, this section briefly examines some of the proposals relating to incentives, merely to give a flavor rather than to place them under the microscope. In and of themselves, they may be seen as therapeutic as well as prophylactic. However, I contend that the underlying issue – management control – is not only ignored but is fundamentally incapable of being revamped without entirely

destroying the essential fabric of the financial marketplace.

The concern with misaligned incentives and the focus on bonuses predicated on short-term results independent of long-term consequences is reflected in the reforms in a number of ways. The Dodd-Frank Act mandated that the federal regulatory authorities develop rules that require all financial institutions to report compensation arrangements and to prohibit all incentive rewards that encourage “inappropriate risks that could lead to a material financial loss.” Boards are to be more involved with company-wide risk, and are to assure that compensation policies take risk into account.

While the regulations are still being fashioned, their outlines are apparent.⁶¹ Deferred payments are intrinsic. Compensation of “executive officers” cannot be more than 50 percent in cash and must be deferred for at least 3 years. Regulations will also impose longer-term compensation mandates on other parties who could jeopardize the viability of the bank. However, no clawback provisions related to flawed longer-term outcomes of short-term actions are mentioned.⁶²

In fact, the Federal Reserve reports that banks have made much progress in better aligning compensation practices with risk. While noting that deferred compensation had been common in the banking community, “pre-crisis deferral arrangements typically were not structured to fully take account of risk or actual outcomes. Almost all firms now use vehicles for some employees that adjust downward the amount of deferred incentive compensation that is paid if losses are large.”⁶³ The report expresses less confidence about measures related to the compensation/risk balance at the board level –

⁶¹See, for example, FDIC.

⁶² A group of economists met at Squam Lake, NH in 2008 to discuss financial system reform. Among the recommendations concerning compensation was a cash holdback for senior managers that would be forfeit should their SIFI either fail or receive “extraordinary government assistance.” See Frank *et. al.* (81 - 84).

⁶³Board of Governors of the Federal Reserve System, (2). The absence of clawbacks and their potential usefulness are noted on (17).

“Effectiveness will depend on the attentiveness of members of compensation committees to risk-taking incentives.” (24)

The EU has proceeded more aggressively. While the underlying philosophy is identical,⁶⁴ the constraints on compensation proceed somewhat further. First, a broad umbrella covers those whose activities could jeopardize a bank – senior executives, directors, management responsible for day-to-day functions, responsible staff in the risk management and finance department personnel, and traders and trading desk managers. Second, 40 - 60 percent of all “variable remunerations” (i.e., other than salaries) are to be deferred over a 3 to 5 year interval, with reassessments of consequences and therefore the possibility of future payment reductions from previously-allocated bonuses. And they are only to be partially in cash. Finally, clawbacks enter into the scheme when the long-term consequences of short-term actions merit such a response.⁶⁵ (13 - 17, 59 - 64)

It is clear from news reports that a number of financial institutions have moved in this fundamental direction without waiting for the rules to be firmed.⁶⁶ Only time will tell how effective these measures will be or whether they will be circumvented in whole or in part.

VI. Conclusions

Two competing threads have been woven through this essay. While misaligned incentives play a dominant role in the minds of economists, it has been the contention of this paper that – as appealing as this narrative might be in explaining the financial crisis of 2007 - 2008 – at best it was supportive rather than primary. We have emphasized the crucial responsibilities, actions, and errors of senior

⁶⁴“Remuneration policy should aim at aligning the personal objectives of staff members with the long-term interests of the credit institution or investment firm concerned.” Committee of European Bank Supervisors (45).

⁶⁵ The EBA paper also advocates (42 - 43) against permitting staff to engage in hedging strategies or insurance that would mitigate the impact of the long-term component of the bonuses as well as the clawback.

⁶⁶ See, for example, Werdiger, Stewart (2012), and Roose

management at various U.S. financial institutions.⁶⁷ Leadership is the crucial explanatory variable in this narrative. Some CEOs were skilled and lucky, others were equally skilled but ill-starred. In retrospect, some were prescient, others were stampeded by the thundering herd. In a number of instances we have contrasted Lehman Brothers' CEO Richard Fuld with Goldman Sachs CEO Lloyd Blankfein. Yet, they were both cut from pretty much the same cloth in terms of their intelligence, work ethic, ability to inspire others, and overall success – until 2008. The reason that Goldman fared better during the crisis and Lehman failed had much to do with the ability of the banks' leadership to understand and react to the nature of the financial crisis. Senior management at Goldman correctly read the financial markets and projected a bleak future. Senior management at Lehman misread the plummeting real estate and financial derivative prices, deeming the downturn transitory. Yet, Goldman and only a few others turned out in retrospect prescient; the bulk of the sophisticated market participants thought and acted no similarly than did Fuld.⁶⁸ Had the markets indeed turned around, Lehman would have thrived and Fuld would have been acclaimed while Goldman's and Blankfein's reputation would have been tarnished. Hindsight is an unreliable predictor of foresight.

