Thomas H. Stanton

February 13, 2012

Ms. Jennifer J. Johnson
Secretary
Board of Governors of the Federal Reserve System
20th Street and Constitution Avenue, NW
Washington, DC 20551

RE: Regulation YY; Docket No. 1438
RIN 7100-AD-86
Enhanced Prudential Standards and Early Remediation Requirements for Covered Companies

Dear Ms. Johnson:

Thank you for the opportunity to comment on the proposed rulemaking on "Enhanced Prudential Standards and Early Remediation Requirements for Covered Companies," published in the *Federal Register*, vol. 77, no. 3, on January 5, 2012. I would like to comment on Part VI, "Risk Management and Risk Committee Requirements," of the proposed rule.

I offer the following comments based on my analysis of the financial crisis and governance, management, and risk management at twelve firms, four which survived the crisis and eight which did not. I served for a year on the staff of the Financial Crisis Inquiry Commission (FCIC) where much of my focus was on governance and risk management. The Commission obtained large volumes of documents, examined hearings, books and reports, and interviewed CEOs, risk officers, bankers, traders, and others. We also interviewed present and former regulators who had been charged with protecting safety and soundness of financial companies and the financial system. After the Commission concluded its work I conducted further research and wrote a book, *Why Some Firms Thrive While Others Fail: Governance and Management Lessons from the Crisis*, forthcoming from Oxford University Press this June. My background is presented in a brief resume attached to this comment letter.

I would like to make four basic points:

1. The financial crisis has shown that careful supervision is required to ensure that financial companies utilize effective risk management in making major decisions. The final rule, supplemented by supervisory letters, should provide guidance for examiners when they seek to ascertain whether risk management at a financial company is a practical reality rather than a gesture.

2. The financial crisis revealed stark differences in decisionmaking between major financial firms that weathered the crisis and those that failed. Firms that survived the crisis engaged in a regular process of "constructive dialogue" that was missing from firms that did not. Constructive dialogue is a process of respectful exchange of views and information among people with different perspectives and responsibilities.

3. To promote effective risk management at financial companies, the final rule should require that major financial firms engage in regular processes of constructive dialogue – between the CEO and the board, the CEO and an engaged management team, the CEO and the Chief Risk Officer (CRO), and between revenue-producing units and risk managers – backed by information systems providing an enterprise-wide view; examiners can and should test for this.

4. Because constructive dialogue enhances the quality of decisionmaking, it is an efficiency-enhancing benefit rather than a burden on supervised financial firms. The presence or absence of constructive dialogue is also an early warning indicator showing whether a firm engages in (1) effective risk management and, more generally, (2) sound assessment of risk-reward tradeoffs.

These comments are intended to supplement rather than replace the final rule's coverage of issues raised in the Federal Register notice. As the notice states, "The proposal would require all covered companies to implement robust enterprise-wide risk management practices that are overseen by a risk committee of the board of directors and chief risk officer with appropriate levels of independence, expertise and stature."[1] The point of this comment is to urge that the Federal Reserve Board set prudential standards to help examiners to ascertain whether risk management practices in fact are effective and robust, rather than merely complying with formalities of a risk committee and chief risk officer.

[1] Federal Reserve System, Regulation YY; Docket No. 1438, RIN 7100-AD-86, "Enhanced Prudential Standards and Early Remediation Requirements for Covered Companies," *Federal Register*. vol. 77. no. 3, January 5, 2012, pp. 594-663, at p. .600

In its 2009 report the Senior Supervisors Group warned about the distinction between mere organizational improvements and actual improvement in risk management at financial firms:

> "Many changes that firms have undertaken are organizational and appear to have been relatively easy to implement. Less clear is whether these organizational changes will—without further effort—improve future governance practices."[2]

The Federal Reserve Board and other federal regulators will need to help strengthen the culture of financial firms so that risk management becomes an effective reality. This rulemaking, supplemented by supervisory letters, can be an important vehicle for enabling examiners better to assess the quality of that culture.

I. The financial crisis has shown that careful supervision is required to ensure that financial companies utilize effective risk management in making major decisions. The final rule, supplemented by supervisory letters, should provide guidance for examiners when they seek to ascertain whether risk management at a financial company is a practical reality rather than a gesture.

Financial firms had a variety of incentives to create the trappings of risk management, but not necessarily the reality. Some financial companies didn't take risk management seriously. Roger Cole, a former Director of Bank Supervision at the Federal Reserve Board, told FCIC staff:

> "Key people in the industry were throwing risk management out on the table as kind of a diversion. You've got those supervisors in the Basel committee really focused on talking about risk management and good practices and governance and whatever. And that's fine. But we're in the business of product, and we've got to sell, we've got to make money--it's all about marketing."[3]

Writing in 2008, Daniel Tarullo suggested why firms might not adopt adequate risk management processes and systems:

> "Part of the explanation may lie in the simple fact that senior management is usually beset with problems of an immediate nature, where some influential actor or constituency is demanding action. In these circumstances, the medium-term imperative of improving risk management systems can easily slip from a list of

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[2] Senior Supervisors Group, *Risk Management Lessons from the Global Banking Crisis of 2008,* October 21, 2009, p. 22.

[3] FCIC Interview with Roger Cole, formerly Federal Reserve Board, August 2, 2010, available at http://fcic.law.stanford.edu/.

management priorities. Also, of course, [there are] competing demands for funds; the creation of a trading unit to participate in a new high-return activity can easily win out over the investment…in upgrading risk management capabilities. [And] managers of operating divisions may not want their risks to be accurately assessed and managed [if] their compensation is tied to their division's revenues or imputed profitability…"[4]

In the crisis, too many major firms nominally managed risk but took actions that threatened the firms' survival. One firm that failed (Freddie Mac) fired the Chief Risk Officer and another (Lehman) sidelined the CRO to a less important position at the company. At a third firm (AIG), a part of the firm that was taking excessive risk (AIG Financial Products) simply denied the corporate CRO access to information. Other firms (such as Citigroup), lacked capacity to aggregate information about risk exposures across the enterprise. More recently, MF Global dismissed its CRO after he challenged the size of the firm's bet on European sovereign debt.

A stronger supervisory focus on testing the quality of risk management at major financial firms might have made a difference.[5] The point for purposes of this rulemaking is simply that supervisory and regulatory insistence on effective risk management is far more important than some of the formal requirements that regulations might impose.

This builds on the conclusion that the Federal Reserve Bank of New York reached when it reviewed lessons of the crisis:

> "We did not identify the weaknesses in risk management controls and governance structure - in culture, in quality of senior management knowledge and judgment -- that proved most damaging. These weaknesses were not evident in formal structures such as governance and reporting lines, and were harder to see while economic growth was strong and markets were highly liquid."[6]

Section 165(b)(1) of the Dodd Frank Act would seem to give the Federal Reserve Board ample authority to prescribe prudential standards relating to "overall risk management requirements," Section 165(b)(1)(A)(iii), as well as "such other prudential standards as the Board of

[4] Daniel K. Tarullo, *Banking on Basel: The Future of International Financial Regulation*, Peterson Institute for International Economics, August 2008, p. 176.
[5] Supervisors and former supervisors have produced many thoughtful reviews of these issues. Among those available on the FCIC permanent website, at http://fcic.law.stanford.edu/.see, e.g., Richard Spillenkothen, "Notes on the performance of prudential supervision in the years preceding the financial crisis by a former director of banking supervision and regulation at the Federal Reserve Board (1991 to 2006)," May 31, 2010; Federal Reserve Bank of New York, "Report on Systemic Risk and Supervision," Discussion Draft, August 18, 2009; and Federal Reserve Bank of New York, "Observations on the Role of Supervision in the Current Financial Crisis," July 2008
[6] Federal Reserve Bank of New York, "Observations on the Role of Supervision in the Current Financial Crisis," July 2008, pp. 5-6, available on the permanent FCIC website.

Governors…determines are appropriate," Section 165(b)(1)(B)(iv).[7] Indeed, the stated purposes of this section ("In order to prevent or mitigate risks to the financial stability of the United States…") would seem to call for the Board to set prudential standards that require firms to make risk management actually effective. To do this, the final rule, supplemented by supervisory letters as necessary, should set prudential standards for effective risk management that supervised financial companies can comply with and examiners can test.

II. The financial crisis revealed stark differences in decisionmaking between major financial firms that weathered the crisis and those that failed. Firms that survived the crisis engaged in a regular process of "constructive dialogue" that was missing from firms that did not. Constructive dialogue is a process of respectful exchange of views and information among people with different perspectives and responsibilities.

One major improvement in governance and management, if well implemented, could have helped to protect large financial firms that failed in the crisis and that can help in the future to "prevent or mitigate risks to the financial stability of the United States" pursuant to Dodd-Frank. This is a process that can be called "constructive dialogue." Successful financial firms managed to create productive and constructive tension between (1) those who wanted to do deals, or purchase or offer certain financial products and services, and (2) those in the firm who were responsible for limiting risk exposures.

By creating a respectful exchange of views among these divergent perspectives, successful firms freed themselves to find constructive outcomes that took the best from each point of view. Instead of simply deciding to do a deal or not, successful firms considered ways to hedge risks or otherwise reduce exposure from doing the deal. Successful firms created opportunity for constructive dialogue between CEOs and their boards, and CEOs and their top managers, and between revenue producing units and risk officers.

The idea of constructive dialogue finds strong support in the management literature. Sydney Finklelstein of the Tuck School of Business at Dartmouth and colleagues analyzed decisionmaking in large organizations. They found that decisionmakers may be hampered by misleading experiences in their backgrounds (fighting the last war), misleading prejudgments, inappropriate self-interest, or inappropriate attachments, all of which can lead to flawed decisions. They concluded that bad decisions required two key elements: (1) an initial flawed

[7] Section 165(b)(1) of the Dodd Frank Act is codified at 12 U.S.C. Sec. 5365 (b)(1).

decision that the CEO or another influential person made, and (2) a poorly structured decision process that failed to provide facts and input to correct the mistake.[8]

Unsuccessful firms frequently pursued revenue-producing ventures without constructive dialogue with those concerned about risk. As was seen most recently at MF Global, they often would discourage input from their boards, senior managers and risk officers.

By contrast, managers at surviving firms seemed to solicit feedback continuously. While they didn't act on all, or perhaps most, such feedback, they developed a robust understanding of their firm and its environment that otherwise might not have been possible. This helped them to make better decisions. Because of their application of constructive dialogue and a robust sense of the risk-reward tradeoff, surviving firms sometimes retained more capital than their competitors and many times refrained from lucrative but risky types of financial products or transactions that appeared to be making so much money for their competitors.

Among the firms that I studied that weathered the financial crisis and exhibited strong risk management were JPMorgan Chase, Wells Fargo, Goldman Sachs, and Toronto Dominion Bank. Some of these firms may have had problems, reputational and otherwise, but the point here is that strong risk management practices and processes helped them to weather the crisis. Senior people, often the CEO or top management more generally, applied their influence to make constructive dialogue work. They brought revenue-producers together with risk people and ensured that the discussion was constructive and mutually respectful and that it led to positive results. Constructive dialogue was ingrained in company culture.

Attached to this comment letter is a paper, discussing in more detail differences in management and governance between firms that weathered the financial crisis and those that did not, which I presented last May at the Conference on Bank Structure and Competition of the Federal Reserve Bank of Chicago.

[8] Sydney Finkelstein, Jo Whitehead, and Andrew Campbell, *Think Again: Why Good Leaders Make Bad Decisions and How to Keep it From Happening to You*, Harvard Business Press, 2008.

III. To promote effective risk management at financial companies, the final rule should require that major financial firms engage in regular processes of constructive dialogue – between the CEO and the board, the CEO and an engaged management team, the CEO and the Chief Risk Officer (CRO), and between revenue-producing units and risk managers – backed by information systems providing an enterprise-wide view; examiners can and should test for this.

A draft Federal Reserve Bank of New York study concludes that:

> "The most fundamental of the lessons learned during the crisis is that banks cannot be relied upon to protect themselves adequately against systemic risk. This shakes a basic foundation of regulation. It turns out that risk management systems were far less robust than had been imagined. Not only were the models flawed, but risk managers were not empowered. They appeared to be doing their job, but much evidence after the fact suggests that they had little power to challenge or stop transactions during the boom. The transactions were apparently very profitable and the business side of the bank in most cases was unwilling to slow down because of risk concerns."[9]

If regulation and supervision are to infuse risk management at large complex financial companies with one specific improvement, it should be to require a process of constructive dialogue whenever the firms make major decisions. It would be a great help to the financial system if the final rule would enhance the capability of supervisors to provide useful feedback to firms that lack effective governance and risk management. This feedback should concern itself with the quality of decisionmaking and the firm's consideration of risks and rewards, and not only with more formal and structural requirements.

