Board of Governors of the Federal Reserve System

Speech

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Strategic Risk Management in an Interconnected World

It is not an overstatement to say that we are in the midst of a fundamental transformation in financial services, with market-wide ramifications. At the heart of that transformation lies a much more intense emphasis on funding and liquidity. Additionally, we are all witnessing the extent to which banking and financial markets are interconnected.

The current environment certainly presents some fundamental challenges for banking institutions of all types and sizes.[1] Their boards of directors and senior management, who bear the responsibility to set strategy and develop and maintain risk management practices, must not only address current difficulties, but must also establish a framework for the inevitable uncertainty that lies ahead. Notably, the ongoing fundamental transformation in financial services offers great potential opportunities for those institutions able to integrate strategy and risk management successfully, and I will argue that survival will hinge upon such an integration in what I will call a "strategic risk management framework."

In the remainder of my remarks, I plan to discuss the necessity for institutions to improve the linkage between overall corporate strategy and risk management, and how they can develop concrete strategic risk management frameworks. I will argue that in the highly interconnected financial world, funding and liquidity need to be at the center of such frameworks. But before doing so, I will briefly review recent events.

Recent Events in Financial Markets
We are indeed witnessing dramatic shifts in the structure of financial markets. These are quite extraordinary times that have required extraordinary responses from the Federal Reserve, the Treasury, and other governmental bodies in the United States and around the world. Since last summer, there had been a continuous deterioration of conditions in financial markets, becoming much more acute since March of this year. For instance, we have seen significant disruption in several key sectors of our financial system, such as normally creditworthy companies having difficulty issuing commercial paper, dramatic increases in interbank lending rates, and significant concerns about money market funds "breaking the buck." These are sectors usually considered to be relatively low risk and quite liquid, so disruptions here have signaled the extent and depth of this turmoil and the lack of confidence among financial market participants.

The Federal Reserve has responded to these developments in two broad ways. First, following classic tenets of central banking, the Federal Reserve has provided large amounts of liquidity to the financial system to cushion the effects of tight conditions in short-term funding markets. Second, to reduce the downside risks to growth emanating from the tightening of credit, the Fed, in a series of moves that began last September, has significantly lowered its target for the federal funds rate. Indeed, earlier this month, in an unprecedented joint action with five other major central banks and in response to the adverse implications of the deepening crisis for the economic outlook, the Federal

Reserve again eased the stance of monetary policy. We will continue to use all the tools at our disposal to improve market functioning and liquidity, to reduce pressures in key credit and funding markets, and to complement the steps the Treasury and foreign governments will be taking to strengthen the financial system.

As a result of these ongoing upheavals, we are witnessing substantial institutional changes, in which some long-standing financial institutions have either failed, sought government assistance, or were forced to merge with other institutions. What were the major U.S. investment banks have essentially disappeared, such as by merging with bank holding companies or becoming bank holding companies themselves. Other major banks and thrifts have been absorbed into other banking organizations. Financial institutions and investors have placed much more emphasis on the banking charter, likely driven by banks' more stable funding and deposit insurance, even before the recently announced government support of the banking system.

Over the past year, there has been increasing concern among financial institutions and other counterparties about the health of some financial institutions. Uncertainty about the value of assets and other exposures, as well as uncertainty about the ability of institutions to sustain continued access to funding, has caused financial institutions to operate with great caution and hoard funds. What was once a healthy, active interbank market has become frozen from time to time, as some institutions feel that conditions are so uncertain that they cannot even lend to long-standing clients or counterparties. In quite a dramatic shift from just 18 months ago, there is much more scrutiny being placed on capital adequacy, with financial institutions trying to retain as much capital as they can, raise as much as possible, and demonstrate that their capital positions are not impaired. The Capital Purchase Plan by the U.S. Treasury Department under the Emergency Economic Stabilization Act is focused on improving capital adequacy and, hence, improving confidence in the interbank market.

Perhaps one of the most pressing issues, as I mentioned briefly earlier, is the intense emphasis on funding. This dramatic shift in concerns about a financial institution's funding base results in much more focus on the stability of funding sources--one of the reasons that the bank charter has become so attractive. Indeed, we are seeing the emphasis on funding driving many other factors that affect financial institutions, including the viability of various aspects of firms' business models. And problems with liquidity have affected capital levels, which in turn have further exacerbated liquidity concerns. It is indeed quite remarkable how this "flight to liquidity" has brought about so many institutional and structural changes, and become essentially the most important factor (at least now) for the viability of a financial institution.

