Federal Reserve Bank of New York
Report on Systemic Risk and Bank Supervision

I. Introduction and Summary

This is a report by David Beim[1] and Christopher McCurdy in consultation with the following team: Beverly Hirtle, Meg McConnell, Patricia Mosser, Mark Saidenberg, Michael Silva, Kevin Stiroh, Ronald Stroz and Til Schuermann. In addition Anna Kovner took detailed notes on all the interviews and meetings and made many useful suggestions.

We were asked to draw on bank supervisory lessons learned from the recent financial crisis and to make an assessment of changes the Federal Reserve Bank of New York (FRBNY) might make in its organization and practices, with a particular focus on Bank Supervision, if the Federal Reserve is designated as the nation's systemic risk regulator. In this process we looked at areas where FRBNY has done well, that should be reinforced, and also at areas for improvement. Drawing on these lessons, we make a number of recommendations that should be applied to future conduct of standard bank supervision. Further, we believe that systemic risk in the major financial institutions has become such a powerful issue for bank health that we recommend these changes even if the "systemic risk regulator" designation does not occur.

The 2007-2009 financial crisis was a systemic collapse – a sudden collapse of asset prices and the near-failure/rescue of almost all large financial institutions under severe financial stress. The United States has not witnessed a systemic collapse since the 1930s, and many thought it was impossible for the United States to have such an event, given the apparent advances in risk management that preceded it. However, the collapse occurred and was very large, damaging to the real economy and extremely expensive to resolve. A desire not to let such an event happen again pervades the body politic, indeed is demanded by many.

But preventing such an event is neither easy nor costless. Financial crises typically follow large economic booms. While such booms may be characterized as bubbles in retrospect, they are extremely popular while they are occurring. The Federal Reserve has long seen its mission against inflation "to take away the punch bowl just when the party is getting good"; if it now becomes the systemic risk regulator it must be prepared to do the same against rising systemic risk, using tools beyond monetary policy. This is likely to be unpopular unless the ground is extremely well prepared and broadly understood. We return to this threshold problem in more detail below.

Assuming that systemic risk above some level should be controlled, the regulator has two problems: recognition and action. Recognition requires a contrarian spirit, a willingness to challenge the prevailing orthodoxy. It also requires communication across organizational lines to "connect the dots" when financial innovations occur and new risks appear. Our review of lessons learned from the crisis reveals a culture that is too hierarchical, structured and risk-averse to respond quickly and flexibly

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to new challenges. Business organizations including banks have moved away from structured hierarchies in favor of more modern, flexible organizational forms, and FRBNY needs to adopt some of these attributes to be effective in grasping and acting on systemic issues. This requires a significant degree of cultural change and has implications for human resources and management which we explore below. Much of this report and most of our recommendations are focused on issues of communication and organizational culture. Most of the recommendations are designed to enhance regular supervision as well as to provide an underpinning for systemic risk analysis and policy development

In addition, a channel is needed to turn systemic concerns into responses as appropriate. Many within FRBNY say that "we saw issues but did not respond". So part of the required change is to set up a channel for handing systemic concerns when they arise.

This report is organized into two main sections: lessons learned from the 2007-2009 crisis, and responses and recommendations. Here is a summary of key lessons learned, grouped by assumptions, approaches, culture and practices:

A. **Some basic assumptions are wrong:**

1. *"Banks can be relied upon to provide rigorous risk control." In reality banks' internal risk management and control functions were often ineffective in the run-up to the crisis and were usually trumped by the pressure to do profitable business.*
2. *"Markets will always self-correct." A deference to the self-correcting property of markets inhibited supervisors from imposing prescriptive views on banks.*

B. **Some regulatory approaches need modification:**

1. *"Focus only on individual institutions." Interconnections and aggregates were not taken seriously enough. "We looked at the nodes, not the system."*
2. *"Rely on the banks' MIS." Banks' management information systems were often fragmented and information provided by them to their senior management and to supervisors suffered as a result.*
3. *"Strive to be non-confrontational." Supervisors adopt a non-confrontational style on the expectation that it will smooth their attempts to obtain timely and useful information; many felt the deference to be excessive.*
4. *"Strive for consensus." Internal consensus is needed to move issues forward, but it can also become a source of delay, imprecision and avoidance of responsibility.*

C. **The FRBNY culture should be more pro-active and effective:**

1. *There is excessive risk-aversion. Many people are fearful of making a mistake or of speaking up in contradiction to others, especially superiors. Out-of-the-box thinking is not encouraged.*
2. *There is not enough communication across lines. The "need to know" culture is often overdone and becomes an excuse to hoard information rather than share it across lines.*

3. *There are some frictions in the risk/relationship interaction. This critical interaction works reasonably well albeit with some frictions and communications issues that can be addressed.*

D. **Certain practices are more effective than others:**

1. *Horizontals are effective but need improvement. Horizontal reviews of risks across a panel of banks do identify sound practices for dealing with those risks, but too often reveal only the relative rankings of banks and not the absolute level of risks being run.*
2. *The FRC/FRO initiative was well aimed but its implementation was flawed. This important initiative to give early warning of systemic risks became too formal and presentational to effectively get ahead of the risks.*
3. *The SCAP process was a model of a process that works. Effective supervisory initiatives all contain a set of success characteristics that can be replicated across projects. Conversely where these factors are missing, projects do not reach their full potential.*

Here is a summary of our recommendations:

A. **Foundational matters:**

1. *Adopt financial stability as a central mission, on a par with price stability.*
2. *Build the intellectual and political case for systemic risk regulation.*

B. **Organizational matters:**

3. *Establish a new senior position of Systemic Risk Advocate and dedicate resources from various areas of the bank in support of this position.*
4. *Establish a process for collecting and analyzing cross-firm exposures to identify financial market vulnerabilities that could affect a broad range of institutions and markets.*

C. **Cultural matters:**

5. *Launch a sustained effort to overcome excessive risk-aversion and get people to speak up when they have concerns, disagreements or useful ideas.*
6. *Give more resources to the Relationship Managers and demand from them a more distanced, high-level and skeptical view of how their bank tries to make money and what distinctive risks this entails.*
7. *Refocus Risk Management away from studying banks' systems and toward developing standardized approaches to assessing risk itself. Strive for a better understanding of the aggregate level and trends in bank risk.*
8. *Re-think risk-focused supervision to increase the emphasis on independent identification and examination of actual risks at banks compared to risk-control reviews*

9. *Improve the interaction between Relationship Management and Risk Management by providing them with customized training in executive communications and conflict management.*

D. **Communication matters:**

10. *Announce that improved communication across organizational lines is a centrally important need for recognizing and understanding emerging systemic issues and institute practices that encourage it.*
11. *Remember and repeat the factors in successful regulatory initiatives. Articulate the personal qualities and behaviors wanted in supervisors, repeat them frequently and use them in both hiring and personnel reviews.*

II. Lessons Learned

We interviewed over 20 participants in the New York Fed's bank supervisory program. Most, but not all, were from Bank Supervision and most, but not all, were senior officers. We asked the following question: give us a sense of the lessons learned about Supervision's activities over the years leading up to and including the financial crisis, those things we did well and those things we did not and help us think about how we might employ these lessons in an environment where the Fed will need to address supervisory and systemic risk issues, whether or not it becomes a systemic risk regulator. We divide our findings into Assumptions, Approaches, Culture and Practices.

