

Derivatives, AIG and the Future of Enterprise Risk Management

by Michael G. Wacek

As one highly rated financial firm after another blows up, what is the right conclusion to draw about enterprise risk management (ERM)? Does the financial crisis of 2008-09 demonstrate its criticality, or does it bring the whole concept into disrepute?

Alan Greenspan has been criticized for his admission in Congressional testimony that he had “looked to the self-interest of lending institutions to protect shareholders’ equity” and was “shocked” that such self-interest had not motivated better risk management. His critics claim that such a view was naïve and that more regulation was (and remains) necessary.

Greenspan believed that well-managed companies know how to optimize their own enterprise risk and will *voluntarily* seek to do so. Would more prescriptive regulation really improve ERM effectiveness, or would it merely further encourage companies to manage the measures outsiders have decided are important? The real imperative of ERM is to optimize a company’s upside aims and downside risks within a set of constraints defining its own risk appetite. If Greenspan’s critics are right, and we must look to rating agencies and regulators to define the risks and how to measure them, then ERM will likely never amount to more than a game of minimizing the reportable magnitude of externally specified risk measures. Unfortunately, that seems to be how it has been practiced until now by many companies, including some highly touted for their superior risk management prowess.

The surge in recent years in the use of derivatives to obscure balance sheet risks is a manifestation of that approach. Investors and other users of financial statements, including regulators, have developed an intuition about the likely volatility of balance sheet assets and liabilities. They know that, everything else being equal, companies with highly leveraged balance sheets (i.e., high ratios of assets and liabilities to equity) are riskier than those with less leverage. Knowing that the market frowns on excessive

balance sheet leverage, many companies have looked for ways to minimize the size of the assets and liabilities they reported on the balance sheet. Derivatives are attractive because they can often be structured to replicate traditional asset transactions but with a much lighter balance sheet impact. Clearly, not all derivative transactions are bad, but in some cases, they can facilitate a business strategy that would not be executed using traditional assets.

AIG’s short portfolio of credit default swaps (CDS), reportedly totaling \$450 billion of “notional” limits at the time of the government rescue, is a case in point. Writing a CDS on a corporate or asset-backed bond is effectively the same as buying the bond and shorting a risk-free government bond to harvest the risky bond’s credit spread. However, the two approaches result in radically different entries on the balance sheet. The short CDS position is booked at market value as an “other liability.” The market value for a CDS is roughly the present value of the market credit spread on the reference bond in dollar terms over the remaining life of the swap. For example, the market value of a seven-year \$10 million notional amount CDS on Fannie Mae subordinated debt in late February 2007 was about \$110,000, reflecting a credit spread of 19 basis points (0.19 percent) per annum. A writer of that CDS on that date would have booked an asset of \$110,000 and a matching \$110,000 “other liability.” In contrast, assuming the Fannie Mae bond was trading at par value, an institution executing the other equivalent credit-spread-harvesting strategy would have booked a “fixed income” asset of \$10 million and a matching \$10 million “obligation to return borrowed securities” liability. In February 2007, the balance sheet impact of the CDS-based strategy was only about 1 percent of the equivalent strategy that used Fannie Mae and risk-free government bonds!

As of Dec. 31, 2006, AIG’s assets totaled about \$1 trillion, and its GAAP shareholders’ equity was about \$100 billion. Would its management have been willing to execute the bond equivalent of its CDS business plan, i.e.,

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borrow \$450 billion to purchase a portfolio of corporate, asset-backed and foreign government bonds? I doubt it. Even if management had been willing, it is unlikely that AIG's investors and creditors would have allowed it. However, the favorable balance sheet optics provided by CDS enabled AIG management to pursue an *extremely* leveraged business strategy without attracting much attention and perhaps without itself fully understanding it.

The danger posed by short CDS arises from their enormous leverage. As a result of a widening of credit spreads on relatively safe Fannie Mae debt, the market value of the Fannie Mae CDS cited earlier skyrocketed nearly *eightfold* from \$110,000 in February 2007 to about \$800,000 by June 30, 2008, obliterating the initial \$110,000 asset and producing a loss of 627 percent! CDS on riskier bonds fared even worse.

As risky as they are, the issue is not the CDS themselves, but rather how they are modeled and how well modeling results are understood and used by management. A self-disciplined company with an effective ERM program does not merely take its risk management cues from how its risks look from the outside. It seeks to model and limit the actual risks inherent in its business plan and balance sheet.

AIG reported a very low "capital markets trading" value-at-risk (VaR) as of December 2007 for the financial products unit, which wrote the CDS portfolio. While that VaR calculation reflected interest rate, equity, commodity and foreign exchange risks, the company admitted that, "Credit-related factors, such as credit spreads or credit

default, are not included in AIGFP's VaR calculation." (AIG 2007 Form 10-K, p. 124.) That is like a property insurer monitoring the potential cost of claims from all perils affecting policies exposed in Florida...except for hurricanes! It suggests that AIG management did not understand its business well enough to properly supervise the risk modeling of the CDS portfolio.

This episode and others like it potentially create credibility problems for ERM. Because risk modeling is a centerpiece of ERM, when poorly supervised, but apparently sophisticated modeling *exacerbates* a business disaster rather than helps to avoid it, it is viewed by some as a general failure of both risk modeling and ERM. To prevent the baby from being thrown out with the bathwater, it is essential that the current financial crisis be studied closely to identify the real ERM successes and failures, and to distinguish between those companies who truly managed their enterprise risks and those who merely pretended. The results should be widely promulgated.

Ultimately, the market will decide on the importance of ERM. Over time, the market will punish companies practicing the window-dressing version of risk management and reward those whose ERM proves effective. In the current crisis, while critics complain about government "bailouts" of failing companies, the fact is that investors in those companies have suffered enormous losses. In the future, once burned, twice shy, investors will undoubtedly seek to learn much more about the quality of ERM within the companies in which they invest.

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