Over the past year there have been a number of studies analyzing the causes of the current turmoil, which include shortcomings in the risk management practices of financial institutions.[2] It is absolutely clear that many financial institutions need to undertake a fundamental review of risk management. They now realize that ignoring risk management in any aspect of the banking business usually creates problems later on. Risk management shortcomings need to be addressed not only to improve the health and viability of individual institutions, but also to maintain stability for the financial system as a whole.

Framework for Strategic Risk Management

At this time, I would like to explain a bit more about what I mean by a "strategic risk management framework." In my view, an effective overall corporate strategy combines a set of activities a firm plans to undertake with an adequate assessment of the risks included in those activities. Unfortunately, many firms have forgotten the second part of that definition. In other words, there can be no real strategic management in financial services without risk management, hence my use of the term "strategic risk management." Risk management needs to be interwoven into all aspects of the firm's business and should be part of the calculus for all decision-making. Strategic decisions about what activities to undertake should not be made unless senior management understands the risks involved; assessing potential returns without fully assessing the corresponding risks to the organization is incomplete, and potentially hazardous, strategic analysis.

Ensuring that risk management permeates an entire organization may require some fundamental changes for certain firms. And this lesson applies not just to the prominent organizations mentioned in the headlines of late, but also to smaller firms. Even if smaller firms have been less affected by the recent turmoil (and perhaps have even won back some market share as customers seek more "traditional" places to put their money), their managements must understand that the financial landscape has changed and needs to be surveyed anew because events outside of their control in market-wide flight to liquidity, for example, can have direct impacts on them. Of vital importance will be incorporating into strategic risk management the lesson that funding and liquidity will be a major determinant of institutions' success going forward.

Building a rigorous strategic risk management framework requires an institution to reexamine both its internal practices and its external environment, and to understand how closely the two are connected. In other words, external factors have an impact on internal practices, but those internal practices, because financial markets are so interconnected, can in turn have an impact on how the institution is viewed externally--and even have an impact on the marketplace more broadly. We have witnessed several such examples of late, in which an institution encountered severe liquidity needs, which then affected funding for other institutions. Institutions need to understand better that a number of factors affecting their business are beyond their control, and that events can have secondary or tertiary "knock-on" effects. The real art is to realize that while all institutions may be affected by external factors, each is affected in its own way.

Now that I have laid out a general framework for strategic risk management, I would like to offer a few examples of its application.

Funding and liquidity

As I noted, the clear driver of the fundamental transformation in financial services is the increased importance of funding and liquidity. The ability to secure funding is a fundamental task in banking, and banks have been managing expected liquidity demands since the beginning of banking itself. In times of stress, such as now, having a solid and reliable funding structure becomes much more important, in some cases so much so that it affects most other banking activities.

The current turmoil has brought about substantial deleveraging in financial services. Managing this process is an immediate challenge for banking institutions, as they must consider the need to reduce leverage at their own institution as well as understand the consequences of deleveraging at other firms. This is clearly an example of external factors affecting internal practices, and vice versa. From a strategic perspective, bank directors must examine their current and future funding situation in light of recent deleveraging, its near-term prospects, and the state of overall liquidity in financial markets.

Financial institutions rely on external funding in some fashion--either through retail deposits, interbank lending, or debt offerings. Therefore, they must understand that their funding can be subject to the vagaries of the market, such as sudden shortages of market liquidity or rapid swings in investor sentiment. For example, banks may benefit in the near term in attracting deposits and thereby improve their funding positions, but they also may experience more difficulty securing other sources of funds and find that situation persisting for some time. Additionally, counterparty reactions to changes in the business mix or risk profile of an institution (or even the *perceived* change in its risk profile) could suddenly hamper the ability to find funding.

In recognizing the inherent leverage in the business of banking, institutions must examine longer-term implications of funding and liquidity, and begin to build those into the overall strategic plan for their organizations. The market for external funding is an international one, so liquidity troubles in one market can have repercussions in others. Accordingly, banks should be prepared for a range of adverse situations related to funding and market liquidity that can be precipitated by a range of sources.

