



2008 Enterprise Risk Management Symposium

The importance of
Enterprise Risk Management to
Standard & Poor's Ratings
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Agenda

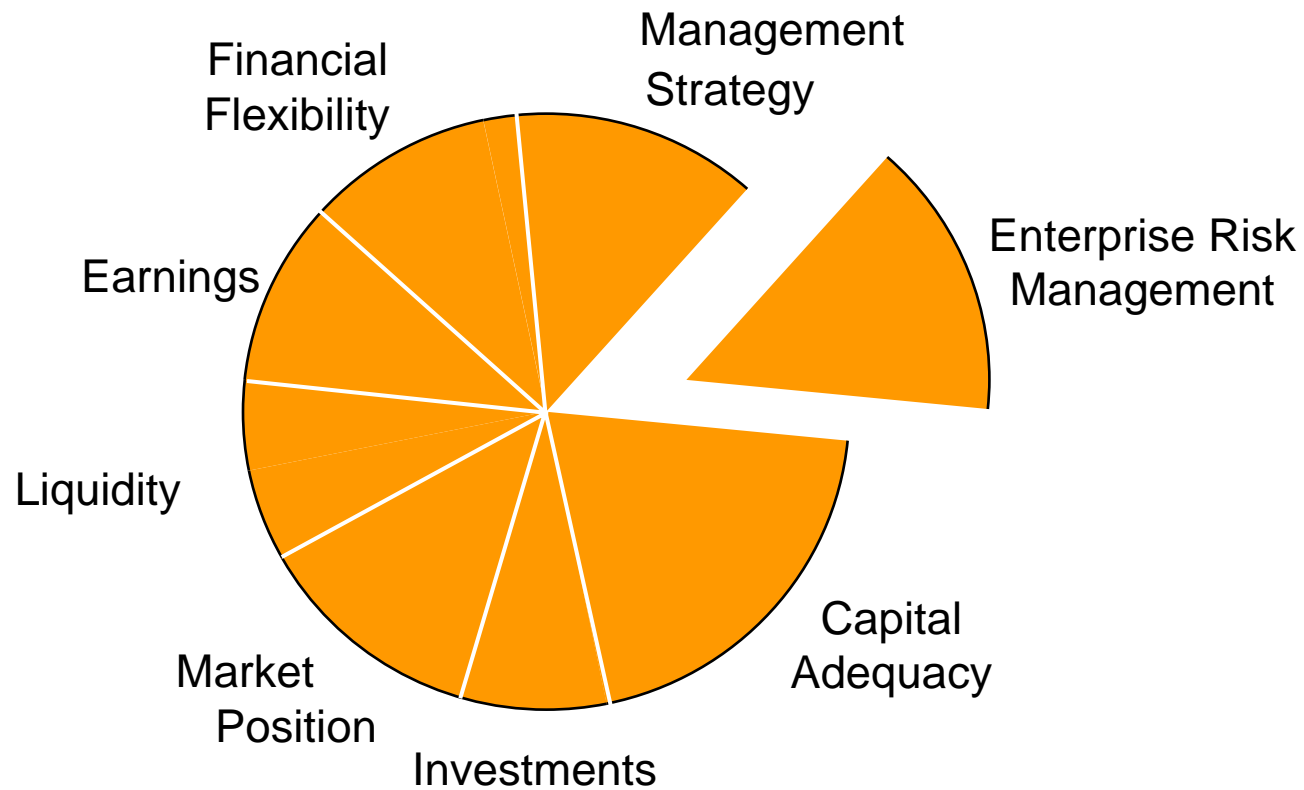
1. What & Why of ERM for S&P
2. ERM Evaluation Criteria
3. Results of ERM Evaluations
4. Achieving Strong ERM
5. Risk Tolerance & Risk Appetite
6. Conclusion

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ERM Evaluation in the Ratings Process



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What Is the Difference Between Risk Management and ERM?

An ERM Program comprehensively applies Risk Management...

- Across ALL of the significant risks of the Enterprise
- Consistently across the risks
- Consistently with the fundamental objectives of the enterprise

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Full Benefits of an ERM Program

In addition, an ERM Program will...