A. Some Basic Assumptions are Wrong

Lesson Learned: Banks may not want rigorous risk management

Regulators have long assumed that a bank's board of directors will act in the best interests of the shareholders to assure the long-run profitability and viability of their firm. It was assumed that bank boards and managements wanted a serious and effective internal control structure that would encourage managers in the various business lines to seek strong profits subject to internal constraints – limits on risk taking and promotion of ethical behavior, for example. Regulators over time incorporated these assumptions into their approach to bank oversight. In recent decades banking has become more complex and the risk management function more important and challenging. Banking has moved from standard deposit taking and commercial and consumer banking with some capital market activity to the full range of trading in securities, derivatives, and securitization activities in addition to standard commercial banking activity. Profitability and risk both expanded.

To adapt to this changed banking environment, Supervision over the last 20 years moved away from an annual full scope examination (which became less relevant and efficient) and migrated to risk-focused supervision. Supervisors focused on the risks banks identified in their business lines and sought to build on the banks' control structures. This approach centered on risk management systems at banks and bank holding companies on the assumption that the companies had a keen self-interest in identifying and controlling their risks and could establish an internal risk management function capable of monitoring and/or carrying out these functions. Supervisors would "leverage" off a bank's risk management apparatus – the traditional compliance and audit functions, and new risk management divisions designed to review, measure, and report to senior managers on market and credit risks in various business lines. Supervisors thus shifted toward reviewing processes rather than the level and extent of risk that each bank was running.

These assumptions were not tested with rigor over time. In reality, risk management functions were less effective than needed. Supervisory attention was diverted from independently assessing the inherent level and extent of risks in the banks' main or emerging business lines. As indicated in the Senior Supervisors 2008 report on banks' risk management capabilities (covering activities in 2007), this reliance was misplaced, as risk management processes fell down in many ways.

It is difficult to inspect a risk management division to determine if it is effective in helping the bank manage those risks. On paper, an area may look independent and have reporting lines that go to the bank's top managers, but these managers may not listen to the risk management area. Some risk management areas tried to retain relevance as "trusted partners" to their allied business lines, sometimes at the expense of independence. The risk management function was often marginalized within the banks.

Some interviewees noted the principal/agent dichotomy between senior managers and the shareholders over the desire for long-run profitability versus short-run bonuses. Compensation structures based on bonuses for profitability in a given year were a powerful incentive for seeking short-term gains. The incentives buried in business line bonus pool determinations tended to re-enforce risky behavior, notably in trading areas. Bonus pool plans generally did not provide incentives for conservative judgments. Profits from structured product trading would be booked in the first year but problems would often not occur until well down the line – an interval that might be well beyond the average tenure of trading desk personnel and management. A bank's governance predicated on maximizing lending or trading profits subject to internal limits and economic capital might break down under the temptations to skew bonus pool calculations and to co-opt the internal risk management functions. One of our interviewees said that principled risk managers in banks were fired. Conversation with some bank risk managers themselves confirms that they felt powerless to stand up to the business side.

Lesson Learned: Deference to the self-correcting property of markets

Interviewees noted the common expectation that market forces would efficiently price risks and prompt banks to control exposures in a more effective way than regulators. For example innovative securitization techniques, derivative instruments and off-balance sheet vehicles apparently helped to diversify risks away from leveraged intermediaries, allocating risks to investors and others who were thought most able to shoulder the risk/reward trade-offs. Regulators faced and often shared skepticism that regulators could push for more effective practices than those required by the market for controlling firm risk. After years of record profits, low and declining price volatility and minimal losses during 2003-2007, supervisors faced an up-hill battle to challenge banks' appetite for risk or their business practices.

But in reality markets did not control risk until very late in the cycle when funding was finally withheld from one large institution after another.

Regulators were reluctant to be prescriptive in exam findings. Beyond not wanting to impose their judgment on an outwardly successful business model, supervisors were concerned that their recommendations might be wrong and would be faced with ongoing criticism from the bank. Some interviewees feel we accepted bank risk models that we would not accept today because we were not willing to propose particular practices or supervisory models, that is, to require particular parameters or structures that were more conservative or stringent.

B. Some Regulatory Approaches Need Modification

Lesson Learned: Emphasis on individual bank supervision

Supervision monitors the safety and soundness of individual banks. Many noted that supervisors looked at the nodes of the financial system – individual banks and holding companies – and did not often look at the system as a whole. Supervisors generally did not review a bank's ability to withstand a market-wide event in the context of other banks with similar exposures or consider what issues across systemically important banks might cause problems for banks collectively. Thus in supervisory stress tests, a bank would be asked to demonstrate how well it could weather a problem that affected only it – a name-specific or idiosyncratic event such as a ratings downgrade, and even then the assumed problem was modest. Banks were not pushed too far out into the tail of the risk distribution or asked to review their plans for dealing with an industry-wide liquidity or credit risk event, or to demonstrate their ability to handle a significant loss of confidence in the industry or loss of funding industry-wide.

Banks did not internalize the costs of systemic risk or build liquidity or capital resources to high levels. Market participants believed it was reasonable to expect the fiscal authorities would provide the ultimate insurance policy to protect against a system-wide crash. The moral hazard embedded in this model was pervasive: supervisors did not press the largest banks to analyze and prepare for extreme risk events.

Supervisors and banks alike were not aware of the full size and overhang of exposures in the market such as CDOs in general and those backed by sub-prime mortgages in particular. An exposure at one institution might appear reasonable or manageable if others did not have the same high exposure, but in the aggregate a high level of holdings industry-wide can be a recipe for gridlock if others are in the same situation and all head for the exit at the same time in a stress event.