Bank directors and senior management need to anticipate potential difficulties in funding the bank, and demand that solid contingency plans are in place--and are regularly updated--for a variety of funding and liquidity problems. Such plans should include the potential for external factors to generate a funding squeeze for the institution, even if its own positions and risk profile have not materially changed. Preparing for sudden changes in the pricing and availability at any price of funding sources is something that, leading up to the current turmoil, most banks did not fully consider. Instead, their managements focused mostly on building market share, growing revenues, and realizing the short-term profitability of their activities--a telling example of banks not properly including risk management in their overall corporate strategy. As the Senior Supervisors Group Survey of major financial institutions pointed out, there have been numerous examples of failures of strategic risk management and these must be rectified going forward.

Finally, strategic risk management for funding and liquidity needs to consider potential liquidity problems on both sides of the balance sheet. We saw such examples recently when there were draws on liquidity commitments to structured investment vehicles and commercial paper conduits, and when banks faced difficulty selling exposures in illiquid markets. When there is a marketwide scramble for liquidity, a bank must be prepared to manage funding challenges and unplanned asset expansions simultaneously. Developing a strong strategic risk management framework that recognizes the vital importance of funding and liquidity to both sides of the balance sheet is one way in which directors and senior management can help ensure that their institutions are ready for such outcomes. They should also ensure that they fully understand that funding and liquidity issues will drive many of the activities in which they will be able to engage, something to which I will now turn.

Choice of financial services activities
While the financial landscape is by no means settled, certain emerging trends will affect which activities make sense, which exposures should be assumed, and which risks should be undertaken. One immediate trend is that much of the future of business activities of banking organizations will be driven by the increased focus on funding and liquidity. Accordingly, this trend must be integrated into a strategic risk management framework. For instance, there may be less opportunity to pursue activities that were quite prolific under the previous "originate-to-distribute" model, such as securitizations, given current disruptions or longer-term uncertainties about the reliability of market liquidity. For similar reasons, other activities, such as investing in collateralized debt obligations or structured investment vehicles--which typically relied on relatively easy maturity transformation--may not be as viable in this new environment.

Whether transactions take place on an organized exchange or in the so-called over the counter market is another important aspect of the strategic risk management choices undertaken by an organization. When contracts are traded on an exchange, clearing and settlement, for example, may have less uncertainty associated with them. In addition, an exchange that has a centralized counterparty--perhaps the clearinghouse of the exchange--can reduce uncertainty about counterparty risk and help to avoid market dislocations that can arise from such uncertainty, not only for an individual firm but, potentially, more broadly in that market. Thus, market infrastructure and its impact on how organizations are connected to each other can have a large impact on market confidence in times of stress.

Of course, we have seen that uncertainty, fear, and lack of trust among key counterparties can dramatically affect trading in some products across markets in many countries, again an example of the impact of interconnectedness. These days, institutions are seeking more assurance that their counterparties will not default from one day to the next. Whether there is a shift to more trading on clearinghouses will be driven by firms' analysis of counterparty credit risk and the extent to which they are comfortable doing business with leveraged counterparties about which they have limited information. Firm managers should take these infrastructure and interconnectedness issues into account in undertaking their own strategic risk management choice about what activities to undertake and the risks posed by each. This is a clear example of how external structures should be taken into account in a firm's strategic planning.

In their strategic risk management frameworks, institutions should also understand the broader issue of potential gravitation to a model in which most or all types of financial services are brought together in single institutions. That is, institutions have to prepare for the possibility that they could lose customers and/or be less competitive if they are unable to provide the full set of financial products. Importantly, however, bank directors and senior management, in assembling their strategic risk management framework, should fully understand the complications associated with offering multiple products and engaging in a wide array of activities--such as reputational risk. And they should not automatically assume that engaging in multiple activities in multiple geographic markets will provide so-called "natural diversification." As I just noted, different financial markets and different types of financial services are quite interconnected, and during times of stress all can experience losses concurrently.

Of course, there may also be an opportunity for some institutions to benefit from more traditional, "bread-and-butter banking," with exposures and risks tied more closely to bank balance sheets. This potential opportunity for niche banking could have certain benefits, as clients and investors, because of the fear of contagion, seek institutions that are specifically *not* involved in multiple markets and activities. And local banks can often provide more personalized service and have a better understanding of their clients' needs. In such cases, however, institutions conducting specialized or local business must understand the inherent risks, such as potential risk concentrations.

