

# Enterprise Risk Management: Ratings Agency View

David Ingram

*Standard & Poor's  
Financial Services Ratings*

*The McGraw-Hill Companies*

## Agenda

- Our ERM Criteria
- Who has been Evaluated
- Overall Findings
- ERM Elements
- What's Next

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## S&P's Evaluation of ERM



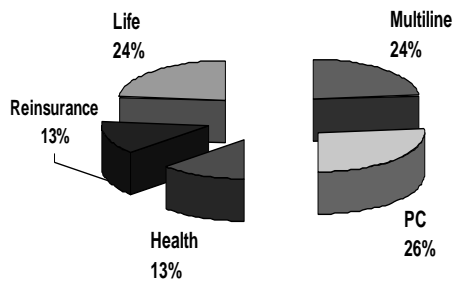
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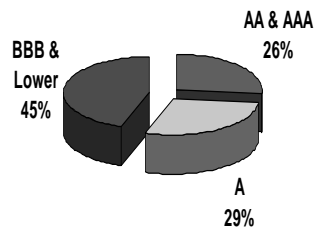
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## Who we have evaluated?

**Sector Breakdown**  
38 companies



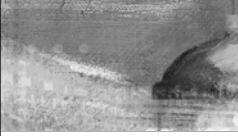
**Ratings Breakdown**  
38 companies



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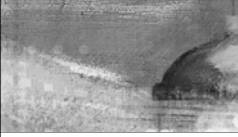
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## Who have we evaluated?

- Both Europe based (7) and US based companies (31)
- Companies primarily selected based on schedule of review
- Small number of “Leading Edge” off-cycle evaluations
- No way to tell if the findings to date are representative
  - Sample too small
  - Slight positive skew from Leading Edge volunteers

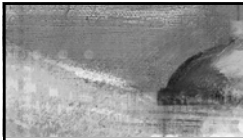
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## Overall Findings

<b>Weak</b>	Lacking basic controls for important risk(s)	<b>8%</b>
<b>Adequate</b>	Basic risk controls in place for all major risks	<b>63%</b>
<b>Strong</b>	Basic risk controls in place for all major risks <b>PLUS:</b> 1) Process to prepare for Unknown Future Risks 2) Process to make strategic choices among risks based on risk & reward framework	<b>21%</b>
<b>Excellent</b>	Mastery of Controls, Unknown Future Risk preparations & strategic risk applications	<b>8%</b>

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## ERM Impact on Rating

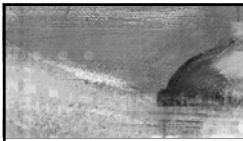
Out of 38 reviews completed:

- 2 ERM Evaluations Strengthen Ratings
- 12 ERM Evaluations Affirm or Support Ratings
- 24 ERM Evaluations Neutral to Rating

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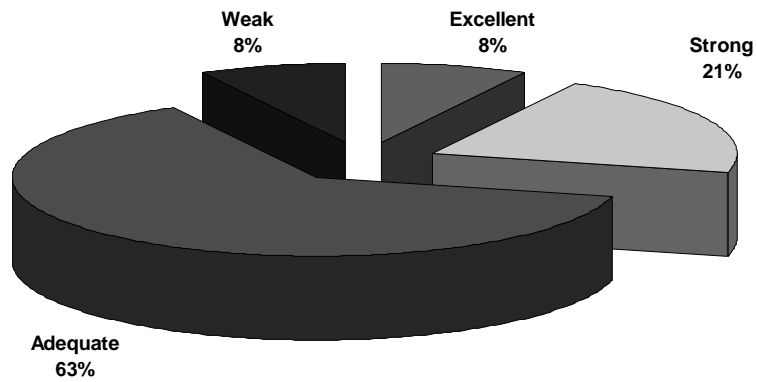
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## Overall Findings

