STANDARD & POOR'S

Global Credit Portal®
RatingsDirect®

May 3, 2007

Criteria | Financial Institutions | General:

A Roadmap For Evaluating Financial Institutions' ERM Practices

Primary Credit Analysts:
Prodyot Samanta, New York (1) 212-438-2009; term.prodyot_samanta@standardandpoors.com
Michelle Brennan, London (44) 20-7176-7205; michelle_brennan@standardandpoors.com

Table Of Contents

Criteria | Financial Institutions | General:

A Roadmap For Evaluating Financial Institutions' ERM Practices

*(**Editor's Note:** This criteria article supersedes the article titled "Assessing Enterprise Risk Management Practices Of Financial Institutions," published on Sept. 22, 2006.)*

This article provides further guidance on the key risk factors considered by Standard & Poor's Ratings Services when assessing the risk management techniques at financial institutions.

As part of our ratings assessment, we consider how well the institution's risk policies, procedures, and tools fit its risk profile and contribute to its strategic and commercial development. Here, we outline the "roadmap" of high-level issues that we consider to form our opinion on the relative strength of the various parts of a financial institution's ERM framework.

A Standard & Poor's ERM assessment centers on the following five key areas: risk governance; operational risk; market risk; credit risk; and liquidity and funding.

This report lists the types of questions we consider to assess the institution's practices in each of these areas. An institution receives one of the following scores for each area: "Excellent," "Strong," "Average," or "Weak." The score depends on our opinion of how the institution's practices align with its risk profile and how well they compare with the industry. For each risk area, the roadmap also shows the types of features that are characteristic of institutions with that score.

A financial institution's ERM capabilities are critical to its overall creditworthiness; thus our assessment of these capabilities forms an important part of any credit rating. We view financial institution risk management practices from a holistic perspective and recognize that ERM is a dynamic and forever evolving discipline. Our analytic framework reflects various dialogues with financial services companies about the evolving nature of risk management practices across the industry.

Evaluating an ERM framework is no different than conducting other types of credit risk analysis. Analysts make a judgment about the robustness of an institution's risk management practices based on its risk profile, the appropriateness of the risk framework to the risk profile, its processes for managing risk, and its ability to mitigate risk. The assessment also considers best practices observed in the industry.

This article is a follow-up article to "Criteria: Assessing Enterprise Risk Management Practices of Financial Institutions," our most comprehensive review to date of the analytical framework and criteria we use to assess enterprise risk management (ERM) practices at financial institutions, which was published on Sept. 22, 2006.

ERM Evaluation Structure

Standard & Poor's ERM assessment centers on the following five key areas:

A. Risk governance;

B. Operational risk;

C. Market risk;

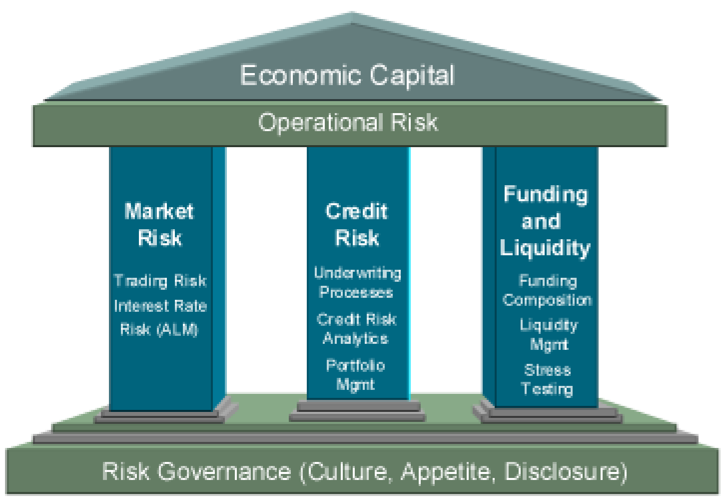
D. Credit risk; and

E. Liquidity and funding.

In most cases, risk governance is the most critical area of our evaluation, as it typically drives the quality and strength of an institution's risk management framework. The figure below depicts risk governance as the foundation of our ERM evaluation structure. Here, we assess the institution's risk culture, risk appetite, quality of risk disclosure, and ability to view its aggregate risks.

The other major areas of risk that are assessed are market risk, credit risk, funding and liquidity, and operational risk. A structural defect in the operational risk approach can lead to a significant impact not just in one business silo, but across the entire enterprise. Embedded within the analysis of these broader risk areas are assessments of an institution's management of business, legal, and reputational risks.