Consider the advantages of requiring large complex financial companies to adopt regular processes of constructive dialogue. This is something that supervisors can monitor. Examiners can routinely request information from major financial firms about:

1. Examples of constructive dialogue between the CEO and the board of directors that show how input from the board affected final decisions on major matters.

2. Examples of constructive dialogue between the CEO and top management that show how input from an engaged top management team affected final decisions on major matters.

[9] Federal Reserve Bank of New York, "Report on Systemic Risk and Supervision," Discussion Draft, August 18, 2009, p. 15

3. Examples of constructive dialogue between (1) those who wanted to engage in activities or close a deal or relax concentration limits or other risk limits and (2) the chief risk officer, that show how input from the chief risk officer affected the final decisions.

Essentially, supervisors would be weighing in on behalf of often-neglected parts of the decision process vis-à-vis the CEO and revenue producing units to ensure that more voices were properly heard and considered. This amounts to an insistence that risk management become part of a financial company's culture rather than merely a gesture.

Supervisors need to back up the review of decisionmaking with a review of the flow of information to decisionmakers, especially including risk-related information that often was inadequate or neglected by unsuccessful firms in making their decisions. It is a sign of dysfunction either when top management lacks important information that is known farther down in the organization or when organizational "silos" prevent important information from flowing across different parts of the organization. Supervisors need to interview across the organization and up and down the organizational hierarchy to pick up these trouble signs.[10]

IV. Because constructive dialogue enhances the quality of decisionmaking, it is an efficiency-enhancing benefit rather than a burden on supervised financial firms. The presence or absence of constructive dialogue is also an early warning indicator showing whether a firm engages in effective (1) risk management and (2) assessment of risk-reward tradeoffs.

Insisting on effective constructive dialogue can improve the performance and efficiency of large complex financial companies. By focusing on the effectiveness of the process in shaping decisions, supervisors can avoid imposing costs on firms that might occur if a supervisor insisted on a specific form of risk management that can be implemented in a pro forma manner. This focus also might help supervisors to avoid getting into difficult issues such as evaluating whether particular directors are qualified enough to sit on the board of a large complex financial company.

By developing a systematic focus on constructive dialogue and information flow, supervisors can help to insulate themselves from the kind of push-back that can occur if supervisors were

[10] Indeed, Herbert Allison recommends that company boards undertake such reviews:

> "The board of every financial company should conduct regular, confidential surveys of all employees to elicit their views of the organization's culture—its values (evidenced by day-to-day actions as contrasted with management's proclamations), management's priorities, prevailing attitudes toward risk-taking and compliance, service to clients, and the working environment. Boards should give as much attention to evaluating culture as they give to scrutinizing financial statements and controls."

Herbert M. Allison, *The Megabanks Mess*, Kindle Edition, 2011.

insisting on something that the firm alleges would cost it money and lose deals, such as happened when supervisors sought to object to specific activities that seemed to be generating substantial revenues in the years before the crisis. The supervisor is objecting to the lack of balanced input rather than trying to prove that the deal itself was risky.[11] Similarly, while a supervisor might not try to inject itself into a decision whether or not to acquire a firm (such as the Wachovia acquisition of Golden West) and at what price, the supervisor would be on firmer ground in assessing the quality of decisionmaking and whether or not constructive dialogue was effective when the financial company made major decisions.

The suggestion here is that supervisory attention to the need for constructive dialogue is more of a fulcrum than a panacea. It gives supervisors a better place from which to apply leverage when they try to reduce vulnerabilities and increase safety and soundness of a financial company, especially in boom years such as before 2007-8, when it seemed that no one could make a bad decision. Given the efficiency-enhancing nature of this approach, and that it does not involve prescriptive requirements for organizational structure and other aspects of governance and risk management (other than those of the proposed rule), the Federal Reserve Board and other regulators ultimately might usefully require that all financial companies, regardless of size or complexity, adopt constructive dialogue as an integral part of their cultures and procedures.

A focus on constructive dialogue can serve as an early warning indicator. The FCIC interviewed supervisors who used losses at a firm as the basis for requiring improved governance and risk management. Unfortunately, losses are a lagging rather than leading indicator of problems at a firm. By contrast, constructive dialogue is a leading indicator. Examiners can focus on whether a firm engages systematically in constructive dialogue before making major decisions and whether appropriate information is available to all decisionmakers. The focus on constructive dialogue, and whether it is effective or not in shaping decisions, allows supervisors to address potentially difficult governance and risk management issues without waiting for losses as a sign of vulnerability.

[11] Of course, preventative supervisory actions may be needed for some activities. For example, when he recognized in 2008 that the market had become risky for leveraged loans but felt compelled to continue in the business, Citigroup CEO Charles Prince asked Treasury Secretary Hank Paulson, "whether given the competitive pressures there wasn't a role for regulators to tamp down some of the riskier practices," and "Isn't there something you can do to order us not to take all these risks?" FCIC, "Interview of Charles O. Prince," March 17, 2010, Transcript, pp. 126-7, available on the permanent FCIC website.

V. Conclusion

In conclusion, while many aspects of the proposed rulemaking offer welcome prudential standards for risk management, I respectfully suggest that the final rule, and supervisory activities based on the final rule, should be structured to enable examiners better to test whether risk management in fact is effective at promoting change in decisions, actions, and cultures of supervised financial companies.

Yours truly,

Thomas H. Stanton

Attachment A: Brief Biography

Attachment B: "Governance, Risk Management, and the Financial Crisis: Learnings from the Financial Crisis Inquiry Commission," paper presented to the 47th Annual Conference on Bank Structure and Competition, Federal Reserve Bank of Chicago, May 5, 2011

ATTACHMENT A
Thomas H. Stanton

Thomas H. Stanton is a Fellow of the Center for Advanced Governmental Studies at Johns Hopkins University, where he received the award for Excellence in Teaching. Mr. Stanton is a former member of the federal Senior Executive Service and a Fellow of the National Academy of Public Administration. In 2010 he served as a member of the senior staff of the Financial Crisis Inquiry Commission, where he focused on governance and risk management, among other issues. He reviewed a dozen financial firms, including four that survived the crisis in good shape and eight that did not. The staff interviewed CEOs, risk officers, traders, bankers, and many others at many different firms and also interviewed numerous present and former officials of government regulatory agencies.

The Federal Reserve Bank of Chicago invited Mr. Stanton to present a paper on "Governance, Risk Management, and the Financial Crisis," in May 2011 to the annual Conference on Bank Structure and Competition, where he has presented papers twice before. He has a book in press on *Why Some Firms Thrive While Others Fail: Governance and Management Lessons from the Crisis* (Oxford University Press, forthcoming 2012).

Mr. Stanton's writings have appeared in publications including *Public Administration Review*, *The Administrative Law Journal*, *American Banker*, and *the Wall Street Journal.* He edited, with Benjamin Ginsberg, *Making Government Manageable: Executive Organization and Management in the 21st Century*, Johns Hopkins University Press, 2004. He also edited, *Meeting the Challenge of 9/11: Blueprints for Effective Government*, M.E. Sharpe Publishers, 2006.

Mr. Stanton's publications include two books on government-sponsored enterprises (GSEs). The first, *A State of Risk: Will Government-Sponsored Enterprises be the Next Financial Crisis?* (HarperCollins, 1991), recommended creating a system of what is now known as "contingent capital," i.e., subordinated debt that automatically converts to equity if the company begins to fail, to increase the capital cushion of the GSEs and provide some market discipline (see p. 182). Policymakers are now extending that idea to other financial institutions as part of a pattern of reforms to try to mitigate systemic risk.

Mr. Stanton's B.A. degree is from the University of California at Davis, M.A. from Yale University, and J.D. from the Harvard Law School. He is fluent in German and has conducted research in several different countries. In 2009 he received the Jesse Burkhead award for writing the best article in *Public Budgeting & Finance*.

ATTACHMENT B
Governance, Risk Management, and the Financial Crisis:
Learnings from the Financial Crisis Inquiry Commission

Presented to the 47th Annual Conference on Bank Structure and Competition
Federal Reserve Bank of Chicago
May 5, 2011
By Thomas H. Stanton*

The Financial Crisis Inquiry Commission learned much about the impact of governance and risk management on success or failure of financial firms. This presentation draws from the Commission's published documents and interviews of CEOs, risk officers, and others at companies and supervisory agencies. Effective governance and risk sensitivity must become part of the culture of firms, especially large complex institutions. Managers at successful companies solicited feedback continuously. Financial firms have a stake in improving the mandate and capacity of supervisory agencies to provide useful feedback. Otherwise well managed firms again will survive the next crisis while failing firms amplify it at immense cost.

I. Introduction

"I made a mistake in presuming that the self interest of organizations, specifically banks and others, was such that they were best capable of protecting their own shareholders and the equity in the firms" – Alan Greenspan, 2008[12]

This paper reflects the author's service as a staffer on the Financial Crisis Inquiry Commission. Alan Greenspan raises a question of major importance: why did so many large firms fail in the financial crisis while others survived and even thrived? The Commission studied large volumes of nonpublic documents and interviewed CEOs, risk officers, traders, and others; in addition, it reviewed public documents such as were produced in hearings and government reports.[13] Commission staff also reviewed much of the relevant literature on governance and risk management relating to financial firms. While this literature is informative, analysts tend to prescribe useful practices without suggesting how less capable firms, and not merely the successful ones, can be brought to adopt such practices.

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12 Alan Greenspan, testimony before the House Committee on Oversight and Government Reform, October 23, 2008, transcript, p. 33.

13 Researchers and others may wish to consult the many documents and interview records that the Commission has made permanently available on its website, now hosted at http://fcic.law.stanford.edu.

The Commission found a disturbing gulf between successful firms and the others. The conclusion of the present author is that, when not tied integrally to a firm's culture, risk management can become a pro forma exercise in which company officials go through the motions without adding to the company's capacity to address potential risks. Financial regulators seem to have had a difficult time dealing with this gap.

To take an example from the province of financial modeling, the present author asked one vice president, responsible for aspects of risk management at an unsuccessful firm, what his assumptions had been about house price declines. He responded that he had used varying house price assumptions and attached varying probabilities. I asked, "Oh, you mean a Monte Carlo simulation?" He replied yes, in a tone that conveyed surprise that the present author knew the term. Later I asked a top-flight risk officer from another firm whether she used a Monte Carlo simulation. She replied (almost indignantly) of course not, because that assumes a normal distribution of risk. Her argument implicitly recognized the need to structure models to capture the possibility of "black swan" events, or tail risks, which may occur more frequently than a normal distribution would assume. It would seem to be difficult at best to bring the former risk person up to the sophistication of the latter.

This raises a core issue of this paper: successful firms will take care of themselves, but how can one improve decisionmaking at firms that are likely to stumble and perhaps fail in the next crisis unless their governance and risk management are brought up to much higher levels? For the present author, there must be more capable financial supervision. Well managed firms have a stake in strengthening the capacity and mandate of supervisory agencies to obtain improvements in governance and risk management at less capable firms. Otherwise, when the next financial crisis comes, well managed firms again will survive while failing firms amplify the crisis at immense cost. Unfortunately, space constraints and the focus of this paper do not permit extensive treatment of this recommendation, which must await another publication.

Section I is this introduction. Section II looks at differences in governance between major firms that survived the crisis and those that either disappeared or required large infusions of taxpayer funds. Section III looks at management, and risk management in particular, and differences among firms. Section IV, the conclusion, builds on the observation that managers at successful companies solicited feedback continuously. The section argues that financial regulators are a potential source of useful feedback, but only if financial firms use their influence to shape an environment where this is possible.

The financial crisis illustrated, with painful consequences, lessons about risk-taking and risk management. Yet, there is a bright side to the lessons one can derive from successful firms: adopting and adapting their approaches can help other firms, and not only financial firms, to improve their decision-making not merely to help avoid "black swan" events, but also as a way to improve their cultures, processes, and performance more generally. Robust decision-making with strong but respectful feedback before making major decisions, active checking for vulnerabilities, improved information flow, and building organizational resilience all can improve the results that firms deliver every day, and not just in a crisis.