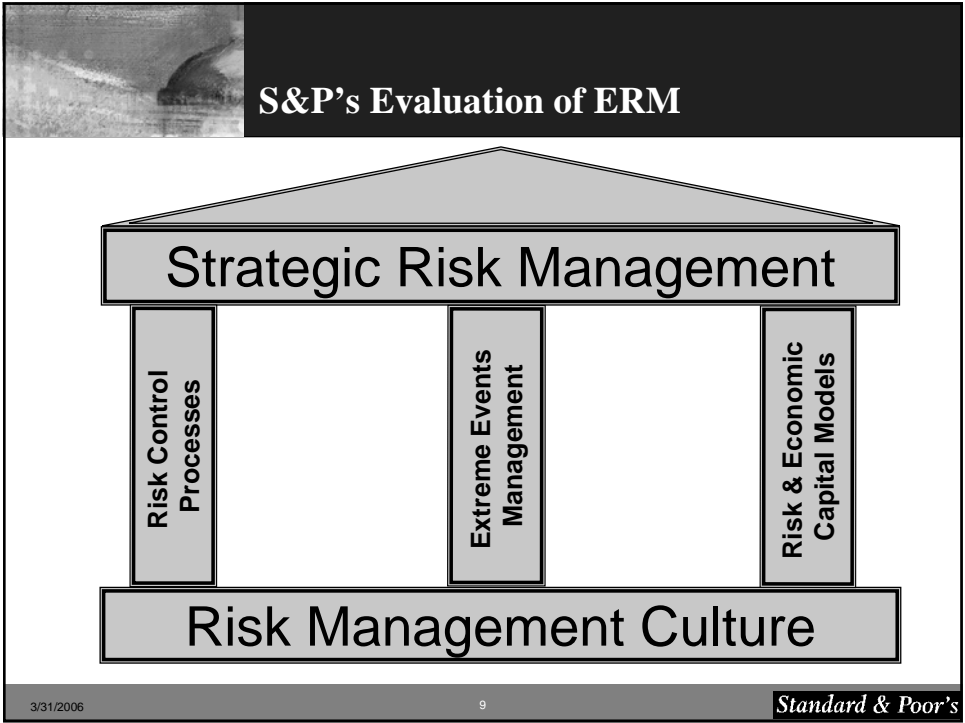
Overall ERM Evaluation  
38 companies



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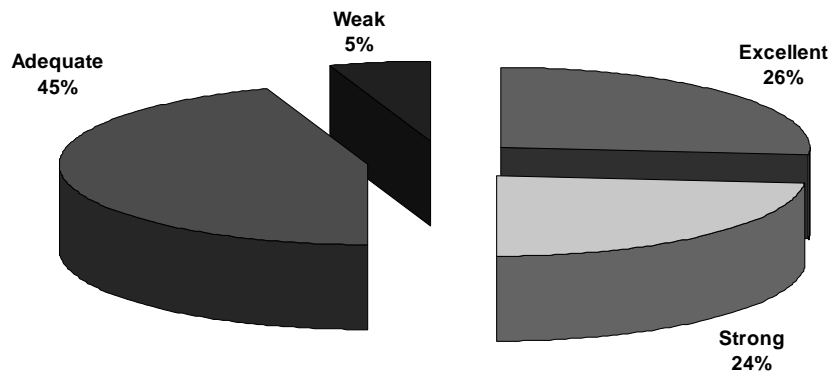
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## Risk Management Culture

### Wide Range of Practices



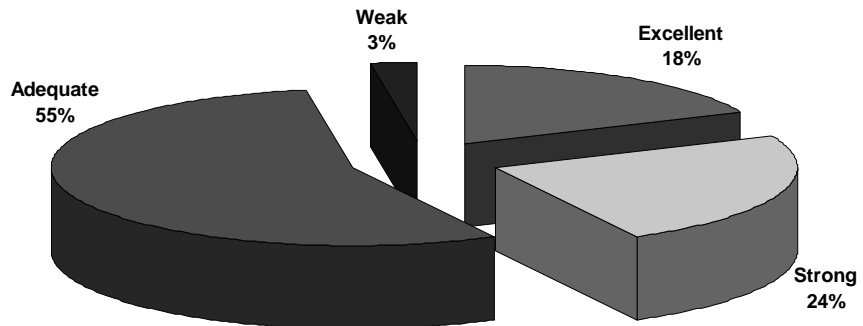
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## Investment Risk Control

