April 2, 2013

Risk Management and the Rating Process for Insurance Companies

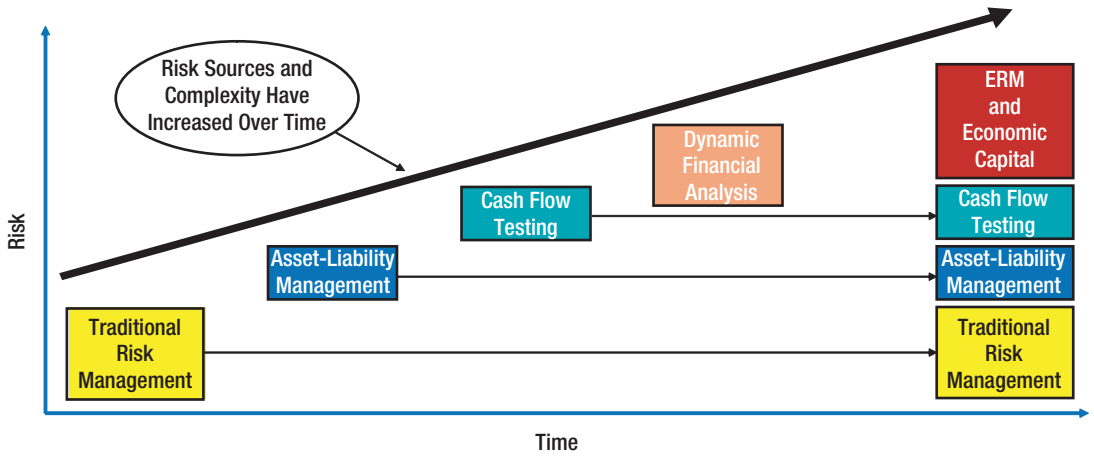
Insurance companies make money by managing various types of risk for individuals, municipalities and corporate entities—the risk of dying too young, experiencing a loss due to man-made or natural disasters, outliving your assets, losing income capacity through business interruption, and so on. Where there is risk, there is uncertainty, and where there is uncertainty, there is exposure to volatility.

Risk management is the process by which companies systematically identify, measure and manage the various types of risk inherent within their operations. The fundamental objectives of a sound risk management program are:

- To manage the organization's exposure to potential earnings and capital volatility
- To maximize value to the organization's various stakeholders.

However, it is important to note that the objective of risk management is not to eliminate risk and volatility, but to understand it and manage it. Risk management allows organizations to identify and quantify their risks; set risk tolerances based on their overall corporate objectives; and take the necessary actions to manage risk in light of those objectives. When done right, risk management fosters an operating environment

Exhibit 1
Insurance Industry Continues to Respond to Risk Dynamics



Source: A.M. Best Co.

Additional Information
Criteria
Catastrophe Analysis in A.M. Best Ratings

Understanding BCAR for Property/Casualty Insurers

Understanding BCAR for Life/Health Insurers

Special Report:
Variable Annuities – Changing The Industry's Risk Dynamics

Survey Reveals Leaders, Laggards in P/C Enterprise Risk Management

Analytical Contacts

Thomas Mount
+1 (908) 439-2200 Ext. 5155
Thomas.Mount@ambest.com

George Hansen
+1 (908) 439-2200 Ext. 5469
George.Hansen@ambest.com

William Pargeans
+1 (908) 439-2200 Ext. 5359
William.Pargeans@ambest.com

This publication updates the criteria report issued January 25, 2008 to include additional events that have contributed to the increased level of risk and uncertainty for the insurance industry (pages 5 and 6), as well as a more detailed explanation of how an insurer's risk profile and risk management capability impact the rating process (pages 16 and 17).

Contents

that supports both strong financial controls and risk mitigation, as well as prudent risk-taking to seize market opportunities.

Risk management tools and practices across the insurance industry have advanced significantly in recent years—and it's a good thing they have. The industry has experienced a number of events and trends since the turn of the millennium that have exposed, and will continue to expose, insurers to increased levels of risk and uncertainty.

Developments such as the implementation of enterprise risk management programs, including economic capital models, more sophisticated catastrophe management and dynamic hedging programs, have headlined efforts of the insurance industry to manage its growing exposure to potential volatility in earnings and capital. These recent additions to the industry's risk management arsenal are the latest evidence of ongoing efforts to respond to changing risk dynamics.

In this paper, A.M. Best explores the key risk management trends in the insurance industry and describes how risk management impacts the overall rating process and the development of capital requirements. Below are some of the highlights and key observations.

Enterprise Risk Management and the Risk Management Framework

• A.M. Best believes that ERM – establishing a risk-aware culture, using sophisticated tools to consistently identify and manage, as well as measure risk and risk correlations – is an increasingly important component of an insurer's risk management framework.

• The foundation of any risk management framework is the compilation of traditional risk management practices and controls that historically have helped companies monitor and manage their exposure to the five key categories of risk: credit, market, underwriting, operational and strategic.

• What's new about ERM is the "E," which represents the development of an enterprise-wide view of risk through which insurers consistently can identify, quantify and manage risk on a more holistic basis.

Risk Management and Ratings

• The assignment of an interactive Best's Rating is derived from an in-depth evaluation of a company's balance sheet strength, operating performance and business profile as compared with A.M. Best's quantitative and qualitative standards.

• A.M. Best believes that risk management is the common thread that links balance sheet strength, operating performance and business profile. Risk management fundamentals can be found in the strategic decision-making process used by a company to define its business profile, and in the various financial management practices and operating elements of an insurer that dictate the sustainability of its operating performance and, ultimately, its exposure to volatility in its capital.

• As such, if a company is practicing sound risk management and executing its strategy effectively, it will maintain a prudent level of risk-adjusted capital and perform successfully over the long term – common objectives of both A.M. Best ratings and risk management.

• A.M. Best believes that assessing an insurer's risk management capabilities – within the context of determining an insurer's financial strength – should be viewed in light of a company's scope of operations and the complexity of its business.

• A.M. Best believes to remain competitive in today's dynamic environment, build sustainable earnings and capital accumulation, and ultimately, maintain high ratings, complex organizations – such as insurers participating in the global reinsurance and retirement savings markets – must develop and constantly refine an ERM framework, including the development of internal economic capital modeling.

• For organizations with a more limited operating scope focusing on more stable, traditional lines of business, the ERM process may be less comprehensive or complex – at this time. However, the development of principles-based solvency approaches such as Solvency II in Europe, the "Own Risk and Solvency Assessment" reporting requirements in the United States, and the significant efforts of sophisticated insurers to raise the bar on the risk-management front, ultimately will become a competitive issue driving continued improvement and integration of ERM concepts for all insurers, regardless of size.

• Whether utilizing a formalized ERM framework, integrating selected elements of ERM into an insurer's operating practices or relying solely on a traditional risk management process, A.M. Best perceives risk management as paramount to an insurer's long-term success. As such, within the rating process, each company – regardless of its size or complexity – is expected to explain how it identifies, measures, monitors and manages risk.

• An insurer that can demonstrate strong risk-management practices integrated into its core operating processes, and effectively execute its business plan, will maintain favorable ratings in an increasingly dynamic operating environment. A.M. Best believes that risk management is embedded in an insurer's "Corporate DNA" when risk metrics are integrated into corporate, business line and functional area objectives, and when risk-return measures are incorporated into financial planning and budgeting, strategic planning, performance measurement and incentive compensation.

Risk Management and Best's Capital Adequacy Ratio (BCAR)

• BCAR is an important quantitative tool that helps A.M. Best differentiate between companies and indicate whether a company's capitalization is appropriate for a particular rating level. However, BCAR by itself never has been the sole basis for determining any Best's Rating.

• Other considerations include the various financial management practices and operating elements of an insurer that ultimately dictate the sustainability of its operating performance, and its exposure to capital volatility. In other words, a company's relative risk management capabilities are a key factor in determining the BCAR capital requirement for each rated insurer.

• Given the insurance industry's evolving risk profile and the significant recent advancements made in risk management tools and practices, A.M. Best recognizes that a more economic, prospective view of capital can be another valuable supplement to the rating process. As a result:

• A.M. Best will consider allowing companies to maintain lower BCAR levels relative to the guideline for their ratings based on a case-by-case evaluation of an insurer's overall risk management capabilities – relative to its risk profile.

• A.M. Best is exploring ways to incorporate stochastic modeling in the development of risk factors within the BCAR model, and to more directly tie probability of default to the determination of capital required to support individual rating levels.

• A.M. Best also will consider the use of company-provided capital models in developing capital requirements within the rating evaluation process.