An allied issue is the tendency to focus on on-balance sheet risks and not to address off-balance sheet vehicles that can present risk to the institution. To take one important example, Structured Investment Vehicles (SIVs) were not on the radar screen in the supervisory arena until very late in the crisis. SIVs were designed to provide investment structures that relied on short-term financing, commercial paper or the equivalent, as a way to finance longer term less liquid instruments, such as

CDOs or medium-term notes. SIVs were legally separate from the sponsoring organization – generally an affiliate of a bank. However, when investor interest in SIV paper evaporated in 2008, some institutions agreed to buy back or support the instruments, largely as a way to maintain their customers' good will and their franchise value. Banks and supervisors alike underestimated how these off-balance sheet exposures could harm a firm's overall liquidity.

Lesson Learned: Reliance on banks' MIS and models

Bank supervisors often rely on the supervised institution's internal management information systems (MIS) and the output from models, as opposed to requiring data provided according to standardized regulatory reports. In many cases there seems to be no alternative way to get insights into a bank's sophisticated trading (in derivatives, for example) and commercial banking activities. This approach is predicated on the expectation that banks have a strong incentive to develop good MIS and models for use in running their business lines and as a result will produce information that is more accurate and timely than regulatory reports (which are not used internally). Supervisors were also sensitive to banks' complaints that producing MIS according to regulatory definitions and formats would be burdensome.

In retrospect, this reliance was misplaced across a range of major institutions. After multiple mergers, banking companies often faced significant challenges in integrating IT systems. Many reporting structures were fragmented and banks encountered big challenges in aggregating exposures and risks. Banks failed to invest adequately in internal MIS and as a result failed to capture all of their exposures and positions across the full range of entities in the firm. Thus the time and resource expenditures firms faced in identifying their exposures to a single name or risk dimension such as sub-prime mortgages could be daunting. Information provided to senior management and regulators suffered as a result.

Furthermore, even when the MIS and model outputs were accurate, but expressed in each bank's metrics, supervisors were not in a good position to see or aggregate risky exposures across the universe of major or systemically important institutions.

IT costs for improved, comprehensive systems were very high, and as such competed with business lines and profitable new initiatives for scare IT resources. Given the expense involved, supervisors often did not feel in a position to recommend and require significant spending on MIS over the near term unless they were able to point out demonstrable control and compelling reporting weaknesses.

Lesson Learned: Deference and avoidance of confrontation

A number of people believe that supervisors paid excessive deference to banks and as a result they were less aggressive in finding issues or in following up on them in a forceful way[2]. Information asymmetry subtly influences the relationship between supervisors and the supervised. Banks have superior information about their business and are the primary gateway to information the supervisor needs. Banks inherently have an information advantage over the supervisors. To understand a bank's exposures and risks the supervisor must request information and often explanations of what the information means. Getting good, timely information is therefore dependent on the willingness and enthusiasm of bank staff in providing that information. Supervisors need good working relationships with their firm, and they believe that a non-confrontational style will enhance that process. Large information requests, lengthy exams, and frequent meetings with management can be a source of friction with the bank.

The problem is analogous to that of ambassadors to other countries, where getting support from the top is critical to pushing for changes. Examiners note how important it is to receive support from senior management when the banks complain about supervisory intrusion, and how demoralizing it can be when they perceive insufficient support. Many have been reluctant to press changes on the supervised banks.

Lesson Learned: Achieving consensus

Interviewees noted the tension involved in getting buy-in from various stakeholders who need to sign off on a decision. In most cases this is a healthy goal that brings different viewpoints to the table and results in support of better decisions and next steps. Indeed exam findings and supervisory ratings need to be subjected to vigorous debate.

But achieving consensus has costs. One of them is delay – "ideas get vetted to death". The structure within supervision at the System level, with Board staff and other Reserve Banks at the table, requires consensus. While different approaches have been tried over the years, there appears to be no real method for forcing decisions when they can be appealed to many different levels within the System, or stymied by those opposed to particular initiatives. Consensus leadership is seen by some as a way to deflect accountability for certain policies or approaches, in that no one feels personal responsibility for particular outcomes.

An allied issue is that building consensus can result in a whittling down of issues or a smoothing of exam findings. Supervisory judgments can be smoothed over so that only the most black-and-white issues will be taken forward as concerns with the bank. Compromise often results in less forceful language and demands on the banks involved.

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[2] "Within three weeks on the job, I saw the capture set in."

C. The FRBNY Culture Should Be More Pro-Active and Effective

Lesson Learned: Excessive risk aversion

A very frequent theme in our reviews was a fear of speaking up:

"No one feels individually accountable for financial crisis mistakes because management is through consensus."
"Grow up in this culture and you learn that small mistakes are not tolerated."
"Don't want to be too far outside from where the management is thinking."
"No opportunity to earn enough merit from ten right policy decisions to compensate for one wrong decision."
"The organization does not encourage thinking outside the box."
"After you get shot down a couple of times you tend not to "go there" any more."
"Until I know what my boss thinks I don't want to tell you."
"Members of the vetting committee fight their way through a giant document rather than risk prioritizing and being wrong. People are risk-averse, so they include everything."

The strength of this theme is unmistakable and suggests an organizational culture that is excessively risk-averse. All organizations give people both positive and negative signals – every car needs both an engine and a brake. But some organizations, usually without realizing it, send too many negative signals. This management behavior has a chilling effect on individual initiative. Members of an organization will only take the risk of speaking up if they feel they will be rewarded for this rather than punished.

This is a cultural issue of the greatest importance. Consider how other organizational cultures encourage the best ideas to rise to the surface. Academic cultures, for example, value strong criticism because it will make everyone's work better; such criticism is not dependent on organizational rank but is a function of intelligence and insight, which can occur at any level of seniority. Shutting out critique would leave vulnerabilities in the final product. Consulting firms have regular brain-storming sessions at which individuals at all levels are expected to speak their minds without fear of reprisal; law firms sometimes behave in much the same way.

A systemic risk regulator will be critically dependent on individual initiative and out-of-the-box thinking, to say nothing of their importance to robust inquiry in day-to-day bank supervision. This issue is the responsibility of the senior managers. They need to encourage dissent rather than stifle it. Even if the senior officers are themselves unafraid of speaking up, they may inadvertently be encouraging those below them not to do so.

Lesson Learned: Insufficient communication across organizational lines

Our interviewees expressed a strong desire for more and better communication across organizational lines. The word "silo" was often used to describe a condition of isolation. There may be valid reasons to hold back information in some cases, but these can also become an excuse for hoarding information for bad reasons. Here is a sampling of comments suggesting a cultural issue:

"The real challenge is that the culture does not want to share information."