### Mostly doing what they need to do with a few standouts



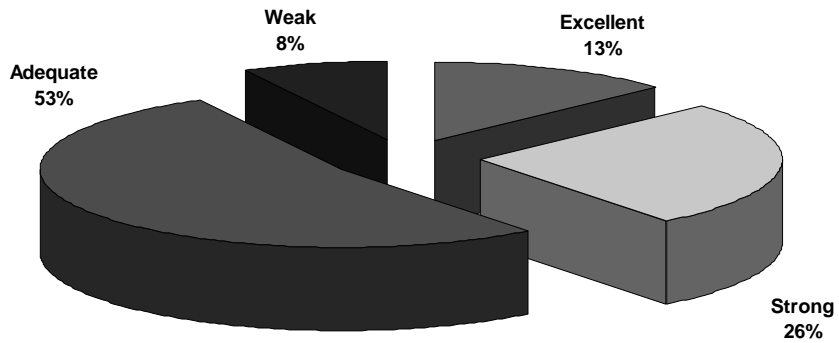
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## Insurance Risk Control

### Wide Range of Practices



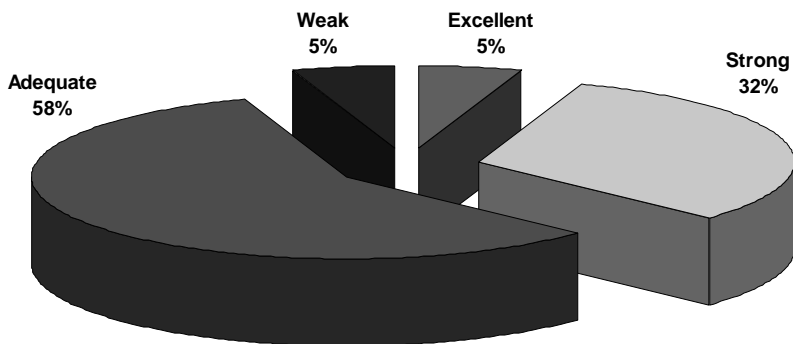
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## Operational Risk Control

### Area to Improve Evaluation Capabilities



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## S&P's Evaluation of ERM



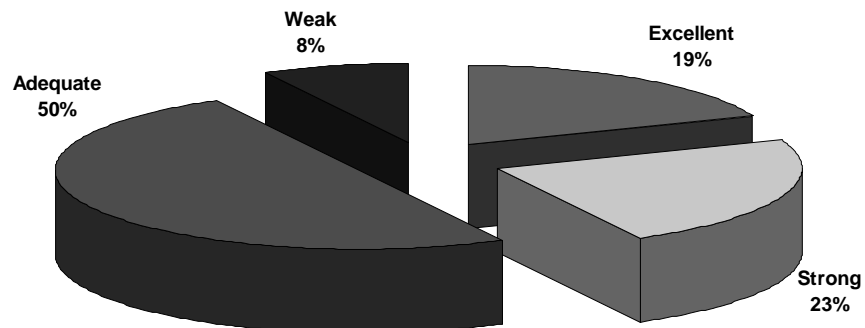
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## Extreme and Emerging Risks

### Few Practioners Found



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## S&P's Evaluation of ERM



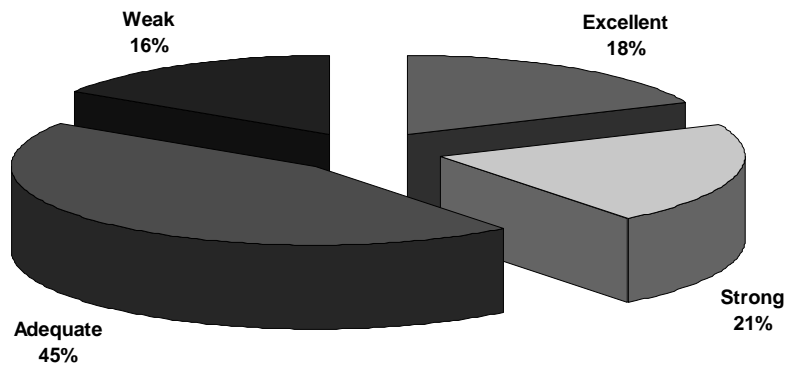
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## Risk & Economic Capital Models