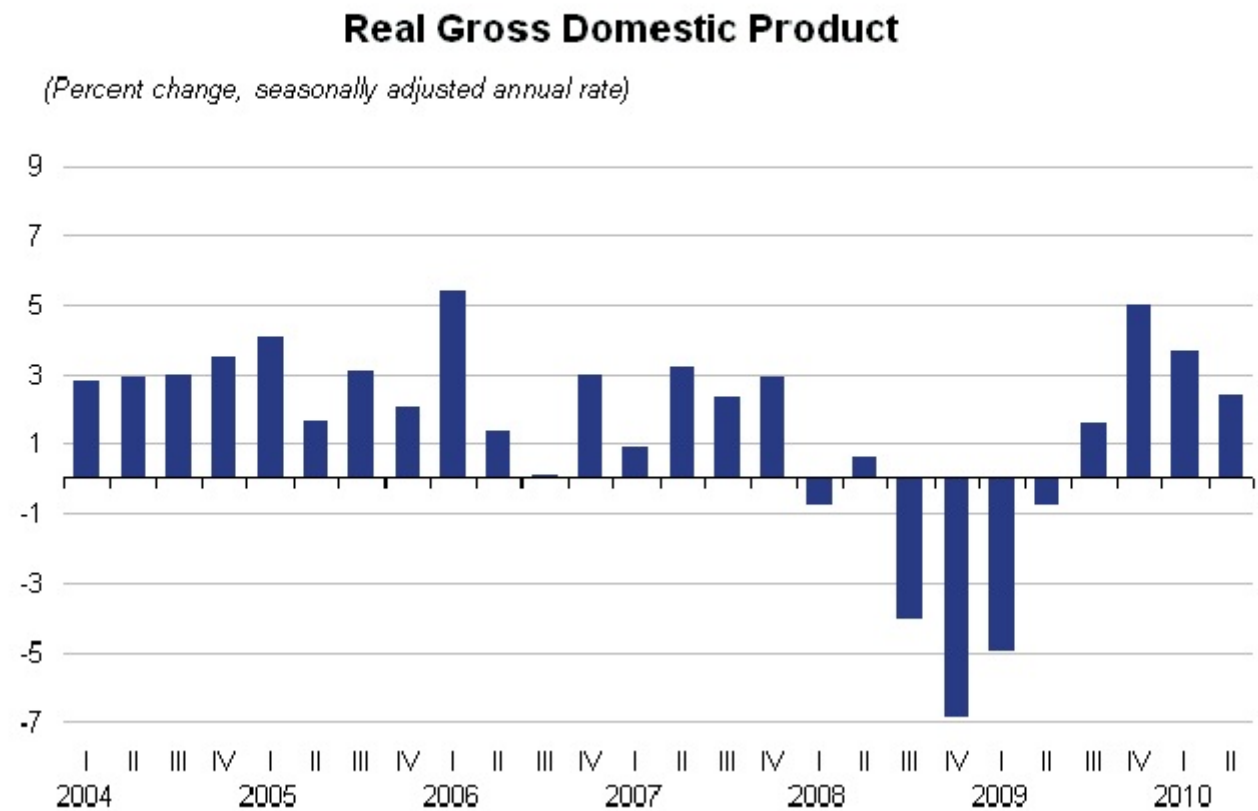
To claim that policy-makers, be they legislators or regulators, can fashion a fail-safe financial structure is delusional. Hence, one cannot insure that there will not be another financial panic in the future. To be sure, policy-makers can set into motion policies designed to prevent or at least mitigate a recurrence of the 2007 - 2008 crisis. They can always fight the last battle. But it is presumptuous and ahistorical to believe that it is possible to predict the source and timing of the next debacle. Optimism about prevention is sorely misplaced.

⁶⁷While our focus has been U.S.-directed, a similar story could have been told for other parts of the global marketplace – some institutions were on the brink of collapse and others fared far better.

⁶⁸Lewis's *The Big Short*, which focuses on those who forecast a collapse of derivatives, has only a few major players.

FIGURE 1

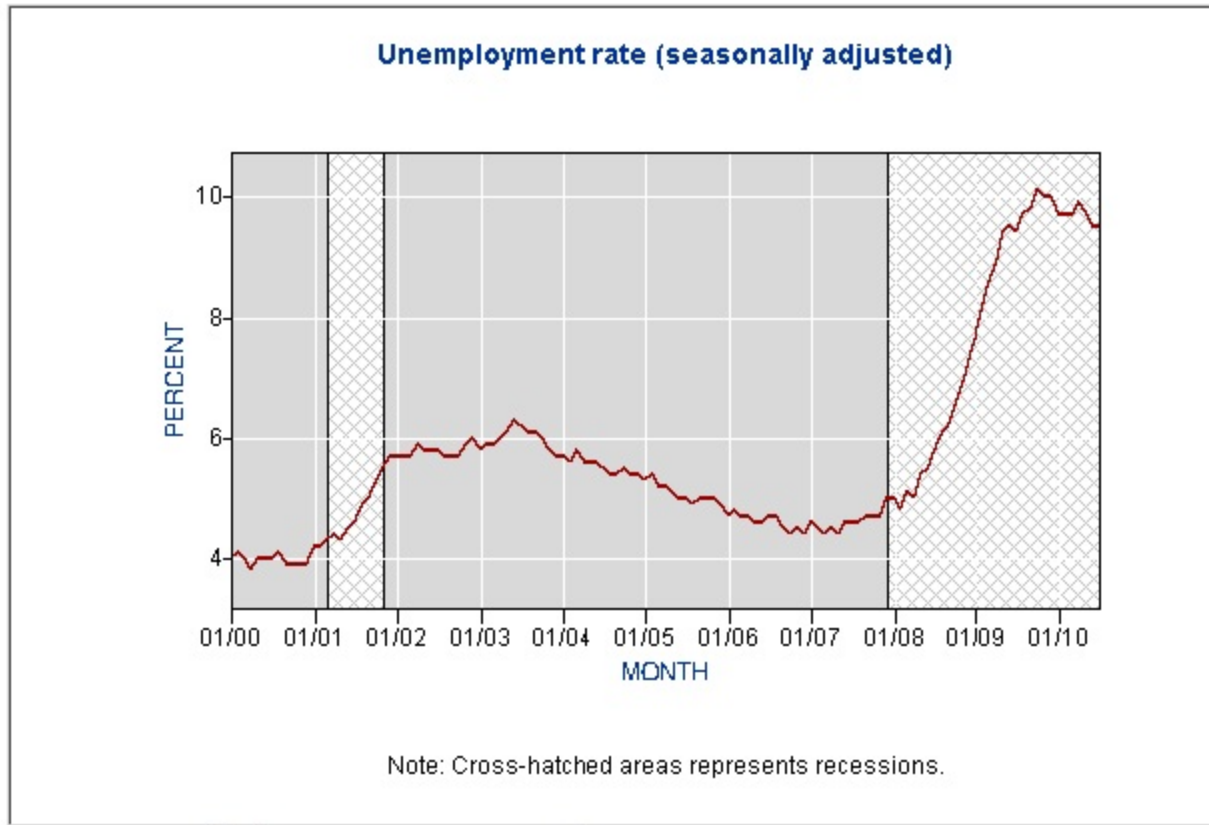
Gross Domestic Product



Note. Real GDP growth is measured at seasonally adjusted annual rates.

FIGURE 2

Labor Force Statistics from the Current Population Survey



Source: Bureau of Labor Statistics, Current Population Survey

NB: The end of the current recession as depicted in Figure 2 is inconsistent with the NBER's dating, which lists the terminal month/year as June '09.