ERM Evaluation Components For Financial Institutions



Our ERM Evaluation Methodology And Assessment Guidance

The remainder of this document outlines some of the key questions Standard & Poor's analysts must address for each of the five major components of our ERM assessment process. The examples provided by no means constitute a complete set of the issues we would typically address, but show a selection of relevant issues.

We have included a "roadmap" for the qualitative scoring process we employ in our assessments, illustrating how we evaluate an institution's practices. For each heading, the institution is given one of four scores: "Excellent," "Strong," "Adequate," or "Weak." The text shows the types of features that are characteristic of institutions in each category. For example, an institution with weak risk governance will tend to view risk management as a cost center that adds little value. Such an institution will therefore have insufficient staffing and resources in its risk functions. An institution with strong risk governance will tend to involve risk management functions closely in planning, and will have risk management professionals with high status within the firm.

In our ratings analysis, we also provide an aggregate score for the overall robustness of an institution's risk management practices. In line with the scores assigned to the individual risk areas, this overall ERM score is also denoted as "Excellent," "Strong," "Adequate," or "Weak."

A. Risk Governance

This component assesses an institution's risk culture, risk strategy, risk appetite, and risk awareness level.

Does the risk management function have sufficient stature within the firm?

- Weak: Risk management is regarded as a policeman, or a cost center that adds little value. Staffing and resources are insufficient.
- Adequate: The risk management department stands independent of business units and is regarded as a valued partner. It enjoys access to senior management and is staffed by quality employees. There is a demonstrated organizationwide commitment to risk management.
- Strong: The track record shows that the formal risk management department acts as a valued partner to the business units by advising them on both "local" and enterprisewide risks. Risk management is closely involved in planning and budgeting, and risk professionals rank highly within the firm. Indicators of a strong framework can include the existence of an Chief Risk Officer who reports directly to the CEO, and the existence of a Risk Management Board with nonexecutive director representation that reports to the board. There is clear evidence of board involvement in risk management issues.
- Excellent: The organization exhibits all "strong" characteristics, and is an acknowledged leader in its industry in ensuring that risk management occupies an important niche in the firm.

How well does the firm establish and articulate its risk appetite? Is it consistent with the articulated business strategy, and what is the role of risk management in this process?

- Weak: The company is unable to express aggregate risk tolerance. Risk management is minimally involved in evaluating the organization's risks and developing the business strategy.
- Adequate: Some kind of aggregate risk tolerance measure is available, but it is either based on insufficient data or defined relatively vaguely. Tolerance may not be defined well in both qualitative and quantitative terms.
- Strong: The risk appetite has been established following a rigorous, collective review of risk-reward trade-offs. The tolerance is well defined both qualitatively and quantitatively. Staff members are well able to express the risk appetite of the firm.
- Excellent: The organization exhibits all "strong" characteristics, and is an acknowledged leader in its industry when it comes to the articulation of risk appetite.

Is the reach of the risk management function sufficiently wide across the group? Are the established policies of the business lines consistent with the group's stated risk appetite and business strategy?

- Weak: Risk is monitored silo-by-silo. The entity has little ability to acquire a consolidated view of risks across the enterprise.
- Adequate: The firm monitors risk primarily by silo, but can monitor and aggregate some risks across the

organization. Business lines' risk policies parallel group policies.
- Strong: The institution has a demonstrated track record of success in monitoring and aggregating risks across the organization, including smaller/remote subsidiaries. Risk management initiatives are well coordinated across the entity. Business line risk policies parallel group policies, and strategies and commercial policies are consistent with group risk appetite and objectives. Economic capital, a balanced business scorecard, or a similar approach is actively used in the day-to-day management of the business.
- Excellent: The organization exhibits all "strong" characteristics, and is an acknowledged leader in its industry in ensuring that risk is managed across the entire enterprise.

How well informed is senior management on risk issues? Is there effective internal reporting of risk issues? How good is external disclosure?

- Weak: Meetings between senior management and risk staff are infrequent. Risk reporting is poor, and risk reports serve only a compliance role and are rarely perceived to have a wider business role.
- Adequate: Risk committee structures are in place, with improving metrics and report formats. Risk issues are discussed at a strategic forum. While there are regularly scheduled internal audits of the risk management function, risk reporting may be more reactive than proactive.
- Strong: The institution employs high-quality internal and external risk management reporting, with regular discussions in risk committees. The reporting framework is strong and well supported by the business units, showing visible improvements over time. The evaluation of risk issues is embedded in strategic decision making, budgeting, and planning. Risk reports are expected to contain tangible strategic applications, with a demonstrated link between risk reporting and commercial decisions. Risk issues that emerge are brought to the attention of senior executives quickly, responses are timely, and there is a track record of effective action being taken. A good balance has been struck between the measuring and modelling of risk, and the actual management of business risks.
- Excellent: The organization exhibits all "strong" characteristics, and is an acknowledged leader in its industry in ensuring that senior management is kept apprised of potential enterprisewide risks.

