Magic Mirror on the Wall, What's the Biggest Risk of All?

by Beverly Foster

"Industry complacency!" It's a warning that echoes down through the years, especially during economic periods that look worrisome or following a financial event within a company, an institution, or a country. Even as the industry celebrates its ability to withstand shocks to the financial system, banks and especially nonbank financial enterprises move further and further out on the risk curve—whether that means creating layered, increasingly complex debt, or not addressing other risks. At the January 2007 meeting of the New York Chapter of RMA, three panelists discussed the risks their institutions are facing. Two of the panelists—Michael Alix from Bear, Stearns (at right, above) and Paul Shotton from Lehman Brothers (left)—understandably focused on market risk. Jim Garnett of Citigroup (center) offered eight "nontraditional" risks that his Risk Oversight group is addressing. After all panelists concluded their remarks, a Q&A session followed. The panel was moderated by New York Chapter President Mary Ann Snyder.

The Panelists

Michael Alix—Chief Risk Officer, Bear, Stearns & Co., Inc.; also Chairman, Risk Management Committee, Securities Industry and Financial Markets Association.

- Became CRO in January 2006. Responsible for credit, market, and operational risk management globally.
- Contributes to projects in other risk management-focused industry associations, including the International Swaps and Derivatives Association. Served on the Counterparty Risk Management Policy Group II.
- Prior financial institution: Merrill Lynch.
- B.A., Economics, Duke University; M.B.A., Finance, Wharton School of the University of Pennsylvania.

Jim Garnett—Managing Director and Head of Risk Oversight, Citigroup.

- Joined Citibank in 1997 as head of Risk Management for the Global Capital Markets.
- Responsible for group-wide liquidity, market, and operational risks; oversees risk analytics, performance reporting, and risk policies and measurements, including economic and regulatory capital.
- Responsible for Citigroup's merger/acquisition due diligence and country risk.
- Member of Citigroup's Management Committee and the Country Risk Committee.
- Prior financial institution: Chase Manhattan.
- B.A., Lake Forest in Comparative Literature.

Paul Shotton—Global Head of Market Risk Management, Lehman Brothers.

- Joined Lehman Brothers in May 2004.
- Responsible for oversight of all market risk taken throughout the firm.
- Serves on the New Products Committee.
- Has one-off approval of specific large or exotic transactions.
- Develops market risk measurement methodologies, stress testing & scenario analysis, capital allocation, etc.
- Prior financial institutions: JPMorgan Chase (London), Goldman Sachs, BZW, and Deutsche Bank.
- B.S., M.S., Ph.D., Physics, Oxford University.

Today's credit environment appears robust and fairly benign, but Lehman Brothers' Paul Shotton reminded the audience that risk management is charged with creating a culture of "no surprises" for senior management. "The major surprise of the last few years has been the lack of surprises—or, at least, the fact that the exogenous shocks that did occur have been absorbed by the markets with barely a ripple," he said.

As each challenge has been overcome, the level of complacency in the markets increases still further. Rationalizations for taking on more risk include the following:

- Central banks are much better at controlling inflation.
- The science of risk management is much better developed.

- The ability to move risk off the books through derivatives has resulted in lower systemic leverage and concentration risk.
- Entities holding risk are more comfortable and won't panic into dumping positions as often occurred in the past. Therefore, the mechanism that creates contagion between markets with no rational economic linkages no longer exists to the same extent.
- A worldwide savings glut has created a wall of liquidity available to meet any financing need.

Leveraged lending. Leveraged lending creates an environment ripe for exploitation. Bear, Stearns's Michael Alix discussed leveraged lending—the levels seen today, as well as the coverages, covenants, and conditions, or lack of same. "Most important to consider is the pricing, or spread, available for taking risk in this market," Alix said. "You might be astonished, particularly if you were a risk manager five years ago, at the demand for loan product."

Partly, the demand for leveraged loan products—many with short-option positions—is driven by a perceived diversification benefit, Alix continued. Spread compression is being driven by structured credit—the CLO (collateralized loan obligation)[1] and CDO (collateralized debt obligation) markets as well as the synthetic markets.

The return available for a given rated risk in the CLO market remains "reasonably appealing" to investors. Demand for newly originated leveraged products over the past several years has brought on "a complete flip in the holders of lending risk," from banks and insurance companies—regulated institutions that are long-term holders—to other entities that invest through the structured vehicles and through hedge funds. Shotton explained that dealers issuing notes then hedge the structured products by selling the embedded options.

