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**Solvency II: Strategic Stakes for
the Insurance Industry**

Brussels, 14 November 2005

&

**Solvency II: Challenging Issues for
Insurance Industry**

Milan, 23 November 2005

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Layout & Distribution: Pascal Clerc & Valéria Kozakova

Enterprise risk management: S&P's new approach

Laura Santori

Strategic Risk Management
Risk Culture, Processes
Enterprise Risk Management
Risk & Financial Capital Markets
Risk Management Culture

Winds of Change for Insurers

- **The nineties: expansion financed through capital market bubbles**
- **The catastrophes and the capital market crisis: the importance of risk bearing capital analysis**
- **The new century: consolidation and refocusing**
- **Solvency II: new challenges for management on integrated risk management, value based management, transparency, new products**

Insurers are facing a new risk & regulatory environment... and need to re-examine old assumptions about risks, cost of risks, and risk adjusted capital allocation

Enterprise Risk Management is the answer

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Strategic Risk Management

Risk Control Processes
Risk & Events Management
Risk & Events Capital Models

Risk Management Culture

What is Good Risk Management?

- Identifying and **monitoring significant risks**
- Setting **risk limits** for each risk that reflect the company risk tolerances, competencies and resources
- Operating **risk management programs** that will maintain the level of risk retained by the company within the risk limits.
- Execute the risk management programs to **limit losses** to within the company risk tolerances

The product of Good Risk Management is

a controlled risk taking environment

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Strategic Risk Management

Risk Control Processes
Risk & Events Management
Risk & Events Capital Models

Risk Management Culture

Good ERM Programs

- Practicing Good 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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Strategic Risk Management

Risk Control Processes

Efficient Risk Management

Risk & Economic Capital Models

Risk Management Culture

Excellent ERM Programs

All of the characteristics of Good ERM Programs plus...

- **Developing and maintaining systems to periodically measure the capital needed to support the retained risks of the company**
- **Reflecting the risk capital in:**
 - strategic decision making,
 - product design and pricing,
 - strategic and tactical investment selection
 - financial performance evaluation

The product of excellent ERM is the optimization of enterprise risk adjusted return