II. Governance

Relations among the CEO, Board, and Regulators

The Basel Committee on Banking Supervision suggests that corporate governance involves the way that boards of directors and senior management govern an institution including how they:

1. set the firm's strategy and objectives;
2. determine the firm's risk tolerance/appetite;
3. operate the firm's business on a day-to-day basis;
4. protect the interests of investors, meet shareholder obligations, and take into account the interests of other recognized stakeholders; and
5. align corporate activities and behavior with the expectation that the firm will operate in a safe and sound manner, with integrity and in compliance with applicable laws and regulations."[14]

Achievement of these objectives requires coordinated or at least complementary action by the CEO and top management, the board of directors, and regulators. The problem, of course, is that power and information are not distributed proportionately among these three groups. Too often, overbearing CEOs held weak boards in thrall while boards failed to uphold the duty of respectfully challenging management to provide feedback and probe the limitations of proposed management initiatives. Some institutions lacked ability to provide adequate information to top management or the board to support sound decision-making. Regulators seemed incapable of holding unsafe and unsound practices in check, especially at firms that seemed to be reaping substantial profits. Firms often lacked adequate checks and balances to help mitigate poor decisionmaking.[15]

On the other hand, a capable CEO can build relationships with the board and with stakeholders and regulators that help to build needed checks-and-balances. CEO Edmund Clark, who successfully led Toronto Dominion Bank through the financial crisis, spelled out his vision that provides almost a textbook description of appropriate relations between the CEO and a board:

> Good executive management teams want a strong board. If they're going to add value they need to ask the tough questions. They need to challenge us on our assumptions. So I tell my Board to wander through the organization; meet the executives; ask for any document you want. And if any executive refuses, tell me and I'll have a conversation with him or her and make sure they know they have to let you have it. Before each Board meeting I go through the agenda item by item. I tell the directors where the problems are and point out where they might want to press for more information on issues.[16]

[14] Basel Committee on Banking Supervision, Principles for enhancing corporate governance, Consultative document, March 2010, p. 5.
[15] On the last point, see Sydney Finkelstein, Jo Whitehead, and Andrew Campbell, *Think Again: Why Good Leaders Make Bad Decisions and How to Keep it From Happening to You,*" Harvard Business Press, 2010.
[16] Ed Clark, "Corporate Transparency and Corporate Accountability - today's table stakes for senior executives," remarks to the Executive Women's Alliance Conference, Vancouver, July 12, 2004.

The Board of Directors

Boards exercise two functions in normal times, (1) to advise the executive, and (2) to monitor the executive on behalf of shareholders. On occasion, these functions can conflict. To the extent that boards advise the executive, they may become enmeshed in the executive's outlook and unable to achieve the distance needed to be a good monitor. Economist Willem Buiter has identified the concept of "cognitive regulatory capture" of regulators as they attempt to solve problems of the regulated companies and then adopt the companies' world view.[17] Cognitive capture would also seem relevant to relations between company executives and some boards.

Boards have responsibilities in unusual times, to recruit and select a CEO, dismiss a CEO, and to approve changes in corporate structure, for example by approving a purchase or spin-off of an organizational unit or, as occurred with the sale of Bear Stearns to JP Morgan Chase in 2008, by approving dissolution of a firm. In the financial crisis, boards that exercised the function of accepting the resignation of a CEO, such as occurred at UBS and Merrill Lynch in mid- and late-2007 respectively, took action only after substantial losses materialized.

In its advisory role, the board is supposed to provide feedback and guidance to senior management. Boards should be "strong, high-functioning work groups whose members trust and challenge one another and engage directly with senior managers on critical issues facing the corporation."[18] When it serves as a source of constructive and well informed feedback, a strong board can help compensate for problems that can arise when an overbearing CEO becomes falsely confident and loses touch with important sources of information.[19]

In fact, many boards failed to live up to this standard, for several reasons: (1) many board members were unqualified and unequipped to provide useful feedback on the complex financial issues that firms faced; (2) many board members were placed on boards at the behest of the CEO and were unprepared to challenge the CEO's judgments; and (3) a weak chairman of the board could prevent a board from developing the climate of respect, trust, and candor necessary to encourage a culture of respectful disagreement.[20]

Relevant governance case law precludes directors from acting in their own interests and against the interests of the company, which is known as the duty of loyalty. On the other hand, provided they are acting in good faith, directors need meet only a very low standard for the duty of care. A 2009 Delaware case involving Citigroup's internal controls, for example, held that directors would be held liable only if:

> "(a) the directors utterly failed to implement any reporting or information system or controls; or (b) having implemented such a system or controls, consciously

[17] Willem Buiter, "Central Banks and Financial Crises," paper presented at the Federal Reserve Bank of Kansas City. 2009. For an example of cognitive regulatory capture, note the FCIC interview with Lord Adair Turner. November 30. 2010, at 1:23. available on the FCIC permanent website.

[18] Jeffrey A. Sonnenfeld, What Makes Great Boards Great," *Harvard Business Review*, September 2002, pp. 106-113. at p. 106.

[19] Sydney Finkelstein, *Why Smart Executives Fail, and What you Can Learn From Their Mistakes*, 2003.

[20] Paul Myners is only one of many observers who make scathing observations about the composition of many financial institution boards: "The typical bank board resembles a retirement home for the great and the good: there are retired titans of industry, ousted politicians and the occasional member of the voluntary sector," letter, "Reform of banking must begin in the boardroom." *Financial Times*, April 24, 2008.

failed to monitor or oversee its operations thus disabling themselves from being informed of risks or problems requiring their attention. In either case, imposition of liability requires a showing that the directors knew that they were not discharging their fiduciary obligations."[21]

This is a test that virtually insulates directors from consequences of being lax. Thus, Lehman's board could have recognized warning signs that the company was taking on too much risk. Anton Valukas, the Lehman Bankruptcy Examiner, reported that Lehman's management provided ongoing information to the board about the company's levels of risk exposure:

> "The directors received reports concerning Lehman's business and the level and nature of its risk-taking at every Board meeting. Although these reports noted the elevated levels of risk to Lehman's business beginning in late 2006, management informed the directors that the increased risk-taking was part of a deliberate strategy to grow the firm. The directors continued to receive such reports throughout 2007, and were repeatedly informed about developments in the subprime markets and the credit markets generally. Management assured the directors that it was taking prudent steps to address these risks but that management saw the unfolding crisis as an opportunity to pursue a countercyclical growth strategy."[22]

Applying the legal standard, Mr. Valukas also found no basis to hold board members legally liable for their lax oversight.

One likely reason for the board's acquiescence was the lack of financial expertise among directors; another was the strong personality of the CEO:

> "The Board of LEH was another "stale", entrenched board with the same individual wielding unchecked power for a long period of time….There was a noticeable lack of [nonexecutive director] financial industry experts …on the board— overseeing one of the most complex balance sheets of our peer group." [23]

The Chief Executive Officer

In the years before the crisis CEOs made mistakes that resulted in substantial losses and even the demise of their firms. This is not the first time that previously successful executives suffered serious lapses in judgment. Dartmouth Business School Professor Sydney Finkelstein points, among other factors, to the effects of success on judgment:

> "Want to know one of the best generic warning signs you can look for? How about success, lots of it! .... Few companies evaluate why

[21] *In Re Citigroup Inc. Shareholder Derivative Litigation*, Delaware Court of Chancery, 964 A.2d 106 (2009), at 123.

[22]Article of Anton R. Valukas, Examiner, *In re Lehman Holdings, Inc.*, United States Bankruptcy Court, Southern District of New York, Section III.A.1: Risk," pp. 55-56, March 11, 2010, available at http://lehmanreport.jenner.com/VOLUME%201.pdf, accessed March 29, 2011.

[23] Nestor Advisors, *Governance in Crisis: A Comparative Study of Six US Investment Banks*, April 2009, p. 5.

> business is working (often defaulting the credit to "the CEO is a genius"). But without really understanding why success is happening, it's difficult to see why it might not. You have to be able to identify when things need adjustments. Otherwise you wake up one morning, and it looks like everything went bad overnight. But it didn't – it's a slow process that can often be seen if you look."[24]

This observation helps to relate the credit bubble to governance and risk management: in years when house prices were appreciating and the economy displayed the great moderation financial firms grew and reaped generous returns, regardless whether they had the people and systems and processes in place to ensure effective risk management. The problem was exacerbated as financial firms consolidated and became larger and more complex. Only some firms, and JPMorganChase stands out here among the largest firms, took care to build the infrastructure needed to integrate information about operations of each part of the firm. Then housing prices dropped and governance, risk management, and infrastructure shortcomings became apparent, showing the wisdom of Warren Buffett's observation that, "After all, you only find out who is swimming naked when the tide goes out."[25]

TD Bank's Edmund Clark provides his view of how the CEO should deal with the risks of complacency:

> I'm constantly saying to people: 'Bring forward the bad news, the good news will surface soon enough. What I want to hear about is what's going wrong. Let's deal with it.'… It's about no surprises. Any number of problems we've had to deal with could have been solved if the person had only let us know early on… In fact [employees] joke that I'm only happy when the world's falling apart and that I'm a total pain when everything is going well."[26]

Some major firms studied by the Commission lacked capacity to communicate across organizational subunits. The Commission looked, for example, at two major financial institutions that required substantial taxpayer assistance to survive the financial crisis, Citigroup and AIG. In both cases top management told the Commission that until 2007 they were completely unaware of the financial products, CDOs and CDSs respectively, that almost took their firms down. Citigroup CEO Charles Prince told Commission staff that in early 2007 he had no knowledge of the CDO tranches that Citigroup held on its books; he first learned of the holdings as an issue in September 2007. Martin Sullivan, AIG's CEO told the Commission that he first became aware of the company's exposure to $ 78 billion in CDSs sometime in 2007.[27]

[24] *Why Smart Executives Fail, and What you Can Learn From Their Mistakes*, pp. 251-2.
[25] Warren Buffett, "Chairman's Letter, 2001," Berkshire Hathaway, available at http://www.berkshirehathaway.com/letters/2001pdf.pdf, accessed March 15, 2011.
[26] Ed Clark, "Corporate Transparency and Corporate Accountability - today's table stakes for senior executives," remarks to the Executive Women's Alliance Conference, Vancouver, July 12, 2004.
[27] Financial Crisis Inquiry Commission, "Interview of Charles O. Prince," March 17, 2010, pp. 73-74; and Financial Crisis Inquiry Commission, "Official Transcript, Hearing On "The Role Of Derivatives In The Financial Crisis," June 30, 2010, P. 151, both available on the FCIC permanent website.

One forgets sometimes how large these institutions actually are. Citigroup, with 350,000 employees and nearly 2,500 subsidiaries, was the largest of 16 organizations that Herring and Carmassi have identified as large complex financial institutions, and AIG was smaller than those they list.[28] AIG comprised some 223 companies that operated in 130 countries with a total of 116,000 employees.[29]

Citigroup CEO Charles Prince, only partly in jest, characterized Citigroup as not having one good culture but five or six good cultures. Mr. Prince told Commission staff about his frustration at the inability of Citigroup's business lines to communicate with one another. In an e-mail in October 2007, he wrote about Citi's "Incredible lack of coordination. We really need to break down the silos!"[30] Inability to communicate effectively across organizational lines meant that a firm lacked an enterprise-wide view of risks. A 2008 UBS report to shareholders on the firm's losses similarly notes the absence of strategic coordination at that institution. While the various risk functions, relating to market risk, credit risk, and finance, came together to assess individual transactions, "[i]t does not appear that these functions sought systematically to operate in a strategically connected manner."[31]

There is also the problem of the overbearing executive who brooks little opposition, even at the cost of performance of the company. The Lehman experience is illustrative:

> "[CEO Richard] Fuld commanded the highest pay premium over his senior executive colleagues. In 2007, he earned almost three times more than the four most senior executives beneath him did on average. This is one more indication of the enormous amount of power that Fuld wielded within the firm. It might explain, to a degree, his unquestioned authority in at least two failed merger negotiations that could have saved the firm during the last months of its existence. After all, he had been the boss of the board for more than 13 years and a long-term shareholder at that. Nobody could really challenge his devotion to the firm…"[32]

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[28] Herring, Richard and Carmassi, Jacopo (2009), "The Corporate Structure of International Financial Conglomerates: Complexity and Its Implications for Safety & Soundness," Chapter 8 in Allen N. Berger, Phillip Molyneux and John Wilson, editors, *The Oxford Handbook of Banking,* write that "Among the 16 international financial conglomerates identified by regulators as large, complex financial institutions (LCFIs), each has several hundred majority-owned subsidiaries and 8 have more than 1,000 subsidiaries."
On the other hand, Commission staff learned in interviews with federal regulators that many of these subsidiaries and affiliates were small institutions, acquired in a process of accretion, which had little financial significance.
[29] GAO, "Troubled Asset Relief Program, Status of Government Assistance Provided to AIG," September 2009, p. 5; AIG – Form 10K for 2008, p. 7.
[30] Financial Crisis Inquiry Commission, Interview of Charles O. Prince, Transcript, March 17, 2010, pp. 37, and 41, respectively, available on the FCIC permanent website.
[31] UBS AG, *Shareholder Report on UBS's Write-Downs*, April 18, 2008, p. 40.
[32] Nestor Advisors, *Governance in Crisis: A Comparative Study of Six US Investment Banks*, April 2009, p. 5.
See also Stanford Rock School of Business, "Lehman Brothers: Peeking Under the Board Façade," available at http://www.gsb.stanford.edu/cgrp/documents/CGRP03-LehmanBoard.pdf.