Back to Basics: Financial Strength Ratings and Risk Management

The objective of Best's Ratings for insurance companies, both Financial Strength Ratings (FSR) and Long-Term Issuer Credit Ratings (ICR), is to provide an opinion as to an insurer's ability to meet its senior financial obligations, which are its obligations to policyholders. The assignment of an interactive rating is derived from an in-depth evaluation of a company's balance sheet strength, operating performance and business profile, as compared with A.M. Best's quantitative and qualitative standards.

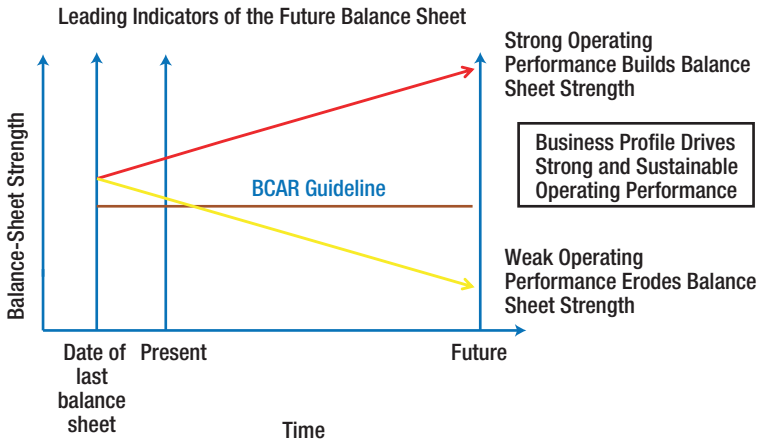
In determining a company's ability to meet its current and ongoing obligations, the most important area to evaluate is its balance sheet strength, since it is the foundation for policyholder security. Balance sheet strength measures the exposure of a company's surplus to its operating and financial practices.

One of the primary tools used in the evaluation of balance sheet strength is Best's Capital Adequacy Ratio (BCAR), which provides a quantitative measure of the risks inherent in a company's investment and insurance profile, relative to its adjusted capital. A.M. Best's analysis of the balance sheet also encompasses a thorough review of various financial tests and ratios over a five-year period.

The assessment of balance sheet strength includes an analysis of an organization's regulatory filings, including the GAAP or IFRS balance sheet, at both the operating insurance company and consolidated level. To understand the strength and flexibility of an insurer's balance sheet, a variety of tests and measures are reviewed, which include an assessment of the corporate capital structure, financial leverage, fixed charge coverage, liquidity, and historical sources and uses of capital.

Exhibit 2

Impact of Operating Performance & Business Profile on the Balance Sheet



Source: A.M. Best Co.

While balance sheet strength is the foundation of the rating process, the balance sheet provides only an assessment of capital adequacy at a point in time. A.M. Best views operating performance and business profile as leading indicators when measuring future balance sheet strength and policyholder security (see **Exhibit 2**).

The term "future" is the key, since ratings are prospective and go well beyond a "static" balance sheet view. Profitability is the engine that ultimately

drives capital, and looking out into the future enables the analyst to gauge a company's ability to preserve and/or generate new capital over time. In many respects, what determines the relative strength or weakness of a company's operating performance is a combination of its business profile and the ability of a company to effectively execute its strategy.

A strongly performing company, over time, will generate earnings sufficient to maintain a prudent level of risk-adjusted capital and optimize stakeholder value. Strong performers are those companies whose earnings are relatively consistent and deemed to be sustainable. Because of their track record and better-than-average earnings power, these companies typically benefit from higher ratings and/or lower capital requirements relative to their peers.

On the other hand, companies that have demonstrated weaknesses in their earnings through either consistent losses or volatility are more likely to struggle to maintain or improve capital in the future. For these reasons, these companies typically are rated lower than their counterparts that perform well and/or usually are held to higher than minimum capital requirements to minimize the chance of being downgraded if current trends continue.

A.M. Best believes that risk management is the common thread that links balance sheet strength, operating performance and business profile. Risk management fundamentals can be found in the strategic decision-making process used by a company to define its business profile, and in the various financial management practices and operating elements of an insurer that dictate the sustainability of its operating performance and, ultimately, its exposure to capital volatility. As such, if a company is practicing sound risk management and executing its strategy effectively, it will preserve and build its balance sheet strength and perform successfully over the long term – common objectives of both A.M. Best ratings and risk management.

"Necessity Is the Mother of Invention"

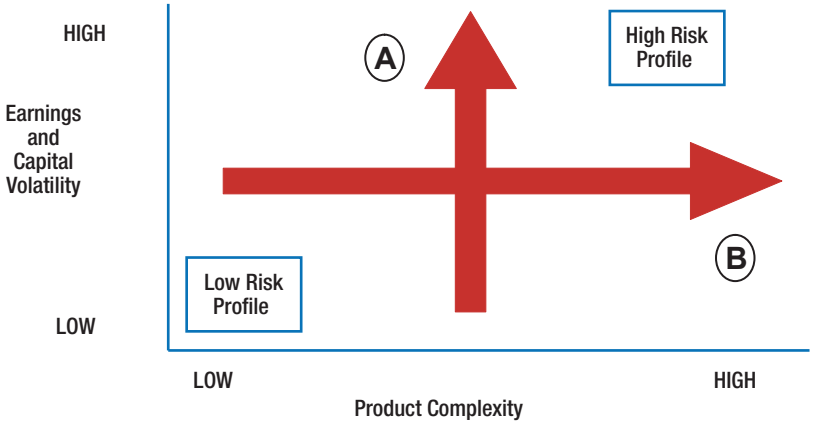
Risk management tools and practices across the insurance industry have advanced significantly in recent years—and it's a good thing they have. The industry has experienced a number of events and trends since the turn of the millennium that have exposed, and will continue to expose, insurers to increased levels of risk and uncertainty:

• Economic conditions that generated sharp declines in equity and real estate markets, deterioration in credit markets and prolonged record-low interest rate environments.

• U.S. government impasse on fiscal policy and national debt that results in more pessimistic views of the credit quality of government debt and whether the debt is risk free.

• The Eurozone crisis that

Exhibit 3
Industry Risk Profile Trends



A) Exposure to Earnings and Capital Volatility increasing reflects the impact of: terrorism and cat exposures on loss ratios and reinsurance costs; additional risk and costs related to more complex products; and general economic conditions.
B) Product Complexity increasing due to market demand for more sophisticated products and additional guarantees, as well as heightened competition and regulatory scrutiny.
Source: A.M. Best Co.

resulted in large investment losses related to sovereign debt, sovereign default, banking bailouts and a recession that had worldwide impacts.

• The continuing geopolitical unrest and the ongoing threat of terrorist attacks.

• Increased hurricane activity that produced multiple landfalls in a single season; repeated landfalls in areas assumed to have low annual probabilities of landfall; and damage farther inland than expected.

• Stronger than anticipated earthquake activity that demonstrated the correlation of losses across life, health and property/casualty sectors during extreme events.

• Record flooding impacting global supply chains and creating business interruption worldwide.

• The possible emergence of a global "bird flu" pandemic.

• Converging regulatory and economic views of capital adequacy, which are evident with the advent of EU Solvency II and principles-based regulatory reporting requirements in the United States.

In addition to these event-related risk triggers, insurers – particularly in the retirement savings market – have been taking on more risk through their product development activities as insurers try to proactively address the ever-changing needs of an aging population.

The result is that the insurance industry overall has been trending toward a higher risk profile.

While the risks and level of uncertainty facing the industry have grown, the more prudent and capable insurers have taken steps to more effectively manage and mitigate these risks and preserve policyholder security. Two areas where insurers have employed more advanced methods to address specific emerging risks are catastrophe risk management and dynamic hedging programs.

Common Themes – Principles-Based Solvency Requirements and Best's Rating Approach

One of the key drivers of change in the insurance industry's risk management landscape has been the convergence of regulatory and economic views of capital adequacy. Regulators across the globe, including those in Europe, the United States and Canada, are moving away from their traditional factor- or rules-based solvency platforms to a more dynamic, principles-based regime. Furthermore, Solvency II in Europe; work being undertaken by various National Association of Insurance Commissioners (NAIC) working groups in the United States; and the most recent proposals prepared by the Minimum Continuing Capital and Surplus Requirements (MCCSR) Advisory Committee (MAC) in Canada, all embrace core concepts that integrate risk management, corporate governance, internal capital modeling and increased transparency and disclosure as key components of the evolving capital adequacy framework.

These new regulatory regimes are attempting to tap into both insurance industry and supervisory best practices to create principles-based solvency requirements aimed at better reflecting each individual company's risk profile and risk management practices. This is accomplished primarily by allowing insurers to use internally developed scenario or stochastic models as the basis for reporting their regulatory solvency requirement, if they meet certain minimum standards set by the regulators. In addition to the focus on more sophisticated financial requirements, the new solvency framework calls for an integrated set of regulatory requirements that consider risk management, corporate governance, market conduct and disclosure – as well as a dynamic and constructive internal risk assessment process by insurance company management – as key elements of a comprehensive solvency regime.