"People are good at what they do in silos."
"Need to know" culture truncates communication across groups."
"We want to hoard our sources – knowledge is power."

Interview participants felt that communicating information and ideas has the potential to be much more efficient and vibrant both within Supervision and across the entire bank. Communication "up" works well, while information sharing "down" and "sideways" is less robust. Diagonal communication has a long way to go. Having made these points, interviewees believe that the silos in the New York Fed are nowhere near as rigid as within the Board staff or other agencies. Also, communication is much stronger now than before the crisis, and everyone hopes there will not be backsliding once the financial markets normalize.

Supervision often operates on a need to know basis, and particularly sensitive issues involving banks do need to be held among those closest to the problem institution. The group has well articulated rules in Operating Bulletin 12 for protecting bank supervisory information. And there are strong prohibitions on passing supervisory information to the priced services areas of the Federal Reserve. Staff will often take a very conservative stance on sharing information so as to avoid violating the rules.

However, this conservatism can be counter-productive. Good communication requires balancing confidentiality with the need to harness the insights of a broad workforce. Examiners and others perceive the need for better perspectives on the issues and risks at their institutions and for the markets they operate in. When communications channels are too compartmentalized, people miss out on similar issues at other banks or helpful information about new instruments and emerging credit or liquidity problems in the market in general.

Lesson Learned: Risk-Relationship issues

The division of Supervision into Risk teams covering particular risks and Relationship teams providing the on-going oversight and contact with individual banks is designed to benefit from both specialist and generalist insights into banks' activities. Since this structure was introduced the two areas have cooperated, although there are tensions. Vetting meetings to go over exam findings or ratings can be contentious. The areas see value in developing a better style, an open and frank presentation of points without becoming confrontational.

Certain perceptions and practices impede effective interaction and cooperation. The Relationship teams feel that the process can be heavy at times, turning their teams into data gatherers for Risk teams or for other parts of Supervision, and that the process of turning out reports can impede further analysis. Relationship's focus can become very detailed and topic-oriented, setting up meetings for the Risk teams with bank management, and as a result efforts to look at the big picture are put on a back burner. Relationship often feels that Risk teams, with more resources and a multitude of issues to look into, drive the issues at their banks more than the Relationship teams.

Risk teams, on the other hand, often feel that the Relationship teams become gate-keepers at their banks, seeking to control access to their institutions, and therefore the information developed on site. Risk also notes the slow-down in on-site exam scheduling in the first part of each calendar year as the Relationship teams spend considerable amounts of time and attention to developing the annual ratings of banks.

Many interviewees emphasized the need to look collaboratively at the entire organization's financials and business strategies: key areas where it was making considerable amounts of money and possibly taking out-sized risks[3]. By looking at a bank's revenue side and strategies, supervisors should be able to identify the firm's intended risk taking ventures and then be on the alert for reviews when actual outcomes deviate significantly from plan – either positively or negatively. A bank that had a balanced strategy in several business lines might have a very unbalanced and concentrated risk profile if particular business ventures begin to take off at the expense of others. Understanding the connection between revenue sources and risk sources requires closer collaboration between Relationship and Risk teams.

D. Certain Practices Are More Effective Than Others

Lesson Learned: Horizontal reviews

In recent years horizontal reviews examined a common set of risks or business practices across a group of banks. Upon selecting a risk or business area, examiners would develop a common set of questions and generate a prototype scope document that could be adapted at the various banks but still produce insights that would be compared across banks. Generally the exams would take place over a period of months and in the end the supervisors would have a good cross-firm understanding of risks and applicable risk management approaches. When the results warranted, supervisors would promulgate best practices or supervisory guidance for addressing the issues reviewed. For the most part, banks welcomed the exams because supervisors would inform each bank about the range of results and the bank's relative ranking within that range.

One criticism of the horizontal review process, however, was that the results tended to reflect relative rankings in behavior or approaches across banks. The results did not establish an absolute level of effective practices, and left open the possibility that the level of controls or risk management techniques for the entire group of firms was not appropriate. This was even truer when horizontal reviews incorporated non-banks.

Some horizontal reviews requested information from a group of banks in a common business line or with exposures to a common risk or set of counterparties or industry. Often these would be directed to the Relationship teams resident at or responsible for the particular banks. The timeliness, accuracy, and comprehensiveness of the results would be subject to the adequacy or inadequacy of

[3] We're good at understanding bank losses, but we do not understand bank revenues."

each bank's internal MIS. Comparability across banks suffered from disparate measurement metrics at individual banks.

Lesson learned: FRC/FSO process

We discussed the experience of the Financial Risk Committee (FRC), asking why it was not more effective in seeing the rising systemic risk over 2004-2007. It certainly focused appropriately on a number of systemic issues, including subprime lending and related securities, but its conclusions were quite moderate and no action was ever recommended. Team members noted that the FRC meetings tended to be quite presentational, like lectures, where most participants listened rather than debated.

Through early 2007, the FRC developed for senior management the "Financial Sector Overview" (FSO) report to look at big picture issues affecting markets and major institutions. The reports were well-researched, comprehensive reviews of important systemic issues such as stress-testing, sub-prime mortgage originations and performance, market liquidity and resilience. Staff presented the results to senior management along with some special topics. The meetings provoked some discussion but little if any follow-up. "Good reports, slow or weak follow-up", was the summary of one interviewee.

In retrospect the reports contained a neutral to slightly positive view of current market developments. They kept up with but did not give early warning of the problems of 2007-2008 such as the freezing up of short-term lending markets or the sizable credit losses in mortgages. While the reports and meetings were designed to provoke a discussion on potential systemically important issues, contrarian and skeptical views (if there were any) were not heard in the large and largely formal meetings in the Board Room with the Bank's most senior management.

Lesson Learned: Characteristics of successful supervisory initiatives

The interviewees pointed out successful supervisory programs to identify and deal with major risks at large institutions, including counterparty credit risk, remote back-up facilities for systemically important payments banks and systems, post-trade processing problems at major dealers in credit default swaps (and eventually all OTC derivatives contracts), and the supervisory capital assessment program (SCAP). In particular they noted that these efforts had seven common characteristics:

1. A clearly articulated, well defined, independent view of the issue or risk at hand.
2. Inclusion of all relevant banks and firms in the exercise.
3. Supervisors who were well informed about the banks' businesses and the risks involved.
4. Comprehensive review by all FRBNY stakeholders in the risk: all relevant examiners, analysts, accountants, economists, capital specialists and asset specialists.
5. A clear metric or final end-game ("so-what") for presentation internally and to the banks.
6. Interdisciplinary, cross-team determination of results for each bank.
7. A determined supervisory will to act on the results.