FIGURE 3

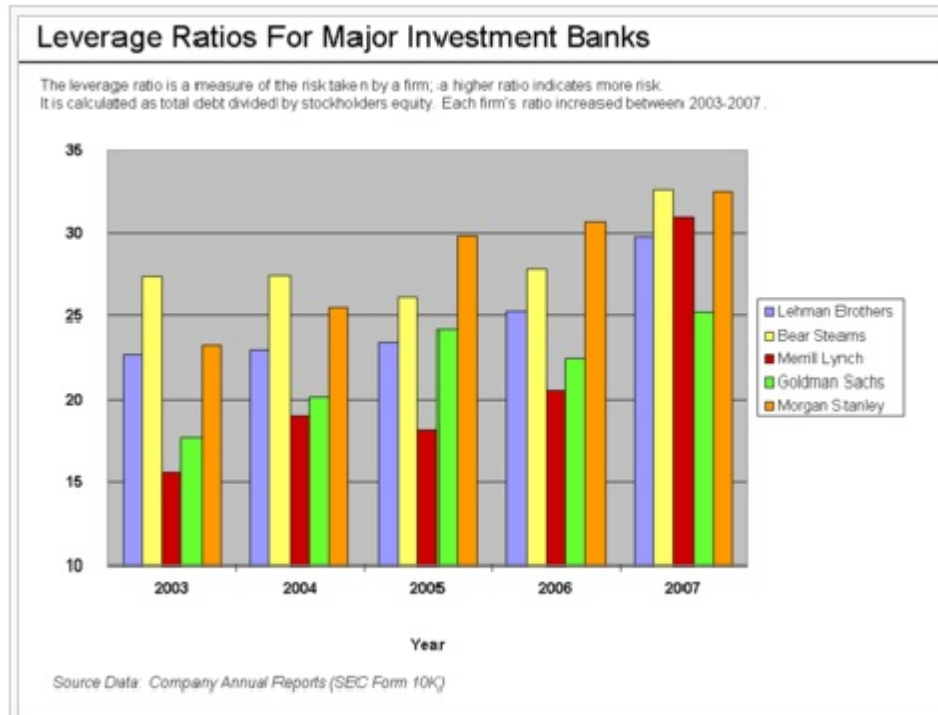
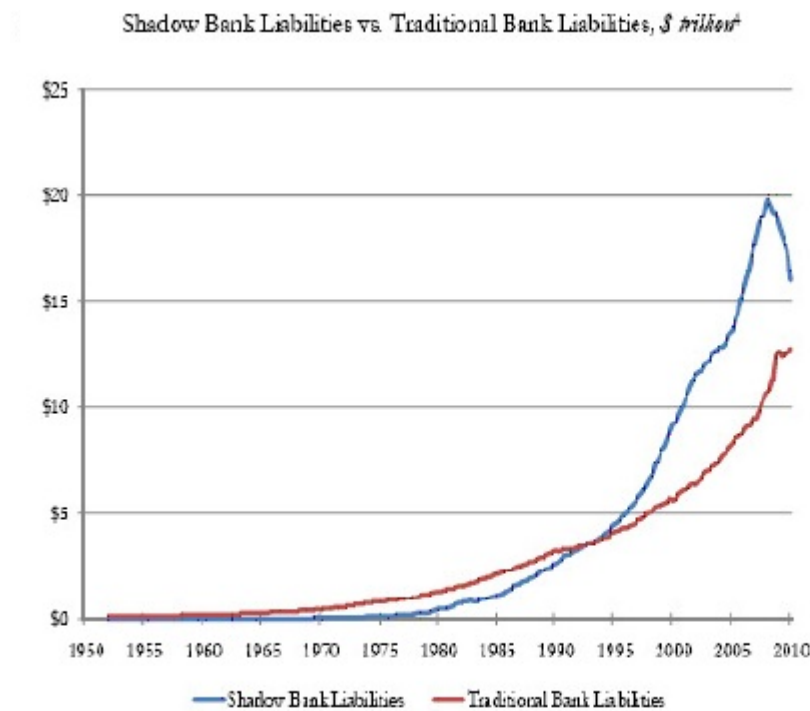


FIGURE 4



Source: Flow of Funds Accounts of the United States as of 2010:Q1 (FRB) and FREDNY.

FIGURE 5

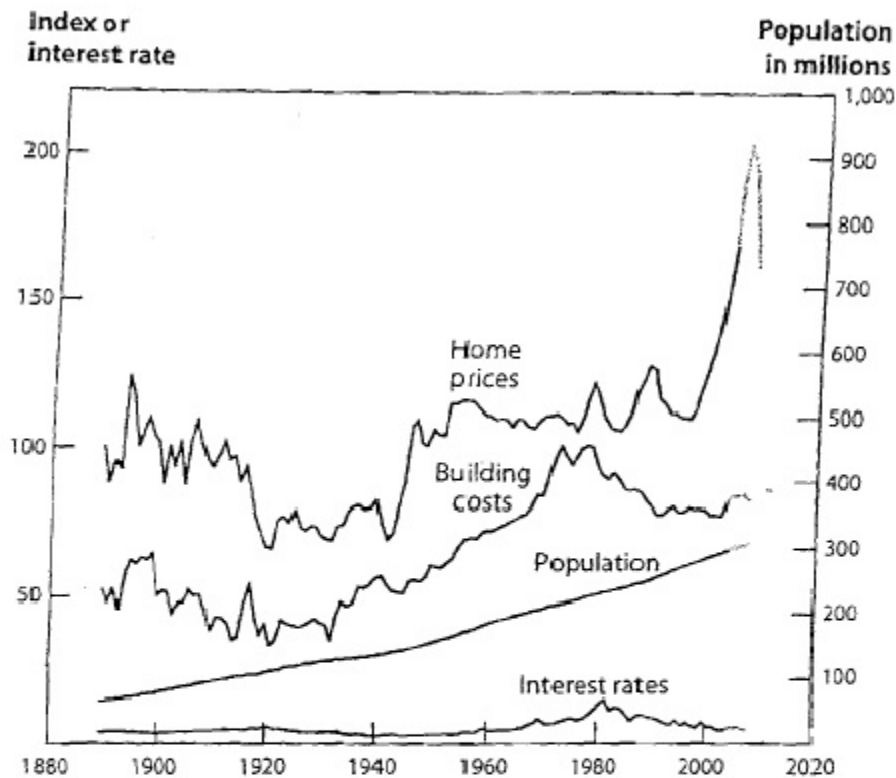
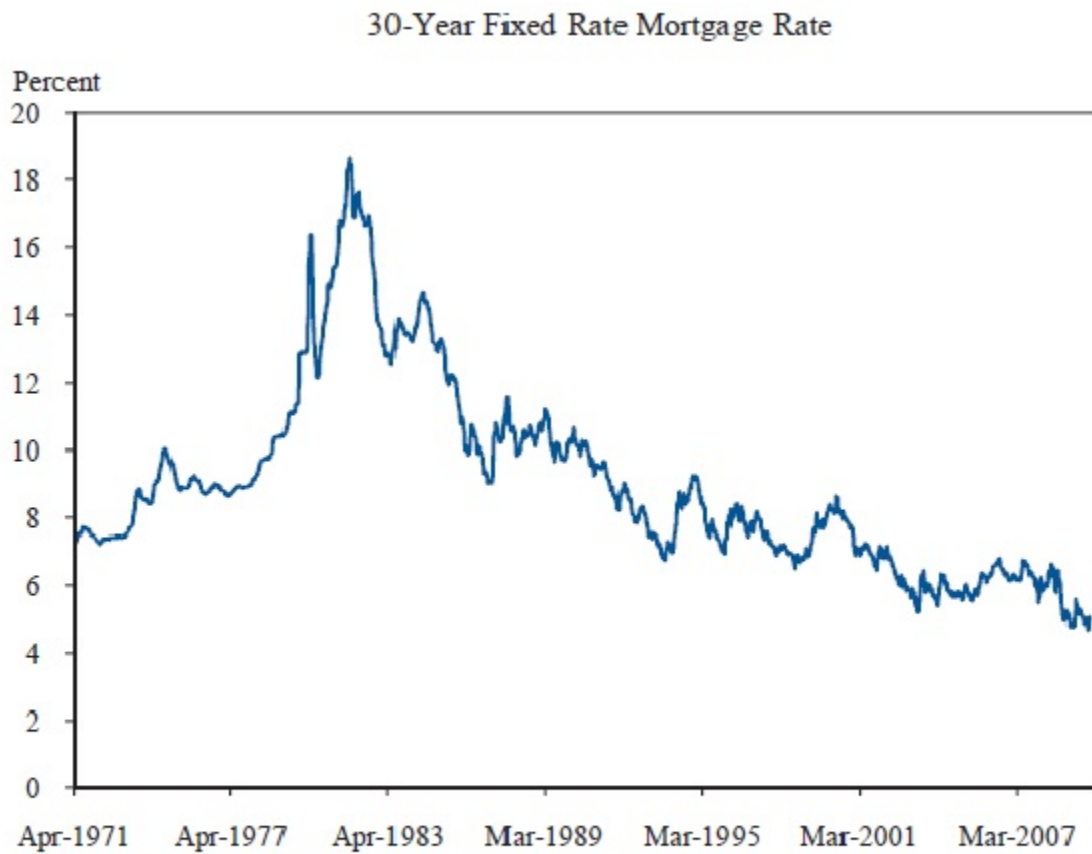