- Develop and maintain systems to periodically measure the capital needed to support the retained risks of the company
- Reflect the risk capital in:
 - Strategic decision making,
 - Product design and pricing,
 - Strategic and tactical investment selection
 - Financial performance evaluation

***The product of a fully-realized ERM Program is
the optimization of enterprise risk adjusted return***

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Standard & Poor's Objective

Risk management is at the heart of what Standard & Poor's does. Standard & Poor's assesses insurers' risks and how risks are managed.

Objective: Enhance ratings by increasing our analytical focus on insurers' risk management practices

- Previously, only qualitative credit given to risk management practices and models
- Ultimately, may give some quantitative recognition to risk models, but only where models are robust and underlying risk management framework is sound

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ERM & Ratings

ERM Quality Evaluation is based on the risks of the company

Importance of ERM in the company rating is based on:

- Capacity to absorb losses
 - Complexity of risks
-
- A insurer with tight capital and complex risks
 - ERM is very important
 - A insurer with excess capital and ordinary risks
 - ERM is not as important



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ERM Evaluation Components



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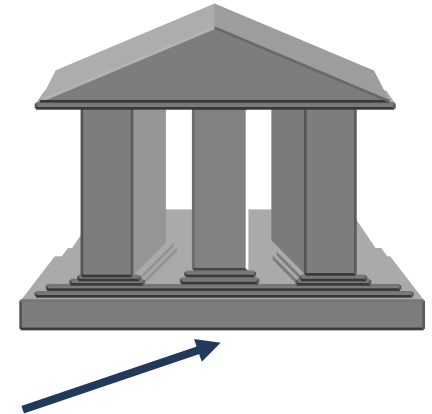
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Risk Management Culture

Standard & Poor's Ratings Criteria:

- Staffing and organizational structure of risk-management function
- Governance structure suggests high degree of influence on decision-making by risk-management staff
- Communication of risk and risk management
- Clear Risk Tolerances tied to Risk Limits



Risk Management Culture

Risk and risk management are considerations in everyday corporate decision-making

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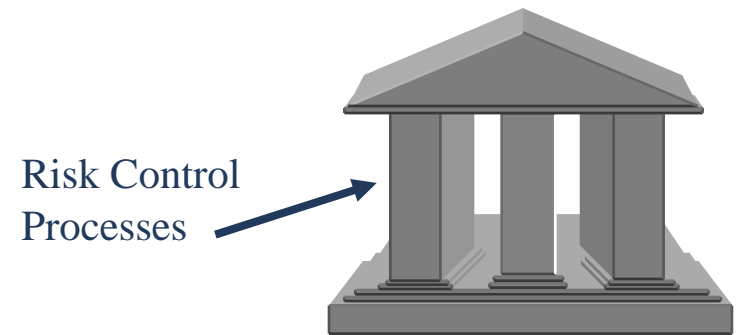
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Risk Control Processes

Primary Components:

- Identify Risks
- Evaluate/Quantity/Measures Risk
- Monitor Risks
- Diversity Risks
- Limit, Avoid Risks and Offset Risks
- Exploit Retained Risks
- Transfer Risks
- New Product Risk and Risk Control Review



Objective: To keep risks & losses to within Insurer Risk Tolerance

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Risk Control Applies to:



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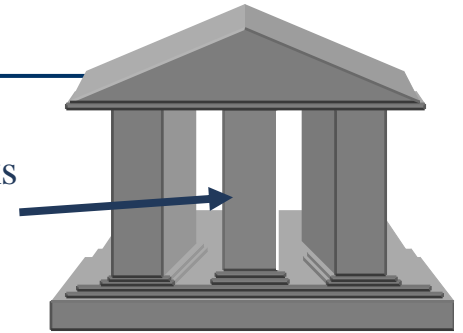
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Emerging Risks Management

Primary Components:

- **Environmental Scanning**
 - To provide advance signals of potential Crisis developments
- **Process for Anticipating Emerging Risks**
 - Development of Emerging Risk Scenarios
- **Process for Envisioning Significance of Emerging Risks**
 - Stress Testing & Liquidity Risk Analysis
- **Process for Preparing Response to Emerging Risk Solutions**
 - Contingency Planning
- **Execution of Company in Emerging Risk Solutions**
 - Changes to company business and risk management practices
- **Company learning process from Emerging Risk Situation**

Emerging Risks
Management



Objective: To anticipate the next big risk

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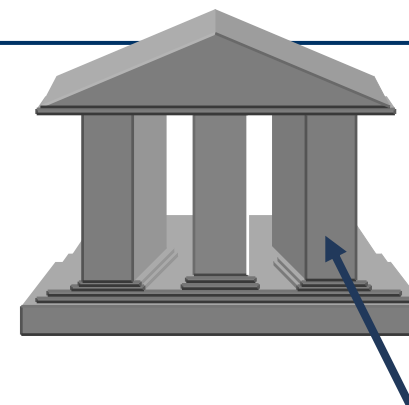
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Risk and Economic Capital Models

Primary Components:

- Type of Risks Modeled
- Modeling methodologies used for each risk
- Modeling of Risk mitigation
- Risk dependencies and aggregation
- Risk measures
- Assumptions
- Data feeding
- Model integrity
- Validation and Documentation



Risk & Economic
Capital Models

Objective: To Provide the information on Insurer Risks to Support other ERM Processes

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Strategic Risk Management

Standard & Poor's Ratings Criteria:

- Consistent view across all risks
- Capability to assess trade-offs between different risk types
- Assessment of risk adjusted returns
- Capital budgeting
- Strategic investment allocation



Objective: To Optimize Risk-adjusted Returns

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ERM Quality Classifications

Excellent	<ul style="list-style-type: none"> ▪ Advanced capabilities to identify, measure, manage all risk exposures within tolerances ▪ Advanced implementation, development and execution of ERM parameters ▪ Consistently optimizes risk adjusted returns throughout the organization
Strong	<ul style="list-style-type: none"> ▪ Clear vision of risk tolerance and overall risk profile ▪ Risk Control exceeds adequate for most major risks ▪ Has robust processes to identify and prepare for emerging risks ▪ Incorporates risk management and decision making to optimize risk adjusted returns
Adequate	<ul style="list-style-type: none"> ▪ Has fully functioning control systems in place for all of their major risks ▪ May lack a robust process for identifying and preparing for emerging risks ▪ Performing good classical “silo” based risk management ▪ Not fully developed process to optimize risk adjusted returns
Weak	<ul style="list-style-type: none"> ▪ Incomplete control process for one or more major risks ▪ Inconsistent or limited capabilities to identify, measure or manage major risk exposures

