RMA surveyed 45 global institutions to capture the environment for market trading activities and counterparty credit risk. Participants related how their institutions approach organizational structure, data collection, measurement techniques and methodologies, valuation practices, scenario analysis, limits setting and reporting, actual risk measurement results, and capital allocation. Information gathered on counterparty risk include methodology, credit standards, netting, derivatives trading supported by collateral, derivatives trading with re-couponing, early-termination clauses, repo trading, and credit risk IT structure and architecture. The complete results of the survey were sent to the participants.
During the spring of 2006, RMA’s Market Risk Council conducted RMA’s first Trading Activities and Counterparty Risks Survey to determine the current state of practice and planned developments. The survey is part of an ongoing, long-term RMA effort to identify best practices and provide an ongoing benchmark to help RMA member institutions understand market risk. Forty-five large institutions based in North America, Europe, Australia and Asia participated in the Web-based survey, which resulted in a 330-page final report. Specifically, the study was designed to provide:

1. A benchmark by which participants can review the best practices of trading activities and counterparty risks.
2. A better picture of how institutions use technology to measure and monitor risk.
3. An aid to member institutions as they assess the state of trading activities and counterparty risk metrics.
4. The basis for further exchange of information.

**Market Risk Trading Activities**

Information on market risk trading activities obtained from participants
encompassed organizational structure, data collection, measurement techniques and methodologies, valuation practices, scenario analysis, limits setting and reporting, institutions’ actual risk measurement results, and capital allocation.

Organizational Structure
- The primary mandates of the market risk management function are risk monitoring (100% of respondents), risk reporting (96%), policy enforcement (91%), and limits setting (77%).
- Trading risk, asset liability management, and counterparty credit exposure are the three main risk areas covered by market risk management. Most respondents, including leading practitioners, focus on two areas of market risk management: overall value at risk (VaR) and scenario analyses.
- Participants pointed to the reporting areas of content and timeliness, as well as data collection and new product integration, as the main focus for market risk management over the past 18 months. For leading practitioners, however, cleansing/scrubbing was the main focus.

Data
- Most participants’ institutions, including leading practitioners, use separate data collection points rather than a centralized approach. Also, the majority of participants update transactions on an end-of-day time frame, and a significant number of these institutions can do so in real time.
- For interest rate calculations, nearly 75% of participants (83% of leading practitioners) did not change providers in the past 12 months.

Measurement Techniques and Methodologies
- Most participants use a third-party software vendor in conjunction with an internally developed software solution. All of the leading practitioners use internal software development.
- The majority of participants perform both full revaluation across all levels as well as first- and second-order approximations.

Valuation Practices
- Participants were asked about several tasks, including market risk management, finance, trading management, operations, and management committee. Market risk management is the predominant party responsible for nearly all of these tasks. In most organizations, the responsibility for valuation accuracy and reserve accuracy is shared.
- In the case of securities or other positions without clearly observable prices, the majority of participants use mark-to-model and mark-to-model-plus-reserve to determine mark-to-market.

Scenario Analysis
- A majority of participants (all but one leading practitioner) use scenario results to quantify and communicate tail risk, and two-thirds use these results to set limits on exposure to extreme events.
• Around 60% of participants run historical scenarios on a daily basis or plan to do so. On average, however, participants use fewer historical scenarios than planned. Institutions are deploying historical scenario analyses by the business unit and global book levels.

Limits Setting
• Participants were asked to identify at what levels were market risk limits and controls set. Overall, centralized risk and line-of-business management are very much involved with all aspects, while the board of directors, COO, and executive management tend to look at VaR and stress results. The desk is the lowest level at which VaR is calculated. About 95% of participants make VaR results available on a next-day basis, and most do so at some point the next morning.

Capital Allocation
• Respondents were asked if there was a diversification benefit when the economic or risk capital computation at the business-unit level allows for diversification among market, credit, operational, and other risks. About 50% believed there is a diversification benefit of 10-20%.
• More than 75% of participants use a multiple of VaR for attributing economic capital to market risk in trading businesses, with stress testing, at 3%, a distant second.
• Nearly 75% of leading practitioners and nearly 50% of all participants use the one-year time horizon in calculating economic capital for market risk.

Counterparty Risks
Counterparty risk information encompassed the following areas of trading activities: methodology, credit standards, netting, derivatives trading supported by collateral, derivatives trading with recouponing, early-termination clauses (ETCs), repo trading, and credit risk IT structure and architecture.