B. Operational Risk

This component evaluates the level of operational risk management practices employed within the institution, the level of awareness of the operational risk management processes, and the degree to which the institution uses its operational risk management analysis in its decision-making process.

Does the firm have a usable definition of operational risk?

- Weak: A lack of understanding of the firm's operational risks pervades the firm's staff.
- Adequate: Business lines are developing or have improved their definitions of operational risk.
- Strong: A clear and consistent firmwide definition avoids overlaps with credit risk and market risk, for example.

Excellent: The organization exhibits all "strong" characteristics, and is an acknowledged leader in its industry in ensuring that the boundaries of operational risk are defined in a clear and usable manner.

Is there an effective framework in place to capture operational risk exposures and loss data?

- Weak: No comprehensive data-gathering framework exists. Operational losses are sometimes disguised as credit risk or market risk losses.
- Adequate: A consistent structure for capturing loss data has been developed (this may have been slowed by

acquisitions). Potential exposure is assessed through key risk indicators, and control self-assessments, for example.
- Strong: The firm coordinates its efforts across business lines to capture and track "trigger" events and risk indicator data. It maintains a consistent structure for capturing loss data, which is not undermined by recent acquisitions. A transparent methodology has been developed for classifying key risk indicators.
- Excellent: The organization exhibits all "strong" characteristics, and is an acknowledged leader in the strength of its operational risk evaluation framework.

Does the operational risk analysis affect decision making and controls?

- Weak: The feedback mechanism linking loss data to operational controls is inadequate. Indeed, operational risk initiatives seem to be driven mainly by regulatory compliance.
- Adequate: The firm has shown clear responses to operational risk issues, but control improvements are mainly reactive. It is developing a process to allocate capital to the businesses for operational losses.
- Strong: A clear management focus and operational risk analysis via the use of operational risk dashboard reports drive control improvements. The firm has taken a proactive stance on operational risk issues, and a proven track record of effective responses is also evident. In the case of operational losses, a process for allocating capital to the businesses has been clearly articulated.
- Excellent: The organization exhibits all "strong" characteristics, and is an acknowledged leader in integrating operational risk analysis into management decisions.

Which Basel II approach is the firm adopting?

The advanced measurement approach may be an indicator of good operational risk management practices.

Are there sufficient resources devoted to operational risk issues?

- Weak: Back-office structures are not always independent of the businesses. Remote locations of the company have weaker structures.
- Adequate: A clear organizational structure for the back office, independent of the business, has been established. Several risk-related training opportunities are available to staff. The company is developing disaster recovery plans and business continuity plans. It has demonstrated an ability to cope with emerging operational risk issues.
- Strong: High-quality personnel, and strong training and development structures are evident. Data-recovery processes and business continuity plans are in place and continue to show enhancements. The firm maintains well documented and frequently (and preferably randomly) tested business continuity plans.
- Excellent: The organization exhibits all "strong" characteristics, and is an acknowledged leader in its commitment to provide the appropriate resources to mitigate operational risk.

Is there a well-defined approval process for new products? How are illiquid products valued?

- Weak: New product definition is unclear and final sign-off is vested with the business.
- Adequate: A new product approval process is in place, but can occasionally be circumvented.
- Strong: The risk function, in conjunction with the other support functions, vets new products, and can provide final sign-off. Risk management also vets pricing models, including data inputs.
- Excellent: The organization exhibits all "strong" characteristics, and is an acknowledged leader in its industry in empowering the risk management function to provide input on new products.

C. Credit Risk

This component of the ERM evaluation structure looks at how an institution's underwriting practices are linked to its credit risk appetite, as well as the robustness of the techniques used in monitoring and managing its credit portfolio.

Can the firm ensure that its underwriting criteria are consistent with its risk appetite?

- Weak: Ineffective risk criteria. There is an apparent willingness to compromise underwriting standards to achieve short-term profit/growth targets.
- Adequate: Policies have been put in place, but may be not be sufficiently clear or subject to regular reviews. The number of exceptions to official policies may be sufficiently high to question their effectiveness.
- Strong: Clear risk and pricing policies have been established and are reviewed regularly. Effective credit scoring and delegated authorities are in evidence. Experienced and well-qualified personnel have implemented policies in a consistent manner.
- Excellent: The organization exhibits all "strong" characteristics, and is an acknowledged leader in its industry in establishing underwriting criteria consistent with its risk appetite.

