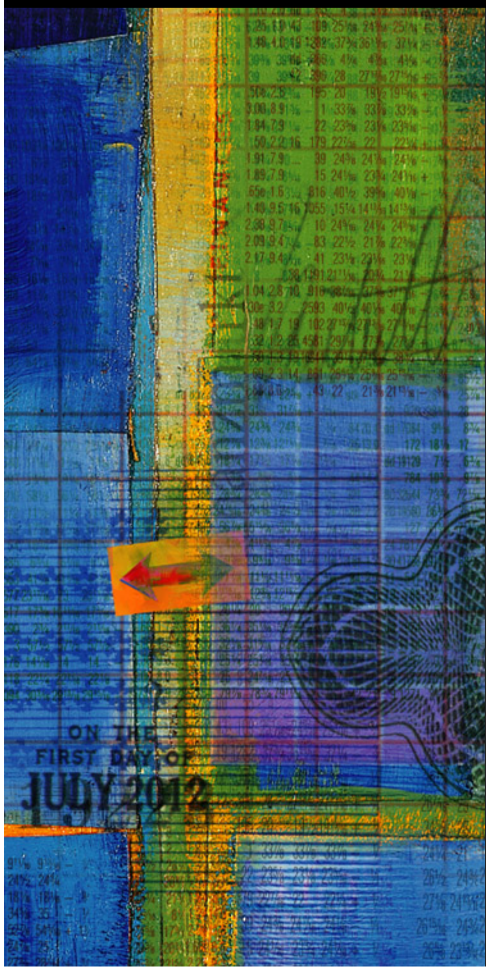
STANDARD & POOR'S



Enterprise Risk Management: S&P's new approach

Laura Santori

Milan, November 23nd 2005

The McGraw-Hill Companies

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

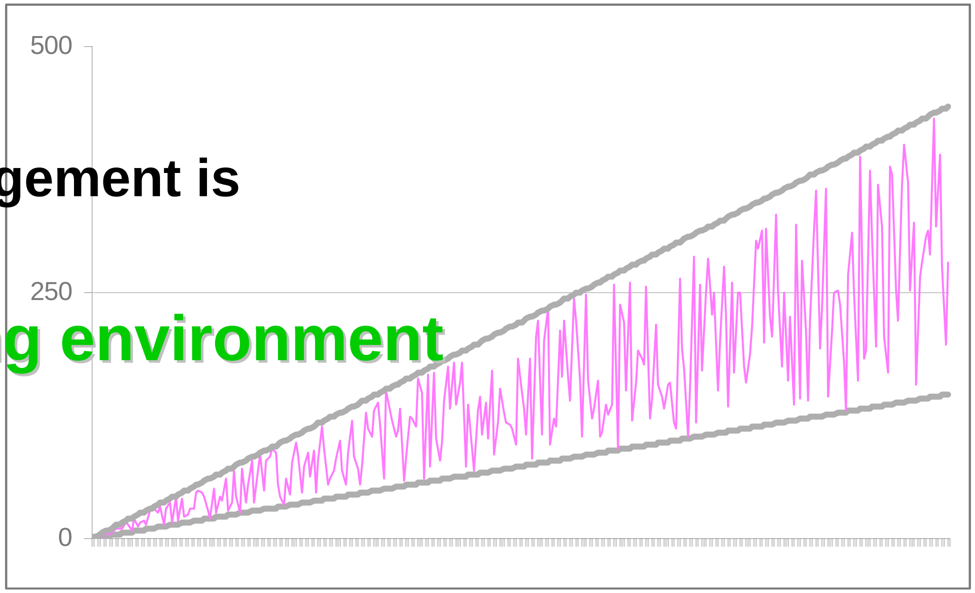
Enterprise Risk Management is the answer

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



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**

Excellent ERM Programs

All of the characteristics of Good ERM Programs plus…

- **Developing and maintaining systems to periodically measure the <u>capital</u> 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 <u>optimization</u> of enterprise <u>risk adjusted return</u>