Methodology
• Respondents prefer to use much of the same market data sources for both credit and market risk modeling for derivatives. A few respondents use the same simulation methods or assumptions.
• For evaluating credit risk for loan customers who also execute derivatives transactions, most respondents amend their documentation to create cross-references and measure loan credit risk separately from the derivatives transaction.
• When addressing derivatives, respondents split on the primary method to measure potential future exposure (PFE), depending on the product, and between the leading practitioners and other participants. The majority of leading practitioners use portfolio-based simulation for interest rates, foreign exchange, and commodities, while nearly half did so for other participants. For equities and credit derivatives, most respondents relied on transaction-by-transaction add-on. For repos, nearly double the respondents use transaction-by-transaction add-on over portfolio-based simulation as the primary method for PFE. Regardless of the product, however, most respondents use the transaction-by-transaction add-on method as their secondary method to measure PFE.
• Nearly 40% of respondents subtract the cost of capital from revenues for derivatives or repo trades. In calculating economic capital for derivatives, the overwhelming majority of respondents take netting and CSAs into account. A majority of respondents include credit derivatives mitigation and default correction, although they split on including ETCs and recouponing.
The spirit of RMA has always been to share knowledge for the benefit of all its members and to advance profitable results through sound practices.

Credit Standards
- On average, nearly 85% of respondents use netting, collateral, and ETCs for credit mitigation. Ratings-based terminations and recouponing are less common but are still used by the majority of leading practitioners.
- More than 80% of the respondents use mark-to-market plus PFE without regard to creditworthiness for the basic credit risk formula for derivatives, and nearly 75% do so for repos.

Netting
- About 60% of respondents net counterparty credit exposure across all derivatives exposure and another 15% include repo exposures as well. Only 10% of respondents, and none of the leading practitioners, net across a single product.
- An overwhelming number of respondents calculate net exposure daily for derivatives and repos.

Derivatives Trading
- About 90% of respondents recognize the legal enforceability of collateral, and consequently they rely on in-house legal analysis as well as an external industry opinion.
- Respondents strongly agree that completing a CSA allows an institution to undertake greater exposure with a counterparty. However, among the largest 25 bank counterparties worldwide and the 15 largest non-U.S. bank counterparties, about a third had not completed a CSA.
- Cash (especially in U.S. dollars) government bonds, and supranational corporate securities are the most widely acceptable forms of collateral under a CSA. GSE mortgage-backed securities are also acceptable, as well as non-government debt.

Early Termination Clauses
- About 90% of respondents rely on in-house analysis to define the enforceability of ETCs. Few respondents require no legal analysis.
- In calculating term risk, about 75% of respondents use the ETC date rather than the maturity date. To calculate credit deferral, about half use the ETC date, and the majority of respondents use the maturity date to calculate credit risk.

IT Structure
- To design risk systems, most respondents rely on in-house resources almost exclusively or use them in conjunction with vendors. However, respondents most often rely on vendors exclusively for collateral management systems. Most risk systems are integrated, except for market risk measurement.
- For capital reporting, most respondents’ systems support regulatory capital, economic capital, and portfolio modeling capital calculations. Integrating market and credit risk capital modeling, or integrating the two with issuer risk capital modeling, seems less urgent to most respondents.

What the Future Holds
The spirit of RMA has always been to share knowledge for the benefit of all its members and to advance profitable results through sound practices. The ability to benchmark our own progress is essential in an increasingly complex financial services environment.

Future studies being considered will determine the current state of practice and the planned developments relating to models used in market risk management and to hedge funds as counterparties. Proposed topics to be covered by a models survey include pricing methodologies for selected...
models, industry standards, model validation, model calibration, stress testing of models, simulations, model limitations, model reserves, audit of models (both internal and external), model policies, and model risks.

RMA’s Market Risk Council also is considering a potential benchmarking survey to learn more about the lines of business that financial institutions have with hedge funds, including trading lines, hedge fund financing, financing a fund of funds, prime brokerage activities, and the range of custodial services that organizations provide to hedge funds. That survey will also help participants learn more about other areas affecting institutions’ relationships with hedge funds, such as operational risks, staffing issues, IT systems and architecture, and limits setting.

Contact Fran Garritt by e-mail at fgarritt@rmahq.org or contact him by phone at 215-446-4122.

This survey contained 66 questions on trading activities and 94 questions on counterparty credit risk. The vast majority of the questions were multiple choice. To learn more about the survey and RMA’s market risk activities, or to participate in a future survey, contact Fran Garritt, RMA, at fgarritt@rmahq.org or 215-446-4122.