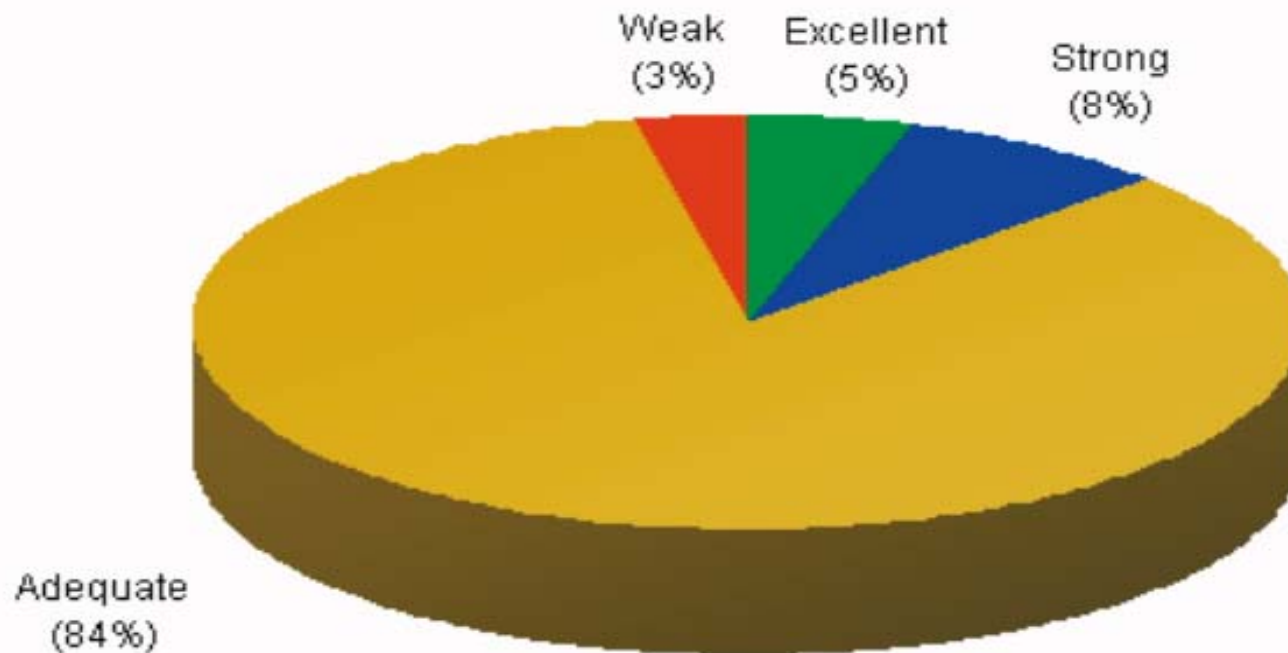
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Insurance & Reinsurance ERM Findings

ERM Evaluations, North American Insurers As Of Oct. 31, 2007
Total Insurers: 125



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INSURANCE: North America/Bermuda

Excellent ERM

- **Genworth**
- **Manulife**
- **Partner Re**
- **Renaissance Re**
- **Travelers**
- **USAA**

Strong ERM

- **ACE**
- **AETNA**
- **Berkshire Hathaway**
- **Chubb**
- **Endurance**
- **Hartford**
- **MetLife**
- **Nationwide**
- **Platinum**
- **Principal**
- **Progressive**
- **Sun Life**

Adequate ERM

But developing rapidly

- **Allstate**
- **Ameriprise**
- **Axis Capital**
- **Guardian**
- **New York Life**
- **OneAmerica**
- **Prudential**
- **XL Capital**

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What Do We Expect from a Strong/Excellent ERM Firm?

- **ERM is not a Loss prediction tool!**
- **ERM helps a firm to manage to tendencies**
 - We do not expect that Strong/Excellent ERM will always cause a firm to miss all loss events, **BUT**
 - We do expect that over time, Strong/Excellent ERM firms will have lower losses as a percentage of average earnings
- **To Achieve that, Firm needs three things:**
 - 1. Strong Risk Control Capabilities**
 - 2. Emerging Risks Management Capability**
 - 3. Strategic Risk Management**

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Strong Risk Controls

- 1. Clear Targets for Risk Controls**
- 2. Multiple Views of Risk**
- 3. Multiple sources of information on risks**
- 4. Multiple Tools for risk mitigation**
- 5. Action Orientation**
- 6. Integration of Quant tools with Experienced Management Team**

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Example – ALM – Interest Rates

1. Clear Targets for Risk Controls

- Targets for matching, triggers, limits
- Objectives stated so Targets can be adjusted easily when situations change

2. Multiple Views of Risk

- Duration, Convexity, Key Rate Duration
- VaR, CTE, EaR

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Example – ALM – Interest Rates

3. Multiple sources of information on risks

- Treasury rates, swap rates, economic trends, central bank trends

4. Multiple Tools for risk mitigation

- Redirect Future Cashflows
- Trading
- Derivatives

5. Action Orientation

- First response is not to request limit exception – is action

6. Integration of Quant tools with Experienced Management Team

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Example – VA Embedded Options

1. Clear Targets for Risk Controls

- Impact on tail risk metric, Earnings vol metric
- Degree of difference on Greeks expectation, checkpoints, limits

2. Multiple Views of Risk

- Multiple Greeks
- Future vs. Market vs. Historical

3. Multiple sources of information on risks

- Stock market, derivatives market, interest rates, economic trends, consumer trends

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Example – VA Embedded Options

4. Multiple Tools for risk mitigation

- Reinsurance, Hedging (long term, short term, custom, traded)

5. Action Orientation

- Active use of tools
- Not completely routine

6. Integration of Quant tools with Experienced Management Team

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Strategic Risk Management

Why are we making SRM so important?