Does the firm have appropriate structures in place to monitor its credit portfolio for potential problems?

- Weak: The institution lacks the necessary metrics and data to monitor the evolution of its portfolio. The entity is hampered by its limited ability to extract segment data quickly.
- Adequate: The institution is improving its risk metrics, but its ability to track performance may be limited for some products/segments. Data may be stuck in silos or insufficiently flexible to respond to changing needs. Staffing may be adequate, but some concerns exist about individuals' depth of experience, and the overall availability of resources for collections/recoveries.
- Strong: Effective portfolio analytics have been developed to monitor performance by product and vintage, track watch-list credits, and transfer underperforming exposures to collections/recoveries. There is more-than-adequate staffing of collections/recoveries units with experienced personnel in charge. The institution has conducted extensive analysis into the adoption of a specific credit modelling approach, with assumptions and limitations clearly documented. It boasts a solid track record of reserves/provisions versus actual losses.
- Excellent: The organization exhibits all "strong" characteristics, and is an acknowledged leader in its industry in monitoring its credit portfolio for potential risks.

Does the institution have access to sufficient portfolio management techniques, including credit risk-mitigation tools?

- Weak: Only reactive techniques for managing exposure to particular entities or sectors are available. Few conscious decisions about the appropriate levels of risk for the company are made, and the management of risk concentrations is haphazard or insufficiently comprehensive.
- Adequate: Efforts have been made to manage the portfolio more proactively, with a conscious decision about the level of risk to be retained, but a limited range of tools or techniques are available. Risk concentrations are monitored and managed at a group level.
- Strong: The enterprise has taken a highly proactive view of the credit risks in the portfolio and methodically controls exposure to particular segments through a range of potential tools. Policies regarding hold levels and arrangements for sale of assets have been made clear, with teams' actions monitored closely. Reviews of particular portfolios are conducted using stress tests.

- Excellent: The organization exhibits all "strong" characteristics, and is an acknowledged leader in its industry in the techniques it uses in managing portfolio risk.

Does the credit risk management framework feed into decision making?

- Weak: The feedback mechanism from credit risk metrics to commercial and strategic decisions is inadequate. The use of some credit risk metrics and models seems to be driven mainly by regulatory compliance.
- Adequate: Clear responses to credit risk issues, with a process to allocate capital to the businesses for credit risk.
- Strong: Management understands credit metrics and processes well. It demonstrates a proactive approach as well as having a solid track record of effective responses to credit risk issues. Use of more advanced Basel II approaches typically indicate that the firm has more sophisticated data and risk management techniques, if backed by demonstrated understanding by management, and clear business usage of the information.
- Excellent: The organization exhibits all "strong" characteristics, and is an acknowledged leader in its linking of its credit risk management into management decision making.

D. Market Risk

This component of the analysis assesses the quality of the risk management processes that the institution has established for managing trading risk and structural interest rate risk.

Does the market risk function have a sufficiently broad reach?

- Weak: The market risk function has a narrow remit, limited controls, and loose or inconsistent coverage. It relies on over-simplistic measurement techniques. Management has a limited understanding of the market risk reports.
- Adequate: Expanding coverage of market risk across the group is evident. Some areas may still be excluded. Management generally has an acceptable understanding of the market risk reports.
- Strong: The market risk framework captures risks borne by subsidiaries, including nonbanking subsidiaries. Market risks associated with pensions and other employee benefits are also captured, if relevant. Regular usable reports are issued at a group level to assess the groupwide position.
- Excellent: The organization exhibits all "strong" characteristics, and is an acknowledged leader in its industry in ensuring that its market risk function has a broad reach.

Can the firm express and manage its tolerance for structural interest rate risk? What about structural foreign-exchange risk and equity risk?

- Weak: These risks are not measured or managed effectively. There is no defined remit. Limits or controls are loose and there are over-simplistic measurement techniques.
- Adequate: The firm has improved its measurement of structural interest rate risk (or foreign exchange or equity risk, as relevant), but it may still be only partial. Risk reports may give less effective guidance to management, and the firm's tools are not sophisticated enough when compared with evolving industry standards. Metrics should be appropriate for the risk type.
- Strong: The institution has designed a risk-adjusted approach to produce profits within risk parameters that have been agreed by the board and senior management. Structural interest rate risk is measured comprehensively, with regular reporting and value-added metrics (typically with scenario analysis that is considered usable by the business).
- Excellent: The organization exhibits all "strong" characteristics, and is an acknowledged leader in its industry in managing structural interest rate risk.