The FCIC staff interview with Richard Fuld, in which he discusses risk management and governance, can be found on the FCIC's permanent website.[33]

FCIC staff gained an impression that the problem of overbearing CEOs is widespread among major financial firms. The Commission heard repeated statements that pressure from chief officers to increase market share was a problem, for example at Moody's Investors Services, which came under pressure to please issuers with its ratings, and numerous financial institutions including AIG Financial Products, Lehman, Countrywide, and WaMu. As a European supervisor told staff in an interview, "The best guys in the banks are often the arrogant ones."

Stakeholders

Effective governance involves managing risks that may arise with respect to a range of stakeholders:

1. Shareholders

Shareholders are the owners of the company and the primary subject of corporate governance. Shareholders expect returns on their investment and often expect short-term returns.[34]

When Jamie Dimon became CEO of JPMorganChase at the end of 2005, he brought with him his philosophy of the "Fortress Balance Sheet." A 2005 *Business Week* article described the idea: "By selling off …portfolios and stashing away reserves far beyond what either regulators or the bank's own targets require, he is building a "fortress balance sheet" capable of weathering rising interest rates and tougher lending markets."[35]

Not all shareholders favored Mr. Dimon's approach; building up a company's capital reduces returns on equity. But by 2008 tables had turned. The Fortress Balance Sheet allowed the company to make favorable acquisitions of Bear Stearns and WaMu's assets and operations.

This pattern can be generalized. Researchers analyzed returns for a sample of large banks in the U.S. and overseas and found that banks with the highest returns in 2006 took the worst losses during the crisis. More specifically, "banks in the worst quartile of performance during the crisis had an average return of -87.44% during the crisis but an average return of 33.07% in 2006. In contrast, the best performing banks during the crisis had an average return of -16.58% but they had an average return of 7.80% in 2006....Banks that had a higher Tier 1 capital ratio and more deposits generally performed better during the crisis."[36]

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[33] Mr. Fuld's discussion of risk management and governance is found at, Financial Crisis Inquiry Commission, Interview of Richard S. Fuld, August 24, 2010from 1:10 to about 1:40, available on the FCIC permanent website.

[34] Committee for Economic Development, "Restoring Trust in Corporate Governance: Six Essential Tasks of Boards of Directors and Business Leaders," January 2010, discusses the short term outlook of institutional investors and states that "the average holding period for equities is now less than a year," p. 14.

[35] "Dimon's Grand Design: Jamie Dimon is bracing for another tough year at JPMorgan. But now he has a $1.1 billion plan to revive the nation's No. 2 bank. An inside look," *Business Week*, March 28, 2005.

[36] Andrea Beltratti and René M. Stulz, "Why Did Some Banks Perform Better during the Credit Crisis? A Cross-Country Study of the Impact of Governance and Regulation," European Corporate Governance Institute, Working Paper No. 254/2009, July 2009, pp. 2-3, available at http://www.law.columbia.edu/null/download?&exclusive=filemgr.download&file_id=154789, accessed March 20, 2011.

In the case of Fannie Mae and Freddie Mac, stakeholder pressure, including concern about needing to satisfy shareholders, led both companies to increase their market presence and risk exposures in 2006-2007 even after house price appreciation peaked and then dropped. A strategic plan document presented to Freddie Mac's board in March 2007 highlighted "pressure on the franchise" and the fact that "We are at risk of falling below our return aspirations."[37] The plan suggested that a major opportunity existed to improve earnings by expanding into adjacent markets: "We have an opportunity to expand into markets we have missed – Subprime and Alt-A."[38]

Several former Moody's officials pointed to the company's transition to a shareholder-owned company as a cause of increased emphasis on revenues at the cost, as they perceived it, of the quality of the ratings that Moody's assigned. Jerome Fons, Moody's Managing Director for Credit Policy testified that:

> "Following the 2000 "spin" from Dunn & Bradstreet, in which Moody's became a stand-alone public company, management's focus increasingly turned to maximizing revenues. Stock options and other incentives raised the possibility of large payoffs. Managers who were considered good businessmen and women – not necessarily the best analysts – rose through the ranks. Ultimately, this focus on the bottom line contributed to an atmosphere in which the aforementioned rating shopping could flourish."[39]

There is similar evidence that Freddie Mac's appetite for risk-taking increased after the GSE became a shareholder-owned and controlled company in 1989.[40]

2. Debtholders and Other Counterparties

As was seen in the liquidity crises of August 2007 and September 2008, holders of short-term debt and other counterparties can and will flee a company that they perceive to be in financial difficulty. One form of protection against pressure from debtholders is to maintain a fraction of liabilities in the form of longer term debt; unlike investors in repos or other short-term instruments, holders of longer term debt are locked in until the debt obligation matures.

Goldman Sachs appears to have been sensitive to this issue. The Goldman Sachs 2006 Annual Report articulates the company's policies with respect to maintaining excess liquidity, which it calls "global core excess," sufficient to meet stressful conditions. "We maintain Global Core Excess and other unencumbered assets in an amount that, if pledged or sold, would provide the

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[37] FCIC Final Report, p. 183.
[38] Freddie Mac. "Freddie Mac's Business Strategy," March 2-3, 2007, p. 70. available on the permanent FCIC website.
[39] Testimony of Jerome S. Fons Before the Committee on Oversight and Government Reform United States House of Representatives. October 22. 2008. See also Statement of Richard Michalek. Former VP/Senior Credit Officer, Moody's Investors Service, Submitted to Permanent Subcommittee on Investigations. Committee on Governmental Affairs, United States Senate, April 23, 2010; and Statement Of Eric Kolchinsky Before The Senate Permanent Subcommittee on Investigations , April 23, 2010.
[40] Thomas H. Stanton, *Government-Sponsored Enterprises: Mercantilist Companies in the Modern World*, 2002, pp. 83-84.

funds necessary to replace at least 110% of our unsecured obligations that are scheduled to mature (or where holders have the option to redeem) within the next 12 months."[41]

By contrast, firms that lacked appropriate liquidity management, especially if they were highly leveraged, were vulnerable to runs if the market began to question their solvency. In a crisis, problems of liquidity emerge first; being able to avoid or defer a perception of illiquidity can go a long way to reassure investors about the solvency of a firm. Thomas Fontana, Chief Risk Officer of Citigroup's Global Transactions Businesses, told FCIC staff there is a saying at Citi that: "Financial Institutions die of a heart attack; corporates die of cancer," explaining that Financials tend to be more sudden. Loss of confidence is the biggest factor."[42]

3. Employees

Especially in the fast-moving Wall Street environment, employees are an important stakeholder group. To the extent that compensation practices at one firm are perceived as less generous than those at others, for example, a firm risks losing its employees to competitors. The problem is more acute when a firm faces a decision whether or not to enter or withdraw from a particular activity or line of business. Former Citigroup CEO Charles Prince, for example, explained his statement that the firm would "keep dancing," in terms of his employees:

> "My belief then and my belief now is that one firm in this business [leveraged lending] cannot unilaterally withdraw from the business and maintain its ability to conduct business in the future. Running a securities business is a lot like running a baseball team where none of the players have contracts, and people can leave any day and go to another team. And if you are not engaged in business, people leave the institution. And so it's impossible, in my view, in the leveraged lending business, for you to say to your bankers, we're just not going to participate in the business for the next year or so until things become a little more rational. You can't do that and expect that you'll have any people left to conduct business in the future."[43]

4. The Political Establishment

Members of Congress and senior members of the Executive Branch play important roles in enacting the laws and setting policies that govern the benefits and burdens of a government charter such as a national bank, thrift, or GSE charter. One need not go as far as Simon Johnson[44] to recognize that policymakers are an important constituency of financial firms (and vice versa).

[41] Goldman Sachs. *2006 Annual Report*, p. 65. The same statement appears in the *2007 Annual Report*, p. 77.
[42] Financial Crisis Inquiry Commission. Interview with Thomas Fontana, Citigroup. at 1:52, available at the FCIC permanent website.
[43] Financial Crisis Inquiry Commission, hearing transcript, April 8, 2010, p. 87, available on the FCIC permanent website.
[44] Simon Johnson and James Kwak, *13 Bankers: The Wall Street Takeover and the Next Financial Meltdown*, Pantheon Books, 2010.

Laws establish the framework within which financial institutions operate, including conditions of entry, permitted activities, and conditions of exit in case of failure. Laws also establish the regulatory framework, including the mandate, authority, and capacity of each regulator. Finally, congressional oversight is a tool that can be applied with respect to the activities of virtually any financial firms. For all of these reasons, the political establishment constitutes an important group of stakeholders for the leadership of financial companies. The financial sector is the largest source of campaign contributions to federal candidates and parties. The Center for Responsive Politics, which tracks such expenditures, reports, for example, that the financial sector contributed almost $ 480 million in the two-year campaign cycle ending in 2008.[45]

5. Government Regulators

The law authorizes the establishment of each regulator, whether at the federal or state level, specifies the regulator's organizational structure, relationship with the rest of government, capacity, authority, and powers. The ability of financial firms to choose their regulators or, in the case of the SEC's Consolidated Supervised Entity program, to suggest that business would become subject to European rather than US regulation, put pressure on some regulators to become more congenial to the firms they regulated. One sign of this dynamic occurred, for example, when Countrywide shifted financial regulation from the Federal Reserve and OCC to the Office of Thrift Supervision. Another sign of the dynamic was the willingness of some regulators, notably the OCC and OTS, to preempt state consumer protection and predatory lending laws, and thereby create a more favorable environment for the institutions they regulated, who therefore would not need to adapt business practices to the different requirements of the different states.

Regulators may have believed they lacked an adequate mandate or capacity to add value to governance and risk management practices, especially at firms that were reaping substantial profits before the crisis hit. It was much easier for a supervisor to seek and obtain changes with respect to compliance issues that could be easily verified than with respect to more intangible issues such as the risk-sensitivity of a firm's culture. Moreover, it could be difficult for a supervisor to obtain improvements in risk management until demonstrable losses occurred.

Interviews with supervisory officials responsible for supervising a variety of institutions indicate an approach of prodding large firms. This was true, for example, of supervision of Fannie Mae, perhaps because the political strength of the GSE made it difficult to force more rapid changes on the company, even when examiners saw and documented weaknesses. On the other hand, interviews with top agency officials indicated that some seasoned supervisors with good interpersonal skills were able to add value and shape decisions of major firms. Lessons learned by the FCIC about regulators' capacity to promote stronger governance and risk management practices is a topic that deserves more extensive treatment.

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[45] Center for Responsive Politics, "Election Cycle 2008, Totals by Sector," available at http://www.opensecrets.org/bigpicture/sectors.php?cycle=2008, accessed April 9, 2011. ("The financial sector is far and away the largest source of campaign contributions to federal candidates and parties…"), available at http://www.opensecrets.org/industries/indus.php?Ind=F.

6. Customers.

In the financial services industry, customers are the people or firms to whom one sells products and services or from whom one buys them. The financial crisis was marked by sometimes significant disparities in market power or sophistication between some firms and their customers. The result was increased risk to both firms and their customers as the disparities weakened market forces that might otherwise have helped to keep risky practices in check. As the inventor of the residential mortgage-backed security, Louis Ranieri, told commission staff, investor and disclosure weaknesses meant that often "there was nobody to defend the deal."[46]

Among less sophisticated customers were many borrowers and some investors. Many borrowers took out mortgages they ultimately could not afford. The result was not only default for the borrower, but also an accumulation of risk on the books of investors and financial institutions.

Freddie Mac and Fannie Mae, suffering after 2003 and 2004, respectively, from the need to devote many resources and much management attention on rebuilding their internal controls to be able to issue financial statements, faced pressure from the larger lenders that were their customers to purchase mortgages that did not meet traditional credit standards. Consolidation of firms in the primary market gave these customers market power that they had not traditionally possessed. A concern for the GSEs also was that the customers would turn into competitors; their largest customer, Countrywide, was building a vertically integrated link from origination to securitization for the ultimate investor. Wall Street firms such as Merrill Lynch and Bear Stearns vertically integrated forward to the loan origination market as well.

Rating agencies faced pressure from their customers, the large issuers of mortgage-related securities, to provide favorable ratings of mortgage securitizations and CDOs. With the rating agencies too, pressure from customers with the ability to play one firm against another meant pressure to lower standards.