Figure 2.1.

U.S. Real Home Prices, 1890–2008, along with Building Costs, Population, and Long-Term Government Bond Interest Rates, annual 1890–2008. *Source:* From Robert J. Shiller, *Irrational Exuberance*, 2nd Edition (Princeton, N.J.: Princeton University Press, 2005),

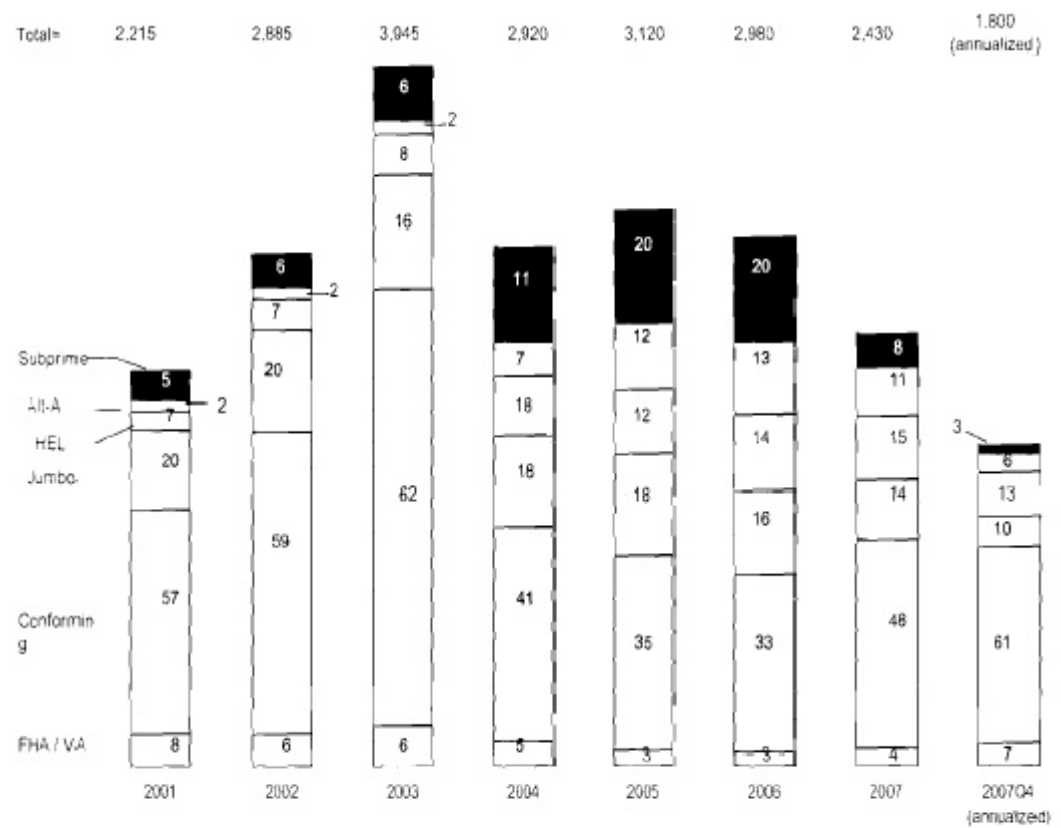
FIGURE 6



Note: Contract interest rate for first mortgages.

Source: Freddie Mac, Primary Mortgage Market Survey.

FIGURE 7: U.S. MORTGAGES BY TYPE, 2001 - 2007



Source: Inside Mortgage Finance. HEL is Home Equity Loan.