The SCAP process included these ingredients of success. Supervisors had sufficient information to approach the banks about projected losses related to the macro-economic scenarios underlying the 19-bank stress tests. By including the entire set of large banks the supervisors could look across the banks' aggregate revenue projections and spot the fallacy of simply accepting the sum of all individual banks' highly optimistic projections. Further, each bank could be persuaded that their competitors were also being subjected to the same process and expectations and that it was not being singled out or unfairly imposed upon. The result for each bank was determined by the broad team. The clear objective for the exercise was to determine whether the banks had sufficient capital to withstand a very severe economic downturn and still be in a position to provide credit to bolster economic recovery. Finally, the supervisory will to cajole and persuade banks to accept the results was very important to the effort's final resolution.

The SCAP process was a one-off exercise, but it can be replicated in many areas. Currently, for example, FRBNY's ongoing oversight of clearing and settlement activities at market utilities and banks benefits from many of the same positive characteristics: deep knowledge of (and in some cases participation in) the business line, a thorough-going understanding of the risks, the ability to include a wide scope of important systems in our oversight, and a strong supporting staff of legal experts, payments systems users (Markets Group) and policy experts.

III. Responses and Recommendations

A. Foundational Matters

Financial stability as a mission

The nation's quest for a systemic risk regulator, and the Federal Reserve's obvious candidacy for this role, has given rise to controversy in Washington. Aside from the turf issues that always pervade politics, some have asked why the Federal Reserve should be given this mandate when it did not foresee the systemic collapse that just occurred. In other words, some believe that the Federal Reserve has had a financial stability mandate all along.

In fact this view seems inescapable. The Federal Reserve as bank supervisor is responsible for the safety and soundness of the nation's largest financial institutions. The recent systemic collapse is the greatest departure from bank safety and soundness in our lifetimes. Its importance dwarfs all other safety and soundness concerns. The reason it was not foreseen is that virtually no one imagined that such a collapse could happen in 21st century America. We now know that a future systemic collapse is not only possible but probable, unless actively prevented, because of the increase in moral hazard following the rescue program. Armed with this knowledge, the Federal Reserve is bound to focus heavily on systemic risk regardless of what Congress does or does not decide. From now on systemic risk must be the most important single issue in bank supervision.

But the mission of financial stability should be made explicit. Future bank supervision will require a degree of sophistication, contrarian thinking and imagination beyond anything thought needed in the past. As emphasized throughout this report, the culture needs to change in some important ways. But cultures resist change, and change only happens when there is both a determined push from the top and also a convincing reason to show people why they must change. Nothing is more convincing than a new mission, or at least a new articulation of mission.

Recommendation #1:

The Federal Reserve should adopt financial stability as a central mission, on a par with price stability. Leadership for this mission must come from the top and be explicitly affirmed. Discussion of systemic issues should either become a regular part of FOMC meetings, or a parallel process for this issue should be created. The rhythm of regular discussion of systemic risk is central to keeping the financial stability mission well supported. Unless this support is strong and visible, actions at FRBNY to uncover systemic risk are unlikely to have real effect.

A new intellectual framework

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.

The crisis has provoked a number of historical studies of banking crises including systemic collapses that occur regularly throughout history, in developed countries and emerging markets alike.[4] It is well understood that banks supply liquidity to the economy and in doing so make themselves potentially illiquid – this has given rise to reserve banking, deposit insurance and many other protective devices over the years. But something larger seems to be at stake. Bank managers and shareholders may sometimes risk eventual collapse because this is so much more profitable than slowing down and preventing eventual collapse. This is only beginning to be explored theoretically.[5] If true, this is a market failure on a large scale.

Even if this view does not become widely accepted, all mainstream economists would today agree that moral hazard has significantly increased. The government's aggressive actions in 2008 to protect the financial system have been widely admired, but are very likely to affect future decisions by financial institutions. These actions are not isolated events, but the culmination of a broad pattern of growing governmental protection of banking. One hundred years ago the Federal Reserve did not exist and U.S. banking was lightly unregulated. During these hundred years, the government has gradually extended its embrace of banking. The emergency protections of 2008 appear to have prevented a

[4] See for example Rogoff and Reinhart 2009, "Banking Crises: An Equal Opportunity Menace".
[5] See for example Shleifer and Vishny 2009, "Unstable Banking" (NBER).

second Great Depression, but their side effect will be a further lowering of bank incentives to protect themselves against events as extreme as this, assuming such incentives existed before. A systemic regulator to put the brake on excessive bank behavior is now more needed than ever.

This requires a major change in regulatory thinking. One of the lessons learned is that regulators have been overly deferential to the self-correcting property of markets. This confidence must be replaced with a new intellectual framework that explains the problem of systemic risk and the central responsibility of government to restrain banking excesses.

Recommendation #2:

The Federal Reserve generally and FRBNY in particular must, as an early priority, build the case for systemic risk regulation. Research is a key resource, and other components of the Federal Reserve System need to be engaged as well. Academics need to be enlisted, conferences held, and a broad debate on the subject needs to occur. This is important now because at some future time a systemic risk regulator will probably attempt to slow an economic boom in the interest of financial stability, which will almost surely invite criticism. Before such a time is reached the regulator must make clear how it will conduct itself, and this conduct must be generally understood and accepted.

B. Organizational Matters

Systemic risk advocate

The most difficult of the issues we have considered is whether to recommend any structural changes in the FRBNY organization to support a new, strong focus on financial stability and systemic risk as a core mission. We are agreed that a large "systemic risk office" is undesirable. Systemic risk needs to be everyone's job, and a large, separate office would very likely take the issue off the minds of others. Such an office could become marginalized, viewed as a tax on the organization, and lose the fluid communication across lines that is central to effectively recognizing systemic issues.

At a minimum, though, there needs to be a "go-to" person, an advocate who can listen for emerging concerns and organize appropriate responses. Such a person needs to be quite senior, unafraid of speaking out, and command respect across the bank. Because such an advocate would not have a large staff, he or she would need dedicated resources from various divisions of the bank.

We have considered the analogy with monetary policy. If financial stability becomes a Federal Reserve goal on a par with monetary stability, it should benefit from a comparable degree of institutional support and focus. Monetary policy benefits from the assignment, on a rotating basis, of people in Research, Markets and elsewhere. It also benefits from the rhythm of regularly scheduled FOMC meetings, which are obliged to make a decision every 6-8 weeks and defend that decision in public. What comparable processes might maintain a steady focus on systemic risk long after the current crisis has passed?