The need to attend to customers as stakeholders also relates to reputational risk of a firm. Long ago, Walter Wriston, former Chairman of Citicorp, pointed out that, "It is inconceivable that any major bank would walk away from any subsidiary of its holding company. If your name is on the door, all of your capital and assets are going to be behind it in the real world. Lawyers can say you have separation, but the marketplace . . . would not see it that way."[47]

Citigroup rediscovered this truth in 2007 when the company decided to take financial responsibility for the structured investment vehicles (SIVs) that it had sponsored and that were legally separate from Citigroup and its balance sheet. Other Wall Street Firms, such as Bear and Goldman, similarly protected investors in their asset management funds for fear of the consequences to their reputations.

In summary, then, financial firms faced the need to juggle a broad range of stakeholders. Inability to deal with any particular stakeholder, such as shareholders, customers, or government, could result in an accumulation of risk. On the one hand, strength of some stakeholders such as

[46] Interview with Lewis Ranieri (Part 1), July 30, 2010, at 1:14, available on the permanent FCIC website.
[47] Quoted in Arthur E. Wilmarth, Jr., "Controlling Systemic Risk in an Era of Financial Consolidation," p. 16, footnote 25, available at http://www.imf.org/external/np/leg/sem/2002/cdmfl/eng/wilmar.pdf, accessed March 19, 2011.

Countrywide led firms such as Fannie Mae and Freddie Mac to make risky decisions. On the other hand, weakness or unsophistication of other stakeholders such as some mortgage borrowers, investors in mortgage-related securities or SIVs, and rating agencies, fostered a relaxation of standards and the accumulation of risk, both at major financial firms and in the financial system as a whole.

Incentives Created by Compensation Practices

It is now widely recognized that compensation practices at major financial firms created incentives to take too much risk.[48] First, incentives between employees and the firm can be out of alignment; to the extent that compensation practices foster risk taking without due consideration of the longer term interests of the firm, employees may benefit while taking unacceptable levels of risk for their firms.

Second, the interests of employees and shareholders may conflict with interests of the financial system as a whole. Shareholders and employees who are compensated through stock-related awards have an incentive to increase leverage of the firm to increase their up-side benefits. Increasing leverage may help shareholders make profitable bets on future earnings while exposing the financial system to greater risk.[49] Thus, Freddie Mac refused to issue new equity stock in 2008 despite the risks that high leverage posed to the company and ultimately to the financial system and taxpayers.[50]

Some have suggested that the loss of value in accrued stock holdings and options by senior management of firms like Bear and Lehman showed that compensation practices did not affect risk-taking at the firms. Harvard Law Professor Lucian Bebchuk differs with this perspective. He and colleagues studied compensation of the top five company officers at Bear Stearns and at Lehman Brothers and argue that, although the company officers lost significantly on their stock holdings, they also had received enough in cash from bonus payments and stock that they sold, which was not clawed back when the companies failed, to create incentives to take excessive risks in the period 2000 to 2008.[51]

The problem is compounded when firms provide compensation based on revenues rather than profits. One witness, Joseph St. Denis told FCIC staff that this was the case at AIG Financial

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[48] For example, Federal Reserve System, "Proposed Guidance on Sound Incentive Compensation Policies," *Federal Register*, vol. 74, no. 206, October 27, 2009, pp. 55227-55238, at p. 55228:
"Banking organizations too often rewarded employees for increasing the firm's short-term revenue or profit without adequate recognition of the risks the employees' activities posed for the firm. Importantly, problematic compensation practices were not limited to the most senior executives at financial firms."
The final guidance is found at Guidance on Sound Incentive Compensation Policies, vol. 75 *Federal Register*, June 21, 2010, p. 36395, at 36396 and, June 25, 2010, at p. 36405, available at http://www.federalreserve.gov/newsevents/press/bcreg/bcreg20100621a1.pdf.
[49] Lucian A. Bebchuk and Holger Spamann, "Regulating Bankers' Pay," discussion paper No. 641, Harvard John M. Olin Center for Law, Economics, and Business, October 2009 revision.
[50] David S Hilzenrath, "Chief Says Freddie Won't Raise Capital; Mortgage Financer Cites Responsibility to Shareholders, Won't Increase Loan Capacity," *Washington Post*, March 13, 2008, p. D4; see also interview with Anurag Saksena, Chief Risk Officer, Freddie Mac, June 22, 2010, available on the FCIC permanent website.
[51] Lucian A. Bebchuk, Alma Cohen, and Holger Spamann, "The Wages of Failure: Executive Compensation at Bear Stearns and Lehman 2000-2008," discussion paper No. 657, Harvard John M. Olin Center for Law, Economics, and Business, February 2010 revision.

Products, which rewarded its people on the basis of a bonus pool consisting of 30 percent of revenues that the unit brought in.[52] That form of compensation is essentially a sales commission on new business coming into the unit, with no accounting for the amount of associated risk.

By contrast, Goldman Sachs has sought to retain the culture of a partnership in its compensation practices:

> "The process is at the heart of Goldman's culture, a way for the firm to reward and retain top talent. Goldman was one of the last of the big Wall Street partnerships to go public, selling shares in 1999. When it was private, the partners were the owners, sharing in the profits, and in some cases having to put in money to shore up losses. To retain that team spirit as a public company, Goldman continued to name partners. In 1999, there were 221."[53]

The issue of executive compensation and incentives that it creates is a difficult one. Clearly, as with UBS and AIG Financial Products, some forms of compensation fail to align the incentives of employees, and especially traders and revenue producers, with the long-term interests of the firm. On the other hand, it would be unwise to align incentives too directly with shareholders, given the returns that shareholders gain from a firm that is excessively leveraged. These considerations need to be weighed in an environment where top producers are likely to have considerable bargaining power and credible opportunities to move to firms offering more congenial compensation.

Finally, the functional relationship of a firm's compensation practices to its risk management practices deserves careful consideration. David Viniar of Goldman Sachs, for example, believes that:

> "You can't have a compensation structure that will cause you to have good risk management. You have to have a risk management structure that will cause you to have good risk management. You can have a compensation structure that could negatively affect your risk management, but I think it is very hard to make it positive. It is very hard for your compensation to cause you to have good risk management. You need to have good risk management to have good risk management."[54]

Risk Management

Even though many firms had governance structures and risk management systems in place that appeared sophisticated and effective, many proved themselves not to be. Some firms did not live up to even a semblance of sound governance and risk management. AIG, Bear Stearns, Fannie Mae, and Moody's (although the latter is not a financial firm), stand out in this regard. Problems of an overbearing CEO and a supine board can make the risk officer's job impossible. Problems of a board with too few financially informed members can lead to the same result especially

[52] Joseph St. Denis MFR, April 23, 2010, available on the FCIC permanent website.
[53] Suzanne Craig, "At Goldman, Partners Are Made, and Unmade," *New York Times*, September 12, 2010. See also FCIC interview with David Viniar, Goldman Sachs, June 16, 2010, available on the FCIC permanent website.
[54] FCIC interview with David Viniar, Goldman Sachs, June 16, 2010, available on the FCIC permanent website.

since, as Robert Rubin told the Senior Supervisors' Group, "As financial engineering became more complex, it exacerbated rather than reduced complexity."[55]

Complexity is a serious problem. Some of it, as in the case of Lehman's use of repos at the end of each quarter, or Citi's creation of SIVs and provision of liquidity puts, relates to regulatory avoidance and a desire to increase leverage beyond recognized limits. And complexity and higher leverage can create vulnerabilities and reduce a firm's ability to anticipate or deal with volatile markets.

There were success stories. JPMorganChase had leadership that emphasized a Fortress Balance Sheet, construction of infrastructure to ensure the flow of information across the organization, and effective risk management. Goldman Sachs emphasized a rapid flow of information and ability to respond rapidly to early signs of emergent risk. The experience of these two firms demonstrates that "too-big-to-fail" need not always mean "too-big-to manage," even though that was the case with other large firms such as Citigroup, AIG, UBS, and Fannie Mae.

The Goldman Sachs approach represents the adaptation of an old risk management model to a large complex financial institution. Years ago banks would convene meetings between loan officers and underwriters. The loan officer would seek permission to close a loan and would advocate for its value. Then the underwriter would present concerns about the risks of the proposed loan. In a well managed discussion, the final result might be something other than a decision simply to book the loan or not; instead the resolution might be to request added collateral or a shorter term or some other way to address the underwriter's concerns without turning down the business. The key to a constructive outcome was the way that the bank's senior management monitored the discussion and ensured that both perspectives were properly taken into account.

Goldman Sachs built a system of controllers that parallels the organization's traders and ensures a conversation about market values between these two perspectives literally every night and more often when necessary. Whatever risk management system a financial firm adopts, it would be wise to ensure that such conversations take place regularly, among competent and independent parties on both sides, based on high-quality information. Then the conversation needs to expand, so that traders and controllers across the organization, and especially across a large complex financial institution, have access to that information and those judgments.

However, poor governance can swamp even the best risk management structure. Lehman Brothers is a case in point. The company created a strong risk management process involving the type of deliberations needed for effective risk decisions. Yet, as the company determined to increase its size and market presence and risk appetite, those deliberations turned into vehicles for top management to implement decisions greatly to increase the company's risk-taking and exceed important risk limits.[56]

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[55] Senior Supervisors Group, "Notes on Senior Supervisors' Meetings with Firms. Citigroup, Inc.," November 19, 2007, p. 21, available on the permanent FCIC website.

[56] FCIC *Final Report*, pp. 176-7; Interview with former Lehman Chief Risk Officer Madelyn Antoncic, July 14, 2010; Interview with former Lehman Global Head of Risk Management Christopher O'Meara, July 17, 2010, all available on the FCIC permanent website.

That relates to another pattern just before the crisis broke: the race to the bottom, in terms of risk taking, that the housing bubble encouraged. Many firms -- UBS, Citi, Fannie Mae, and Bear – lowered their standards as they raced to catch up with the accelerating financial markets. Shareholders penalized firms such as JPMorganChase and Toronto Dominion Bank that maintained discipline.

In the end, the single most important factor in sound governance and effective risk management is a firm's culture. Policymakers, regulators, CEOs, and boards of directors need to be sensitive to culture as something to be developed and nurtured.

Case Studies: Successful vs. Unsuccessful Firms

Leo Tolstoy opens his novel Anna Karenina with the observation that all happy families are alike and each unhappy family is unhappy in its own way. The financial crisis revealed the opposite truth: successful firms each found their own way to weather the crisis; unsuccessful firms were remarkably alike in their inability to cope and in the mistakes they made.

Consider first four successful firms: JP Morgan Chase, Goldman Sachs, Wells Fargo, and Toronto Dominion Bank. The first two are treated at some length; the last two more briefly. Each of these firms distinguished itself in its operational competence and intelligent discipline, but with different approaches. JP Morgan Chase's story is of preparing the company to be strong enough to take advantage of long-term opportunities. Goldman's is of firm-wide systems and capacity to react quickly to changes in the environment. Wells is a company with a strong culture of customer focus and restraint. And TD Bank provides the simple lesson: if you don't understand it, don't get involved. Then briefly consider failed firms and their problems.

J.P. Morgan Chase

Governance and Management

The composition and organization of the JPMorganChase board drew favorable comment in the Nestor Advisors report. It notes that of the six US financial firms it surveyed – Bear Stearns, Lehman Brothers, Merrill Lynch, Morgan Stanley, Goldman Sachs and JPMorganChase – only JPMorganChase expressly provides a mandate for the board as a whole to oversee risk management.[57] The Nestor Advisors report viewed it as a favorable sign that the average tenure of non-executive directors was longer than the tenure of the CEO on the board, and also that the average age of non-executive directors was lower than almost all of the other firms in the survey. This was viewed as providing some protection against the problem of directors who might be too acquiescent to the CEO.

Jamie Dimon, JP Morgan's CEO created both a structure and processes to solicit vigorous feedback:

> "Dimon's all-stars who make up the 15-member operating committee are a mix of longtime loyalists, J.P. Morgan veterans, and outside hires….To make it on Dimon's team you must be able to withstand the boss's withering interrogations and defend your positions just as vigorously. And you have to live with a free-

[57] Nestor Advisors, *Governance in Crisis: A Comparative Study of Six US Investment Banks*, April 2009, p. 7.