FIGURE 8

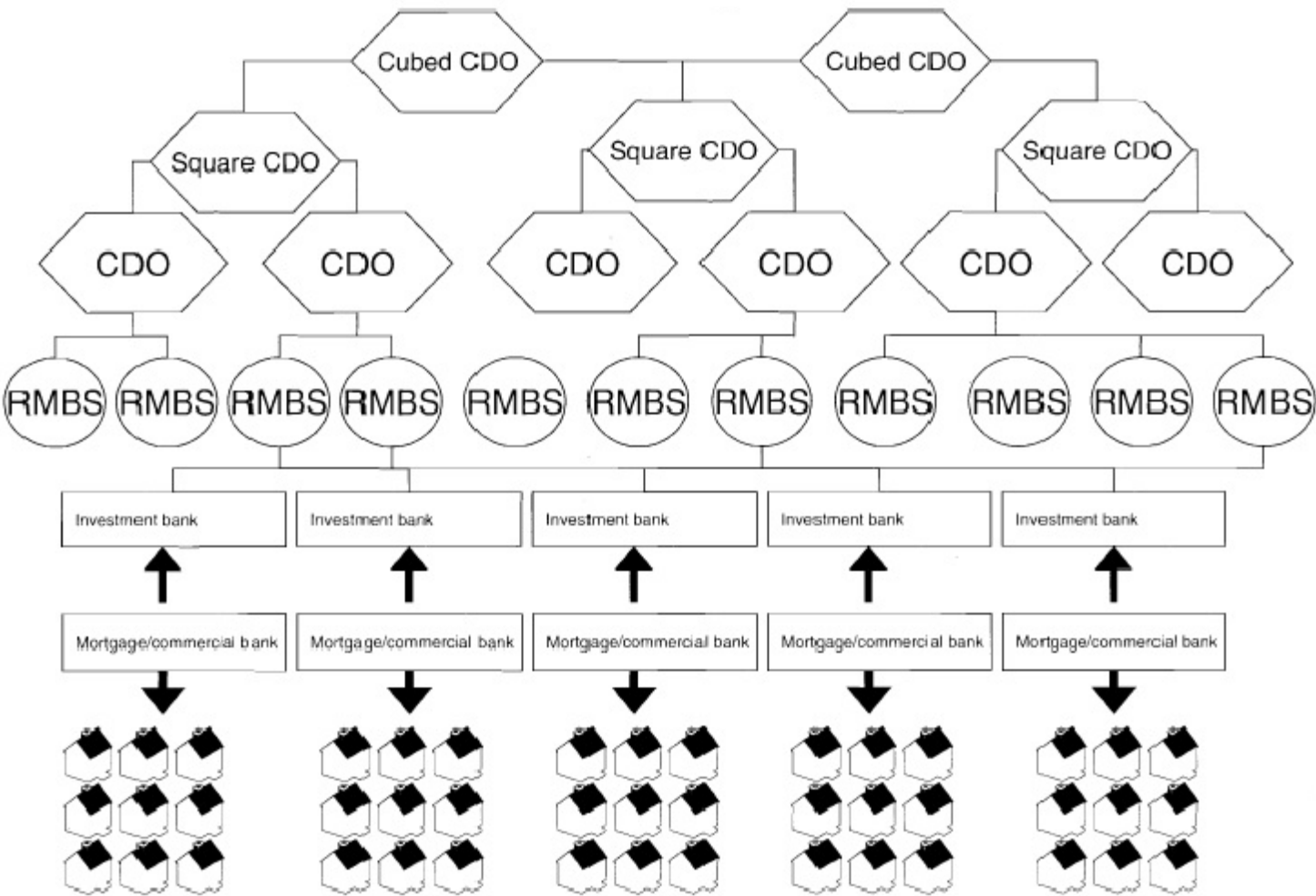


FIGURE 9

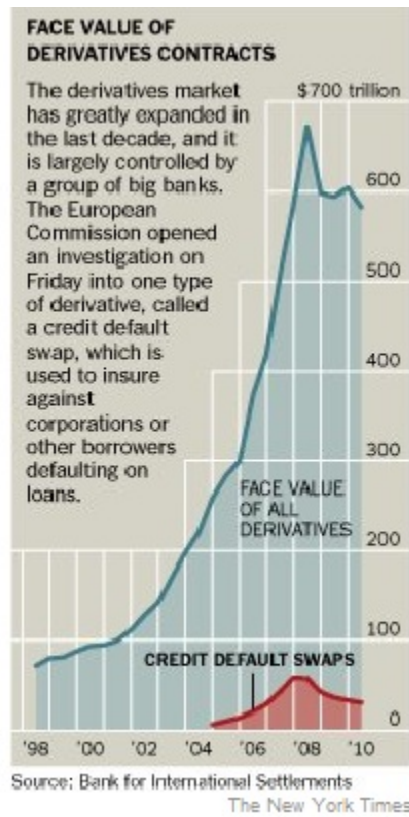
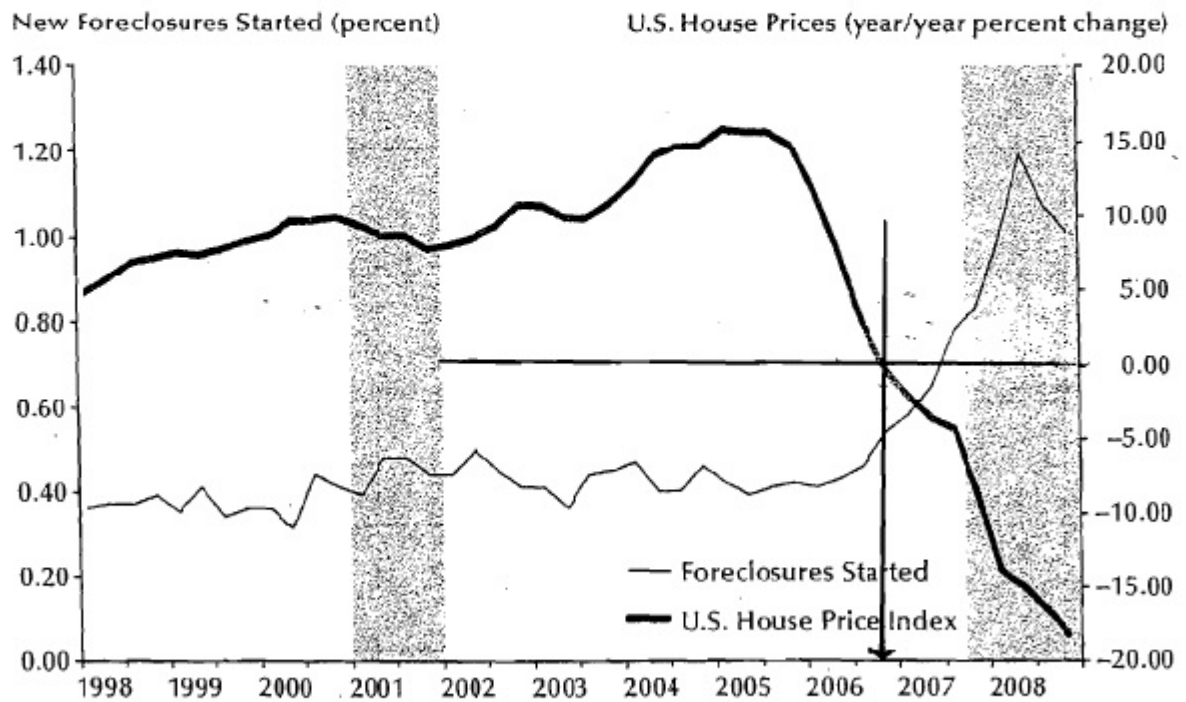