Not subject to deep review

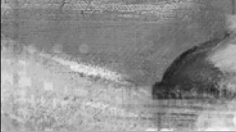


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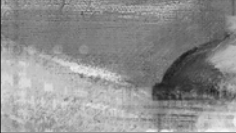




## Coming Attractions - Criteria

1. Risk Tolerance
2. New Product Risk
3. Extreme Event and Emerging Risk Management
4. Risk Control
  - a. Broad Considerations
  - b. ALM / Market
  - c. Credit
  - d. Insurance – PC – Non-Life
  - e. Insurance – Life
  - f. Insurance – Health
  - g. Operational
5. Risk Models

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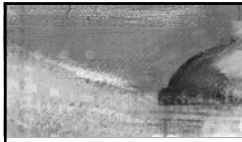


## Risk Tolerance

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? How much do we know?
	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

*Many Insurers will have several Zero Tolerance Risk Areas*

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## Sound Practices: Credit Risk

**Broadly four approaches:**

### **1. Traditional Credit Management**

- Underwriting Standards & enforcement process
  - Limits for concentrations by sector, location, rating, name
- Workout Process to provide best residual value

### **2. Portfolio Based Management**

- Use of a Portfolio Credit Risk metric with structural model support
- Risk/Reward optimization process

### **3. Credit Spreads and Sales**

- Loss limitation targets
- Firm Sales Triggers
- Regular monitoring and assessment of Credit Spreads

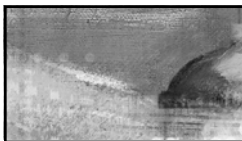
### **4. Credit Instruments**

- Uses of CDO's & other credit instruments to effect changes in credit risk retained

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## Sound Practices: Insurance risk– P&C

### **1. Underwriting Process – Set, monitor and enforce standards**

- Underwriting guidelines and enforcement
- Risk review
- Pricing
- Cycle management

### **2. Claims**

- Process for assessing claims experience & comparing to pricing expectations & process to limit losses when appropriate

### **3. Monitoring and feedback mechanism**

- Underwriting, Pricing & Claims

### **4. Catastrophe Risk**

- Exposure concentration limits, monitoring & enforcement process
- Model and process to set and update model assumptions

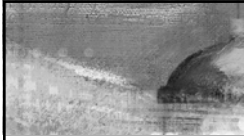
### **5. Reinsurance**

- Policy for usage of reinsurance with update as conditions change
- Process to monitor and enforce compliance with policy
- Optimizing risk-return trade-off

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## Questions?

**Laura Santori**

**Director, Enterprise Risk Management**

**Financial Services Ratings, Paris**

**Tel: + 33 1 44 20 73 20**

**E mail: [laura\\_santori@standardandpoors.com](mailto:laura_santori@standardandpoors.com)**

**David Ingram**

**Director, Enterprise Risk Management**

**Financial Services Ratings, New York**

**Tel: + 1 212 438 71 04**

**E mail: [david\\_ingram@standardandpoors.com](mailto:david_ingram@standardandpoors.com)**



## Developments in Financial Markets

- New or more active regulation (Basle, SEC, RBC, MiFid)
- Corporate governance frameworks (Sarbanes-Oxley, AML) and judicial activism with civil and criminal liabilities for directors and executive management
- New accounting rules (FAS 133, IASB 39,...)
- Increasing complexity and diversity of structures (CDO's, ABS)
- Fast pace of innovation in financial products
- Increasing size of new capital markets
  - GSE debt and MBS larger than market for US Treasury securities
  - Notional of CDS contracts is upwards of \$6 trillion
- New players (hedge funds, private equity) and new strategies
- New or increased macro-level risks
  - Price amplification feedback mechanisms (hedging of large positions)
  - Correlation convergence from cross-over products
  - Moves towards more illiquid positions
  - Hidden exposures and increased leverage levels (securitizations, CDOs)