A.M. Best strongly supports the core concepts underlying these principles-based solvency regimes. A.M. Best believes these integrated platforms for the assessment of insurer capital adequacy promote greater emphasis on many of the same quantitative and qualitative aspects of financial strength and long-term capital adequacy that are the foundation of A.M. Best's interactive rating evaluation. Some of the common themes shared by these emerging solvency requirements and A.M. Best's rating approach are summarized below.

Focus on risk management as part of a balanced quantitative and qualitative review. The assignment of an interactive Best's Rating is derived from an in-depth evaluation of a company's balance sheet strength, operating performance and business profile as compared with A.M. Best's quantitative and qualitative standards. A.M. Best believes that risk management is the common thread that links balance sheet strength, operating performance and business profile. An insurer that can demonstrate strong risk management practices that are integrated into its core operating processes, and effectively execute its strategic business plan, will maintain favorable ratings in an increasingly dynamic operating environment.

Support for the development of internal capital models. A.M. Best will consider the use of company-provided capital models in developing capital requirements within the rating evaluation process. A.M. Best believes that the primary benefit of a strong internal capital model is the aid it provides company management in understanding and quantifying key risks and their correlations from a holistic point of view. The true value of any capital model is realized only when management employs it in the strategic decision-making process when assessing the impact of different business strategies, asset allocations, reinsurance structures, etc.

Risk management and capital modeling are not "one size fits all." A.M. Best believes to remain competitive in today's dynamic environment, build sustainable earnings and capital accumulation, and ultimately, maintain high ratings, complex organizations – such as insurers participating in the global reinsurance and retirement savings markets – must develop and constantly refine an ERM framework, including the development of internal economic capital modeling. For organizations with a more limited operating scope focusing on more stable, traditional lines of business, the ERM (and capital modeling) process may be less comprehensive or complex – at this time. However, the pending implementation of principles-based capital requirements, and the significant efforts of sophisticated insurers to raise the bar on the risk management front, ultimately will become a competitive issue driving continued improvement and integration of ERM concepts for all insurers, regardless of size.

Catastrophe Risk Management

A.M. Best considers catastrophic loss, both natural and man-made, to be the No. 1 threat to the financial strength and policyholder security of property and casualty insurers because of the significant, rapid and unexpected impact that can occur. Of particular concern is the rapid escalation in insured exposures over the past decade – reflecting demographics and rising property values, combined with the increased frequency and severity of natural disasters.

Some experts in the fields of climatology and meteorology have submitted that global warming is contributing to the unprecedented number of severe events worldwide, representing a fundamental shift in the expectation for the frequency of their occurrence in the future. In addition, the worldwide political environment and the technology of warfare have experts prognosticating that man-made events will occur with increasing frequency. Relatively benign storm seasons and the absence of a major, man-made catastrophe do not change the long-term dynamics; rather, they demonstrate the difficulty and uncertainty in predicting catastrophic events.

To manage and monitor catastrophic risk, most property and casualty insurers have utilized increasingly sophisticated catastrophe modeling tools, primarily those provided by specialized firms with extensive meteorological, seismological, statistical and technical resources. Hurricane seasons with multiple landfalling hurricanes serve as a reminder that while the models are extraordinarily useful in the analytical and underwriting process, they are only tools and cannot be relied upon solely for the management of catastrophe exposures.

Strong catastrophe risk management is more than just an advanced model. Data quality, constant monitoring of aggregate and individual exposures, disciplined adherence to underwriting controls, and implementation of an integrated reinsurance program are all important elements of strong catastrophe risk management.

During the rating evaluation process, all these areas are assessed and considered along with the financial flexibility of a company to determine its ability to first, avoid a material loss to capital, and second, respond to any significant capital deterioration from such an event.

Dynamic Hedging

The retirement savings segment long has been the growth engine for the domestic life insurance industry. As the baby boom generation nears retirement, the opportunities for future growth in this business segment are enormous for companies that are well positioned in terms of product development, distribution and brand. However, with these potential rewards come significant risks – including risks that the insurance industry has not traditionally underwritten – that A.M. Best believes expose the industry's earnings and capital base to greater volatility, both now and in the future.

The insurance industry long has been managing a host of risks inherent in offering annuities and other products and services within the retirement savings market. These risks include interest rate risk, asset/liability management and disintermediation risk. However, with the emergence of secondary guarantees within the variable product market and the introduction of equity-indexed products, new risks are emerging that will significantly influence the long-term financial strength of retirement savings providers.

The companies offering these benefit features are subject to two major risk categories that are, in some respects, outside the traditional risk parameters of the insurance industry:

• Policyholder-based risks, which represent the exposure to adverse development based on the optionality in various product designs where the policyholder can control different elements of the product. As a result, many of the actions a policyholder can take can profoundly change the risk dynamics of the product.

• Capital-market-based risks, which are derived from the fact that the insurance company is guaranteeing certain returns on the assets invested. These guarantees put some of the investment risk, which variable annuities previously had passed on to the policyholder, back onto the insurance company's balance sheet.

Insurers have made significant strides in limiting the impact of policyholder-based risks, through more intelligent product design that either limits the optionality within the product or ties certain policyholder decisions to the amount of protection provided by the guarantee.

The top writers of variable annuity products also have developed and implemented sophisticated hedging programs that help protect the company against adverse movements in the capital markets. Sophisticated risk management through hedging has become a critical factor for success in the variable annuity market with the widespread consumer acceptance of new living benefits. These hedging programs use derivative instruments and are designed to mitigate the negative impact of swings in the equity markets.

However, similar to efforts made to predict and manage natural and man-made catastrophe risk, dynamic hedging is far from an exact science. As such, as mentioned previously, the rating evaluation process considers both the strength of the risk-mitigation process and the insurer's financial flexibility when assessing financial strength.

"E"RM – What's New?

Enterprise risk management (ERM) has been one of the most significant and widespread additions to the insurance industry's vocabulary in recent memory. While many may see ERM as a completely new process, A.M. Best considers ERM as a natural extension of an insurer's fundamental risk management practices, with the foundation still rooted in sound traditional controls and policies encompassing the five key categories of risk: credit, market, underwriting, operational and strategic.

What's new about ERM is the "E," which represents the development of an enterprisewide view of risk where insurers can identify, quantify and manage risk on a more holistic basis. ERM takes into consideration the individual risks at hand, as well as any correlations and interdependencies of risk across the entire organization. By overlaying this "enterprise" view of risk on top of the traditional silo approach to managing individual risks, insurers are creating a more structured, integrated framework that – if prudently applied – can increase the value of the firm, while at the same time providing financial security to the organization.

A.M. Best believes ERM encompasses three key areas.

• Culture – the establishment of an environment throughout an organization, from the board level to senior management to business line management to the employee, that embeds risk awareness and accountability in daily operations, its corporate "DNA."

• Identification and Management – the ability to consistently identify key risks across the entire organization, and to establish uniform controls and procedures to effectively manage and mitigate the impact of those risks to the organization.

• Measurement – the use of sophisticated tools and data collection to quantify risks, including the impact of risk correlations within and among the five categories of risk, considering