> form management style in which Dimon often ignores the formal chain of command and calls managers up and down the line to gather information."[58]

These processes encouraged a flow of information, including negative information, to the place in the organization that could use it. JP Morgan had a policy of requiring managers to report problems to their superiors: the idea was that top management wanted to hear bad news from subordinates before hearing it from other sources. In the pithy words of a JPMorgan Chase executive, "Jamie and I like to get the bad news out to where everybody can see it…to get the dead cat on the table."[59]

Preparing for the Crisis

JP Morgan Chase's CEO, Jamie Dimon, took a long view of his firm's business. Consider this statement in 2006, *before* the financial crisis broke:

> "Go back to 1975, when I had my first job out of high school. Since then we've had multiple wars, multiple terrorist attacks, multiple countries going bankrupt—three times for Argentina—and multiple recessions. We've had interest rates as high as 21 percent and as low as 1 per-cent. These things happen. So when you're running a business, you have to run the business maturely, knowing that things are going to happen. The only thing that is unpredictable is the timing and, sometimes, where the punch is coming from. But you know it's coming, and nobody, in my opinion, has ever really picked the inflection points."[60]

In keeping with this outlook, Mr. Dimon kept a larger capital cushion that was larger than financial supervisors required, the "Fortress Balance Sheet." JP Morgan emphasized another fundamental approach that cost funds and effort. This was an insistence on placing all of the company's far-flung operations onto a common operating platform. Only that way could a complex financial firm with thousands, or hundreds of thousands, of employees, hundreds or thousands of affiliates and, for retail banks, tens of thousands of retail locations, actually run the company as a single business.[61] As the firm's CIO put it with respect to integration of the investment business of Bear Stearns, which it acquired after that company failed, "One client, one firm, one view, across all our business lines is the overarching goal."[62] The result was not only an ability of the company to manage itself across multiple business lines, locations, and even countries, but also – of particular relevance here – to take an enterprise-wide view of risks that the firm was incurring.

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[58] Shawn Tully. "Jamie Dimon's swat team; how J.P. Morgan's CEO and his crew are helping the big bank beat the credit crunch." *Fortune*, September 2, 2008.

[59] Shawn Tully. "Jamie Dimon's swat team; how J.P. Morgan's CEO and his crew are helping the big bank beat the credit crunch." *Fortune*, September 2, 2008.

[60] Clayton G. Deutsch, "Building the global bank: An interview with Jamie Dimon," *The McKinsey Quarterly*, 2006, no. 4.

[61] See, e.g., Mara Der Hovanesian. "JPMorgan: The Bank of Technology; The financial giant is making investments in info tech and expects to reap huge awards," Business Week, June 19. 2006; Clayton G. Deutsch, "Building the global bank: An interview with Jamie Dimon," *The McKinsey Quarterly*, 2006, no. 4; Adam Lashinsky, "Riders on the Storm [Wells Takeover of Wachovia]," April 20, 2009.

[62] John Hintze, "Top 10 CIOs on Wall Street: Duncan Rawls, JPMorgan Chase," *Securities Technology Monitor*, November 4, 2010.

Responding to the Crisis

This enterprise-wide view, coupled with a flow of significant information to the top, paid off when the crisis began. According to Professor Russell Walker, the firm noticed an increase in delinquencies on mortgages that it held and serviced. The retail banking division communicated this information to the firm's leadership and the company's investment banking division. The company used this information to reverse course and sell rather than purchase mortgage-related assets:

> "When JPMorgan saw signs in its mortgage accounts, it incorporated information on mortgage payments that was unconventional for the evaluation of portfolios of mortgages by the investment bank. Its success came from identifying such novel information and realising that it challenged conventional thinking."[63]

Because it had one of the strongest balance sheets in the financial sector, JPMorgan Chase was able to make favorable acquisitions of Bear Stearns and WaMu's assets and operations. Unlike WaMu, which had grown through acquisitions that management failed to integrate, JP Morgan promptly integrated operations of the two firms so that remaining employees of the acquired firms worked under a common corporate culture and in the context of a common firm-wide operating system.

Effects of the Crisis

While JP Morgan Chase had shed much of its exposure to the subprime mortgage market starting in 2006, the firm went back into the market in 2008, optimistic that home prices had bottomed out. This misjudgment cost the firm a few billion dollars, still far below losses at firms that had failed to weather the crisis.[64]

The acquisition of Washington Mutual brought its own difficulties. While JP Morgan anticipated losses from WaMu's large subprime mortgage portfolio, the losses appear to have been greater than expected. Perhaps more significant was the damage to J.P. Morgan's reputation as the firm foreclosed on households who had defaulted on their mortgages and came under scrutiny from state attorneys general, private litigants, and federal regulators.

That said, J.P. Morgan Chase emerged from the crisis as one of the strongest financial institutions in the world, with total assets of over $ 2 trillion at yearend 2010 and reported net revenue and net income for the year of over $ 100 billion and $ 17 billion respectively.

[63] Russell Walker, "Fortune favours the well-prepared," *Financial Times*, January 29, 2009
[64] Shawn Tully, "Jamie Dimon's swat team; how J.P. Morgan's CEO and his crew are helping the big bank beat the credit crunch," *Fortune*, September 2, 2008.

Goldman Sachs

Governance and Management

In 1994 Goldman suffered multi-billion dollar trading losses that almost caused the firm to go out of business. At the time the firm was a partnership; the experience seared itself into the minds of the remaining partners and led the firm to adopt what might be called a culture of risk management. The firm created a parallel structure of traders and revenue-generating businesses on the one hand and an extensive support structure, known in the firm as "the federation," including controllers who oversee the activities of traders and mark their positions each evening.

While JP Morgan Chase relied upon a Fortress Balance Sheet, Goldman Sachs operated on a different business model. Goldman officials told Commission staff that the firm operates "as a moving company, not a storage company."[65] This means that the firm monitors assets it holds and firmly encourages traders to sell aged assets out of inventory.

Goldman has an unusual approach to risk management that involves daily monitoring of the firm's enterprise-wide risk profile on a mark-to-market basis:

> "The foundation of Goldman Sachs' approach to risk management is disciplined mark-to-market accounting. This involves the daily practice of valuing the firm's assets and liabilities to current market levels – that is, the value one might expect to find on the open market. Without a transparent and realistic insight into our own financial position, Goldman Sachs would not be able properly to assess or manage our risk. It was mark-to-market accounting that spurred Goldman Sachs to reduce the firm's risk in the residential mortgage market near the end of 2006."[66]

For Goldman, the benefit of strict mark-to-market accounting was twofold: (1) it permitted the firm to maintain an accurate picture of its assets and liabilities without the distortions that accompany historical cost accounting, and (2) it provided discipline in making decisions, such as deciding whether to hold or change a position.

Nestor Advisors included Goldman and its study of governance at six US financial firms. Looking at the board of directors, Nestor found that,

> "The GS board of 'heavy hitters' contrasted somewhat with its peers, many of which seem to have adopted a policy of seeking out the 'good and the great' rather than those with significant and relevant financial industry expertise.....Like fellow survivor [Morgan Stanley], the remuneration of its most senior executives was

[65] Dan Sparks, former head of the Goldman mortgage trading desk, told Commission staff, "The firm was not a bank. Use of the balance sheet was very carefully guarded." FCIC Interview, June 16, 2010.

[66] Goldman Sachs, "Goldman Sachs: Risk Management and the Residential Mortgage Market," April 23, 2010, p. 5 (footnote omitted).

relatively egalitarian, a testament to GS's famous 'partnership' culture...This, in conjunction with a healthy presence of executives on the board, suggests a balance of power less predicated on the authority of one individual."[67]

Nestor also found merit in the Goldman practice of having essentially all non-executive directors attend all committees. "From a risk oversight perspective, this practice might be quite effective in providing [non-executive directors] with a comprehensive view of key risks and allowing them to have a collective board view on group risk tolerance and risk appetite."[68]

Another important aspect of Goldman Sachs' management is what the firm calls a "culture of over-communication; multiple formal and informal forums for risk discussions coupled with a constant flow of risk reports."[69] As the former head of the Goldman mortgage desk Dan Sparks told Commission staff, "Part of my job was to be sure people I reported to knew what they needed to know."[70]

Preparing for the Crisis

Without access to a Fortress Balance Sheet, Goldman relied on liquidity management to prepare for unsettled markets. In contrast to other risks, such as credit risk or interest rate risk, which a firm is paid to take, Goldman sees liquidity protection as a form of insurance: the firm pays more to borrow, for example, than it might otherwise, in return for obtaining longer-term liabilities that are less susceptible to a run. In the early 1990s, Goldman managed liquidity risk with cash on hand. In 1990-91 Goldman used undrawn bank lines as a backstop. The firm then saw that this was not a good way to raise cash when it needed to. Other firms have pointed out that one sends a strong signal to the market when one draws down a contingency line of credit; this can harm perceptions of the firm's financial strength at just the wrong time. Goldman sought to hold more liabilities for a longer period of time. ("More/longer" is the firm's motto for liability funding.) The firm sold little short term debt; even though the firm used repos as a tool for collateralized financing, almost all repos had more than a 100-day weighted average maturity. The firm also issues promissory notes for 6 to 9 month periods and borrows in the unsecured debt markets at maturities of 7-8 years.

For Goldman liquidity risk management involves both liabilities and assets. The idea is to borrow long and invest in short term assets. The firm manages the balance sheet on both sides of the ledger. Traders must justify not only maturity but also why they need to hold an asset. Sometimes, as with a hedge or a position held for a client, a position may need to stay open. To reduce exposure to the "storage" business, the firm uses pricing to discourage traders from holding aged assets.

The company uses quantitative models to calculate the amount of liquidity the firm must keep on hand. Some might be predicated on Goldman's 1998 experience when liquidity became an issue for financial firms in the aftermath of the Russia debt crisis. CFO David Viniar told Commission

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[67] Nestor Advisors. *Governance in Crisis: A Comparative Study of Six US Investment Banks*. April 2009, pp. 6-7.
[68] Ibid., p. 15.
[69] "Risk Management at Goldman Sachs," February 20, 2007; materials provided to the Senate Permanent Subcommittee on Investigations.
[70] Interview with Dan Sparks, Goldman Sachs, June 16, 2010.

staff that the firm adds to the model amounts according to judgment; the final Global Liquidity Core, as the firm calls it, is about 50% higher than models alone would suggest.

Responding to the Crisis

The company reported excellent communications within the firm. Information and reports regarding risk metrics and firm exposures flowed up to senior management in a timely manner. Chief Financial Officer David Viniar interacted daily with CEO Lloyd Blankfein and other senior executives. Both senior management and the Goldman board were actively engaged during the crisis.

The firm reported that, "…Dan Sparks, then head of the mortgage department, [told] senior members of the firm in an email on December 5, 2006, that the 'Subprime market [was] getting hit hard… At this point we are down $20mm today.' For senior management, the emergence of a pattern of losses, even relatively modest losses, in a business of the firm will typically raise a red flag."[71]

Chief Financial Officer David Viniar convened a meeting to try to understand what was happening. Goldman's senior management decided, in Mr. Viniar's phrasing, "To get closer to home" with respect to the mortgage market. In other words, in its combination of long and short positions, the firm would begin taking a more cautious and more neutral stance. It would reduce its holdings of mortgages and mortgage-related securities and buy expensive insurance protection against further losses, even at the cost of profits foregone on what had looked like an attractive position in mortgages.[72]

In January and February 2007 Goldman hedged its exposure to the mortgage market. The firm then closed down mortgage warehouse facilities moved its mortgage inventory more quickly, and reduced its exposure yet further by taking on more hedges and laying off its mortgage positions. The end result was that Goldman avoided taking the substantial losses it would have suffered if it had not reacted so promptly to signs of problems.

Goldman was pleased at the way that its liquidity risk management worked in the crisis.[73] The firm recognized that market perceptions were critical during the panic. The firm raised cash in a public offering of $ 5.75 billion and a special $5.25 billion offering to Warren Buffett. The positive "optics" of having Mr. Buffet invest in the company at the height of the crisis outweighed the cost of the generous terms that Mr. Buffett required. A *New York Times* story from September 2008 states that nonetheless, and especially after the failure of AIG, "jittery investors and clients pulled out of the firm, nervous that stand-alone investment banks — even one as esteemed as Goldman — might not survive."[74] Under pressure, Goldman and Morgan

[71] Goldman Sachs. "Goldman Sachs: Risk Management and the Residential Mortgage Market," April 23, 2010. p. 5; materials provided to the Senate Permanent Subcommittee on Investigations.
[72] Jenny Anderson and Landon Thomas. Jr., "Goldman Sachs Rakes In Profit in Credit Crisis." *New York Times*, November 19, 2007
[73] Goldman Sachs, "Fall 2008 Narrative."
[74] Julie Creswell and Ben White, "Wall Street, R.I.P.: The End of an Era, Even at Goldman," *New York Times*, September 28, 2008.

Stanley, the other surviving major investment bank, converted into bank holding companies. At that point, with a clear perception of Fed backing, Goldman had weathered the panic and crisis.