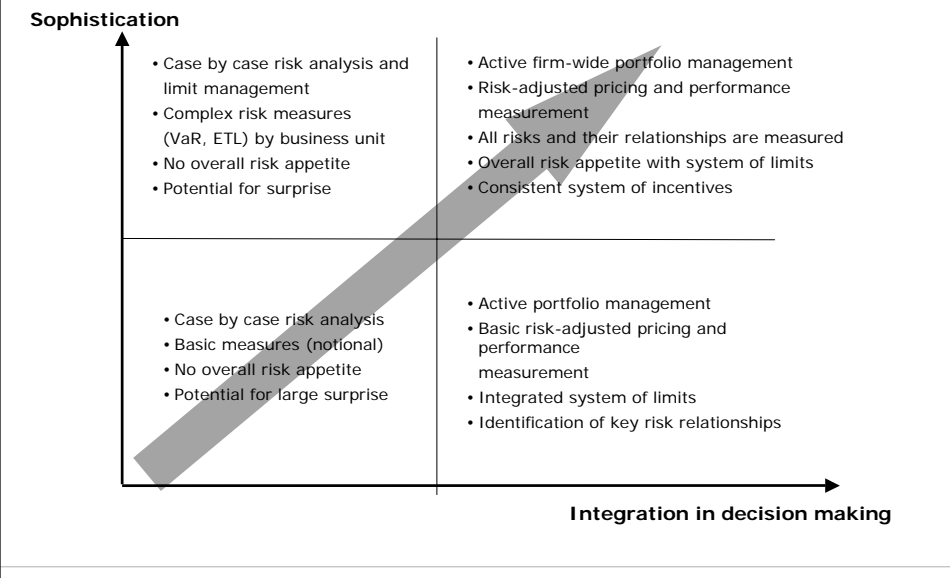
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## Trends in Risk Management

- Elevation of CRO role
- Integration of risk and strategy (risk adjusted performance measures)
- Focus on knowledge management
- Coordination of risk, compliance and regulatory
- Link of asset/business risks with liquidity and asset-liability management
- Focus on difficult to quantify risks (operational, reputational)
- Infrastructure design (capabilities in aggregation/decomposition of risks)
- Reliance on data for decision making

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## Benefits of Risk Management



## ERM Defined

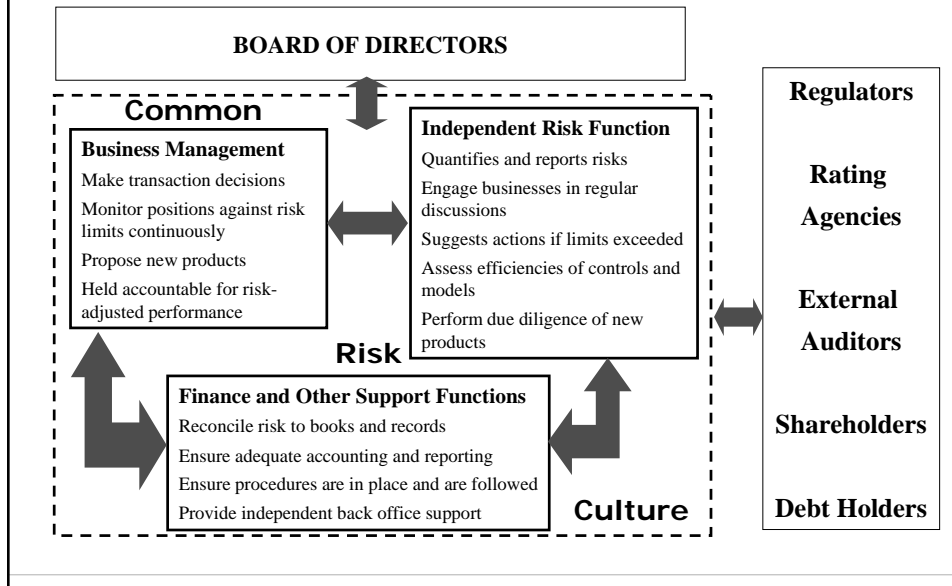
- COSO (September 2004):

Enterprise risk management is a **process**, effected by an entity's **board of directors**, management and other personnel, applied in **strategy setting** and **across the enterprise**, designed to identify potential events that may affect the entity, and manage risk to be within its risk appetite, to provide **reasonable assurance** regarding the achievement of entity objectives.

- Another view:

Enterprise risk management is that discipline which enables the firm to actually obtain, over time, the expected returns from the risks it is taking. A successful firm must always operate with a tension between order and chaos. Enough chaos for innovation and growth, balanced by order for consistency and robustness. Enterprise risk management makes chaos possible and productive.