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Strategic Risk Management

Risk Control Processes

Efficient Risk Management

Risk & Economic Capital Models

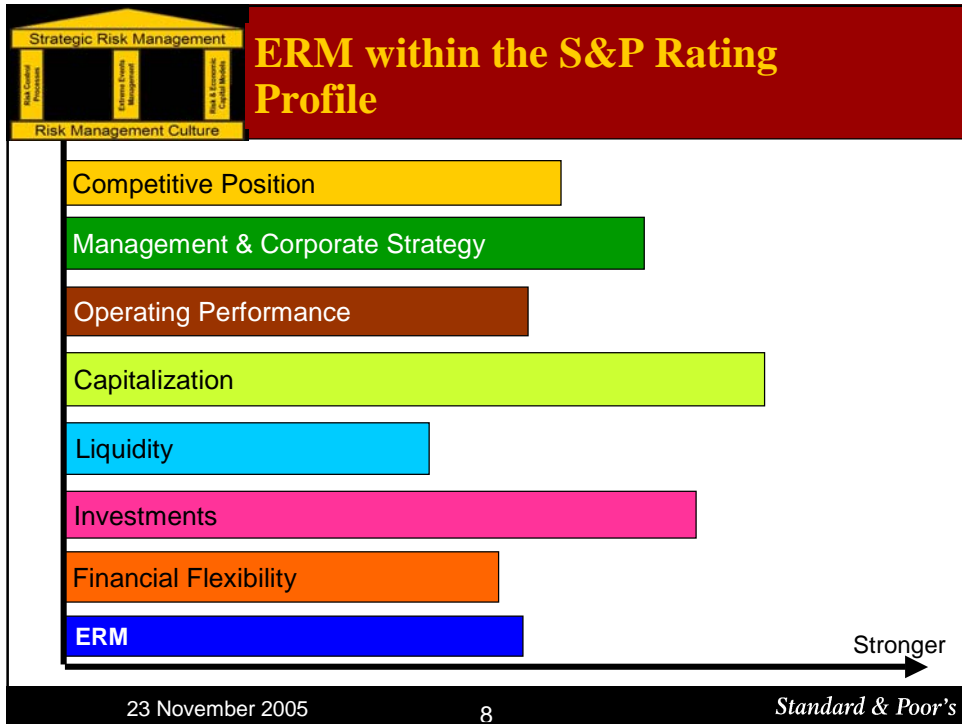
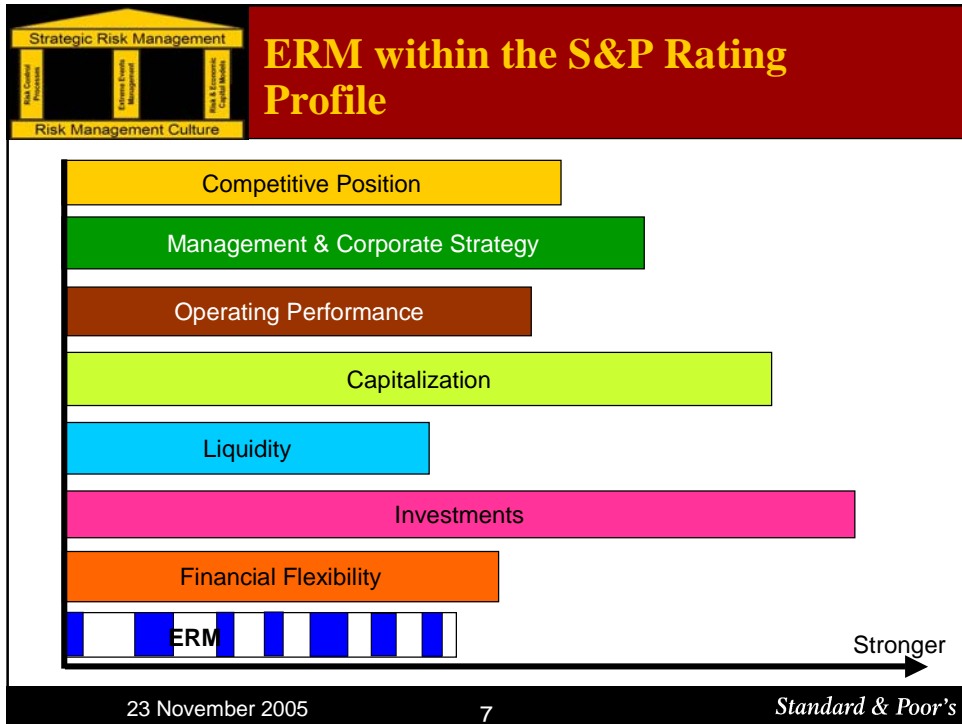
Risk Management Culture