Compensation
As many of you know, as an economist I am particularly interested in the impact that compensation has on incentives for bank management.[3] I am pleased that the industry has also begun to address this issue, as reflected in a recent report by the Institute of International Finance.[4] Clearly, the industry needs to better understand the link between compensation and risk management, as in the past those two areas have usually been addressed in isolation.

Generally, investors analyze financial institutions on a risk-adjusted basis, interpreting profits based on the amount of risk taken. Management at financial firms should do the same thing with regard to their business units and their employees. A risk-sensitive compensation framework will help provide the right incentives for employees, and establish a better link between the actions of those employees and the firm's overall risk profile. Institutions should be particularly sensitive to employee activities that could either directly or indirectly impair access to funding or disrupt liquidity.

Clearly, bank directors have an influential role to play in setting compensation, and they should exercise their authority to establish a more risk-sensitive compensation framework while embedding it in the broader strategic risk management framework of the institution. Directors should understand the consequences of providing too many short-term and one-sided incentives. There are many ways that this risk sensitivity could be accomplished, and it is up to the firms themselves to arrive at solutions. One possibility, for example, is to include more types of deferred compensation, since the risks of certain investments or trades may not manifest themselves in the near term. It makes sense to try to match the tenor of compensation with the tenor of the risk profile and, thus explicitly, take into account the longer-run performance of the portfolio or division in which the employee operates. A good risk-sensitive compensation regime, properly embedded in a strong strategic risk management framework, can bring about changes in behavior so that the firm's employees refrain from taking on risk beyond the firm's stated risk appetite. Perhaps most importantly, such a compensation regime must give the appropriate incentives to take risks fully into account during good times, when many often underestimate longer-term risks.

Conclusion
I have tried to lay out the importance for banking institutions to develop and maintain a strategic risk management framework that fully incorporates all the risks they face--both internal and external--when making choices about what activities and markets in which they will operate. Indeed, having a corporate strategy that does not include risk management at its core is not really a strategy at all. Market infrastructure, which affects not only the ways in which firms are connected to each other but also the types of shocks to confidence that they may encounter, is an important external factor that should be taken into account in strategic risk management.

As a concluding point, I will offer a few comments on one additional area to which banking institutions must pay particular attention: the regulatory and supervisory structure in which banks operate. Banking is an industry that is subject both to market competition and considerable regulation. Therefore, banking institutions must not only evaluate potential changes in the competitive financial landscape (as I noted earlier), but must also pay attention to potential changes on the regulatory side.

Over the past year, there have been a number of suggestions for possible statutory changes in U.S. financial services regulation, so bank directors must be prepared for whichever outcomes such changes might imply for the regulatory structure in the United States. For example, the Congress may wish to undertake legislative action to effect regulatory changes, or there may be changes to the existing authority and responsibility of certain regulatory bodies. In any event, there will likely be some type of adjustments in regulatory structure simply given the changes in the financial services landscape. Given the fluid situation in which we find ourselves today, bank directors and senior management in their strategic planning have to anticipate a range of potential outcomes in the regulatory sphere in both the short and long term.

Since banking and financial markets are so interconnected, the fundamental transformation in financial services is affecting all types of financial institutions, even those less directly affected by recent events. Importantly, in developing strategic risk management frameworks, institutions must not only understand the direct consequences to their own firms of such shifts, but must also recognize that consequences to other firms can have effects on the broader market. The heightened importance of funding and liquidity is a clear example of a major change that has far-reaching ramifications and, thus, has to be appropriately addressed in assembling any credible strategic risk management framework in an interconnected world.

Footnotes

1. In my remarks, I will use the terms "banks," "banking institutions," and "banking organizations" interchangeably. Return to text

2. One example is a report entitled "Observations on Risk Management Practices during the Recent Market Turbulence," issued by the Senior Supervisors Group, which included supervisory agencies from France, Germany, Switzerland, the United Kingdom and the United States. Return to text

3. Randall S. Kroszner, 2008, "Improving Risk Management in Light of Recent Market Events," speech delivered at the Global Association of Risk Management Professionals Annual Risk Convention, New York, February 25. Return to text

4. Institute of International Finance, 2008, "Final Report of the IIF Committee on Market Best Practices: Principles of Conduct and Best Practice Recommendations," July, http://www.iif.com/regulatory. Return to text

▲ Return to top