## Process: ERM Should be Driven by Culture



## Board: ERM and Corporate Governance

- **Focus on role of the Board in risk management:**
  - The board is instrumental in designing a risk management policy which outlines the mechanisms to delegate responsibilities and to elevate issues and conflicts
  - The board establishes a Risk Management Committee (RMC), which is empowered to perform active oversight of the firm's risk management framework.
  - The board ensures that it is updated regularly on the identification of the key risks faced by the organization
  - The board helps create an overall culture that promotes risk-adjusted decision-making at all levels of the firm.
  - The board approves the risk appetite of the firm as part of the annual business plan
  - The board should make sure that the financial objectives of the firm (earnings, ROE, ROA,...) are compatible with the level of risk embedded in the business plan
  - The board or the RMC approves the list of traded products (futures, options, structured trades,...) and makes sure that the firm is adequately prepared to handle their risks
  - The board keeps track of major changes in the firm's risk profile over time (at least once every other month)
  - The board is aware of the relationships between risks and revenue drivers.
  - The board is active in reviewing large capital commitments and investments
  - The board or the RMC monitors the action plans put in place to remedy deficiencies in the key risk controls and risk systems of the firm

## Strategy: ERM is a Key Tool

<b>RISK ATTRIBUTES</b>	<b>Different</b>	<b>Compounding of Risks?</b> Risks may be inconsistent with the business model		<b>Multiple benefits or multiple threats?</b>	
		<b>Extension of Core</b> Builds on competitive advantage, somewhat higher/different risks	<b>Extension of Core</b> Extending beyond current franchise and risk attributes	<b>Diversification or Distraction?</b> No competitive advantage, possible dilution of franchise	
		<b>Core Activity</b> Same franchise and risk attributes			<b>Extension of Core</b> Similar risks but lower franchise strength
	<b>Similar</b>	<b>Similar</b>		<b>Different</b>	
		<b>FRANCHISE ATTRIBUTES</b>			

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## Implementation: ERM Models

<b>Director</b>	<b>Aggregator</b>	<b>Distributor</b>
Control and command philosophy: rules based decisions	Consensus/ Committee decision making	Strong local accountability with committee supervision
Same measures and language force fed to businesses	Different risk language and measures	Common lingua franca and integrative measures
Standard policies and procedures	Business specific and Ad hoc policies and procedures	Strong common guidelines and minimum requirements for business policies and procedures
Risk management organization essentially at core administrative center	Balance of power resides with business risk managers	Core risk management function coordinate business risk managers
Centralized risk system	Decentralized risk systems	"Hub and spoke" risk system with centralized static data and distributed risk applications

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## Reasonable Assurance: ERM Pitfalls

- **Proceduralization of risk management practices**
  - Control framework could be completely and legally defensible (in the sense of Sarbanes Oxley for instance) but utterly inefficient in terms of actual risk management because there is no place for individual judgment and no prioritization of issues.
- **Institutionalization of risk measures and reports at the expense of accountability.**
  - Excessive focus on quantification outside of context: numbers in reports cannot replace the risk narrative and opinions of experts
- **Framework imposed without buy-in of all involved in risk activities**
- **Rigid environment lacking adaptability to new conditions**
- **Insufficient learning, knowledge and communication management capability**

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## Moody's Perspective on Risk

- **Rating process already includes top level business risk assessment**
- **Detailed risk assessments enrich information set**
  - Enhance Moody's core analysis capabilities with accurate picture of issuer's risk positioning
    - Support analysts on specific risk and derivatives issues
  - Use risk picture to inform ratings of firms
    - Relative scale for competitors across sector
    - Changes for same firm across time dimension
  - Provide fixed income investors with relevant and value-adding risk discussions
- **Risk cannot be completely separated from strategic and overall financial goals**

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## The 4 Pillars of RMA

- **Risk Governance**
  1. Risk governance at board and executive management level
  2. Risk management organization and its influence
- **Risk Management**
  1. Risk control processes
  2. Risk appetite and limit setting
  3. Risk mitigation
- **Risk Analysis and Quantification**
  1. Risk quantification
  2. Risk monitoring and reporting
- **Risk Infrastructure and Intelligence**
  1. Risk infrastructure
  2. Risk intelligence

