A Clear VIEW

Risk management and the push for transparency.

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RISK MANAGEMENT CONFERENCE ONLINE
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CANADIAN investors continue to reel from the effects of the asset-backed commercial paper freeze-up and the subprime collapse in the U.S. spreading through the financial sector. This year's Risk Management Conference came at an important time for plan sponsors seeking to ensure that they have adequate tools and strategies in place to weather the storm. Hosted by *Canadian Investment Review,* in partnership with L'Université du Québec à Montréal (UQAM) School of Management, the conference included a combination of formal presentations and case studies on topics such as portfolio structure, understanding and budgeting risk, transition management and risk-aware practices and procedures. Speakers started out by addressing transparency in Canadian marketplaces and the fallout from the ABCP crisis. From there, they looked at currency, business cycles and the different factors that must be considered in the risk equation.

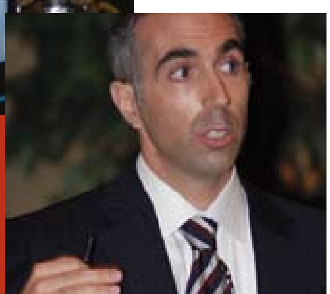
CROWS AND SWANS

To get things started, keynote speaker John Chant, emeritus professor of economics at Simon Fraser University, took us through an analysis of the asset-backed commercial paper crisis. His question: "Was this event a black swan, a highly improbable event that carries a massive impact, or just a common crow, another in the line of crises that hits the financial system every few years?" One comparison implies that investors could have anticipated and prepared for the event, while the alternative suggests no one could have foreseen it. Chant argued that the ABCP debacle is a crow—an inherently fragile financial instrument that would have been vulnerable to triggers like the subprime crisis in the U.S. At the same time, he noted that "the ABCP crisis caused losses for many investors, but its costs go beyond this. All the elements of ABCP, securitization, intermediation and derivatives, contribute to the efficiency of financial markets when conducted properly." However, Chant said he believes investors will likely shy away from these vehicles, concluding, "the impact of the ABCP crow will be felt for many years in the future."

DARK POOLS

Looking at the transparency of Canadian financial markets, Eric Chouinard, senior analyst, financial markets department with the Bank of Canada, discussed dark pools of liquidity. As the Canadian equity trading landscape is transformed by the emergence of alternative trading systems (ATSs), there has been growing demand for marketplaces that allow investors to execute large orders anonymously. These venues are known as "dark pools of liquidity" and they allow investors to match large orders without displaying their full trading information and exposing themselves to other investors.

According to Chouinard, the phenomenon raises a number of issues related to the health of capital markets, particularly its implications for price discovery, which is a main component of healthy financial markets. It could also lead to market fragmentation. As he said, "academic studies have found evidence that liquidity can be negatively affected if large orders are displayed.” As such, good regulation will be key to dealing with some of these challenges: “Regulation requires dark liquidity pools to contribute to price discovery by publicly disseminating information on completed transactions. Dark pools are therefore not entirely opaque and it can be argued they have the potential to support price discovery further by allowing investors to reduce the risks related to the dissemination of certain large orders.” Regulation is also helping to deal with potential for market fragmentation, Chouinard said.



Doug Harris, vice-president and associate general counsel with the Investment Industry Regulatory Organization of Canada (IIROC), continued the ATS discussion. Harris noted that by the end of 2008, 11 equity trading marketplaces are expected to be in operation, three of which are dark pools. Canadian securities regulators and IIROC recently amended the trading rules to clarify that the definition of best execution reflects the fact that there is no simple or purely objective definition. Under these amendments, best execution requires a dealer to undertake reasonable efforts to achieve the most advantageous execution terms reasonably available under the circumstances. As part of a dealer’s best execution obligation, a dealer handling an order for a client must consider placing a client order on a dark pool where the displayed volume on protected marketplaces is not sufficient and the particular dark pool has demonstrated a reasonable likelihood that it will have liquidity for the specific security. With respect to best price, or “trade-through” obligations, the treatment of dark pools differs from that of visible marketplaces. Dark pools’ order data is not disseminated, and so limit orders on dark pools may be traded through by trades on visible marketplaces. It’s important to remember that the converse is not true: a dealer’s trade on a dark pool may not trade through better-priced orders on a visible marketplace.

SECTOR EXPOSURE

Moving from market mechanisms to portfolio risk, Andrew Marchese, portfolio manager with Pyramis Global Investors, discussed the role of sector neutrality in controlling portfolio risk exposure. He cited Canadian data indicating that in Canada, along with the other G7 countries, a large amount of return variance is explained by sector factors, much more than by the aggregate of the four risk factors in Barra’s international risk factor model.