Alix said that the new class of investors may not be subject to the overhead of personnel and bank branches and can thus justify, based on the internal leverage embedded in these products, the risks that they are taking given the returns they expect. Importantly, while they may be examining the risks themselves, these new nonbank investors are assisted by the external opinions, expressed in letter-grade ratings, of credible analysts from the major ratings agencies. These agencies provide opinion and analysis and structural ratings that support the creation and growth of the structured credit markets, which, in turn, support the increase in volume in the leveraged lending market. The level of activity has tightened spreads and loosened covenants.

Increased activity, in turn, has sparked interest from firms that can perform buyouts with today's relatively cheap financing. Alix summarized the picture by saying, "So we see management buyout activity facilitated by readily available credit, facilitated by slicing and dicing of risk in structured markets, which is possible through a common view between a ratings agency that assigns a letter grade and an investor who is looking for the return available for that particular rated risk. The question is what happens if and when that cycle turns."

If, indeed, the cycle turns, things could quickly unravel:

- The investor's opinion of the CLO will change.
- The economic fundamentals will change.
- The amount of interest in the investments will wane.
- There may be de-leveraging—either forced or auto-

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matically indicated through the structure.

"I think the chief challenge for risk managers in 2007 is not just looking at each credit and being comfortable with whether the market has gone too far with respect to the terms available for those credits," he said. Rather, it's "understanding this sort of global dynamic of investing, how it has changed, what might cause those spreads to widen, at what point the traditional investors would be willing to reenter the market, and how much of a price shock or dislocation that would imply."

Said Shotton, "I worry about the fact that clients searching for yield are pushing the boundaries of where firms should be comfortable to take risks. In addition to the tighter credit spreads and ever-higher multiples for leveraged lending, we see boundaries being pushed in such things as fund derivatives transactions, in which clients seek to gain either leveraged exposure to hedge funds or exposure to hedge funds with down-side capital protection.

"When the market first developed, we used to see such structures based on well-diversified funds-of-funds [FOFs] to minimize fraud risk or the risk of concentration in a particular exposure," Shotton continued. "There was reasonable liquidity made available from the fund-of-funds manager to enable us to trade the delta [the rate of change of the option price with respect to changes in the underlying price]. However, with the generally poorer level of returns from most hedge funds and the extra layers of fees the client has to bear in these structures—from the cost of the protection, the FOF manager's fees, as well as the underlying hedge fund fees—the returns of these structures has been disappointing to many clients. So now they want us to write protection, or give them leverage, on the higher-octane performance of a single fund manager, rather than a FOF, or a more concentrated strategy. They want us to do trades on funds offering much worse liquidity terms, given the increasing desire of hedge fund managers to protect themselves in a liquidity crisis by having longer lock-up periods and the ability to introduce liquidity 'gates' on the ability of investors to exit from the fund."

For Shotton, a related area of concern regarding illiquid and structured positions is the use of valuation models. "Accurate daily position valuation is the bedrock upon which the whole risk management edifice is built," he said. "Where there is insufficient liquidity to see actual market prices for the positions one holds, this foundation becomes potentially compromised. We should attempt to distribute risks of positions such as this, to demonstrate valuations, and hold reserves wherever these are allowed against the valuation uncertainty."

Risk management's response. "Risk managers must close their ears to the argument that 'this time, it's different,'" advised Shotton. While exact situations may change and play out differently, he said, "it's inevitable that these bubbles surely will burst at some point, and the cycle will turn…. From my observations of economic forecasters, I learn that you may forecast either a future level that may be attained or a time frame in which some level may be attained, but never both simultaneously. I cannot forecast either when the cycle will turn, nor what will trigger it, but I know that at some point, turn it surely will.

"For me, the key role of risk management is not to say that risk is bad, nor to look to avoid taking it," Shotton continued. "If you don't take risk, you will surely not make money, but the key is to identify and understand the risks involved in any undertaking, to make them transparent to senior management and to the board, to measure them, to make sure that rewards of the venture are commensurate with the risks being taken, and that the risks are commensurate with the firm's risk appetite and available capital.

"When measuring risk, don't be fooled into putting all your confidence in such things as VaR models, which forecast potential losses that may occur over fairly short holding horizons, and usually measure risk based mainly on recent market experience. The best predictor for the level of market volatility tomorrow may be the level of volatility today, but in the longer term, we know that volatility tends to revert to the mean.

"We should not be fooled by the apparent level of available liquidity. We should not fall for the seductive entreaties of traders that CDS [credit default swaps] and other instruments available to lay off risk will always enable traders to avoid the losses they succumbed to in prior crises. One thing I do know is that there is always a lot more liquidity on the way into a market than there is on

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the way out. The Germans have an excellent word, *turschloss-panik*—the fear of being caught by a rapidly closing door—to describe the panic in markets caused by the loss of liquidity."