The dynamic interactions between the 4 pillars are at the center of the risk assessments. They create an actionable knowledge framework

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## Key Themes in Risk Assessments

- **Integrated and Strategic view of risks**
- **Risk culture v. risk infrastructure**
- **Timeliness and relevance of risk information**
- **Identification of hidden and potential "iceberg" risks**
  - Structured/complex/off balance sheet deals
  - Model risk
  - Gaps in operations
- **Compliance policies and procedures for product design, marketing, distribution, sales and pricing**
- **Systems integration and data integrity across business lines and risk factors (ex: static data, outsourcing)**
- **Practical implementation of operational risk tools (score cards, control self assessments and audits,...)**

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## Insurance/Reinsurance Sector

- **Integrated Risk Management**
  - Dynamic risk processes (risk appetite, limits, reporting)
  - Risk management as a separate function (CRO)
  - Interaction of risk management with product design and marketing
  - Securitization of actuarial exposures
  
- **Risk measures and data**
  - Aggregation/Decomposition of risk data and measures across risk types
  - Use of stress-testing and scenarios
  - Consistency and conservativeness of assumptions
  
- **ALM Portfolio management**
  - Asset and liabilities benchmarks
  - Investment guidelines and hedging strategies
  
- **Risk-adjusted Performance**
  - Regulatory vs. economic capital
  - Cash-flow vs. fair value
  
- **Operational and reputational risks**
  - Policies and procedures for distribution, marketing and sales
  - Model risks for complex products

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## Gold Benchmark – Risk Governance

<b>Risk Governance</b>	<p>Dynamic involvement of the board in risk appetite setting and risk controls through committees, reports and delegations of authority</p> <p>Board is fully trained in risk management and understands the risk exposures of the firm</p> <p>Risk-taking activities are completely aligned with corporate and financial objectives through a rigorous planning/budgeting process</p> <p>All risks are viewed on an enterprise-wide basis</p> <p>Clear articulation of overall risk appetite for the whole firm</p> <p>Independent, experienced, and powerful risk management organization</p> <p>Identified Chief Risk Officer for firm reporting directly to CEO and board</p> <p>Risk and compliance functions are integrated within risk group</p> <p>Strict accountability for risk taking is clear throughout the organization</p> <p>Risk policies and procedures are well disseminated and supported by an effective disciplinary system</p>
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## Gold Benchmark – Risk Management

<b>Risk Management</b>	<p>There is a disciplined and integrated waterfall of limits for all businesses</p> <p>Risk process is dynamic and managers are in constant contact with risk takers and market participants</p> <p>Risk managers are in constant communication with other support functions</p> <p>Risk mitigation tools (hedges) are used in line with overall risk appetite of the firm and are well documented</p> <p>The firm's risk management strategy is fully integrated with the regulatory, accounting and compliance constraints</p> <p>Back-office procedures and policies are rigorous and well documented. No significant backlog of confirmations is tolerated</p> <p>Risk takers are limited in the markets, instruments and time horizon that they use</p> <p>Risk management is integrated with Treasury/ Funding. Conservative liquidity assumptions are used when putting risks on</p> <p>New products and complex structures are approved separately and their risks are fully integrated with regular products</p> <p>Concentrations of same-type risks and correlated exposures are actively managed down</p>
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## Gold Benchmark – Risk Measurement

<b>Risk Measurement</b>	<p>All risks are identified and measured even if in a crude way</p> <p>The firm uses a measure of total riskiness (ex: EC) and risk-adjusted returns and transfer prices all risks</p> <p>Risk measures are adapted to the sophistication of the organization and the types of risks taken</p> <p>Statistical risk measures are always supplemented with stress-testing and scenario analysis</p> <p>The leverage and liquidity dimensions are incorporated in some form in all the measures used to monitor positions and activities</p> <p>Specialized risk measures are used to analyze one-off situations and potential structural risks</p> <p>Failures to correctly identify or measure order of magnitude of risks are always investigated and remediation is implemented</p> <p>Linkages between market, credit and liquidity risks are identified and systematically measured</p> <p>Mark-to-model exposures are systematically reviewed with model risk measured</p> <p>A systematic independent verification of the risk analytics is used to validate the relevance and efficiency of measures</p>
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## Gold Benchmark – Risk Intelligence