FIGURE 10

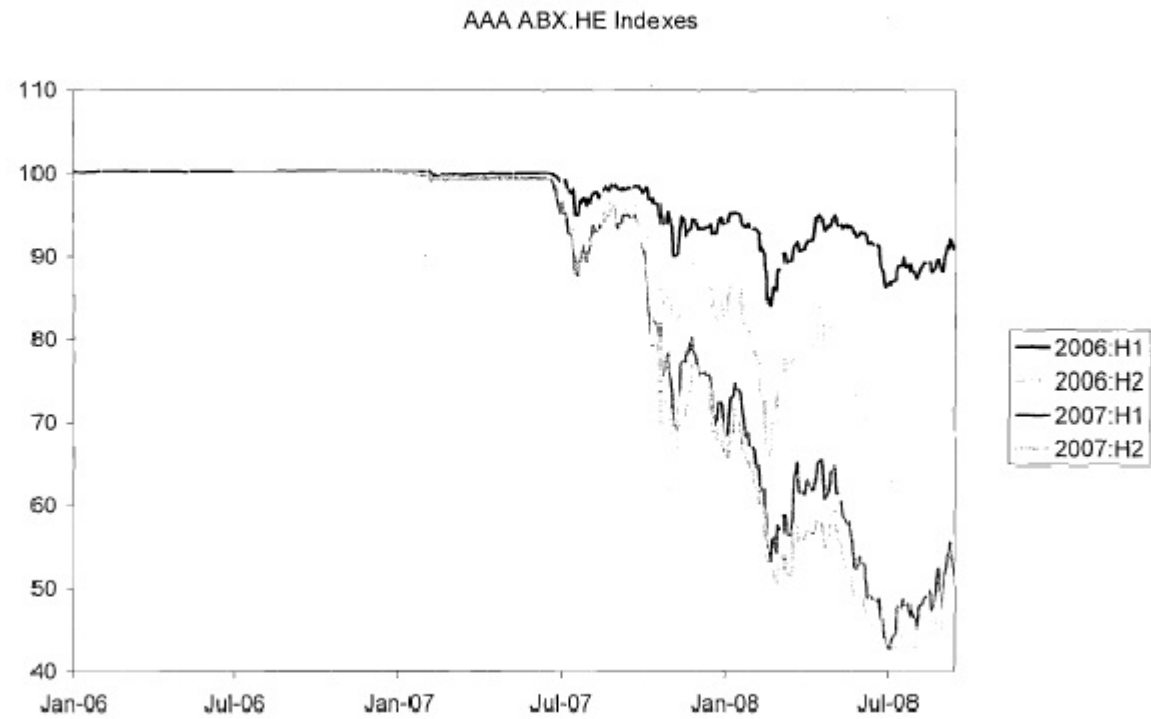
U.S. House Prices and Foreclosures



NOTE: Foreclosures data are from the Mortgage Bankers Association; the house price index (HPI) is the S&P/Case-Shiller National Home Price Index. Vertical gray bars indicate recessions.