Eight nontraditional risks. Citigroup's Jim Garnett began by acknowledging the gains in risk management but noting that most risks continue to be addressed in silos. "In recent years, we've seen risk management expand beyond its roots and move beyond its traditional boundaries," he said. "We need to transfer the expertise we have amassed in identifying and quantifying credit and market risks to some nontraditional types of risks." Garnett then offered eight examples of nontraditional risks.

1. *Proximity risk* is a component of business continuity risk, which Citigroup considers a component of operational risk. Simply stated, it's the risk that backup, recovery, or redundant processes will not be able to recover within the expected time because of an event in the geographic area that also affects the ability to conduct business. People, technology, facilities, and third-party vendors all contribute to proximity risk and its mitigation.
2. *Pandemic risk*, such as the avian flu, has one unique feature when compared to most financial market crises. It will affect the ability to do business on a global scale. If the pandemic is severe, the economic impact is likely to be material, variable across the globe, and difficult to estimate. A severe pandemic could pose risks to the financial system, with fragile institutions, markets, or economies suffering materially, and firms may face challenges in meeting regulatory norms.[2]
3. *Country risk*, which Citigroup defines as the total risk to a financial institution in an event that impacts the country. The risk could be economic (default) or political (regime change); it could be external (trade slowdown) or internal (policy miscues); the event could trigger a shock or crisis, or its effect may be gradual over time.[3]
4. *Vendor management risk*. Although most institutions could report very quickly on credit and market risk exposure and how much they could lose if a given client defaults, few aggregate the impact of problems experienced by a vendor that is critical to the client. Similarly, an institution must know its exposure to risk from its own vendors at any point in time. Citigroup runs vendor management risk mainly through its Vendor Management Committee, which brings senior technology, functional, and business representatives together to discuss vendors that are critical to each. This heightens awareness, provides global assessments, and ensures that appropriate risk mitigation steps are taken if necessary. Further, institutions must know how secure their client information is with their vendors and how cognizant they are of laws and regulations permitting transfer of client-sensitive data.
5. *Budget risk*, which involves reviewing Finance's base-case assumptions and developing alternative scenarios around the base case for stressing the cost of credit.
6. *Franchise governance and regulatory risk*. Institutions should have regular franchise governance reviews of their global operations; members of risk management, audit, compliance, and legal teams should participate. These reviews provide opportunities for unique collaborative dialogues between corporate headquarters and teams from other countries.

7. *Accounting risk*. Citigroup continuously monitors accounting change proposals to anticipate, and participate in, changes to the rules that impact its businesses. Risk management participates in new-rule implementation, trains its risk managers on the rules, evaluates the impact of changing the accounting for certain portfolios from accrual to mark-to-market, and, most important, tries to bridge conflicts between accounting and economic models.
8. *Compensation risk*, which, historically, has been driven by revenue and net income. Citigroup has implemented risk-return measures and earnings variability measures for its managers. Additionally, Citigroup performs control assessments on its businesses and penalizes employee compensation if there are audit or risk-control self-assessment failures, operational losses above thresholds, or breakdowns in controls. Risk management now plays an important part in a business manager's compensation.

Basel II. Garnett also offered comments on the continuing Basel II process. Citigroup supports the objectives of Basel II. "We think that moving to a risk-sensitive, globally consistent, and usable regime is far better and more accurate than what we're using today," he said. "Unfortunately, the current draft of the NPR strays from these objectives and the approved international text. This results in an unlevel playing field between large and small U.S. banks and between U.S. banks and foreign competitors. Our recommendation is to make available all international options to all U.S. banks and use the text that has already been approved and is being implemented overseas today. This approach will eliminate most of our domestic and international competitive concerns. We also suggest that we allow for the full implementation of Basel II—Pillar I, Pillar II, and Pillar III—before we draw conclusions about possible reductions in capital for any of our banks."

Alix acknowledged the potential for Basel-influenced procyclicality resulting from one or more of the following market situations:

- Increases in volatility, signaled by the VaR models that drive trading-book capital.
- Declines in ratings, leading to increases in probability of default.

Firms would be driven to withdraw capital from some of their activities as a result of either, he said, which could exacerbate any shock that would otherwise have occurred.

"There's a natural human tendency to pull back from markets, particularly if they're behaving in a way that's difficult to evaluate or understand," Alix said. Historically, central banks, supervisory agencies, and so forth have dealt with such a pullback by providing liquidity. The risk is that such provisions won't work as well today, but, he said, not because capital requirements are rising or falling in the regulated sector; rather, it's because of the actions other investors may take to reduce their risk. "In other words, it's not a matter of capital constraints as much as other investment criteria constraints or margin constraints," he said.