Exhibit 4
ERM Characteristics—Culture

STRONG CHARACTERISTICS	WEAK CHARACTERISTICS
Set the Tone at the Top	
Senior management establishes an environment and corporate framework that embeds risk awareness throughout the organization.	Senior management does not embrace and communicate a proactive approach to assessing risk within the organization.
Organization/governance structure recognizes the importance of an integrated risk management approach by placing responsibility for corporatewide risk management with a member(s) of senior management with access to the board.	Risk management activities are fragmented throughout the organization and /or typically are viewed as individual tasks completed by lower level staff.
Board and senior management receive, and constructively critique, frequent reports on risk metrics and updates on key risk-management activities across the entire organization.	Board is not routinely apprised of ongoing risk management activities and tends to view risk management as a reactive, rather than proactive, process.
Senior management displays thorough understanding of key risks and risk mitigation practices across the entire organization.	Detailed understanding of the drivers of risk and the policies and procedures to mitigate risk resides at the business line or functional level.
Management objectives, and incentive compensation, are tied to risk management objectives and risk/return measures approved by the board.	Management objectives and incentive compensation are tied to more traditional measures of top-line growth or bottom-line results, without considering the importance of risk-adjusted returns and risk management.
Establish and Clearly Communicate Risk Management Objectives	
Board and senior management clearly define corporate risk profile – risk tolerance and risk management objectives – that supports overall corporate goals and expectations of key stakeholders.	Board and senior management view overall corporate goals and the establishment of risk tolerances as mutually exclusive activities.
Senior management clearly communicates corporate risk profile to business unit management and requires business unit management to implement appropriate risk management practices.	Corporate risk profile and risk tolerances, or business unit management accountability, are not clearly documented or communicated.
Define Roles and Responsibilities	
Appropriate segregation of duties between those responsible for monitoring/measuring risk and those responsible for making risk decisions.	Members of management responsible for monitoring/measuring risk also have the authority to make risk decisions.
Establish a separate, highly qualified department to take a holistic view of the company and coordinate risk management activities across the enterprise, led by a member of senior management – chief risk officer (CRO).	Risk management activities are embedded within various business lines and/or functional areas.
CRO is responsible for the establishment of an appropriate risk management framework, measuring and monitoring risk across the enterprise, providing information to the board and senior management, and facilitating the ongoing risk management activities at the business-unit level.	No corporatewide risk management framework exists. Risk management information is not consistently provided to board or senior management.
Chief Executive Officer is responsible for executing corporate strategy based on information provided by the CRO and other inputs, and is ultimately responsible for the performance of the organization relative to its risks.	Risk management objectives and risk metrics are not fully integrated into overall corporate strategy.
Board provides active oversight and is responsible for understanding and constructively challenging management's assessment of key risks to the enterprise and their approach to managing these risks.	Board is engaged on a case-by-case basis in reaction to loss events that already have occurred, rather than proactively encouraging ongoing risk assessment and analysis.
Business unit managers are directly responsible for managing risk within their areas of responsibility and implementing risk management practices in line with corporate directives.	Accountability for managing risk is not clearly defined.
Strategic Decision-Making Process	
Business strategy and capital allocation are based upon risk-adjusted returns and other risk metrics consistent with the corporate risk profile.	Strategic and financial planning processes are not fully integrated with risk management framework.
Financial planning and budgeting process measures impact of projected financial results on corporate risk profile.	Financial planning and budget process is seen solely as a financial reporting mechanism, not as part of an integrated strategic and risk management system.
Management can demonstrate how the risk/return decisions have improved/will improve the value of the company.	Management views risk management activities only as tools to avoid deteriorating value, not as a vehicle to create value through prudent risk taking.

Source: A.M. Best Co.

the impact of general economic conditions, industry-specific events and extreme events, and report these risk assessments to senior management on a regular basis.

ERM Characteristics – Culture

A.M. Best believes effective ERM starts at the top. In order to set the tone for sound risk management, A.M. Best believes there need to be clear directives established by senior

Exhibit 5
ERM Characteristics—Identification & Management

STRONG CHARACTERISTICS	WEAK CHARACTERISTICS
Ability to identify, monitor and manage risk among (and within) the five categories of risk – underwriting, market, credit, operational, and strategic.	Risk management process conducted independently throughout different departments and does not consider the potential impact of risk correlations.
Implemented an ongoing process for identifying and managing significant operational risks.	Operational risks are not captured or are discussed only after an event occurs.
Produce "exception reports" for all instances where scores/ratios are outside maximum tolerances and list detailed plans to remedy.	Detailed analysis is only done once an issue impacts financial statements.
Decisions to enter/withdraw certain product lines, territories, coverages based upon impact on the entire corporation's risk/return measure – demonstrating an organization's ability to measure natural hedges/correlations.	Strategic decisions are made on a silo basis at the business-line level and are not viewed in light of the overall corporate risk/return objectives.
Reinsurance purchases are made based on overall corporate risk tolerances and provide protection from risk aggregation across lines or divisions.	Analysis of the impact of individual purchases on the overall corporate risk profile is not done.
Company adjusts its corporate risk profile and risk-management process based on past experience, pro forma model results and future stakeholder expectations and current market conditions.	Management does not learn from its mistakes by analyzing risk dynamics on an ongoing basis, and/or does not view the corporate risk profile as a constantly evolving concept.

Source: A.M. Best Co.

Exhibit 6
ERM Characteristics—Measurement

STRONG CHARACTERISTICS	WEAK CHARACTERISTICS
Use of corporate scorecards to assess risk and measure against predetermined tolerances.	Risk management information is compiled and reviewed on an "ad hoc" basis, as opposed to being developed and analyzed routinely versus expected results and predetermined risk tolerances.
"What if" scenario testing is done to quantify impact of unusual/unforeseen/unlikely events on corporate risk profile (i.e. rating downgrade, interest rate shock, stock market crash).	Financial planning process does not include stress testing of baseline assumptions, or any analysis of extreme events.
Management reports give information using risk/return measures that identify areas where risk tolerances and objectives are not being met.	Management reports either don't exist or are prepared using only traditional financial reporting measures and do not track performance versus risk tolerances.
Use of well understood, proven economic capital (EC) models that capture all risks of the enterprise.	If an EC model exists, the model is not robust or is not widely utilized as a management tool.
EC model updated, tested and run frequently.	EC model is run and reviewed only annually and is not viewed as a decision-making tool.
Risk/return measures and EC models can be created for short, medium and longtime horizons.	EC model and risk/return measures are viewed as annual planning tools that are not incorporated in ongoing business management.
Management reports and capital models capture correlations across the five risk categories, considering the impact on all risk categories of: - general economic conditions - industry-specific conditions - extreme events	Risk metrics and capital models do not routinely analyze effects of outside economic factors and market developments on risk correlations.
Risk-based or economic capital model can identify scenarios in which individual risks provide natural hedges to mitigate overall exposure, as well as risks that can compound overall exposure.	Models do not provide detail by scenario to quantify the impact of risk correlations.
Ability to determine effectiveness of company-implemented risk mitigation techniques, such as reinsurance and hedging.	Models do not provide detail to quantify value added by risk-mitigation techniques.

Source: A.M. Best Co.

management and the board. Ultimately, it is the importance that the board of directors and senior management place on risk management that will determine the extent to which the management of risk is integrated across the entire organization.

A strong risk-aware culture also is based on a common language and understanding of risk among corporate officers and directors that enables collaboration on risk management issues across an organization, and a common set of risk-based rules governing accountability and incentive compensation.

Therefore, an essential part of assessing an insurer's risk management capabilities is gaining an understanding of an organization's corporate culture and the degree to which risk management is imbedded within the organization's decision-making process. Strong and weak ERM characteristics are listed in **Exhibit 4**.

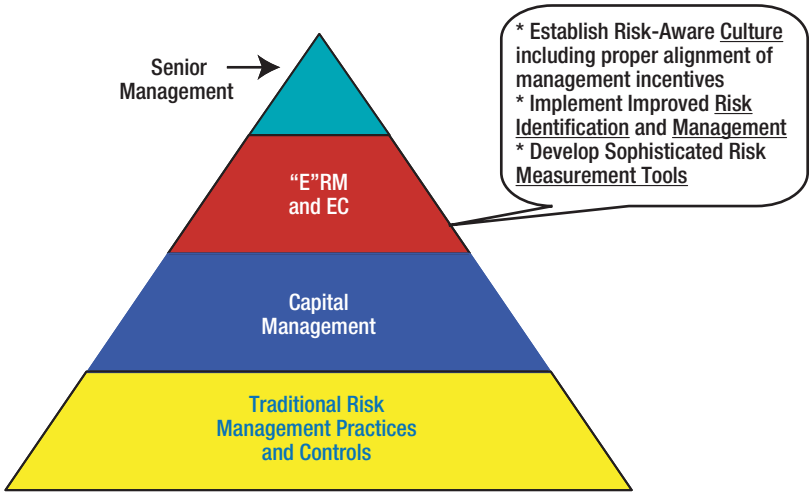
ERM Characteristics – Identification and Management

A strong risk management culture is the starting point; however, the effectiveness of any risk management framework depends on an insurer's ability to identify the key risks to the organization and to establish detailed controls and procedures to manage the potential impact of those risks to stakeholder value. Traditional risk management practices incorporate a wide variety of risk identification and management activities across the five categories of risk. What ERM adds is a more comprehensive approach to the identification and management of risk. ERM also incorporates the development of a consistent, corporatewide set of guidelines that formalize the broader risk process and allow for the sharing of information across business lines and functions. Strong and weak ERM characteristics are listed in **Exhibit 5**.

ERM Characteristics – Measurement

In addition to identifying and managing individual risks, an extremely important component of ERM is the ability to consistently quantify those risks using sophisticated tools and data-collection procedures that ensure the data's integrity. Another key component of measurement is the ability to assess the impact of risk correlations across the enterprise. Certain correlations may be present that create natural hedges across business lines. Other correlations may be identified that could compound risks. A.M. Best believes that companies with more complex risks need to demonstrate that risk models appropriately reflect such correlations. Strong and weak ERM characteristics are listed in **Exhibit 6**.

