

Risk, REVISITED

Forewarned is forearmed, according to participants at
CIR's Risk Management Conference 2009.

BY TERRI GOVEIA

RISK MANAGEMENT CONFERENCE ONLINE

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After the whirlwind of last year's financial crisis, attendees at CIR's Risk Management conference were ready to look ahead. Gathered in Collingwood, Ontario in late August, they learned even more about the latest in risk tools to take them forward. The conference, hosted in partnership with L'Université du Québec à Montréal (UQAM) School of Management, had a title—"The Crisis in Risk: What's Next"—that could have been ominous, but its participants demonstrated that when it comes to the next steps, forewarned is forearmed.

RISK MANAGEMENT: MYTHS AND MODELS

Keynote speaker Robert Jarrow, professor of finance and economics at Cornell University, kicked off the discussion by reflecting on the hard-earned risk management lessons of the past year, dispelling popular myths that derivatives and risk models are risky prospects themselves. The real issue, he said, is that "risk management models are good, but uneducated use of poor risk models is what's bad." Proper use requires extensive testing, and "proper education in their use and care," he said.

Although improper use—through inadequate risk models (Value at Risk (VaR) and the Gaussian copula), by credit rating agencies—did assist in triggering the financial crisis, it could have been a far different scenario, according

to Jarrow. "If the correct models had been used, and the financial risk had been correctly quantified, then adequate capital would have been in the system and the credit crisis would have been avoided," he said.

(See "An Expensive Education," on page 9, for more.)

VALUE AT RISK: GOOD NEWS, BAD NEWS

With diversification spurring losses in pension fund portfolios during the financial crisis, Value at Risk (VaR) is a valuable risk tool. But "VaR is usually difficult to evaluate with precision," and is easily affected by extreme events and contagion, said Bruno Rémillard, professor of management sciences at HEC Montréal. Two methods to evaluate VaR—macro and microevaluation—both have pros and cons. With macroevaluation—only taking portfolio values into account—"one can get explicit expressions for any level of VaR. On the negative side, the contagion effect is ignored, resulting in an underestimation of the real VaR in general," Rémillard said.

On the other side, microevaluation uses information from all components of a portfolio, "including dependence between assets," and doesn't depend on one explicit formula, "a more flexible, more precise and more realistic" approach, he said. "The micro evaluation approach is more intuitive and more realistic than modelling the portfolio, and should provide better estimation of the VaR. It requires much more work but it's worth the effort."

The next speaker explored both sides of VaR: "The problem with traditional VaR models is that they inherently assume a stationary world in which today's volatility equals yesterday's," said Lior Menzly, director of quantitative research at Nomura Global Alpha. "Relying

on backward-looking data, they are slow to identify new factors that emerge and influence the aggregate risk of the portfolio.” The good news: newer VaR models allow estimated portfolio volatility to change according to market conditions, thanks to factor analysis methodology and “stochastic” volatility adjustment modelling features.

Such modelling approaches were welcome following the Lehman collapse. Adding liquidity as a risk factor to the Barclays Global Aggregate Index was critical in capturing risk correctly—“the model immediately reflected very high overall risk following the Lehman collapse, preventing portfolio managers from taking large positions,” Menzly said, but noted that the model’s recent reduced estimation of risk “has enabled portfolio managers to take advantage of a generous liquidity premium that has existed in the market.”

WHERE DID IT BEGIN? WHERE DOES IT END?

Bill Bamber, global head of structuring at CIBC Mellon Global Securities, examined the root causes of the financial crisis, noting that “the origin of the crisis sits with everyone, not just ‘big banks,’” he said. Moving forward, Bamber predicted that the industry would see more segregation between “utility” banks and those that can take risk, and pointed to new growth—focused on real assets—in unexpected places outside the G7, adding, “Canada will benefit if we embrace this.”

Along with forward-looking mileposts, investors will also need specific tools—like risk budgeting—as they emerge from the crisis. John McNair, senior vice president and head of investment research at Highstreet Asset Management, emphasized that risk budgeting is a familiar concept among financial professionals but due to the numerous and obscure definitions for risk budgeting and due to the seemingly complicated calculations required to build such a framework, risk budgeting has not become a familiar tool among financial professionals. His presentation offered a framework for putting risk budgeting into action, stating that “using these risks to actively rebalance your portfolio can improve your portfolio’s ability to meet its risk and return objectives.”

Although plan sponsors are using an increasing array of tools and techniques, the question of how best to define and manage pension risk continues to be a difficult issue for plan sponsors. “The events of the last two years have again forced many pension plan sponsors to rethink whether the degree of financial risk inherent in the investment strategy of their pension plans is appropriate

in the long term,” said David Service, Principal at Towers Perrin. LDI strategies and broad diversification of risky assets that were implemented since the last equity market blow-up did not adequately protect many plans in this market event, he noted, adding that “perhaps it is time to completely rethink the appropriateness of many of the accepted wisdoms around pension investment strategy.”

THE BALANCING ACT

Fixed-income risk management is a hybrid of both art and science, according to Jeff Moore, portfolio manager, Canadian fixed income, Pyramis Global Advisors, who stressed its value in quelling investor concerns over their next steps. The science of fixed-income risk management lies in risk measurement and thorough investment and divestment processes, complemented by the art of interpreting the markets, he said. Mixed results for corporate U.S. bonds during the second half of 2008 and first half of 2009 could have been improved if the models had looked beyond the 2008 experience, he said. “In other words, if these investors had modified their models (the science) to allow for the potential behaviour of the market in the first half of 2009 (the art), they might have had better results.”

Moore explored the tenets of successful fixed-income risk management—see page 23—stating that investors need more than diversification in high-volatility situations.

REVIEWING REAL ASSETS

Courtland Washburn, managing director and CIO of MFC Global Investment Management’s Hancock Natural Resource Group, examined the performance of real assets—such as timberland and farmland—during the credit crisis. Roughly \$35 billion (US) in timberland has transferred from paper and forestry businesses—directly or through publicly traded REITs—to financial investors in the past decade, drawn by negative correlations and high diversification benefits. Though their returns fell as correlations between many assets rose, they remained positive in 2008, “when returns on the S&P 500, investment grade corporate bonds and commercial real estate were all negative,” he said. “In the first half of 2009, timberland returns have been flat, while farmland is up 2.5%.”

Washburn pointed to repricing of risk across capital markets, and the lower liquidity of the asset classes in a declining market, questioning “whether required returns on timberland, farmland and other real assets have now been reduced relative to other asset classes.” ■