In one major area, Goldman's risk management fell short: reputational risk. This is the risk of erosion of a firm's reputation because of its actions or the perception of its actions. On April 27, 2010, the Senate Permanent Subcommittee on Investigations held an 11-hour hearing that focused on Goldman's activities, and one particular transaction specifically, in which Goldman had failed to inform the purchaser of a CDO that the collateral for the CDO consisted of mortgages selected by a short-seller who wanted the deal to fail so that it could collect on CDS that it had purchased on the transaction.[75] On July 15, 2010, Goldman paid $ 550 million to settle allegations of the Securities and Exchange Commission that the transaction was unlawful.[76] The case and its settlement with Goldman's concession was a reminder of the importance of reputational risk in a firm's risk management strategies.[77]

Effects of the Crisis

Goldman emerged from the crisis a strong company. Its Form 10K for 2010 reports total assets of over $ 900 billion, net revenues of $ 39 billion, and earnings of over $ 12 billion. Goldman's conversion to become a bank holding company, subject to the Federal Reserve, along with provisions of the Dodd-Frank legislation, raises issues concerning Goldman's business model going forward. The *New York Times* noted that Goldman's profits had fallen significantly in 2010 and that, "Clients are shying away from the high-margin products that ran into trouble during the financial crisis, and coming regulation will only crimp [Goldman's] profits further."[78]

In early 2011 the firm published a response to its problems with reputational risk, including a new committee structure for reporting potential conflicts and a code of conduct. Goldman pledged that this would be integrated not only into processes of the firm, but also into its culture.[79]

Wells Fargo

Wells Fargo has long operated with a code of principles that it calls the "Vision & Values of Wells Fargo." The company's vision, that, "We want to satisfy all our customers' financial needs and help them succeed financially," came from Norwest when Norwest and Wells Fargo merged in 1998.[80] Wells CEO John Stumpf explains that the Wells culture protected the company: "[I]n

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[75] Proceedings are available at http://hsgac.senate.gov/public/index.cfm?FuseAction=Hearings.Hearing&Hearing_ID=f07ef2bf-914c-494c-aa66-27129f8e6282, accessed July 18, 2010

[76] Securities and Exchange Commission, Consent Order of Defendant Goldman Sachs & Co., paragraph 3, p. 2, available at http://www.sec.gov/litigation/litreleases/2010/consent-pr2010-123.pdf, accessed April 17, 2011.

[77] Sewell Chan and Louise Story "Goldman Pays $550 Million to Settle Fraud Case," *New York Times*, July 15, 2010.

[78] *New York Times*, "Goldman Sachs Group Inc., http://topics.nytimes.com/top/news/business/companies/goldman_sachs_group_inc/index.html?scp=1-spot&sq=goldman%20sachs&st=cse, accessed March 21, 2011.

[79] Goldman Sachs, *Report of the Business Standards Committee: Executive Summary*," available at http://www2.goldmansachs.com/our-firm/business-standards-committee/executive-summary.html, accessed March 23, 2011.

[80] Stanford Graduate School of Business, "Wells Fargo and Norwest: Merger of Equals (B)," October 11, 2004, p. 2.

large part, we avoided the big problems the industry is seeing because of our culture. Our culture puts the customer at the center of what we do. If it's good for the customer, it will ultimately be good for us."[81] The company links the vision to its corporate strategy of cross-selling products to its customers; as customers thrive, and have a good experience, Wells is in a position to provide them yet more products and services.

The vision did allow Wells to sell subprime mortgages to its customers, but the company stayed away from the most risky mortgage products. John Stumpf, the CEO, chairman, and president of Wells Fargo, told the FCIC about Wells's decision not to write option ARMs. These were "hard decisions to make at the time," he said, noting "we did lose revenue, and we did lose volume."[82] Mark Oman, Group Executive Vice President, Home and Consumer Finance, told FCIC staff that this caution cost the company market share in 2004-2006.[83]

The company also originated Alt-A mortgages, but again with caution. Wells CEO John Stumpf told an interviewer that, "With no documentation, no income verification and at the rate, and frankly, we didn't put mortgages in our books or even a lot of credit in our books a few years ago because there was no return built in for risk. These were viewed as riskless assets, and they're not." Moreover, Stumpf said, the company had a policy of underwriting adjustable rate mortgages at the fully indexed rate, rather than on the basis of the artificially low rate that might exist in early years of a mortgage.[84]

Wells's prudence allowed the company to weather the crisis with a strong balance sheet. The *New York Times* summarizes Wells's experience in the crisis as one in which the company's "slow-go approach comes in stark contrast to its rivals. And it is not the only way the bank stands out. Even though Wells Fargo is the nation's biggest lender to consumers, its losses on bad loans have been lower than the rest of the industry. Wells Fargo officials attribute that divide to prudent lending standards — like requiring higher down payments — and being quicker to restructure problem loans from the start."[85]

In the end, however, the company, which had avoided negative amortization mortgages in its business, became one of the largest holders of such products in the nation. In October 2008 Wells purchased Wachovia, a large bank holding company that came to grief after purchasing Golden West, a major originator of pay-option ARMs, a negative amortization product. Wells then became embroiled in the foreclosure problems that have affected other large lenders such as J.P. Morgan, which acquired WaMu and its large portfolio of troubled mortgages, and Bank of America, which acquired Countrywide. Wells also ran into difficulties with $ 10 billion of home equity mortgages that it purchased and that turned out to go delinquent and default in much higher numbers than expected.

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[81] Kai Ryssdal , "Conversations from the Corner Office: Wells Fargo & Company President and CEO John Stumpf," June 10, 2008, available at http://marketplace.publicradio.org/display/web/2008/06/10/corneroffice_stumpf_transcript/, accessed 03-23-2011.
[82] FCIC interview, September 23, 2010, available on the FCIC permanent website.
[83] FCIC interview, October 27, 2010, available on the FCIC permanent website.
[84] Kai Ryssdal, "Conversations from the Corner Office," op. cit.
[85] *New York Times*, "Wells Fargo & Company," January 20, 2011, available at http://topics.nytimes.com/top/news/business/companies/wells_fargo_and_company/index.html, accessed 03-23-2011.

Toronto Dominion Bank

In an investor presentation in September 2007, TD Bank summarized its exposure to difficult assets. The company reported no exposure to U.S. subprime mortgages or CDOs, no direct exposure to third-party asset-backed commercial paper except for exposure of its mutual funds and asset management group, and no direct lending exposure to hedge funds, with only nominal trading exposure.[86]

In the early 2000s, Toronto Dominion Bank had had an active international business in structured products. Then with little explanation CEO Edmund Clark announced in the company's 2005 annual report that, "We…made the difficult business decision to exit our global structured products business…While the short-term economic cost to the Bank is regrettable, I am pleased that we have taken the steps we have and that we can continue to focus on growing our businesses for the future to deliver long-term shareholder value."[87] The company reported taking significant losses as it unwound its positions in 2005 and 2006.

How did Mr. Clark make the decision both to avoid exposure to the U.S. subprime market and to shed the firm's exposure to structured products, including CDOs and interest-rate derivatives? "I'm an old-school banker," Clark told a reporter in May 2008. "I don't think you should do something you don't understand, hoping there's somebody at the bottom of the organization who does."[88]

Clark holds a PhD in economics from Harvard University. He said he spent several hours a week meeting with experts to understand the credit and equity products being traded by the bank's Wholesale Banking unit. "The whole thing didn't make common sense to me," Clark said. "You're going to get all your money back, or you're going to get none of your money back. I said, `wow!' if this ever went against us, we could take some serious losses here."[89]

Mr. Clark recalled that stock analysts did not encourage his long-term perspective:

> "[Prudence] does mean that you have to sit in marketplaces, as we did in the US, for a couple of years and grow our loan book less quickly than the market. It did mean that you had to exit structured products in 2005 and 2006 and have analysts write that you're an idiot….But in the end of the day, it means that when the bad times eventually do come, that you don't get rocked by it."[90]

While their approaches differed, all four of the successful firms combined significant qualities: (1) discipline and a longer-term perspective, (2) strong communications and information systems to ensure that top management had access to information needed both to manage the firm and to

[86] TD Financial Group, "Investor presentation, September 2007," Slide no. 15.
[87] W. Edmund Clark, "President and CEO's Message," *TD Bank Financial Group 2005 Annual Article*, p. 6, 2006.
[88] Sydney Morning Herald, Bloomberg, "The bank that said 'No' to subprime debt," May 27, 2008, available at http://www.smh.com.au/business/the-bank-that-said-no-to-subprime-debt-20080527-2ihd.html, accessed 03-21-2011.
[89] Ibid.
[90] TD Bank Financial Group, National Bank 2010 Financial Services Conference, presentation, March 30, 2010

understand enterprise-wide risks, (3) seasoned managers in positions to add judgment to the output of any quantitative models and to respond to events based on experience, (4) sensitivity to early warning signs and the capacity to respond quickly and effectively, and (5) a process of structured dialogue between business units and risk managers. Managers at successful firms solicited feedback continuously.

In looking at the four successful firms, it is helpful to distinguish among (1) vulnerabilities, (2) behavior in the run-up to the crisis, and (3) capacity to respond as the crisis hit.

Reduced Vulnerability and the Importance of Culture

Firms that weathered the financial crisis had a culture that supported disciplined restraint. Some firms, and J.P. Morgan and TD Bank stand out here, kept a capital cushion that was larger than financial supervisors required.

Successful firms emphasized another fundamental approach that cost the funds and effort. This was an insistence on placing all of the company's far-flung operations onto a common operating platform. Only that way could a complex financial firm with tens or even hundreds of thousands, of employees, hundreds or thousands of affiliates and, for retail banks, tens of thousands of retail locations, actually run the company as a single business.[91] The result was not only the ability of these companies to manage their firms across multiple business lines, locations, and even countries, but also – of particular relevance here – to take an enterprise-wide view of risks that the firm was incurring. Unsuccessful firms such as Citigroup, UBS, and Washington Mutual expanded in the years before the crisis, but failed to integrate their systems and business platforms to obtain the capacity to manage the entire disjointed company.

Prudent Activities and an Enterprise-Wide View of Risks

Successful firms tended to refrain from offering financial products that they viewed as risky for themselves or their customers. Wells Fargo, for example, decided not to deal in some mortgages that could leave borrowers with too much debt. The company gave up market share in the go-go years of 2006 and 2007 while other companies increased lending by originating or holding such mortgages.

In interviews with the Financial Crisis Inquiry Commission, officials of unsuccessful firms complained that they could not have been expected to foresee the improbable drop of 30 or 40 percent in housing prices that occurred in major market areas after mid-2006. But successful firms did not foresee this either. They simply maintained a disciplined approach to risk-taking and, when they saw that the market was troubled, took a defensive posture until they could figure out what was going on. This was the case at Goldman Sachs and J.P. Morgan.

Another important ingredient for success was the ability to combine good judgment with good information. Decades ago economist Frank Knight articulated the difference between risk and

[91] See, e.g., Mara Der Hovanscian, "JPMorgan: The Bank of Technology; The financial giant is making investments in info tech and expects to reap huge awards," *Business Week*, June 19, 2006; Clayton G. Deutsch, "Building the global bank: An interview with Jamie Dimon," *The McKinsey Quarterly*, 2006, no. 4; Adam Lashinsky, "Riders on the Storm [Wells Takeover of Wachovia]," April 20, 2009.

uncertainty.[92] He explained that risk involves factors that can be modeled statistically, while uncertainty involves factors that require qualitative judgments. Successful firms in the financial crisis combined strong information systems and quantitative analysis with sound judgment about uncertainties that would not be susceptible to quantitative-based understanding alone. Top management at some of the successful firms had weathered earlier financial crises such as the stock-market break of 1987 or the Russia debt crisis of 1998 or, in the case of Goldman Sachs, the experience of nearly going out of business in 1994. The Treasurer of a surviving major firm explained to the present author that it was a major benefit to have seasoned personnel in place to manage risk as the panic hit.

On the quantitative side, successful firms needed to draw upon a base of skilled financial modelers who combined sophisticated quantitative skills with practical knowledge of the company's business. Good communication skills helped too, so that management understood the practical strength of financial models and the limitations of available data and other model inputs that affect virtually all quantitative systems. Unlike firms that relied heavily on flawed risk models during the housing and credit bubbles, successful firms used their models and data in the context of seasoned judgment.

A third important characteristic of successful firms was good communication, both across business lines and vertically. These firms required managers routinely to report problems to their superiors: the idea was that top management wanted to hear bad news from subordinates before hearing it from other sources. All four of the successful firms report this approach of requiring managers to report early warnings of potential trouble.