Exhibit 7
Enterprise Risk Management Framework



Source: A.M. Best Co.

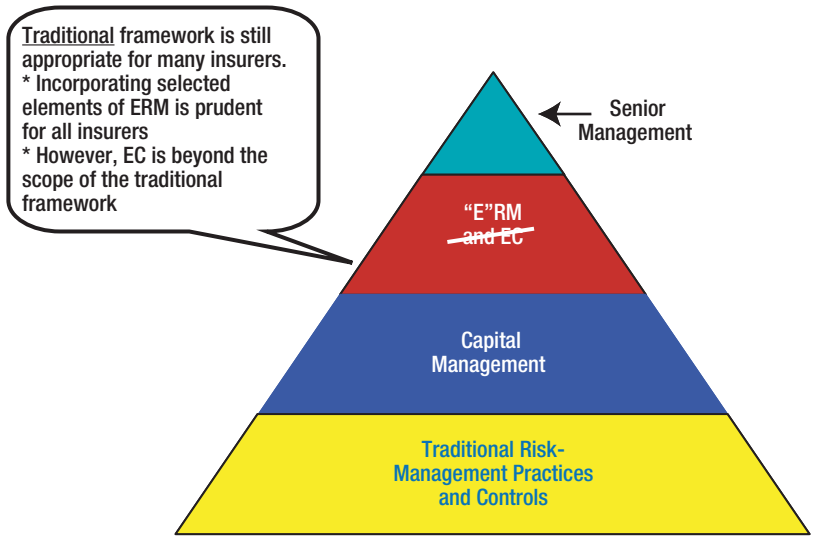
ERM and the Risk Management Framework

A.M. Best believes that ERM – establishing a risk-aware culture; using sophisticated tools to identify and manage, as well as measure risk; and capturing risk correlations – is an increasingly important component of an insurer's risk management framework.

The foundation of the risk management framework is the

compilation of traditional risk management practices that historically have helped companies monitor and manage their exposure to the five key categories of risk: credit, market, underwriting, operational and strategic risk. These practices include a wide variety of processes and controls that enable an insurer to identify and monitor specific types of risk (see **Exhibit 9**).

Exhibit 8
Traditional Risk Management Framework



Source: A.M. Best Co.

• Credit Risk – Counterparty credit exposure from all potential creditors, including agents, reinsurers, bond issuers and large, institutional clients.

• Market Risk – Exposure to liquidity events, asset/liability mismatches and risks in investment portfolios due to changes in equity prices, commodity prices, interest rates and exchange rates.

• Underwriting Risk – Financial exposures arising from various activities integral to the underwriting of insurance products, including: product development; regulatory relations; establishing reserves and pricing metrics; analyzing loss experience, mortality, morbidity and lapses; and loss trends.

Insurers and the Capital Markets

The insurance industry and the capital markets have become increasingly intertwined in recent years, a direct result of the industry's heightened risk profile and the economic realities of low interest rates and uncertain credit and equity markets. For example, an increasing number of insurers effectively (and increasingly) are transferring policyholder obligations to the capital markets via securitizations. Still others are utilizing various nontraditional capital-raising techniques offered by the capital markets, including hybrid securities and contingent capital arrangements, to bolster their capital positions and provide additional financial flexibility.

These various capital-markets activities are to a large extent the result of the insurance industry continuing to refine its capital-management processes, and in a broader sense, its risk-management framework. Having an ongoing relationship with the capital markets also has forced many insurers to be more financially disciplined, which is a positive development.

The reality in today's insurance marketplace is that prudent use of these capital-markets tools is becoming a core competency for the larger players. However, A.M. Best believes that the industry needs to continue to focus on the core, fundamental financial and risk management practices of sound underwriting and pricing, asset and liability management, credit analysis, and spread management as the primary tools for building financial strength.

• Operational Risk – Financial exposures arising from damage to a company's reputation or franchise value stemming from a wide variety of external and internal factors, such as: management change; business interruption; fraud; data capture; data security and integrity; claims handling; and employee retention.

• Strategic Risk – Financial exposures arising from adverse business decisions, improper implementation of decisions or a lack of response to industry changes.

Another integral part of the risk management framework is capital management. If a company's traditional risk management practices are thought of as the processes and controls in place to monitor and manage individual risks, then capital management is the process by which a company provides a backstop to absorb losses that are not sufficiently mitigated by its traditional risk management practices. The primary sources of capital, and in turn financial flexibility, are retained earnings, debt markets and equity markets. Prudent capital management incorporates each of these sources in an integrated way to provide adequate financial resources for daily operations and expected growth, while anticipating potential needs for additional capital based on the risk profile of the entity.

ERM then provides senior management, the final part in the risk management framework, with a platform to view all the various risk management and capital management elements in a more holistic way. The bottom line is that strong, fundamental practices and processes encompassing traditional risk management, capital management and ERM provide a wealth of information and sophisticated tools. However, a company's risk profile, and its ultimate success or failure, still are dictated by the decisions made by management.

ERM Is NOT "One Size Fits All"

A.M. Best believes that assessing an insurer's risk management capabilities – within the context of determining an insurer's financial strength – should be viewed in light of a company's operating scope and the complexity of its business. For those more complex organizations, such as insurers participating in the global reinsurance and retirement savings markets, or insurers with diverse operations covering a variety of products and distribution channels, ERM takes on increasing importance because of the size and complexity of the organization, and the relative risk and volatility in its various lines of business. A.M. Best believes these organizations must develop and constantly refine an ERM framework, including the development of internal economic capital modeling, to:

Exhibit 9
Major Categories of Risk

Credit Risk	Market Risk	Underwriting Risk	Operational Risk	Strategic Risk
Default	Equities	UW Process	Monetary Controls	Competition
Downgrade	Other Assets	Pricing	Financial Reporting	Demographic/Social change
Disputes	Currency	Reserve Development	Legal Controls	Negative Publicity
Settlement lag	Concentration	Product Design	Distribution	Rating Downgrade
Sovereign	Basis	Basis	IT Systems	Customer Demands
Concentration	Reinvestment	Frequency	Regulatory	Regulatory/Political Capital
	Liquidity	Severity	Training	Availability
	ALM	Lapse	Turnover	Technological
	Interest Rate Sensitivity	Longevity	Data Capture	
		Mortality and Morbidity		
		Policyholder Optionality		
		Concentration		
		Economic Environment		

Source: A.M. Best Co.

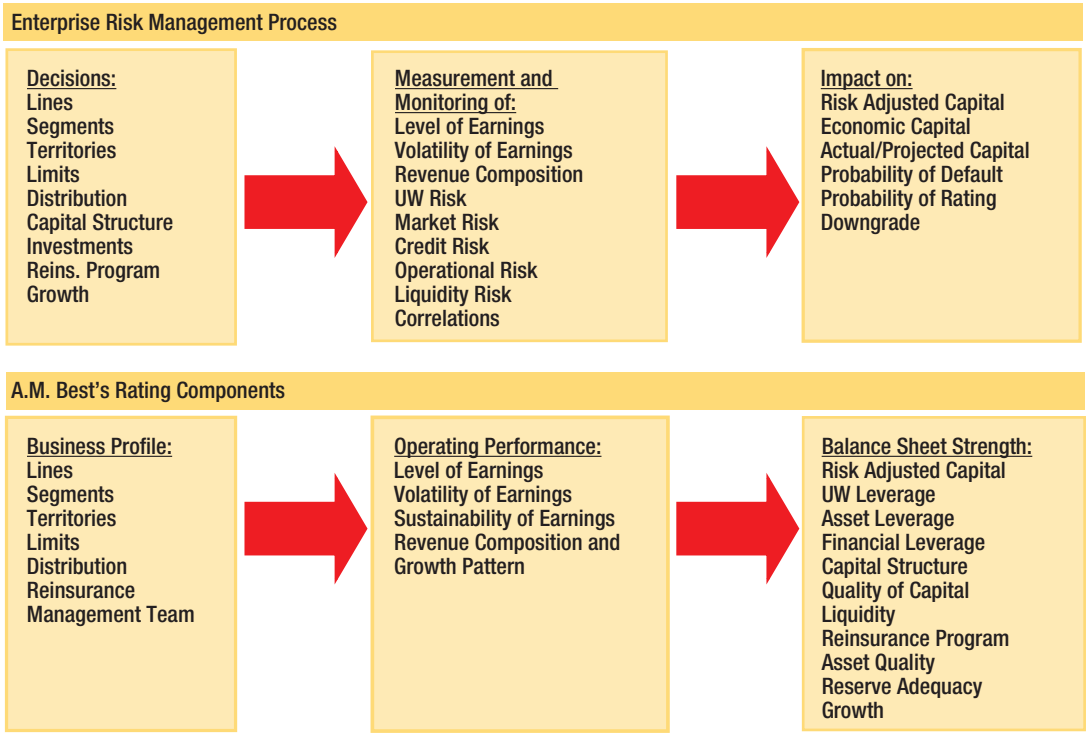
- remain competitive in today's dynamic environment;
- build sustainable earnings and capital accumulation; and
- ultimately, maintain high ratings.