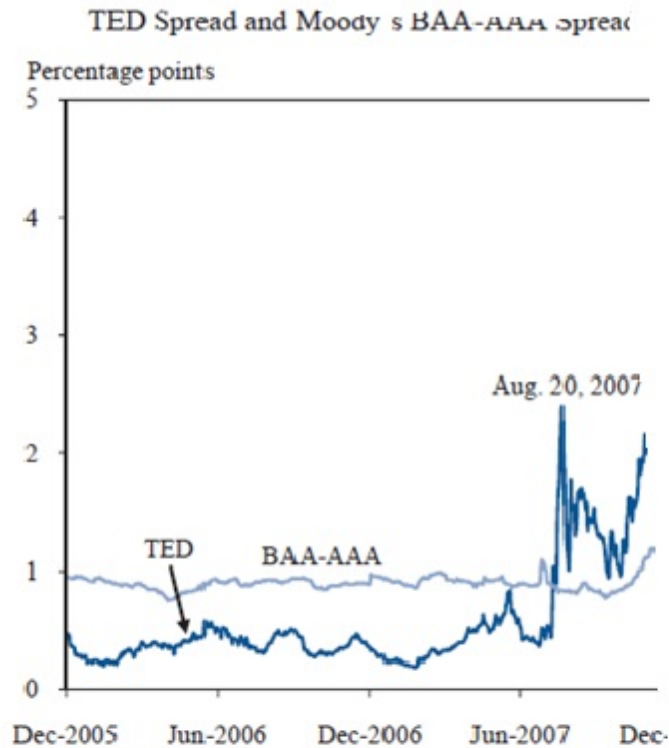
Figure 11

MBS valuations plunge



Heitfield -- Federal Reserve Board

FIGURE 12

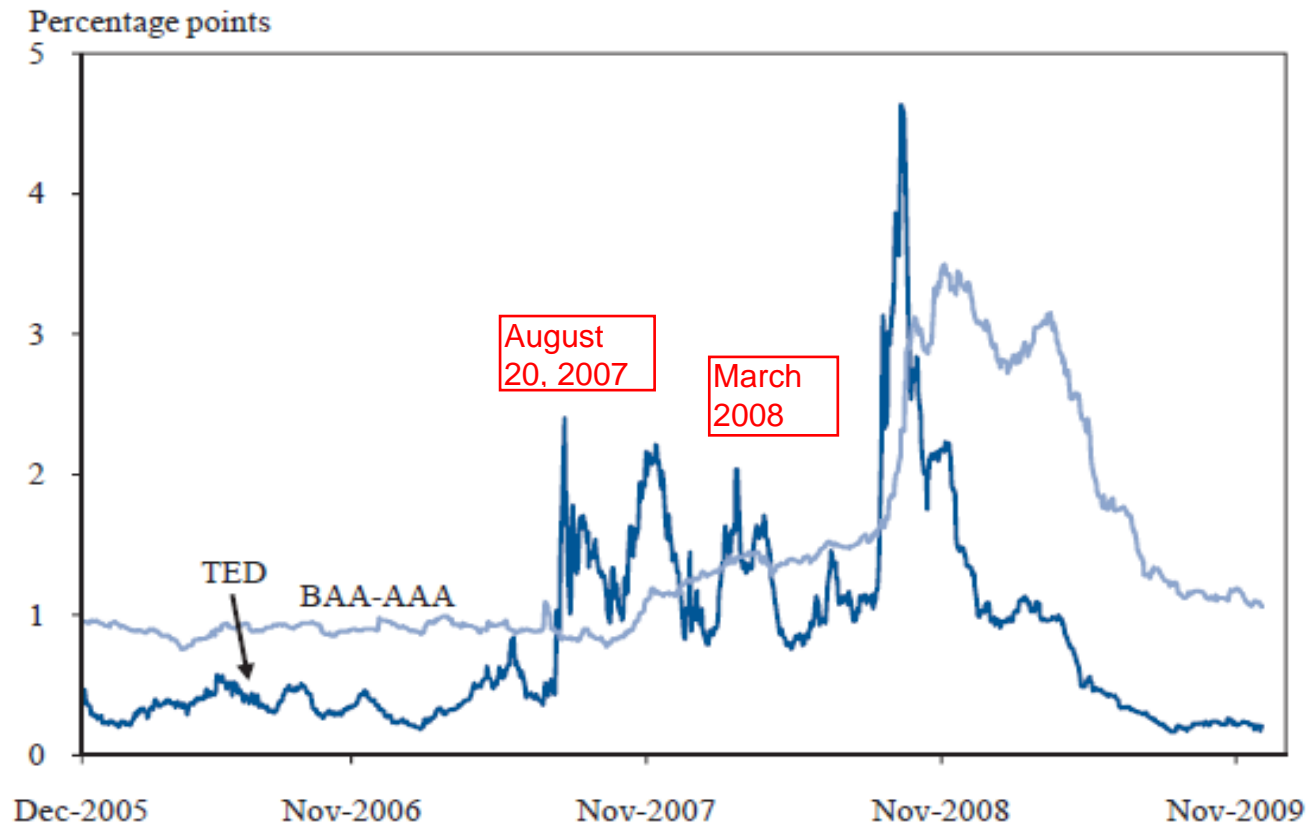


Notes: The TED spread is defined as the three-month London Interbank Offered Rate (Libor) less the yield on the three-month U.S. Treasury security. Moody's BAA-AAA spread is the difference between Moody's indexes of yields on AAA and BAA rated corporate bonds.

Source: Bloomberg.

○

TED Spread and Moody's BAA-AAA Spread Through December 2009

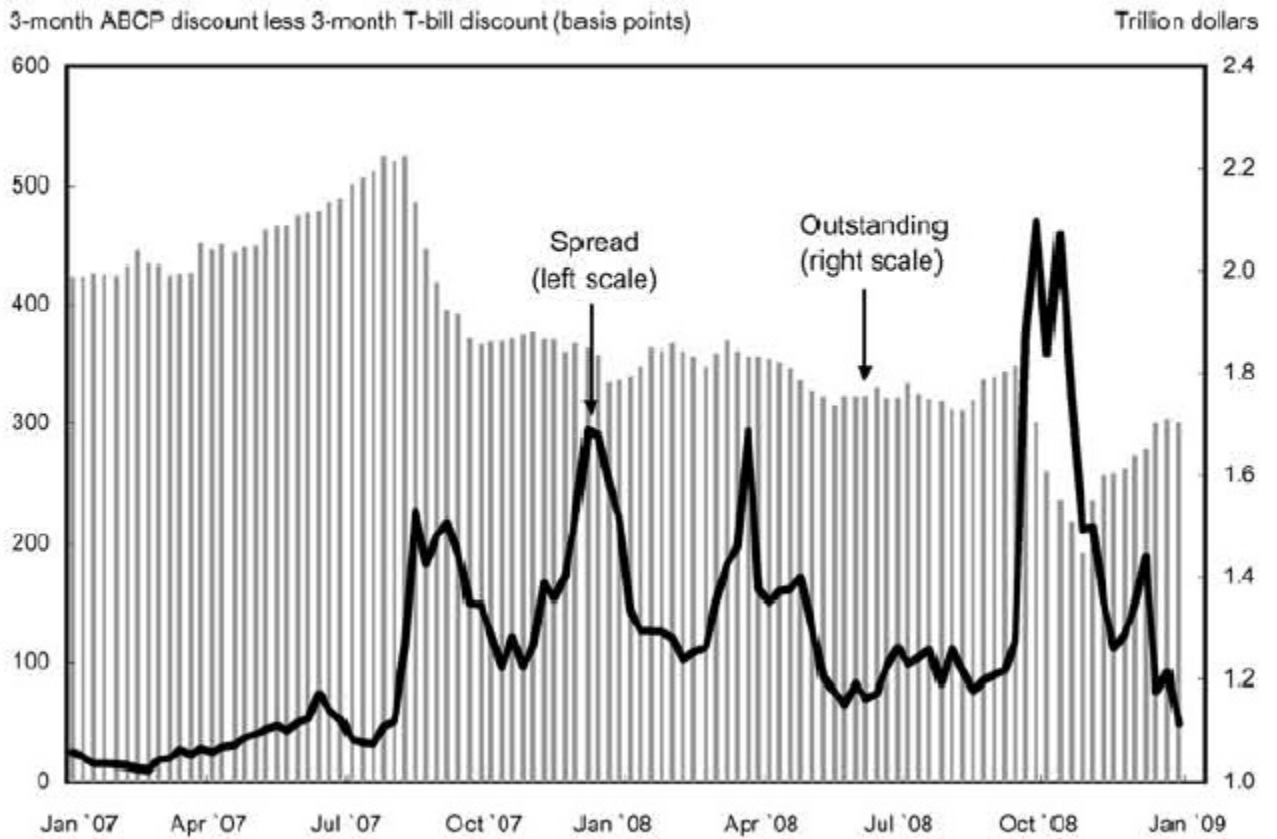


Notes: The TED spread is defined as the three-month London Interbank Offer Rate (LIBOR) less the yield on the three-month U.S. Treasury security. Moody's BAA-AAA spread is the difference between Moody's indexes of yields on AAA and BAA rated corporate bonds.

Source: Bloomberg.