We believe that a process like FRC is desirable but will work better than its predecessor if it is more tentative and exploratory, seeking debate rather than stating conclusions. PowerPoint presentations should be banned. Participants should be given background reading sufficiently far ahead of each meeting and should be expected to have read it before the meeting. All participants should expect to speak up and offer insights, and each person's contributions should be carefully noted. The meetings should occur on a regular schedule, perhaps quarterly, and be chaired by the FRBNY President, with the systemic risk advocate preparing the agenda and the background materials.

It is not clear to us what title the advocate should have or to whom he or she should report. New senior titles often raise jealousies and rivalries which are counter-productive. Several decades ago many large banks abandoned the "EVP/SVP" titles and began calling all senior officers "Managing Directors". This tends to ease organizational change, improve fluidity of assignments, and create a less hierarchical environment, facilitating communication across lines. Such a change at FRBNY would be a shock to the system that might emphasize the new cultural values recommended in this report.

Assuming however that no such change is made at this time, the title choices for the systemic risk advocate would seem to be: EVP, SVP or Special Assistant to the President. The position would report either to the President or to the EVP for Bank Supervision, with a dotted line to the President, implying the President's input into the advocate's appraisal. Whatever the title or organizational position of the advocate, he or she would need dedicated resources, probably on a rotating basis, from numerous areas including Supervision, Research, Markets and Emerging Markets.

The strongest argument in favor of placing this position within Supervision is that more than half the resources needed would probably come from Supervision. This is where the Relationship and Risk teams gather information and insight from the banks that hopefully will reveal new trends and issues. On the other hand, resources would also be needed from the other groups mentioned above, and placing the office within Supervision might inhibit the inputs from these other areas. If recognizing systemic risk issues requires lots of informal communication across lines, it may be best to make the systemic risk advocate a bank-wide office reporting directly to the President. Examples of systemic risk issues that came to attention in the past 10 years would include financial crises in East Asia and Russia, LTCM's collapse, Fannie Mae and Freddie Mac, CDS/AIG, and others that require insights not only from Supervision but also from other areas.

Recommendation #3:

Establish a new senior position of systemic risk advocate and dedicate resources from various areas of the bank in support of this position. Let the work of this person revolve around quarterly meetings of a team of senior officers to consider systemic issues as described above.

Interconnections and cross-exposures

Any program to guard against systemic risk needs to involve the study of how financial institutions relate to each other. Although cross-exposures have long been a matter of concern, it took the recent crisis to reveal how shockingly little most large banks knew about their aggregate exposures to others. Very few focused on the magnitude of AIG's role in the CDS market or the overhang of CDOs containing sub-prime mortgages and the dangers they posed. Few saw the immense risks that one firm's failure would impose on other firms.

In the future, similar issues and concerns related to interconnectedness are bound to arise. Proposals to explore matters of this kind should arise in various corners of the bank and need to be followed through either by the Systemic Risk Advocate or elsewhere in the organization.

Risks at each individual bank should be viewed in the context of the vulnerabilities and exposures of other financial firms. An exposure that is reasonable by the standards of a single firm may be overly large when others have the same exposures. Aside from the formal shared national credit program, supervisors have tended to build cross-firm views on exposures through an ad hoc assemblage of information in horizontal reviews. These reviews need to become more frequent and more fluid, so that supervisors can place a bank's risk profile within the vulnerabilities building up across the system.

Recommendation #4:

Identify system-wide vulnerabilities that could affect a broad range of institutions, through horizontal reviews and ad hoc task forces, so as to identify areas for in-depth examinations at individual banks.

C. Cultural Matters

Speaking up and taking responsibility

Risk-aversion will not change unless there is a determined attack on it. Senior management needs to find words that express what is wanted, perhaps single words or phrases like "initiative", "constructive criticism", or "convictions", perhaps slogans such as "Take personal responsibility" or (to borrow one) "If you see something, say something". When there is agreement from the top on words to describe the behavior being sought, management must devise positive signals that reward it: commendation, public recognition, awards, cash bonuses, all of these can reinforce the verbal message. Management must be careful to avoid negative signals and punishing behavior whenever possible.

Because so many seem to fear contradicting their bosses, senior managers must now repeatedly tell subordinates that they have a duty to speak up even if that contradicts the boss. Evaluation of employees at year-end might include specific categories like "willingness to speak up", "willingness to contradict me", or "thinking outside the box". Senior managers themselves need to be assessed on their ability to elicit discussion and dissent.

Part of the solution lies in hiring practices. Recruitment has clearly been upgraded in recent years and the current marketplace offers more opportunities to hire talent than in earlier years. Recruiters should be willing to take chances on individuals with the confidence to speak their convictions, even at the risk of getting somewhat disruptive personalities. Regular supervision efforts will benefit greatly from a greater diversity of thoughtful views. Further it will take a fairly determined contrarian to spot the next systemic risk.

Recommendation #5:

Management should launch a sustained effort to overcome excessive risk-aversion and get people to speak up when they have concerns, disagreements or useful ideas. The desired behavior should be given a name and repeatedly encouraged. It should affect recruitment, training and personnel assessment.

More aggressive and skeptical relationship management

Concerns about relationship management were expressed at various points in our discussions. As noted above, some felt that the relationship managers were too deferential to bank management and too dependent on the bank's goodwill and MIS to gain information. The informational disadvantage – CPCs can never know as much about the bank as the bank's managers – seems to inhibit taking strong points of view when something at the bank needs attention.

These concerns did not arise during the SCAP exercise. As noted under lessons learned, SCAP was different for several reasons including (1) a clearly articulated, well defined view of the risk at hand and the consequences of the exercise, (2) a determined will to act on the results, and (3) strong information in the hands of the regulators. The latter issue is particularly important. With SCAP, regulators performed a lot of homework, demanding and obtaining projections in standardized form that were then cross-compared and summed across the banks to assess their realism. *Appropriate information in comparable form was demanded and scrutinized with an analytic and skeptical eye.*

There is a major lesson here. CPCs will forever be at an informational disadvantage unless they generate their own, independent insights. Relationship management needs to be given more tools, including training and data access. The natural way to counter-balance the banks' greater knowledge of their own banks is for the regulators to bring a multi-bank, cross-bank perspective. This takes work and preparation. SCAP showed the value of making projections and summing them across banks. Relationship managers should make projection exercises a regular part of their work. These should be independent of the banks' own projections, which tend to be biased toward optimism.