For example, from January 1995 to March 2008, sector factors explained 31% of the cross-sector return variance, compared to 9% explained by Barra’s risk factors. Building sector-neutral portfolios is a meaningful and prudent way of controlling relative risk in G7 markets—it’s also relatively easy to do. “Sector classifications change infrequently,” said Marchese, “whereas exposure to Barra factors can change radically over time and sometimes shift very quickly.”

Marchese’s data also looked at controlling variance on the basis of a “supersector” portfolio, the results of which are consistent with the sector analysis—that is, groups of GIC sectors such as Consumer, Industrial and Interest Sensitive. Supersectors are defined as groups of GIC sectors, which include: Consumer, Industrials, Resources, and Interest Sensitive. Marchese noted that the cross-sectional variance of a supersector-neutral portfolio in Canada carried the same risk as that of a sector-neutral portfolio in the U.S. (21%). That suggests a Canadian supersector portfolio is not materially riskier than a U.S sector-neutral portfolio. Using a supersector-neutral approach relaxes the sector constraints and increases the opportunity to add value, providing a compelling framework in which to manage a risk-conscious Canadian equity strategy.

While sector exposure plays a role in risk management, business cycles can also shift the risk premium, according to L. Jacobo Rodríguez, vice-president, Dimensional Fund Advisors. “In turbulent times, investors would do well to ask themselves some of the basic questions they considered when they made their initial asset allocation decisions,” he said, noting that the relationship between economic conditions and risk has two distinct characteristics. First, risk and the compensation for taking risk vary over time. Second, the variation in risk and risk premiums occurs in a countercyclical fashion, so that expected returns are higher in bad economic times and lower in good economic times. If investors want to use this information in a timing rule, they need a model that forecasts the path of the business cycle with pinpoint accuracy. But determining peaks and troughs is extremely difficult: First, the variables used to make that determination—such as real GDP, real income, employment, industrial production, and sales—do not move synchronously and tend to be noisy. Second, those variables do not carry the same weight from one business cycle to the next.

DIVERSIFICATION

The next presenter, Sébastien Page, senior managing director, State Street Associates looked at diversification during difficult market conditions. "Diversification appears to work during good times—when it is not needed—and disappear during market crises," he said. He discussed recent research done to measure conditional correlations and assess the asymmetric nature of diversification. Factors used were country, style, size, asset class, hedge fund, and fixed income diversification. "In almost all cases, correlations increase significantly more on the downside than on the upside," Page said. Specifically, the researchers apply mean-variance and full-scale optimization to identify optimal country and multi-asset portfolios, assuming a loss-averse investor with a kinked utility function. "This utility function changes abruptly at a particular wealth or return level and is relevant for investors who are concerned with breaching a threshold," he explained. "Consider, for example, a situation in which an investor requires a minimum level of wealth to maintain a certain standard of living," Page continued. The investor's lifestyle might change drastically if she penetrates this threshold. Or she may be faced with a situation in which she will become insolvent if her wealth breaches some threshold, or a particular decline in wealth may breach a covenant on a loan. In these and similar situations, a kinked utility function is more likely to describe one's attitude toward risk. Ultimately, to the extent that correlations are the main driver of utility, an improvement in correlation asymmetry will improve it overall.

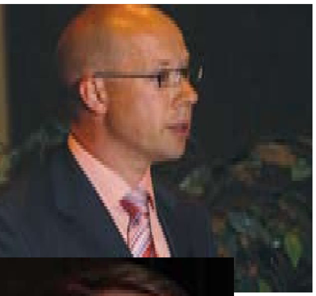
The portfolio management discussion continued with a presentation on passive indexation by Jason C. Hsu, managing director, Research Affiliates LLC and adjunct professor in finance, Anderson School at UCLA. According to Hsu, passive indexation represents about 20% of total institutional equity investments and reportedly gathers 30% of all new equity allocations. This approach has benefited investors through lower fees and superior performance. Adding a Fundamental Index®-based portfolio to a passive program will diversify beta exposure and may increase returns while reducing volatility. Why? Because, said Hsu, "at any given moment in time, cap-weighted indices give higher weights to overvalued stocks and lower weights to undervalued stocks, which leads to a performance drag. Since Fundamental Index portfolios ignore price in determining security weights in the portfolio, the performance drag is eliminated." In Canada, Nortel was 3% of the TSX in 1997 and had a PE of 30, he said, adding that in 1999, when Nortel's PE had ballooned to 100, it represented 16% of the Toronto Stock Exchange (TSX). Intuitively, the more overvalued a stock becomes, the larger its overweight in the (cap-weighted) index. Ultimately, he concluded, a Fundamental Index exhibits active management characteristics and should behave differently than a cap-weighted index. The merits of diversification compel most institutional investors to allocate actively managed portfolios across several styles and managers, and the same approach can now be applied to passive indexation.