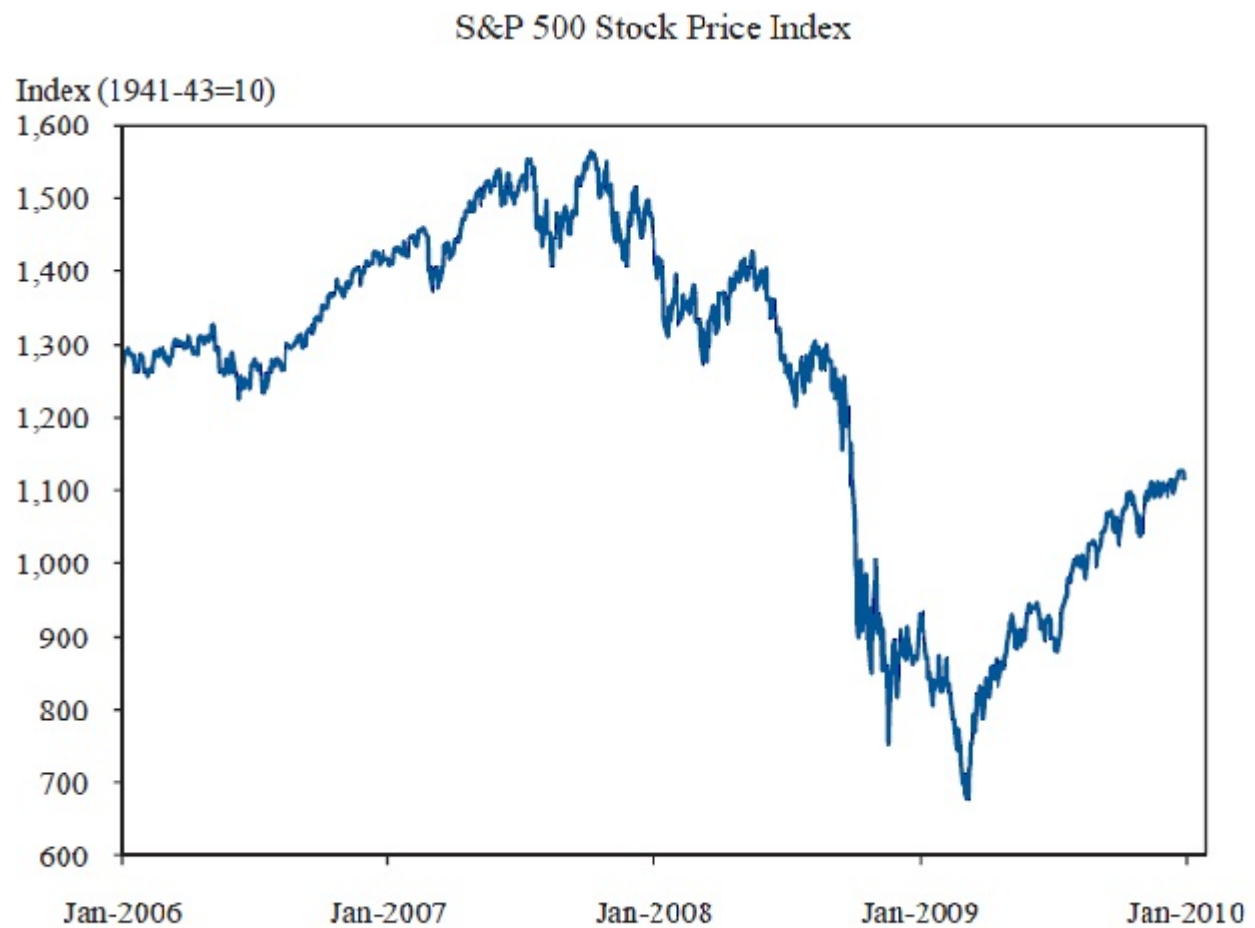
FIGURE 14

Outstanding commercial paper fell dramatically as asset-backed commercial paper (ABCP) spreads spiked in the summer of 2007 and the early fall of 2008 before recovering in late fall.



Sources: Federal Reserve Board and the Treasury Department.

FIGURE 15



Source: Bloomberg.

FIGURE 16

Value of 1 Share of Common Stock on Selected			
	30-Jun-07	30-Dec-08 (or last date of trade)	Percentage Decline
AIG	1,400.60	31.2	-97.77%
Bank of America	47.71	13.24	-72.25%
Bear Sterns	140.00	6.6899 (Sold to JP Morgan Chase, 3/08 for \$10)	-95.22%
Citicorp	51.64	6.8	-86.83%
Goldman, Sachs	219.18	82.06	-62.56%
JP Morgan Chase	49.15	31.01	-36.91%
Lehman	75.8	0.03	-99.96%
Merrill, Lynch	24.45	29 (Sold to BoA, 9/10, for \$29)	18.61%
Wachovia	51.25	5.73 (Sold to Wells, Fargo 12/08 for 5.73)	-88.82%
Wells, Fargo	35.51	28.8	-18.90%

FIGURE 17

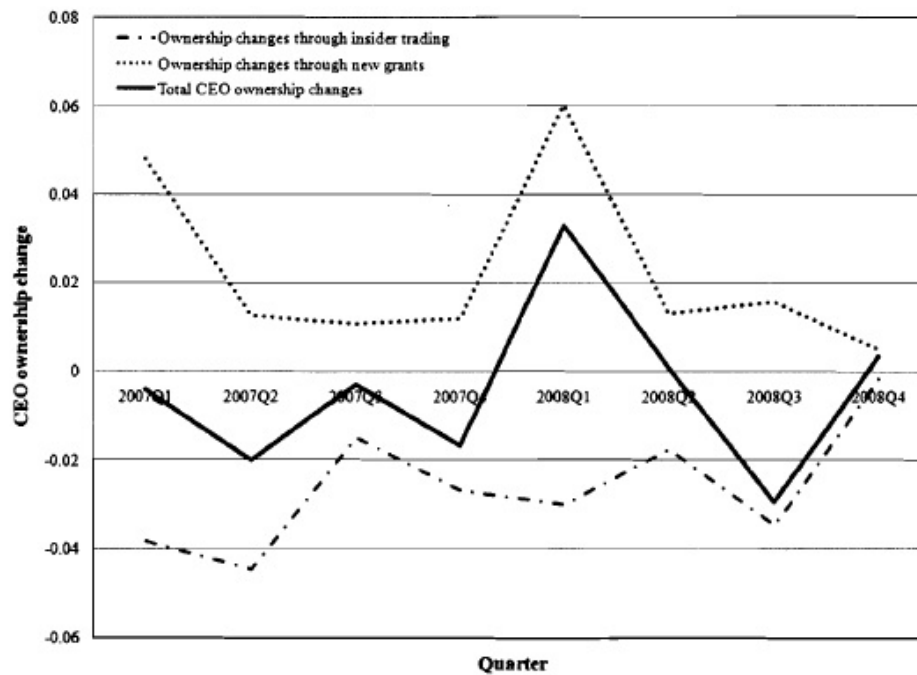


Fig. 2. Chief executive officer (CEO) insider trading. The figure shows the average total changes in CEO ownership and ownership changes caused by trading and new grants. The sample contains 80 bank CEOs that are covered by both ExecuComp and Thomson Financial's insider trading database. A CEO who turned over prior to September 2007 is excluded from the sample. For each CEO, all insider transactions unrelated to option exercises reported by Thomson Financial are aggregated by firm and quarter. If a CEO does not trade or does not receive new grants, he is included in the cross-sectional average for a given quarter with a value of zero. The change in ownership is defined as the number of shares traded or granted divided by the total CEO ownership from stocks, excluding options, at the end of fiscal year 2006.

Source: Fahlbruch and Stulz, Figure 2, p.24

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