Requiring CPCs to make their own projections forces CPCs to have a deep understanding of how the bank makes money, i.e. the bank's specific strategy. As noted in the 1997 report on bank supervision,[6]

> "Some banks make money from their superbly managed depositor relationships. Some rely on automation to become the low-cost provider of services, with much less attention to relationships. Others make money through trading foreign exchange and securities and construction of derivatives. Yet others make money by gaining private information about small borrowers and lending to them at high rates. Each bank has a distinctive plan for

[6] Beim 1997 "Improving the Examination of Banks: A Report to the Federal Reserve Bank of New York".

> making money, and this plan is being constantly revised. And this is where the risks are. Banks do not usually take risks by mistake, but because risks are necessary to their plan for making money."

Intelligent projections cannot be made except from a starting point of a bank's specific strategy. This is needed for understanding the specific risks faces by each bank. Relationship managers need to be very clear on the strategy of their banks, and translate their insights into projections that can be stress-tested routinely.

Finally, relationship management needs to encompass more than the balance sheet of the BHC itself. Off-balance-sheet exposures need to be incorporated in every review, including reputational exposures to apparently-distributed assets. CPCs must insist on accurate accounting for counterparty risks. Special purpose vehicles should be explored skeptically, so that the relationship managers understand the motives behind each – why it was thought desirable to conduct business this way, and what that implies about the BHC's strategy and risks.

Recommendation #6:

Give more resources to the CPCs and demand from them a more distanced, high-level and skeptical view of how their bank tries to make money and what distinctive risks this entails. Give them more technical training in securities analysis and economics of banking, and require them to show breadth, curiosity and skepticism. CPCs should write and defend their own projections of their bank's balance sheet and off-balance sheet exposures and income statement in cross-comparable form (as in SCAP). These projections will not be static: CPCs must constantly be able to say what is new or changing in their bank's numbers and what might change. Stress-testing should become a way of life.

Refocus Risk Management

Bank supervision has moved away from annual full-scope examination and toward focus on the specific risks implied by each bank's strategy. The idea of risk-focusing is powerful and correct. But as noted under lessons learned, this too easily morphed into a focus on each bank's risk management systems and excessive trust that these systems worked. Risk-focusing needs to redress the emphasis away from risk management systems and toward the actual level of risk itself.

The entire risk management "industry" has been embarrassed by its failure not just to predict the financial crisis but even to contemplate its possibility. Indeed, the sense of false security created by the apparently sophisticated risk management systems utilized by major banks probably facilitated the crisis itself – excessive risks were taken in part because so many believed in our capacity to quantify, diversify and hedge risks. Devices like securitization and credit insurance were thought to have tamed risks like subprime lending, and we have learned painfully that they have not.

The crisis will probably result in a large number of papers reconsidering risk models and altering the entire approach to credit risk and diversification. Complex approaches such as Gaussian copulas may be set aside in favor of new approaches, perhaps simplified approaches in which it is assumed that correlations among apparently unrelated risks rise dramatically when default actually looms.

All this implies less reliance on banks' models and more interest in standardized models specified by the regulators themselves. Regulators can no longer assume that banks will adequately protect themselves and need to demand standardized information for regulator-specified models. This will demand more of the Risk Management area, including careful attention to research in the effectiveness of various risk modeling approaches in view of the financial crisis. The Research area should be enlisted as a partner in this exercise.

Recommendation #7:

Refocus Risk Management away from studying banks' systems and toward developing standardized approaches to assessing risk itself. Enlist Research in this effort.

Re-Think Risk-Focused Supervision

The concept behind risk-focused supervision is important and valid: concentrating scarce examiner resources in areas posing the greatest risk to an institution. The important question is how to identify and review those risks efficiently. This suggests that the supervisors should fundamentally re-think how they organize and perform risk focused supervision for each bank. It is a planning job that requires the collaboration of both the Relationship and the Risk teams.

The re-think should first and foremost deal with the need to develop a forward-looking, analytical view of the bank, its business lines, risks from those endeavors, revenue projections, strategies and financial plans. Deviations from those plans and projections will be telling indicators of changing risk profiles. With this underpinning the supervisors can map out areas of highest inherent risk for prioritizing and concentrating exam resources.

Developing an independent view of risks will require the dedication of additional resources both in the Risk and Relationship functions. The mix of talents will skew toward a more senior and experienced analytical staff. Specialists, for example in accounting or model-building skills, may play an important role. These people might be housed in other parts of the bank.

Recommendation #8:

Re-think the approach to risk-focusing with the goal of gaining an early, high-level perspective on the business and risks of each bank. Inputs from both Relationship and Risk should bear on the planning process. Dedicate new resources to the CPC teams to contribute to this effort.

Relationship of Risk Management to Relationship Management

In 2000, Supervision created the Relationship Management and Risk Management groups, both of which had to sign off on examination reports after a vetting process. This cross-disciplinary perspective is vital to insight and well-focused recommendations. The SCAP process illustrated the power of bringing different perspectives to a common decision.

It was recognized from the outset that certain tensions would exist between these two areas, and at first the vetting process was held before an SVP. We heard several accounts that suggested the relationship between these areas needed attention. Many business organizations have struggled over similar conflicts in various ways, e.g. product specialists versus regional market specialists. At their best, matrix structures (in which two co-equal specialties are given mutual responsibility for decisions) produce vigorous debate and a better outcome than either specialty could have achieved otherwise. At their worst, they lead to jealousies, turf wars and unacceptable frictions. Getting consensus in a matrix setting is important but difficult to achieve.

As noted under lessons learned, consensus is a subtle issue. Late in a process, people get locked into positions that are difficult to budge. Excessive focus on consensus leads to ideas "getting vetted to death", a whittling down of sharp-edged findings. Instead, a spirited and outspoken debate needs to happen early in the process of examination. A significant goal should be to hold the debate very early, in the planning stage, before ideas have hardened.

Relationship Management in principle should welcome Risk Management's perspective because it can give the kind of cross-bank insight and informational advantage that Relationship Management needs. Similarly, Risk Management needs to assert its insights forcefully in the spirit of helping Relationship Management to do its job, but should avoid myriad minor issues and stay focused on the large issues that truly make a difference. How to achieve this?

There is a small industry of executive coaching organizations that know how to tackle issues of this kind. To name just one, the Center for Creative Leadership in North Carolina and Colorado offers a wide range of standardized and customized courses designed to give officers feedback and insight into their own communication styles and a chance to work deliberately on making interaction constructive without just caving in. There are many others. Executive Education programs at all major business schools also offer customized sessions focused on self-awareness and effective management of conflict.