The Omega function, according to John McNair, senior vice president, head of investment research with Highstreet Asset Management Inc., can also enhance a portfolio's risk/return profile and should be used when comparing portfolios. Unlike typical risk/return metrics, the Omega function does not make assumptions on the shape of the distribution of historical portfolio returns. In fact, this metric captures all of the distribution's moments (mean, variance, skew, kurtosis etc.). He noted that quantitative portfolio strategies' risk/return profile can be enhanced by replacing typical technical factors like price change or price momentum with Omega.

When comparing portfolio returns, it makes sense to consider all the information embedded within their historical performance, he said, pointing out that Omega captures all of this information and should be added to a risk management toolkit for performance measurement and monitoring.

A MORE TRANSPARENT APPROACH

Transparency also has an impact on securities lending, performance measurement in particular, according to speaker James Slater, senior vice president, capital markets, CIBC Mellon. "Transparency allows buyers and sellers to make more informed decisions and offers investors a window into the various risks that could adversely impact the successful execution of their investment strategies," he said. Securities lending returns can become more significant when they are fuelled by the use of cash collateral. Such transactions enable lenders to earn an intrinsic fee on the loan, while earning cash reinvestment income. Over the past 18 months, Canadian cash collateral activity has grown markedly from roughly $20 billion in outstanding loans to over $30 billion. Securities



lending agents have long been confined to comparing their returns to previous years within the narrow universe of their own client base. However, specialist data vendors have begun to fill in the information gap in recent years and plan sponsors can now compare their securities lending performance in relation to their peers, and assess the impact of various choices of securities lenders or other program options. "Plan sponsors are encouraged to approach their securities lender for analysis of their relative returns," Slater said.

Managing currency risk effectively is also a concern, according to David Service, principal with Towers Perrin. "The events of the past few months have reacquainted us with many financial risks, one of which is the fact that currencies can move very large amounts over very short periods of time," he said. "With the significant increase in foreign investments that pension funds have taken on since the end of the foreign property rule, these moves can have a dramatic impact on pension fund returns. This makes currency risk management a critical part of the pension equation." Establishing a strategic currency hedging benchmark is about determining the degree to which the plan's stakeholders can accept the risk that comes with foreign currency exposure in the pension fund. It should reflect the sensitivity of the pension sponsor to various currency exposures and recognize the impact that different currencies have on the plan sponsor's revenue and cost structure plus any hedging programs that exist within the business. The strategic hedge is typically implemented using the services of a currency manager, either through a passive or active approach. This strategic hedge benchmark should be based on the actual currency exposures in the fund (not the benchmark exposures) as the purpose of the strategic hedge is to control the risk exposure of the fund. "Ultimately, this decision should fit into the broader financial risk management framework, both for the plan sponsor's business and for the pension plan," Service recommended.

The transparency discussion extended to a presentation on risk management by Stephen Orlich, vice-president, strategic asset allocation, MFC Global Investment Management. He outlined ways to create a more transparent DB solution in which risk management encompasses the ability to recognize the key corporate issues in pension finance; to evaluate the merits of different investment solutions; and to measure success and incorporate changes. "In almost all cases, one will also need to pursue higher return by investing in risky assets, such as equities or alternatives," Orlich explained. The key questions to ask to ensure that one doesn't detract value are: how much shortfall risk is acceptable; how much mismatch risk is acceptable and are these risks earning an appropriate return?

"The trade-off between these risks needs to be expressed in a way that will allow one to compare marginal return/risk so that the various alternatives can be ranked," Orlich advised. However, all long-term liabilities should be managed to funding ratios that increase with asset-liability mismatch risk, managers should be motivated to target long-term return on total asset-liability risk, and transparent benchmarks for the asset-liability risk must be understood at the senior management level. "Long-term success in diversifying the DB Plan portfolio is best achieved at the margin, by finding those investment niches where others cannot go," he said, adding that it's important to invest where knowledge, cash and patience are rewarded, and learn to live with the illiquid, stable return assets that are found in inefficient markets. ∎