Risk Management and the Financial Crisis: Why Weren't We Protected?

by Mike Batty

The Failure of ERM?

Risk management can be a thankless profession. In bull markets, risk managers are often viewed as wet blankets who, as some might say, "take away the punch bowl just when the party starts getting interesting."[1] Upon a turn for the worse, people wonder why they weren't warned earlier. Even when successful risk managers limit losses, their recognition is somehow lacking. Maybe it's the loss aversion baked into our psychology, but it can be difficult to find comfort in situations that are merely bad, rather than terrible.

The ongoing financial meltdown has cast a shadow over the entire economy, and caused some to question whether the much-hyped movement of enterprise risk management (ERM) has failed. My answer is, yes, an overarching theme of the credit crisis is a failure of risk management. However, rather than placing all the blame on the risk managers themselves, I look to the breakdown of the entire risk management system. Instead of revealing a fundamental flaw in ERM that will banish it to the annals of academic research, I believe the single most important message from this financial situation is the need for vastly improved risk management capabilities.

The Making of a Crisis

The story of what has gone wrong with the current financial situation is lengthy. In general, the credit crisis revealed a lack of enterprise-wide risk management, a failure of risk management techniques and, in some cases, an outright disregard for well-informed risk managers.

We know the problems began in the housing market. After 2003, when the prices of homes began to deviate from historical relationships with inflation, income and productivity, a time bomb was created for their collapse. But how did this develop? How did these problems so permeate the global economy? And why didn't we see it coming? Low interest rates and regulations promoting home ownership played a role in the growing demand for housing, but the downfall of risk management was also a powerful force. Due to the explosion of the originate-to-distribute business model (fueled by the growth of securitization), underwriters of suspect home loans were freed from significant responsibility for whether the loans could ever conceivably be repaid. They passed the questionable loans onto highly leveraged investors and then focused on their core competency, making more loans. As the demand for these mortgage-backed securities skyrocketed, underwriters tapped pools of more and more suspect borrowers.

So the people making the loans lacked the proper incentives to monitor their quality, but why didn't investors impose market discipline on the lenders to make better loans? For some investors, the simple answer seems to be they didn't realize how risky these assets were. No risk management systems were in place, and they instead relied on the rating agencies' seal of approval. However, many sophisticated investors did utilize complex financial models to measure their risk, and were no more successful insulating themselves from loss. It wasn't that these models were incorrect, per se, but they did provide an unrealistic picture of risk. It's true these financial securities are opaque, but with correct assumptions of home price declines and the severe constriction of credit that ensued, the models do provide a mathematically correct description of the crisis. The models went astray largely because the likelihood of these market conditions was not given due weight. Undoubtedly, there was widespread error in judgment, but before deriding the modelers too harshly, let's try to understand the difficulty of modeling rare events. Home prices have not fallen this sharply since the Great Depression. Given that the financial landscape is so radically different

[1] William McChesney Martin, chairman of the Federal Reserve Board (1951–70), describing the role of the central bank.

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today, and we understand much more about how the economy functions, how much weight should models place on 75-year-old events? There is no definite answer, and modelers will continue to struggle with this question, but a clue can be taken from emerging behavioral economic research that indicates people tend to systematically underestimate the likelihood of rare events. No doubt this has contributed to the running financial joke that a once-in-a-century event occurs every few years.

Still, this is not only a story of a lack of information, or faulty assumptions. Though in the minority, a number of risk managers and economists warned of the impending troubles several years ago. Why were they largely ignored? Many would answer, "greed and arrogance," without hesitation. Those traits certainly played a role, but I believe there is another, underappreciated cause. The psychology of a bubble is very difficult to defeat. Standing up for the contrarian view requires extreme fortitude in a world of cheap credit and seemingly riskless return. Whether the collapse in home prices was inevitable, merely likely or rather a realization of a rare event is open for debate. However, the famous quip by the legendary economist John Maynard Keynes tempers its significance, "The market can stay irrational longer than you can stay solvent." Imagine the unenviable positions of bankers, investors and mortgage lenders who suspect the tenuous nature of their situation, but face immediate pressure to compete with so many who are engaging in the risky behavior. Some executives likely faced the option of a) holding their ground and risking removal immediately (by either their boss or shareholders), or b) going along with the trend of leveraging investments as much as possible, and hoping their fears were not realized. In these situations, it can be rational to abandon your principles and take the risks. The decision to heed the warnings of the risk managers, however believable, is much more difficult (and risky in the short term) than expanding with the bubble as it inflates. In addition, even the brightest minds can begin to question their own beliefs when the actions of others indicate a completely different view.

Improving Risk Management

While there's no panacea for risk management, I believe there are steps we can take. One of the likely benefits of this crisis will be greater appreciation for risk management, both by managers and investors. Many CEOs have taken the fall for their firms' poor performances. While executives have an interest in avoiding large losses in the future, ultimately they are agents of investors, and incentive for risk management should come from this diffuse group. More thoughtfully designed, shareholder-approved pay packages that incorporate risk-adjusted performance measures (likely measured over time) can send important messages to firm managers about the risk level with which they are comfortable.

The libertarian idea that rational self interest will regulate financial markets made mainstream by former Federal Reserve Chairman Alan Greenspan is compelling, but even he now admits a fatal flaw. Many regulations are aimed at preventing the powerful from taking advantage of the weak, but the real problems with the credit crisis were caused by people systematically acting in opposition to their long-term self interest. Predatory lenders did take advantage of naive borrowers, but by and large these lending businesses no longer exist. Borrowers did lie about their incomes, but were the years spent living in nicer homes than they could afford worth the pain of foreclosure? The question of why such large scale departures from rationality occasionally occur is fascinating, and far too complex to address here. Suffice it to say the purest form of Homo Economus is a myth, and while we should respect the right of people to make some foolish decisions, regulations are necessary to limit this type of systematic failure. Paramount to their effectiveness is the structure of regulations. Tighter restrictions on making loans may have prevented this crisis, but will those rules prevent future crises? More likely

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than not, future crises will look different, exploit other regulatory loopholes or result from new products that aren't sufficiently covered under current regulations. Designing an effective system is a difficult task, but a principle-based approach to regulation focusing on the enterprise-wide risk position of a firm, and the role the firm plays within the economy, could help limit systemic problems in the future. These ideas are emerging in talks of regulatory reform in Europe and the United States, and are an increasing focus of rating agencies.

While more risk management is needed, ignoring its inherent limitations is, in itself, a risk. Mathematical models are quite useful, but consider the scale of determining the worst loss that might occur in one year out of 1,000, as is often the goal. A lot has changed since the Battle of Hastings in 1066 (even more than since the Great Depression). Relevant historical data to model losses with such precision is generally unavailable. Models can and will get better, but mathematical sleight-of-hand can only go so far in overcoming a lack of data. With the likelihood of extremely rare events always in question, and knowing our inherent biases in assessing them, we may find it beneficial to downplay the role of tail probability in our analysis, and instead ask questions such as: Are we comfortable with the knowledge that such scenarios might occur? How can we mitigate the risk? How should we react if those situations begin to play out? Again, improving risk management will be difficult, but we will get better.

Mike Batty, FSA, CERA, is actuarial and insurance solutions consultant at Deloitte Consulting LLP in Minneapolis, Minn. He can be reached at mbatty@deloitte.com.