Successful firms also created processes to bring information to the top. Former Comptroller Eugene Ludwig told FCIC staff about one mechanism he used to bring important information to his attention when he served as Vice Chairman of Bankers Trust:

> "We had something called the senior control officer. And that was what I could call an out-of-the-box, roaming, risk manager type. So, notwithstanding the formalized risk management structure …we had somebody [who would] go everywhere and look at everything and if something simply triggered in his mind --he had small team of accountants -- that there was something just wrong; it was growing too fast, they weren't really checking the tickets the way they ought to. Anywhere in the organization -- we operated all over the world -- his job was to note it and immediately pick up the phone and call me, 'Come visit.' That was very effective…notwithstanding all the organized mechanisms…"[93]

Once management received an early warning of possible major issues, more intensive conversations ensued to try to determine whether the warning signaled impending trouble and a possible response. That happened both at Goldman and at JPMorgan Chase. Northwestern University Professor Russell Walker concludes, "[R]isk management is really about the identification of key information and its use in the decision-making process. It is not about

[92] Frank Knight, *Risk, Uncertainty, and Profit*, 1921
[93] Eugene Ludwig interview, September 2, 2010, available on the FCIC permanent website.

guidelines or the execution of conventional mathematical models. Preparing for the unknown requires having the best information."[94]

Good communication is also important more generally, about the directions the business is taking and the need for change. In the parlance of organizational development expert Jack Rosenblum, "Feedback is a gift." A gentleman from one of the successful Wall Street firms proudly told the present author that, "The CEO often asks my opinion on major issues," adding, "but he asks 200 other people their opinions too." Managers at the successful firms solicited feedback continuously. While they didn't act on all, or perhaps most, such feedback, they developed a robust understanding of their firm and its environment that otherwise might not have been possible.

Finally, successful firms created organizations and processes that fostered constructive tension between (1) those who wanted to do deals, or offer certain financial products and services, and (2) those in the firm who were responsible for limiting risk exposures. These firms essentially use a "balanced scorecard" approach to ensure that short-term returns do not result in decisions that increased the firm's vulnerability to potential failure. For well run firms, this means that pricing is appropriate; when the firm buys or sells assets, the price reflects likely risk.

While TD Bank and Wells Fargo minimized their exposure to the crisis through selective participation in risky activities, JPMorgan Chase and Goldman Sachs had enterprise-wide pictures of risks facing the firms and made disciplined decisions when they detected early warnings that the market might be troubled. Of course, this reaction depended on the company's long-term investment in a culture of risk management, information systems to provide an enterprise-wide view of risk, and a general risk management infrastructure that allowed the company to detect risk early, communicate internally in a robust and open manner, and reach a decision to limit the firm's exposure to the mortgage market.

Firms that Failed

Firms that failed exhibited varying organizational structures but common shortcomings in management. Failed firms were of all organizational types, including two government-sponsored enterprises, Fannie Mae and Freddie Mac, two investment banks, Bear and Lehman, two commercial bank holding companies, Citigroup and UBS, one insurance company, AIG, and two thrift holding companies, Countrywide and WaMu.

A distinguishing characteristic of unsuccessful firms was their pursuit of short-term growth without appropriate regard for the risks involved. In 2005-2007 both Fannie Mae and Freddie Mac decided to take more risk and increase exposure to the subprime mortgage market just as home prices were peaking.[95] Other firms decided similarly around the same time, including Lehman and WaMu. WaMu expanded its exposure to lower quality mortgages and other loans in

[94] Russell Walker, "Fortune favours the well-prepared," *Financial Times*, January 29, 2009.
[95] See, e.g., Fannie Mae Strategic Plan 2007-2011 'Develop Segments – Develop Breadth,'" undated, approximately end of June 2007; Freddie Mac, "Freddie Mac's Business Strategy," March 2-3, 2007; both available on the FCIC permanent website. See also, Thomas H. Stanton, "The Failure of Fannie Mae and Freddie Mac and the Future of Government Support for the Housing Finance System," *Journal of Law and Policy*, vol. 18, no. 1, 2009

2005, as the company explained, "In order to generate more sustainable, consistent, higher margins..."[96]

Many of the firms that took excessive risk at the wrong time did have chief risk officers (CROs). Sometimes, the chief risk officer reported to the head of a business unit rather than to a committee of the board of directors or at least to the CEO. This muted their ability to assess risk or make recommendations that top management would hear. Some of the firms that failed either fired the CRO[97] or moved the CRO to a less important position at the company.[98] In one major case, the corporate CRO simply lacked access to information at a part of the firm that was taking excessive risk.[99] At many firms, enterprise risk management expert Stephen Hiemstra explains, risk management was a compliance exercise rather than a rigorous undertaking.[100]

Almost by definition, one can say that unsuccessful firms operated with excessive leverage compared to their risks. Pushing the limits, especially after 2005, meant that highly leveraged firms could afford to take fewer losses than if they had maintained more of a capital cushion.

Besides failing to maintain a prudent capital cushion, failing firms often also lacked an adequate information technology infrastructure to manage their businesses. Many financial firms had grown during years of prosperity but neglected to update their information systems so that they had a good picture of the risks they were taking across the entire enterprise.[101] This was especially true of firms that had grown through acquisitions without adequately integrating operations into a common information technology platform. Some major financial firms showed their lack of integrated risk management when one part of the firm increased its exposure to the mortgage market while other parts were cutting back, without sharing this information.[102]

Finally, many firms failed to prepare themselves for the market panic and loss of access to liquid funds that finally brought them down. These firms tended to finance their long term assets with short-term borrowing. The assumption had been that, if an individual firm began to fail, it could sell high-quality assets and gain the liquid funds it needed to stay in business. Few foresaw the widespread and systemic nature of the financial crisis. Once the market realized that the "AAA" rating, that traditionally had been a sign of credit quality, was not necessarily a sign of credit quality for private mortgage securities, troubled firms found themselves unable to sell their assets except at fire-sale prices.

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[96] Washington Mutual, "Higher Risk Lending Strategy, 'Asset Allocation Initiative,' Board of Directors, Finance Committee Discussion," January 2005, p. B1.2, available from the Permanent Subcommittee on Investigations, Senate Committee on Homeland Security and Governmental Affairs, available at http://hsgac.senate.gov/public/_files/Financial_Crisis/041310Exhibits.pdf, accessed July 15, 2010, pp. 20-48.

[97] Charles Duhigg, "At Freddie Mac, chief discarded warning signs," *New York Times*, August 5, 2008.

[98] Article of Anton R. Valukas, Examiner, *In re Lehman Holdings, Inc.*, United States Bankruptcy Court, Southern District of New York, Section III.A.1: Risk," March 11, 2010.

[99] Financial Crisis Inquiry Commission, "Risk Management," June 30, 2010, available at http://fcic-static.law.stanford.edu/cdn_media/fcic-testimony/2010-0630-AIG-Risk-Management.pdf.

[100] Stephen W. Hiemstra, "An Enterprise Risk Management View of Financial Supervision," *Enterprise Risk Management Institute International*, October 2007.

[101] On the impact of growth on internal controls at Fannie Mae and Freddie Mac, see, e.g., Thomas H. Stanton, "The Life Cycle of the Government-Sponsored Enterprise: Lessons for Design and Accountability," *Public Administration Review*, September/October 2007.

[102] See, e.g., Eric Dash and Julie Creswell, "Citigroup saw no red flags even as it Made Bolder Bets," *New York Times*, November 23, 2008.

The problem was compounded when firms lacked information systems that would reveal the extent of their exposure to mortgages, mortgage securities, commercial real estate, and leveraged loans, among other assets that became hard to price in the crisis. Even firms that thought they had limited their exposure to mortgages, for example, often found that they possessed pipelines of unsold mortgages or had committed warehouse lines of credit to mortgage lenders or were otherwise exposed to commitments that increased the assets on their balance sheets just when they were trying to reduce their exposures.

Many firms, and Fannie Mae and Freddie Mac stand out here, lacked effective information systems. Both firms had suffered a meltdown of internal controls, which came to light at Freddie Mac in 2003 and at Fannie Mae in 2004. The Financial Crisis Inquiry Commission reported on an interview with officials at the GSEs' regulator, the Federal Housing Finance Agency (FHFA), formerly the Office of Federal Housing Enterprise Oversight (OFHEO):

> "John Kerr, the FHFA examiner (and an OCC veteran) in charge of Fannie examinations, labeled Fannie 'the worst-run financial institution' he had seen in his 30 years as a bank regulator. Scott Smith, who became associate director at FHFA..., concurred; ...To Austin Kelly, an OFHEO examination specialist, there was no relying on Fannie's numbers, because their 'processes were a bowl of spaghetti.' Kerr and a colleague said that that they were struck that Fannie Mae, a multitrillion-dollar company, employed unsophisticated technology: it was less techsavvy than the average community bank."[103]

Space does not allow for a listing of the shortcomings of financial firms that went out of business, lost their independence, required substantial infusions of taxpayer funds, or otherwise failed to weather the crisis. The Commission has placed on the public record an Oliver Wyman report from early 2008 that describes "Gaps in Risk Management" at Bear Stearns:

- "No formal framework for risk management
- "No clear process for approval of major trades...
- "Lack of coherent limit structure with consistent enforcement...
- "Underdeveloped processes for strategic risk assessment...
- "Lack of mandate for the Risk Policy Committee
- "Lack of institutional stature for Risk Management Group..."[104]

This list serves as a useful summary of shortcomings at too many of the major firms that failed to weather the crisis.

III. Conclusions and a Closing Thought

The Financial Crisis Inquiry Commission conducted interviews with numerous senior supervisors. From those interviews it became clear that large complex financial institutions pose

[103] Financial Crisis Inquiry Commission, *Final Report*, pp. 321-322 (footnote omitted).
[104] Bear Stearns, "Management Committee: Risk Governance Diagnostic; Recommendations and Case for Economic Capital Development," February 5, 2008, available on the permanent FCIC website.

special supervisory issues. Supervisors of smaller and regional institutions could share promising practices across the institutions that they supervised and thereby contribute value for CEOs of each institution. This was much harder with large complex financial institutions. Often supervisors would concentrate their attention on quantifiable compliance matters where they could make a clear case, even though the value added would have been much greater if they had focused on less tangible issues such as whether a large firm had a risk-sensitive culture and whether revenue-producing units responded appropriately to feedback from risk officers.

In the course of analyzing governance, risk management, and the financial crisis, it became clear that "feedback is a gift." Leaders of the best managed firms used their boards, executive committees, risk officers, and other sources of feedback to keep the balance between revenue generation and risk management. By contrast, leaders of failed firms often had less robust means of soliciting feedback or simply did not welcome it. This leads to a recommendation: regulators need to become strong and capable sources of independent feedback, especially for firms with lower quality governance and risk management. Less well managed firms need this feedback to protect themselves from making serious mistakes, and better managed firms need this to help insulate the financial system from harm.

The literature on governance[105] and risk management[106] suggests many good ideas for improving management at major financial firms. But if an institution in fact does not improve, or adopts an outward form of good governance and risk management but not the actual practice, the literature does not propose how to deal with this. The only answer seems to be to impose discipline and improved governance and risk management from the outside. This was supposed to be the theory of Basel II; yet, while large complex institutions invested in risk management systems to justify lower capital standards, regulators never achieved the mandate or capacity to deal effectively with poor governance and risk management that nonetheless persisted at many firms.

Citigroup CEO Charles Prince made the argument for supervisory intervention at a dinner with then-Treasury Secretary Henry Paulson on June 26, 2007. Mr. Paulson recounts that Mr. Prince asked with respect to leveraged loans "whether given the competitive pressures there wasn't a role for regulators to tamp down some of the riskier practices," and "Isn't there something you can do to order us not to take all these risks?"[107]

Successful firms in the financial crisis managed to take care of themselves. But, as Mr. Prince noted, only a regulator could help to set a floor on conduct and prevent less successful firms from undertaking risky practices that have cost our country so much in so many ways. My personal conclusion is similar: it is in the fundamental interests of the country and of firms that make their livelihoods in the financial system to ensure that regulators have the mandate and capacity to promote and ultimately to require continuing improvements in governance and risk management.

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[105] See, for example, Committee for Economic Development, *Restoring Trust in Corporate Governance: The Six Essential Tasks of Boards of Directors and Business Leaders*, policy brief, January 2010.
[106] See, for example, Senior Supervisors Group, *Observations on Risk Management Practices during the Recent Market Turbulence*, March 6, 2008.
[107] See, Financial Crisis Inquiry Commission, "Interview of Charles O. Prince," March 17, 2010, Transcript, pp. 126-7, available on the permanent FCIC website.