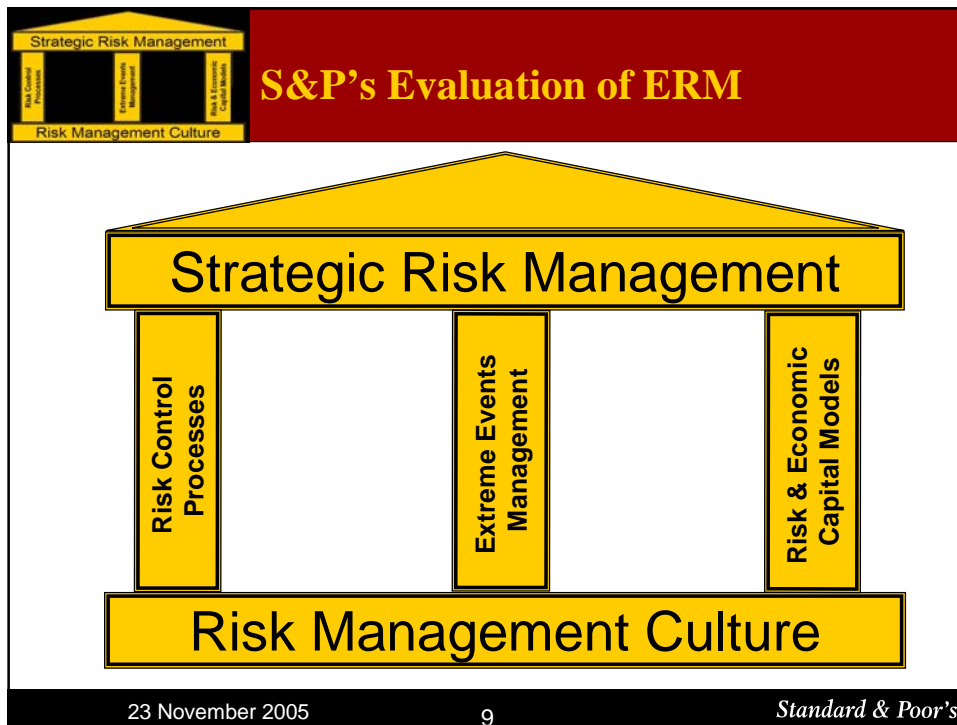
ERM within the S&P Rating Profile

Component	Relative Strength
Competitive Position	Low
Management & Corporate Strategy	Low-Mid
Operating Performance	Low-Mid
Capitalization	High
Liquidity	Low-Mid
Investments	High
Financial Flexibility	Low-Mid

Stronger →

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Risk Management Culture

Strategic Risk Management

Risk Management Culture

Risk Control Processes

Extreme Events Management

Risk & Economic Capital Models

- Reflects the Importance within the company of
 - Financial Strength
 - Exposure to risk of insolvency
 - Exposure to earnings Volatility
- Is the Awareness of risk and importance of risk management at all levels of the company
- Results in Embedding risk management concepts into every business decision
- Risk Management is integral to Corporate Management not a separate process

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Strategic Risk Management

Risk Control Processes
Risk & Events Management
Risk & Economic Capital Models

Risk Management Culture

Risk Management Culture

What will we look for?

- Corporate commitment to Risk Management
- Highly qualified risk management staff
- Regular communication with board on risks positions and risk management programs
- Clear and wide known risk management policies and procedures
- Manager's compensation is linked to the achievement of risk management objectives
- Company's governance structure supports effective risk management
- Risk measurement and monitoring is independent from risk taking and management

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Strategic Risk Management

Risk Control Processes
Risk & Events Management
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Risk Management Culture

Risk Control Process

Risk Control

Credit Risk	Market Risk	Insurance Risk	Operational Risk
Bonds	Interest Rate	Pricing/Underwriting	Distribution
Mortgage Loans	Equity Derivatives Hedging	Reserving	Process & people
Reinsurance Ceded	FX	Catastrophe	IT
Other Assets	Property Real Estate	Mortality/Longevity	Fraud & Internal Control
		Policyholder Behavior	HR
		New Product	Outsourcing
			Reputational

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Risk Control Process

What will we look for?

- Quality of risk identification
- Quality of risk monitoring
- Standards and limits for retained risks
- Enforcement of limits
- Effectiveness and execution of risk management programs

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Extreme Risks Management

What will we look for?

- **Process for Anticipating Extreme Risks**
 - Development of Extreme Risk Scenarios
 - Terrorism, Natural Disasters, Pandemic, Man-made Disasters, Stock Market Crash, Banking Crisis, Interest Rate Spike, Systemic liquidity Crisis, hyperinflation, negative interest rates, significant negative economic growth, Stagflation, Price deflation, currency exchange rate crash
 - To the extent that the risk are not core (catastrophe risk coverage)
- **Process for Envisioning Significance of Extreme Risks**
 - Stress Testing
 - Liquidity Risk Analysis


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Extreme Risks Management

- **Process for Preparing Response to Extreme Risk Situations**
 - Liquidity Crisis planning
 - Contingency Planning
- **Execution of Company in Extreme Risk Situation**
- **Company learning process from Extreme Risk Situation**
- **Environmental Scanning**
 - to provide advance signals of potential Crisis developments

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Risk & Economic Capital Models

- **Primary Risk Metrics**
 - Appropriateness of Assumptions, Methods and Models
 - Comprehensiveness of Models – Risks not covered by models
 - Effective Usage of Metrics – Acting on information – timing & magnitude of response
 - Evaluation of risk at alternate time intervals & probabilities
 - Robust process for Validating Metrics
- **Secondary Risk Metrics**
 - Determination & Usage of sensitivity metrics
 - Validation to Primary measures
- **Adequacy of Modeling Infrastructure**
 - to deliver information in actionable timeframe
 - Timely process for updating assumptions
 - Controlled process for updating Data
- **Aggregation of Risks**
 - Correlations should be based on tails not total distribution

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Strategic Risk Management

What will we look for?