"Procyclicality is an issue that goes beyond Basel," he said. "Recession scenarios are the basic blocking and tackling of risk management. The problem is not increase in demand, widening of spreads caused by weak consumption or investment activity, consumer stress, and so forth. It's the linkages among those factors. Given any change in macroeconomic activity, you may get a dif-

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ferent or worse result than you had expected."

Garnett added that it's highly improbable that any regulator would force an institution in a period of economic weakness to go to such drastic situations as raising capital or selling assets at the most inopportune time. "When we think about the right amount of capital our institutions should be holding, we'll have to think about it a little harder than in the past because our capital is going to change based on the underlying risks of our balance sheets, and those will change based on our strategies and the economic environment. I doubt that a regulator would permit any institution to operate without a capital plan that is credible," one that would allow the institution to operate at minimum standards during a time of economic weakness.

What keeps them up at night. During the Q&A, an audience member asked each panelist to share a concern that might cause him to lose sleep.

Alix noted that in 2006 the concern was credit derivatives' infrastructure problems, but "the new hot button for the regulators is trying to understand how our brokers and dealers are interacting with hedge funds and the consequences to financial stability that may result from the practices. I don't, however, think it's going to lead to a dramatic change or statement of concern."

Garnett said that two operational risks the regulators are currently paying attention to—or soon will be forced to—are information security and consumer protectionism. Particularly with the change in power in Washington, there will be a greater focus on what we are doing with the consumer, and that's already beginning to spread overseas."

Shotton reiterated the need to stand firm against the exhortations of traders who claim that this time things are different. "The market is presenting structures that put institutions under considerably more pressure to take greater risks—whether that's greater leverage or warehousing more of the illiquidity risk. In addition, when differences in a promising transaction make it difficult to replicate in a mainstream system, an institution may choose to move the transaction to offline systems; once successful there, they can rejoin the mainstream fold. However, there could be some danger of less-than-rigorous management lurking within the underlying spreadsheets that could create concerns for institutions later.

"Institutions' infrastructures must maintain the ability to book these positions properly and accurately to reflect all of the risks involved. We must be careful, because no one wants a potential accident waiting to happen." ❒

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Notes

1 CLOs generally are 1) funded asset-backed securities backed by diversified pools of corporate loans; and 2) credit default swaps, each referencing a single funded CLO.

2 During the Q&A that followed the presentations, a member of the audience asked about the threat of a pandemic and what Citigroup's response would be. Garnett said that during early discussions about avian flu hitting a city in which Citigroup operates, the bank considered how it would service clients—fill cash machines, make loans, and so forth. "In other words," he said, "we were trying to figure out how we would do business as usual. We quickly came to the conclusion that if avian flu hit, say, New York City, there would be no such thing as business as usual there. Foremost in our minds is the protection of the employee. That's the risk we think we can manage and control the best. We have concluded that we won't be filling cash machines, we won't be making loans, and we won't be taking credit card applications. In the event the U.S. government or a foreign government wants us to provide cash flow or other services and we're able to do that, we will, with that risk guaranteed by that government. When you try to think how well you can control a pandemic, you quickly realize there's not much you can do other than know your employees have access to the safeguards they'll need to weather that kind of a disaster and safeguarding the assets of our customers. We don't plan on opening our doors in any city hit by avian flu, and I don't think any customer would expect us to do that."

3 Another follow-up question concerned the repercussions of an economic event in China, given that country's large role in the global economy. Alix answered that it's important first to separate that scenario's impact from its likelihood. "What we want to do is understand and analyze the potential downstream effects and then design stresses to reflect that scenario," he said. "We want to be able to show what happens to our portfolio if there's a problem in the Chinese economy. If there's a higher perceived probability of that event, the firm will react by reducing its exposure." Shotton added that while an economic event in China could trigger a large systemic event, "in a sense, it doesn't matter what the next trigger event might be. Trying to predict the next event is fraught with difficulty. The probability associated with any specific event becomes punishingly small. The important thing is what the impact on the portfolio might be. So we run various adverse scenarios to seek out our vulnerabilities, so that regardless of the triggering event, we are prepared to handle the impact." And Garnett said that while a significant downturn in China will certainly have an impact on other markets, he doesn't think it could be the tipping point for the rest of the world—at least not for the U.S. "I don't get a sense that there are major concentrations in many of the markets that will be affected. I don't think it's going to put anyone out of business—at least not any of us in this room."