- **There are some companies with Superior Risk Management that we will then be judging to be Adequate?!?**
 - Companies with Superior Risk Management (Controls) will have volatility of earnings and incidence of losses within their tolerances
 - Companies with Strong/Excellent ERM will have low volatility of earnings, low incidence of losses **AND will maximize their risk/return relationship!**

- **Strategic Risk Management is the UPSIDE of Risk Management**

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Strategic Risk Management

For Life Insurers:

Strategic trade-offs between products with:

- **Credit Risk**
- **Interest Rate Risk**
- **Equity Risk**
- **Insurance Risks**
 - **Based on long term view of risk adjusted returns of products**
 - **Choosing which to write, how much to retain and which to offset**

Strategic trade-offs in Investment Selection

- **based on risks embedded in products**
- **plus long term view of risk adjusted returns of investment choices**

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Risk Selection vs. Strategic Risk Management

Reacting to short term market conditions to choose which risks to take and which to retain in the short term

- May use Risk Reward analysis or just combined ratio targets
- Cycle Management
 - Insurance Cycles
 - Credit Cycles
 - Interest Rate Cycles/Equity Market Cycles
 - *Choosing in and out of risks for a season as spreads fatten or thin*
- Choices to vary from long term strategic choices
 - Usually within a range
 - Range of variation authority limits

Risk Selection is part of Insurance Risk Control

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Capacity / Capital Management vs. Strategic Risk Mgt.

- **Many Insurers & Reinsurers practice Capacity / Capital Mgt**
 - Make plans for writing all of the profitable business they can write
 - Then Assess whether they have exceeded their Capacity
 - Based on S&P, AM Best or RBC Capital Target
 - Use Reinsurance to bring retained risk back into line with Capacity

This is not Strategic Risk Management!

- **S&P, other rating agency/regulatory RBC Capital formulas are not measures of company specific risks**
- **Strategic Risk Management uses company specific risk measure**
 - May be Economic Capital or Earnings at Risk or other risk measure

**We are not saying that Capacity / Capital Mgt is bad
- It is just not Strategic Risk Management**

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Risk Appetite & Tolerance

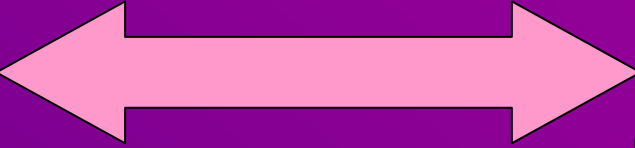
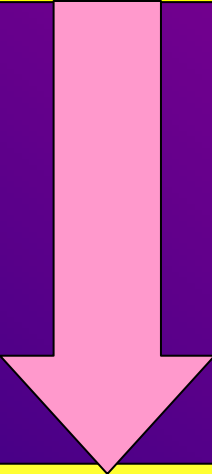
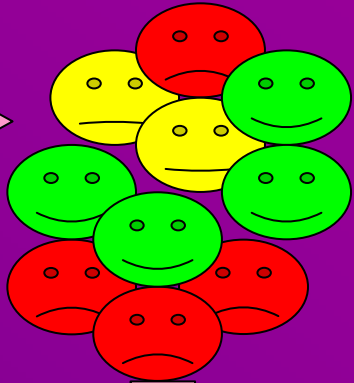
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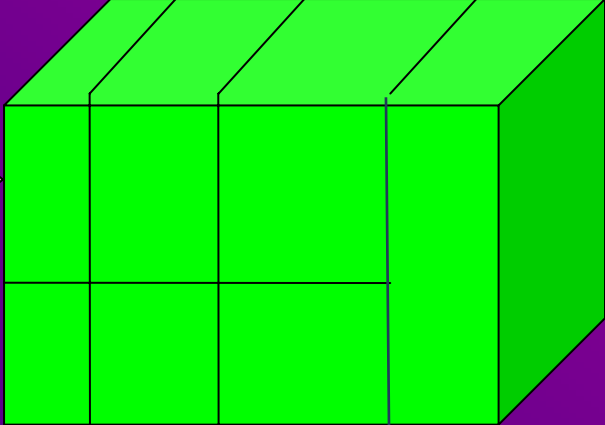
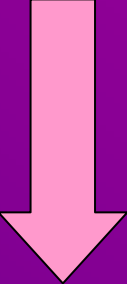
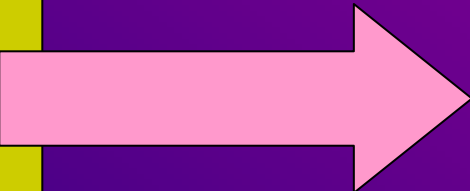
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Risk Appetite