<b>Risk Intelligence</b>	<p>Requirements for risk management are seamlessly integrated in the technology platform and initiatives</p> <p>Risk systems enable managers to access risk data quickly and from all locations</p> <p>Risk infrastructure is optimized, minimizes the number of data sources and has routines to clean and reconcile data inputs</p> <p>The risk systems are completely aligned with the accounting platform enabling full reconciliation with P&amp;L at a very detailed level</p> <p>Risk applications enable aggregation of all risk data across geographies, regulatory entities, risk types and risk books</p> <p>Risk applications enable full decomposition of risk measures down to the lowest level</p> <p>The risk technology budget is commensurate with the objectives, the risk profile and the sophistication of the firm</p> <p>Risk reports are dynamic, timely, and include measures and risk narrative. They are readily available</p> <p>Risk knowledge is shared widely across the firm at all levels</p> <p>The firm is aware of the need for public disclosures and is a leader in establishing best practices for transparency</p>
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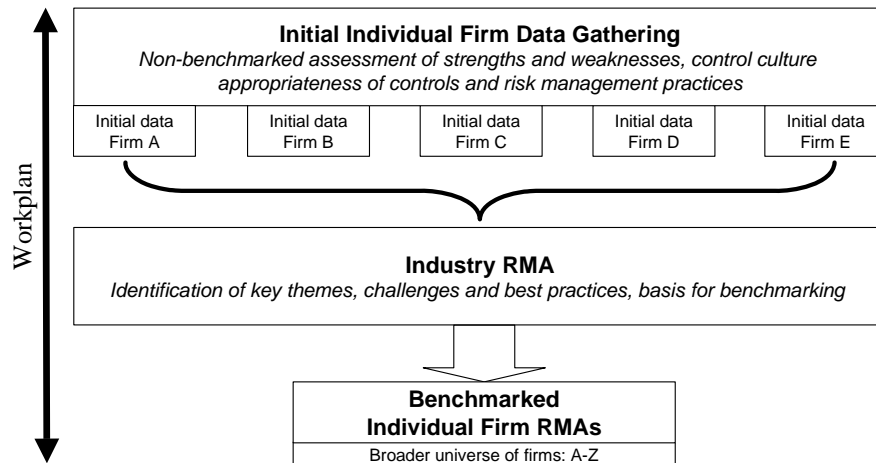
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## Practical Implementation

- **Gather preliminary information from public disclosures and Moody's previous meetings**
- **Use structured approach (work plan) from highest level (board) to Business Lines**
  - Understand organization of risk management function and extent of risk culture within firm
  - Clarify dynamics of risk decisions (appetite, mitigation, liquidation, exception reporting,...)
  - Understand internal risk communication and reporting framework
- **Focus meetings on key sensitive areas**
  - Economic capital and risk-adjusted returns
  - Risk appetite and risk limits
  - Reporting and communication framework

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## Analytical Process for RMA Reports



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## Risk Assessments and Ratings Process

- **Separate RMA process for larger institutions**
  - Deepening of Moody's/issuer relationship
  - Evolving process
- **Participation of risk specialists in rating committees**
  - Risk management capabilities qualitatively weighted against other rating drivers
  - Explicit identification of influence of risk management on credit where appropriate
- **In RMA reports, risk management categorized as strength/neutral/weakness**
  - Relative rankings within an industry
  - Overall assessment of 4 pillars = mix of quantitative and qualitative indicators.

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## **RMA Publications (Tentative)**

- **Global RMA methodology: Jul. 04**
- **Operational Risk at European Banks: Oct. 04**
- **GSE's (Industry, Fannie Mae, Freddie Mac): Dec. 04**
- **Global Securities Firms Industry Report: April 05**
- **Global Banks Industry Report: April 05**
- **Commodities Firms Industry Report: Sept. 05**
- **Special Comment on Risk Disclosures: 2Q06**
- **5 US Securities Firms Individual Reports: 2Q06**
- **Major Commodities Firms: 2Q06**
- **Major Global Banks Individual Reports: 3Q06**
- **Insurance industry: 2006**