Recommendation #9:

Improve the interaction between Relationship and Risk by providing them with customized training in executive communications and conflict management. Start with the acknowledgement that their different perspectives are equally necessary. Direct them to resolve issues between themselves fairly and expeditiously. Vetting should happen before people have dug into fixed positions, and not last too long. Both sides should appraise their own conduct and the other side's conduct after the report is written.

D. Communication Matters

Communication across lines

A systemic risk focus requires much more fluid communication across organizational lines. To change the culture in this way requires strong direction from senior management on the importance of understanding what other divisions are seeing, on comparing notes and noticing patterns, on testing concerns and seeing if others might be concerned as well. To achieve this, management needs to create both formal and informal forums and assess how well individuals are communicating. These forums should include Research, Markets and Emerging Markets as well as Supervision.

Informal forums could include periodic breakfasts and lunch meetings of mid-level officers from different areas with no fixed agenda except to get acquainted with each others' work and to share any insights. Even if little comes of any particular meeting, building a network of horizontal and diagonal relationships in FRBNY could yield important benefits at a later time when serious problems again appear on the horizon. One enduring model is the attendance-voluntary, agenda-free "Payments Forum" which, in one form or another, has brought together staff working on all aspects of payments issues from Supervision, Legal, Markets, Operations, Policy, to discuss common interests for nearly 20 years.

Formal forums include horizontal reviews and special task forces. Horizontals have been found useful but sometimes appear too large and too extended in time, with conclusions sometimes muffled because so many participants are involved. Horizontals should be assessed and improved as much as may be possible. They should have consequences in regulatory action.

A more flexible forum is the task force, a moderate-sized and short-lived group to tackle an issue and report on a specific issue. Some of our interviewees remembered these being used effectively in earlier periods. Task forces not only bring cross-disciplinary perspectives to bear on specific issues, they also have the benefit of building the network of relationships across lines that lies at the heart of good communication. Individuals suspected of information hoarding should be put on task forces and obliged to open up.

Every formal exercise, whether a full horizontal or a task force, should have a leader and an action outcome. It should end with a mutual appraisal: every member should assess in writing his or her own contribution and that of the other members of the task force or other forum. Management should incorporate the findings from these reviews in the feedback process (now called multi-rater reviews) that is becoming part of the annual appraisal. At the end of each year, all officers should be invited to give credit to those in the organization who have been particularly helpful to them in the course of the year. A conscientious program of improving horizontal and diagonal communication would give important credit to certain officers whose colleagues in other divisions praise for seeking them out and sharing insights and concerns.

Recommendation #10:

Senior management should explicitly announce that improved communication across organizational lines is a centrally important need for recognizing and understanding emerging systemic issues. That should be followed up with a series of formal and informal forums to facilitate such communication. Officers should be assessed annually on the value of their insights and communication to colleagues in other divisions.

Reinforcing the message

Cultural change does not come quickly or easily, but requires constant reinforcement in words and deeds from the top of the organization. It must have the full support of the EVPs and other top officials of the bank, who must periodically assess progress in achieving the new goals. Recall that the FRBNY culture may be inadvertently giving too many negative signals and not enough positive ones to its officers. One key tool is communication that defines the behavior being sought and stresses its benefits. Here are two possible forms of such positive communication.

a. Success factors in supervisory initiatives

Let us recall the characteristics of successful regulatory initiatives such as SCAP:

<u>Attributes of successful regulatory initiatives</u>

1. A clearly articulated, well defined, independent view of the issue or risk at hand.
2. Inclusion of all relevant banks and firms in the exercise.
3. Supervisors who were well informed about the banks' businesses and the risks involved.
4. Comprehensive review by all FRBNY stakeholders in the risk: all relevant examiners, analysts, accountants, economists, capital specialists and asset specialists.
5. A clear metric or final end-game ("so-what") for presentation internally and to the banks.
6. Interdisciplinary, cross-team determination of results for each bank.
7. A determined supervisory will to act on the results.

Problems in supervisory efforts can often be associated with the absence of one or more of these characteristics. Some of the success factors address more than one supervisory lesson learned. The importance of developing an independent, well articulated view on a bank's risk using supervisory information and sources (first bullet above) addresses problems associated with the deficiencies in a bank's MIS and also makes the examiners less dependent on the bank's personnel for information. One positive way to keep the lessons of this crisis from being forgotten is to memorialize the success factors by writing them down and repeating them at the beginning of each future initiative.

b. Personal attributes sought in supervisors

Another useful codification is an agreed list of personal qualities that a model bank supervisor would possess. Such a code should be widely distributed, referred to and made to live. The specifics need to be discussed and debated by the top officers, but here is the kind of statement recommended:

<u>You will be a truly effective supervisor if</u>

1. You understand in detail how a particular bank makes money, where it is going and what risks this entails.
2. You consult regularly and informally with colleagues in Relationship, Risk, Policy, Markets, Emerging Markets and Research to broaden your understanding of current trends.
3. You seek out and help to manage horizontal reviews and issue-oriented task forces designed to deepen understanding of bank risks.
4. Through these devices you bring more information to the bank than it brings to you.
5. You welcome aggressive peer review of your conclusions in the interest of best-quality recommendations.
6. You share your own information and insights with colleagues up to the limit of information that genuinely needs to be kept confidential.
7. You readily speak up when you disagree with someone, even it is your boss.
8. You take responsibility and act rather than just observe: you are crew, not a passenger.

Recommendation #11:

The success factors listed above should be remembered, repeated and used as a standard of reference for future work. Supervisors should review proposed major initiatives against these factors to decide whether the efforts will be successful or whether the proposal should be altered to improve chances of success. A list of personal qualities and behaviors wanted in supervisors such as that proposed above should similarly be articulated, repeated and used in both hiring and personnel reviews.

V. Conclusion

The financial crisis has materially changed the banking and regulatory environment. Moral hazard has increased and bank risk management has often been found ineffectual. There is a public demand for regulatory action that will lower the probability of again experiencing such a systemic collapse. The Federal Reserve may be given this role formally, but even if not the Federal Reserve should adapt its bank supervision to the changed environment.

To function well against systemic risk, various areas of FRBNY need to communicate freely and easily, and must be encouraged to speak up when they sense problems anywhere. Much has been done well during the crisis and much has also been learned. The good parts are those where cooperation and frank debate have occurred, where people have taken the risk of speaking out and taking responsibility. The bad parts are those where information hoarding, excessive deference and risk aversion have prevailed. We have attempted to review the lessons learned, with a particular focus on cultural and behavioral issues within FRBNY. We recommend an explicit embrace of cultural change, as expressed in the major recommendations summarized in the Introduction and a number of lesser recommendations embedded in the text.