- **Product Development and Pricing**
 - Role of risk and reward
 - Treatment of Risk Capital in Product Profit Analysis
 - Treatment of Aggregation effects in developing risk capital allocation to product
 - Treatment of risks other than through capital impact
- **Renewal product rate setting process – role of risk and reward**
- **Strategic Asset Allocation Process – role of risk and reward**
- **Tactical Asset Selection Process – role of risk and reward**
 - Asset Purchases and sales
- **Capital Budgeting Process**
- **Risk Adjusted Performance Measures**

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ERM Quality - Excellent

- **Extremely strong capabilities to consistently –**
identify, measure, and manage risk exposures and losses (within the insurer's pre-determined tolerance guidelines)
- **Evidence of the enterprise's consistent practice of optimizing risk adjusted returns is strong.**
- **Risk and Risk Management are always important considerations**
- **Risk Management framework in place for several years**
 - **Has successfully limited losses in adverse market situation**

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The diagram shows a house-like structure. The roof is labeled 'Strategic Risk Management'. The left pillar is 'Risk Control Processes', the middle pillar is 'Efficient Risk Management', and the right pillar is 'Risk & Economic Capital Models'. The base is labeled 'Risk Management Culture'.

ERM Quality - Strong

- **Strong capabilities to consistently –**
identify, measure, and manage risk exposures and losses (within the insurer's pre-determined tolerance guidelines)
- **Evidence of the enterprise's practice of optimizing risk adjusted returns** (but not as well developed as a firm with Excellent ERM)
 Somewhat more likely to experience unexpected losses, *outside of tolerance level*
- **Risk and Risk Management are usually important considerations**
- **Risk Management framework in place for several years**
 - Has moderated losses in adverse market situation

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ERM Quality - Adequate

- **Capabilities to –**
measure and manage most major risk exposures and losses, *but process has not been comprehensively extended to all significant risks*
- **Insurer loss/risk tolerance guidelines are less developed.**
- **Execution of its risk management program is sufficient** (but *less comprehensive than strong and excellent ERM practices*)
- **Unexpected losses more likely to occur** *especially in areas outside scope of existing risk management*
- **Risk and Risk Management are often important considerations**
- **Risk Management framework in place for several years**


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ERM Quality - Weak

- **Limited capabilities to consistently –**
 identify, measure, and manage risk exposures, and limit losses
- **Sporadic implementation of risk management program**
- **Losses not expected to be limited *in accordance with a set of pre-determined risk/loss tolerance guidelines.***
- **Risk and Risk Management are sometimes considered**
- **Risk Management framework**
 - **Not adopted** or
 - **Solely satisfy regulatory minimums** or
 - **Was adopted very recently**

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Conclusions & Implementation

- **Taking risks is a fundamental part of business definition for insurance companies**
- **All companies need to have capabilities to limit their risk exposures and losses to within appropriate tolerances**

But...

- **Importance of ERM in the company rating is based on:**
 - Capacity to absorb losses
 - Complexity of risks
- **A insurer that has unusual or complex risks**
 - ERM is very important
- **A insurer that takes few unusual or complex risks**
 - ERM is not as important

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The diagram shows a yellow structure with a triangular top labeled 'Strategic Risk Management'. Below it are three vertical bars labeled 'Risk Control Processes', 'Risk & Credit Management', and 'Risk & Compliance Capital Models'. The base is labeled 'Risk Management Culture'.

Conclusions & Implementation

Phase 1:
“Evaluating The Enterprise Risk Management Practices of Insurance Companies”, published 17 October 2005

Phase 2:
Detailed analysis including model evaluation: new criteria in 2006

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