Is the firm's asset-liability management framework sufficiently robust, given the assumptions it has made on relevant factors such as duration and prepayments?

- Weak: The firm uses unrealistic assumptions that heavily influence the reported exposures.
- Adequate: Clear assumptions are made, but with more limited back-testing or use of stress testing.
- Strong: The firm uses assumptions that are back tested, stressed, and clearly articulated. The firm evaluates multiple scenarios, and takes into account behavioral characteristics rather than contractual characteristics only.
- Excellent: The organization exhibits all "strong" characteristics, and is an acknowledged leader in its industry when it comes to incorporating assumptions into its asset-liability management framework in a rigorous and robust manner.

Is there a robust approach to limits and the use of stress tests?

- Weak: The business units have excessive authority. The usefulness of stress testing is limited by a view that stress tests are for regulatory compliance, not for adding value. Senior management neither understands nor appreciates stress tests.
- Adequate: There is a clear process for assigning limits, and unambiguous (but restricted) procedures for the granting of exceptions. All excesses and breaches of limits are reported quickly to the appropriate executive level. Stress tests are used, but may have insufficient granularity and only a small role in decision making.
- Strong: Close cooperation has been established between the business units and risk functions. Only risk management can approve excesses over key limits. Dual limit structures may be used. Regular stress testing of macro, historical, and hypothetical scenarios is conducted. A range of stress tests is used, but are all considered relevant. Stress tests and scenario analyses are run and revised at an appropriate level of granularity for the business profile.
- Excellent: The organization exhibits all "strong" characteristics, and is an acknowledged leader in conducting stress tests and using limit frameworks to support its businesses.

E. Liquidity And Funding

This attribute of the ERM assessment evaluates the integrity of the institution's risk management processes for managing liquidity and funding risk.

Does the firm have a well-established funding policy? Does it place an appropriate emphasis on funding concentration and mix (by product, maturity, and investor, for example)?

- Weak: The institution is overly focused on minimizing the cost of funds and possesses a limited understanding of liquidity risks. It also demonstrates difficulty or unwillingness to diversify the funding profile.
- Adequate: The institution has diversified its funding mix, but with a more reactive--rather than proactive--policy. Its views on the appropriate levels of funding concentration may not be rigorously formed.
- Strong: The institution maintains a diverse funding profile, without over-reliance on any single source. The firm has a proactive view toward its funding mix. It has clearly defined views about the optimal funding mix, with appropriate limits and guidelines.
- Excellent: The organization exhibits all "strong" characteristics, and is an acknowledged leader in its industry in creating the right mix of funding concentrations and managing its funding base proactively.

Does the firm have appropriate contingency plans for a liquidity crunch?

- Weak: Underprepared for a liquidity crunch, this company uses insufficiently severe stress tests that do not prompt follow-up actions. Risk management techniques are slow to respond to growth in more sensitive funding sources.

- Adequate: Contingency plans are used, but are either not very detailed or are not rolled out at the appropriate levels across the group (for example, by subsidiary or country). Exposure to a potential downgrade may only be monitored in times of stress. Risk management techniques may still be adjusting to recent growth in the use of some more sensitive funding sources.
- Strong: The firm undertakes detailed stress tests and liquidity continuity scenario planning. Demonstrated links between these tests and management actions have been established. With a clear-eyed view of the potential effects of a downgrade, the entity has developed a plan to manage this exposure. The group's risk management framework takes account of its reliance on sensitive funds.
- Excellent: The organization exhibits all "strong" characteristics, and is an acknowledged leader in its industry in establishing contingency plans for a liquidity crunch.

Does the firm have sufficient liquidity capacity to raise emergency funds without damaging its franchise?

- Weak: Inadequate emergency liquidity sources mean that the firm is overly reliant on committed bank lines and/or questionable liquidity sources.
- Adequate: Sufficient emergency liquidity sources have been earmarked, but they may be relatively concentrated.
- Strong: The firm holds sufficient unencumbered liquid assets, as well as central bank lines and/or other sources of emergency liquidity to meet stress outflows.
- Excellent: The organization exhibits all "strong" characteristics, and is an acknowledged leader in its industry in maintaining sufficient emergency liquidity capacity.

Additional Contacts:
Mark Puccia, New York (1) 212-438-7233; mark_puccia@standardandpoors.com
Richard Barnes, London (44) 20-7176-7227; richard_barnes@standardandpoors.com
Financial Institutions Ratings Europe; FIG_Europe@standardandpoors.com

873850 | 300004777