Meanwhile, for organizations with a more limited operating scope focusing on more stable, traditional lines of business, the ERM process may be less comprehensive or complex – at this time. However, the pending implementation of Solvency II in Europe, "Own Risk and Solvency Assessment" regulatory reporting requirements in the United States, and the significant efforts of sophisticated insurers to raise the bar on the risk management front, ultimately will become a competitive issue driving continued improvement and integration of ERM concepts for all insurers, regardless of size.

For example, a small, disciplined insurer that operates as a single-state personal automobile writer, or a life company selling traditional protection products through a captive agency force, or a health insurer writing high-deductible products, may not benefit from the development and full implementation of a sophisticated ERM process, but incorporating selected elements of ERM can help any company, regardless of size. A.M. Best believes every company can take steps to foster a risk-aware culture; improve its ability to consistently identify, monitor and manage risk on a quantitative basis; and consider the impact of risk correlations within its business model.

Across the insurance industry, there are many companies that produce consistently strong operating results, which support a very strong risk-adjusted capital position – each with its own approach to risk management. A.M. Best does not expect successful, well-managed companies with a limited business and risk profile to change their opera-

Exhibit 10
ERM Process & Rating Components



Source: A.M. Best Co.

tions, hire a chief risk officer and build a sophisticated economic capital model to maintain a high rating – as long as the company employs sound risk management practices relative to its risk profile and considering the risks inherent in the liabilities it writes, the assets it acquires and the market(s) in which it operates, and takes into consideration new and emerging risks.

In many cases, companies with a more limited operating scope, such as those mentioned above, can be managed effectively with traditional risk management practices, because the management teams are smaller and the risks more clearly defined and more easily understood. Consequently, the financial management and risk management tools required to effectively manage and monitor risk, and preserve policyholder security, are more basic. However, that does not mean that all small organizations are successful, or that managing less complex companies is an easy task, because all organizations and business lines potentially are exposed to new and emerging risks. In some respects, managers of smaller organizations face a wider range of challenges than do their large company peers, simply because they "wear many hats" within their organizations.

Whether utilizing a formalized ERM framework, integrating selected elements of ERM into operating practices, or relying solely on a traditional risk management process, an insurer's risk management is perceived by A.M. Best as paramount to long-term success. A.M. Best also believes companies that engage in sound risk management practices are typically less likely to fail because they've "considered the unexpected." As such, within the rating process, each company – regardless of its size or complexity – is expected to explain how it measures, monitors and manages risk on an ongoing basis.

An insurer that can demonstrate strong risk-management practices integrated into its core operating processes, and effectively execute its business plan, will maintain favorable ratings in an increasingly dynamic operating environment. A.M. Best believes that risk management is embedded in an insurer's "Corporate DNA" when risk metrics are integrated into corporate, business line and functional area objectives; and risk-return measures are incorporated into financial planning and budgeting, strategic planning, performance measurement and incentive compensation.

Risk Management and the Rating Process

In the rating evaluation process, A.M. Best always has considered risk management and capital management to be core areas of assessment in determining a rating. As such, many of A.M. Best's existing rating criteria speak to risk management and capital management issues.

With the insurance industry overall trending toward a higher risk profile, and the introduction and ongoing development of ERM platforms, the ties that bind risk management and ratings are becoming even stronger. **Exhibit 10** shows the interaction between the risk management framework and the rating components.

While risk management is core to the rating evaluation process, A.M. Best has not established a separate rating category for risk management because the various components of the risk management framework are intertwined among the three key rating areas: balance sheet strength, operating performance and business profile.

However, because of the importance of risk management in the rating process, A.M. Best has added a separate section in its insurance reports that discusses an insurer's risk management process.

The impact of risk management on an insurer's rating is based on the insurer's risk profile and the insurer's risk management capability relative to that risk profile. An insurer's risk profile is made up of both quantitative and qualitative risks. **Exhibit 11** shows a number of quantitative and qualitative risks that A.M. Best contemplates when reviewing an insurer's risk profile. An insurer's risk management capability is made up of both its traditional risk management processes and its enterprise risk management process. **Exhibit 12** shows a number of risk management areas that A.M. Best considers when reviewing an insurer's risk management capabilities.

Exhibit 11
Quantitative & Qualitative Risks in A.M. Best's Risk Profile Evaluation

Market Risk	Judicial Environment
Credit Risk	Economic Environment
Underwriting Risk	Growth
Off-Balance-Sheet Risk	Investments (quality, type, etc.)
Operational Risk	Liquidity
Strategic Risk	Financial Flexibility
Capital Management	Volatility of Results or Capital
Line of Business	Concentrations
Correlation Among Lines or Risk Categories	Data Quality
Policy Limits	Credit Quality of Reinsurers
Product/Coverage Changes	Ceded Leverage/Potential Disputes
Competitive Environment	Impact of Reinsurance Program
Legislative/Regulatory Environment	Management Philosophy

Source: A.M. Best Co.

Exhibit 12
Capabilities Considered in A.M. Best's Risk Management Review

Market Risk – Bonds	Off-Balance-Sheet Risk
Market Risk – Stocks	Operational Risk
Market Risk – Other	Strategic Risk
Credit Risk – Bonds	Capital Management
Credit Risk – Reinsurance	Risk Culture
Credit Risk – Other	Risk Identification
Underwriting Risk – Pricing	Risk Measurement
Underwriting Risk – Reserving	Risk Appetite/Tolerance
Underwriting Risk – Event Risk	

Source: A.M. Best Co.

Insurers are expected to demonstrate that their risk management processes are appropriate for their risk profiles. An insurer with a very high risk profile would need to demonstrate that it has a corresponding high level of risk management capability. For insurers with a low risk profile, traditional risk management practices alone may suffice. Whenever the insurer's risk management capabilities are considered insufficient for its risk profile, this could have a negative impact in determining the insurer's financial strength rating, resulting in a lower rating or requiring additional capital to maintain a certain rating. Conversely, when the insurer's risk management capabilities exceed its risk profile, this is considered a positive rating factor and could have a favorable impact on the insurer's financial strength rating, resulting in a higher rating or lower capital requirements for a specified rating.

Volatility Is NOT A "Four-Letter" Word

Insurance companies make money by managing various types of risk for individuals and other corporate entities—the risk of dying too young, experiencing a loss due to man-made or natural disasters, outliving your assets, and so on. Where there is risk, there is uncertainty, and where there is uncertainty, there is exposure to volatility.

From a ratings perspective, it is crucial to understand the historical and potential volatility the insurer's balance sheet is exposed to, as well as the drivers of volatility. A.M. Best's ratings are prospective, and understanding an insurer's exposure to volatility in earnings and capital is at the heart of A.M. Best's assessment of operating performance and business profile – the leading indicators of future balance sheet strength.

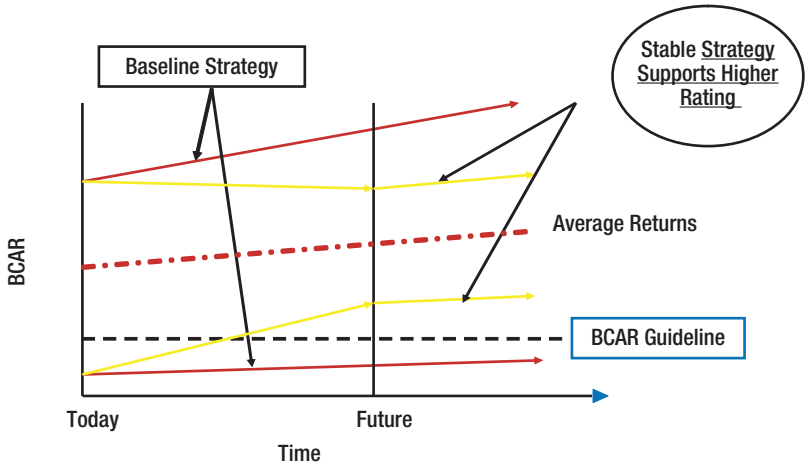
However, it is important to note that the objective of A.M. Best's rating evaluation process – similar to the fundamental goal of any sound risk management system – is not to encourage companies to eliminate risk and volatility, but to understand and evaluate each insurer's risk profile and the reward received for that risk.