Risk Preferences



Risk
Tolerance



Risk Limits

Risk Tolerance & ERM

- **ERM is strongly tied to Risk Tolerance**

- ERM is defined as the insurer programs that keep losses within risk tolerances AND that optimize returns within risk tolerances

- **Ability to Articulate Risk Tolerance**

- Key to S&P opinion of ERM
- Quantitative & Qualitative Risk Tolerances

- **Quantitative Risk Tolerance**

- Aggregate Loss Tolerance at a probability
 - In terms of income &/or surplus &/or embedded value

- **Qualitative Risk Tolerance**

- Driver of Numeric Quantitative Loss Tolerance
 - Impact on Rating, Stock Value, etc.

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Risk Tolerance

Risk Preferences

Quantitative	Qualitative
Earnings Volatility	Uncertainty – are they assumptions or just guesses?
Ruin – Extreme Loss potential	Complexity – how many ways are there to get it wrong?
	Location – Country or other legal jurisdiction
	Experience/Expertise – inhouse vs for hire vs outside
	Tradability – can we get rid of it?
	Time Frame – how long is exposure?
	Type of Risk – Market, Credit, Insurance, Operational (and subcategories)
	Concentrations – by any dimension

Clear Statement of Zero Tolerance Risk Areas

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Risk Profile Discussion

- **Starting Risk Profile**
- **Planned Risk Profile**
- **Relationship to Risk Tolerance & Risk Limits**
- **Discussion of**
 - drivers for changes
 - reasons why some risks are close to limits and others are far away
 - Reasons why company Risk Profile is as far or as close to Tolerance

- **Discussion of how management goes from Tolerance to Limits**
 - Included in SRM within S&P analysis

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10 Questions for an ERM Evaluation

1. **What is the firm's risk profile?**
2. **How much time does the board spend discussing risk with management each quarter?**
3. **Who is responsible for risk management for the risk that has shown the largest percentage rise over the past year?**
4. **What outside the box risks are of concern to management?**
5. **What is driving the results that you are getting in the area with the highest risk adjusted returns?**

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10 Questions for an ERM Evaluation

- 6. Describe a recent action taken to trim a risk position?**
- 7. How does management know that old risk management programs are still being followed?**
- 8. What were the largest positions held by the company in excess of risk limits in the last year?**
- 9. Where have your risk experts disagreed with your risk models in the past year?**
- 10. What are the areas where you see the firm being able to achieve better risk adjusted returns over the near term and long term?**

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Insurance ERM Conclusion

1. S&P has included an evaluation of ERM into the ratings of all Insurers
2. Most Insurers were found to have an Adequate ERM program
3. To achieve Strong ERM opinion, insurer needs:
 - a. Strong Risk Controls
 - b. Emerging Risks Management
 - c. Strategic Risk Management
4. S&P also looks for firms to have articulated Risk Profile & Risk Tolerance/Appetite
5. ERM is not primarily concerned with Capital Adequacy
 - But S&P is going to be reviewing capital models of insurers with Strong/Excellent ERM



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Enterprise Risk Management: Insurance Ratings

Insurance ERM Evaluation Criteria on the web at
www.erm.standardandpoors.com

For further Information Contact:
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