Risk management, especially robust ERM programs, allows an organization to identify and quantify its risks, set risk tolerances based on its overall corporate objectives and take the necessary actions to manage risk in light of those objectives. When done right, ERM allows companies to find the risk/reward balance that best meets their stakeholders' expectations.

For some insurers, the right balance is to reduce volatility through measures such as the purchase of reinsurance, changes in business mix or the refinement of liability characteristics.

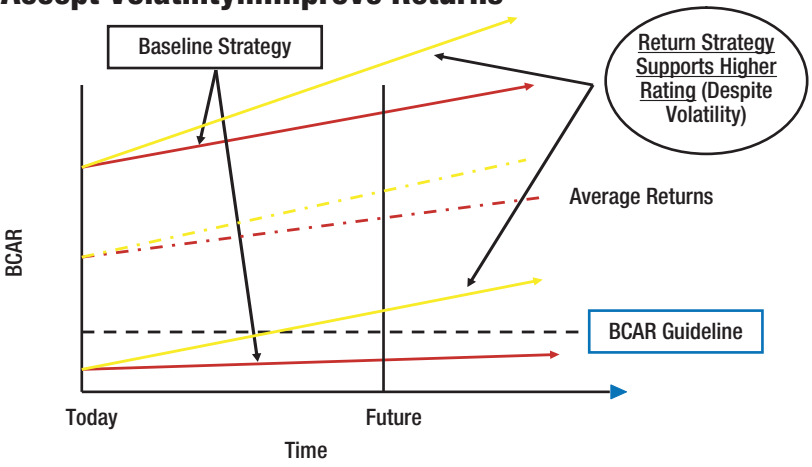
For others, the right balance is to accept their current level of volatility and focus on boosting returns through price actions, expense reductions, changes to reinsurance programs or business mix, etc.

Exhibit 13
ERM—Balancing Risk & Reward: Reduce Volatility



Source: A.M. Best Co.

Exhibit 14
ERM—Balancing Risk & Reward: Accept Volatility...Improve Returns



Source: A.M. Best Co.

In either case, A.M. Best believes that by developing a better understanding of risk and risk correlations through ERM, insurers can take advantage of inefficiencies in the market and improve stakeholder value.

Typically, management is trying simultaneously to strike a delicate balance among the interests of various stakeholders – including shareholders, policyholders, regulators and rating agencies. A.M. Best recognizes this dynamic and understands that higher ratings are not always an objective of insurers. As such, for some companies, the right balance may be found by taking actions that could be detrimental to their ratings.

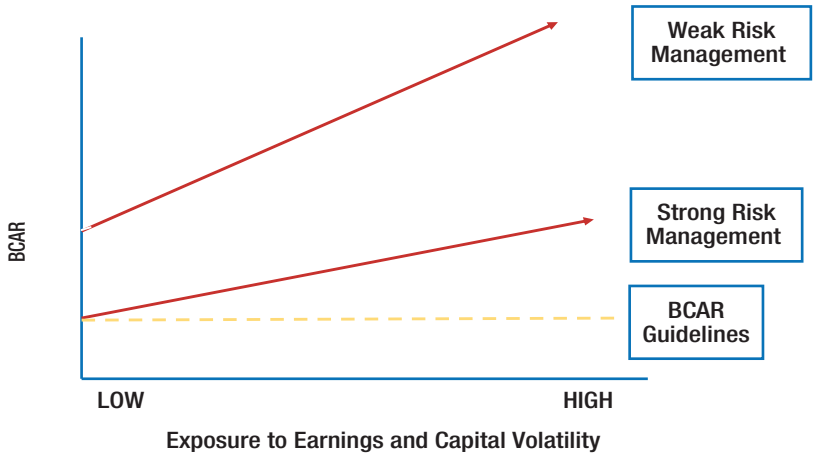
Impact of Risk Management on BCAR Requirements

A.M. Best's Traditional Approach

Clearly, BCAR is an important quantitative tool that helps A.M. Best differentiate between companies and indicate whether a company's

capitalization is appropriate for a particular rating level. However, BCAR by itself never has been the sole basis for determining any A.M. Best rating.

Exhibit 15
Risk Management & BCAR — A.M. Best's Traditional Approach



Source: A.M. Best Co.

In many cases, companies with similar capital positions – BCAR scores – might be assigned different ratings based on the integration of other important considerations unique to each insurance company. These other considerations include the various financial management practices and operating elements of an insurer that ultimately dictate the sustainability of its operating performance and its exposure to capital volatility. In other words, a company's relative risk management capabilities are a key factor in determining the BCAR capital requirement for each rated insurer.

Exhibit 15 is a simple depiction of the relationship between an insurer's relative risk management capabilities and the BCAR capital requirements. In the chart, the relative risk management capabilities of an insurer are depicted as either Strong or Weak. In reality, the assessment is not nearly as "black and white;" rather, there is a range of relative results. The vertical axis represents the BCAR Requirement or score. The horizontal axis represents the relative Exposure to Earnings and Capital Volatility, which considers both the inherent volatility in a company's business mix and the volatility in reported results. In assessing a company's Exposure to Earnings and Capital Volatility, A.M. Best considers a number of factors.

• Review of the relative risk inherent within the insurer's business profile – including the political and regulatory environment – and other elements of strategic and operating risk.

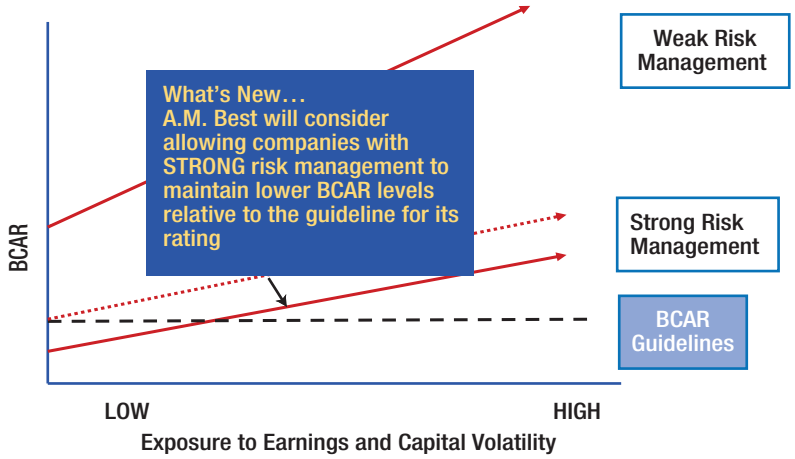
• Earnings and capital trends, including an analysis of the drivers behind the trends so that the long-term sustainability of earnings as a source of capital accumulation can be assessed.

• Comparison of current and prior projections (provided by company management) to actual results, and review of the assumptions used to develop those projections, to assess the insurer's ability to anticipate changes in its operating environment and recognize the potential impact of such changes.

The key points to take away from this chart are:

1. Only companies with STRONG risk management capabilities and LOW relative exposure to volatility are allowed to maintain BCAR levels at or near the guideline for their ratings. STRONG risk management capabilities are defined as strong, traditional risk management fundamentals, relative to the insurer's risk profile, in each of the five key risk types, AND sound financial flexibility.

Exhibit 16
Risk Management & BCAR — A.M. Best's Revised Approach



Source: A.M. Best Co.

2. Companies with WEAK risk management capabilities need to maintain a higher level of required capital – BCAR score – even if there is LOW relative exposure to volatility. WEAK risk management capabilities are evident when traditional risk management practices are insufficient in one or more of the five key risk areas, AND financial flexibility is limited.

3. As the exposure to volatility increases, the BCAR requirement increases at a more rapid rate, i.e. the slope of the line is steeper, for companies with WEAK risk management capabilities.

The chart is intentionally not drawn to scale, because there are an infinite number of combinations and permutations of the various factors evident across the population of rated companies. However, the fundamental approach of determining BCAR capital requirements in light of a company's exposure to volatility, and its ability to measure, monitor and manage that volatility through risk management practices, has been (and always will be) core to the rating process.

A.M. Best's Approach Evolves

Recognizing the development of robust ERM frameworks, as well as the advances in some of the traditional risk management practices employed by the industry, such as the use of more sophisticated catastrophe modeling and dynamic hedging programs, A.M. Best is modifying its approach to determining BCAR capital requirements (see **Exhibit 16**). The fundamental difference in the revised approach is that for companies with STRONG risk management capabilities, A.M. Best will consider allowing companies to maintain lower BCAR levels relative to the guideline for their ratings based on a case-by-case evaluation of an insurer's overall risk management capabilities – relative to its risk profile. However, the bar has been raised to incorporate more advanced tools and metrics employed by sophisticated insurers. To qualify for this treatment, companies typically will have ALL of the following:

1. Superior traditional risk management fundamentals, relative to the insurer's risk profile, in each of the five key risk types.

2. Superior capital management and financial flexibility, providing the organization with cost-efficient access to capital even in distressed scenarios.

3. Strong ERM characteristics (as described earlier).

4. Strong Economic Capital modeling capabilities (as described below).

All companies that demonstrate these characteristics will potentially be held to lower capital requirements at their current rating level. In addition, for companies with a com-

bination of STRONG risk management capabilities (as described above) and relatively low exposure to earnings and capital volatility, A.M. Best will consider allowing companies to maintain BCAR levels below the guideline for their ratings.

ERM and Economic Capital Models

As mentioned earlier, A.M. Best believes that ERM encompasses a wide range of activities, including the use of sophisticated tools to identify and quantify risks. One of the tools often used to quantify risks, and measure the volatility and correlation of risks, is an economic capital (EC) model. A.M. Best believes that a strong EC model can be a valuable tool to an insurer, but it is just one of many tools and processes utilized within the overall risk management framework, i.e. ERM is more than just an EC model.

A strong EC model provides a sound basis for analyzing the risk-adjusted returns (i.e. EC is the denominator) of an insurer; however, an EC model is not simply a financial-reporting system. The benefit of a strong EC model is the aid it provides in understanding the insurer's risks and their correlations from a holistic point of view. The true value of an EC model is realized only when management employs it in the strategic decision-making process when assessing the impact of different business strategies, asset allocations, reinsurance structures, etc.

At the present time, BCAR is the starting point for A.M. Best's assessment of balance sheet strength. Over time, as A.M. Best becomes comfortable with an insurer's EC model, consideration could be given to the output from a strong EC model in the rating evaluation. A strong EC model must be able to capture the material risks associated with each of the major categories of risk listed in **Exhibit 9**. A.M. Best recognizes that certain elements of operational and strategic risk are not easily quantified. However, A.M. Best believes these risks are real and that companies must over time develop methods to estimate the impact of these risks. In the interim, A.M. Best expects companies to allocate some portion of capital within their internal EC models as a placeholder.

Characteristics of Strong EC Models:

• Address correlations within and across the five risk categories above, incorporating reasonably conservative assumptions on positive correlations.

• Contemplate increased correlations with larger events.

• Show the volatility in results.

• Reflect the benefits of diversification.

• Reflect the dangers of concentrations.

• Reflect the macro economy.

• Reflect the stages of the underwriting cycle.

• Can reflect changing reinsurance environment.

• Can accept deterministic scenarios for testing.

• Provide sufficient data to explain extreme events.

- Parameters fit company data well.
- Parameters updated/reviewed regularly.
- Staff dedicated to the EC model.
- Quality of input data reviewed/audited/tested.
- Model output easy to read/understand.
- Results can be tied to objectives.
- Results can be tied to probability of default.
- Produce cash-flow projections for each scenario.
- Model has tested well against historical adverse events.
- Can produce volatilities over different time frames.

Through the development of an integrated framework, combining the key elements of risk, companies have better tools at their disposal to optimize stakeholder value by allocating capital to the risks that provide the best risk/reward opportunities, and/or to products that provide the most optimal diversification benefit, which can be used as a hedge against existing product offerings. In doing so, an insurer is better prepared to determine the levels of economic capital allocated to certain product lines, ultimately resulting in optimal capital utilization and maximizing risk-adjusted returns within each product line.

A.M. Best may give more consideration to EC models as confidence in those models increases. Obviously, this will take time, as A.M. Best will need to see that company management is relying on the model to make business decisions, and that these decisions are validated over time. As part of this process, A.M. Best expects insurers to disclose their corporate risk tolerance or appetite in relation to earnings and/or capital, as well as their risk tolerance and key risk metrics by major line of business, which may include aggregate and single-event risk metrics used to manage certain exposures.

Management also must demonstrate that it can explain the model and its output. Members of management should be ready to show how the model helps them to understand the volatility of their risks, the underlying correlations of those risks and the drivers of the volatility. A.M. Best expects companies to discuss actual results compared with the risk tolerance and key metrics. This should highlight any variances from expected results and any corresponding steps taken to bolster the overall ERM process. Eventually, as actual results are compared with expected results, the model will develop a track record as a dynamic management tool that either will prove or disprove its value to the company. This information and analysis will be reviewed and discussed at the annual company rating meeting and incorporated into the determination of capital requirements and the overall rating analysis.

Direction of Future Model Improvements and Capital Requirements

As mentioned earlier, BCAR is one of the primary tools used in the evaluation of balance sheet strength. The BCAR model provides a quantitative measure of the risks inherent in a company's investment and insurance profile, relative to its capital. A.M. Best reviews the BCAR model on an ongoing basis and makes modifications to enhance

the model in response to industry dynamics—including changes in financial reporting requirements, significant regulatory and product developments, and industry trends.

However, BCAR provides only one view of capitalization, using public financial statements as a base. To develop a more comprehensive view of an insurer's prospective financial strength and flexibility, A.M. Best's assessment of balance sheet strength also includes an analysis of an organization's regulatory filings, including the GAAP or IFRS balance sheet, corporate capital structure, financial leverage, operating leverage, fixed-charge coverage, liquidity, and historical sources and uses of capital.

Given the insurance industry's evolving risk profile and the significant recent advancements made in risk management tools and practices, A.M. Best recognizes that a more economic, prospective view of capital can be another valuable supplement to the rating process. As a result, A.M. Best also is exploring ways to incorporate stochastic modeling in the development of risk factors within the BCAR model, and to more directly tie probability of default to the determination of capital required to support individual rating levels. The probability of default factors will be based on insurance company insolvency and impairment statistics compiled by A.M. Best.

In addition, A.M. Best will consider the use of company-provided capital models in developing capital requirements within the rating evaluation process. A.M. Best will consider using the output of company-provided capital models (that incorporate all the characteristics of strong EC models described above) for analytical purposes; however, the BCAR still will be published as a common, industrywide baseline for capital adequacy.

Appendix: Enterprise Risk Management* – Key Topics & Meeting Agenda Items

ERM Framework and Culture	
	Board and Senior Management Involvement
	Establishment and Communication of Risk Management Objectives
	Risk Tolerance and Key Risk Metrics
	Roles, Responsibilities and Oversight
	Strategic Decision Making
Risk Identification and Management	
	Traditional Risk Management (Underwriting, Credit and Market/Liquidity are covered throughout annual rating meeting)
	Exception Reporting – Performance vs. Key Risk Metrics (by functional area and/or risk type)
	Action Plans for Exception Items
	Operational Risk and Strategic Risk
	Emerging Risk Issues
Risk Measurement and Capital Modeling	
	Management Reporting – Performance vs. Risk Tolerance (corporate-wide, by line of business, by risk type)
	Risk Correlation
	Tools (Economic Capital or Other) Used to Determine Required Capital and Capital Allocation
	Disclosure of EC Results – Internal, Rating Agency, External
	Data Integrity – Completeness and Accuracy of EC Inputs
	Independent Review of Modeling Process
Management's Perspective on Key Risks	
	Top 5 Risk Exposures and Critical Success Factors to Managing these Exposures
	Lessons Learned through ERM Development Process
	Next Steps in ERM Development

* A.M. Best's evaluation of a company's ERM capabilities will vary depending on an insurer's scope of operations, size and complexity of risk. During the annual rating review, the discussion of risk management practices and ERM may be interspersed throughout the meeting, or it may be included in a separate, comprehensive ERM discussion. In either case, the topics listed above will be incorporated into the final rating evaluation

Published by A.M. Best Company

Methodology

A.M. BEST COMPANY
WORLD HEADQUARTERS
Ambest Road, Oldwick, NJ 08858
Phone: +1 (908) 439-2200

WASHINGTON OFFICE
830 National Press Building
529 14th Street N.W., Washington, DC 20045
Phone: +1 (202) 347-3090

MIAMI OFFICE
Suite 949, 1221 Brickell Center
Miami, FL 33131
Phone: +1 (305) 347-5188

A.M. BEST EUROPE RATING SERVICES LTD.
A.M. BEST EUROPE INFORMATION SERVICES LTD.
12 Arthur Street, 6th Floor, London, UK EC4R 9AB
Phone: +44 (0)20 7626-6264

A.M. BEST ASIA-PACIFIC LTD.
Unit 4004 Central Plaza, 18 Harbour Road, Wanchai, Hong Kong
Phone: +852 2827-3400

A.M. BEST MENA, SOUTH & CENTRAL ASIA
Office 102, Tower 2
Currency House, DIFC
PO Box 506617, Dubai, UAE
Phone: +971 43 752 780

SR-2007-M-073a