Strategic Risk Management

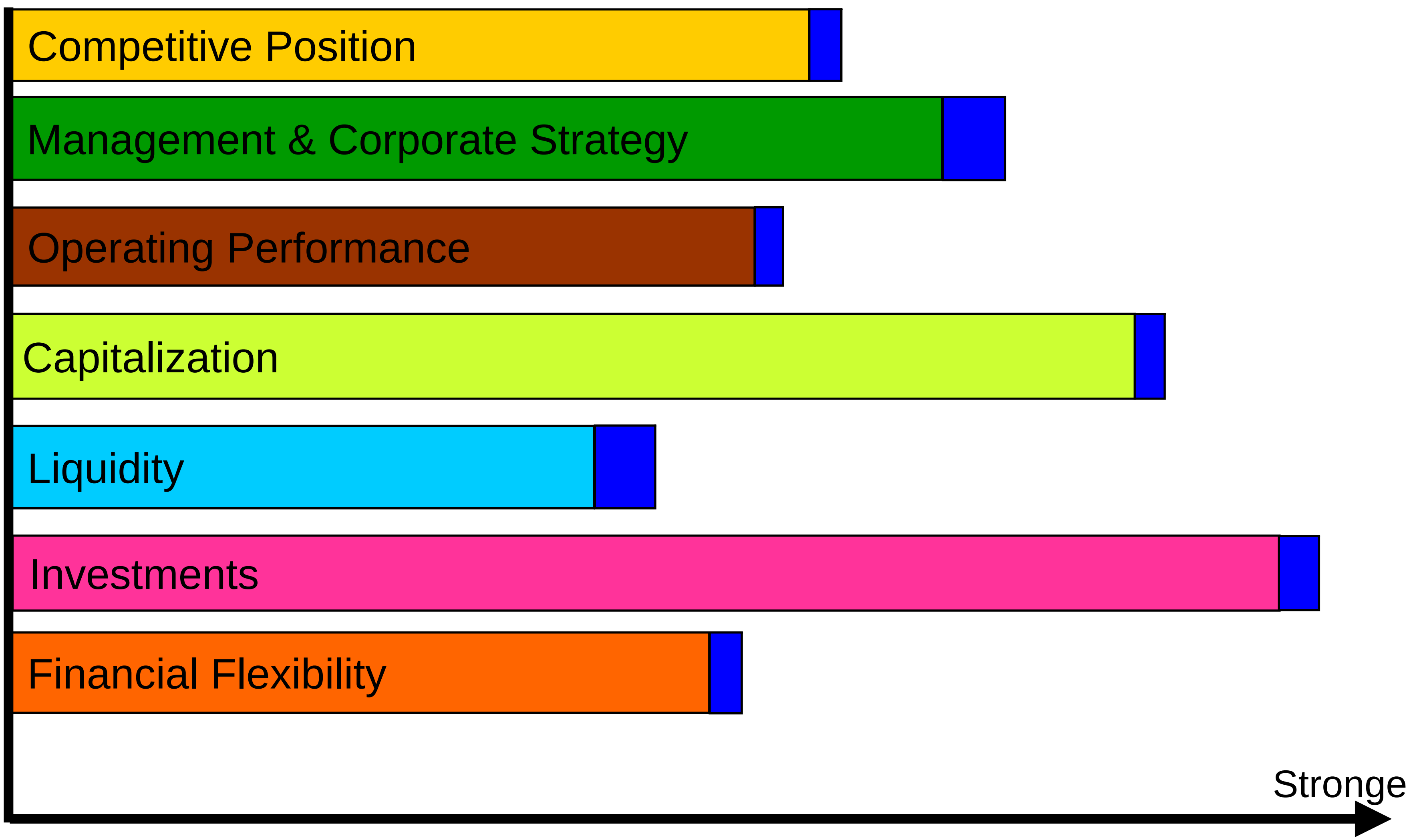
Risk Control Processes

Extreme Events Management

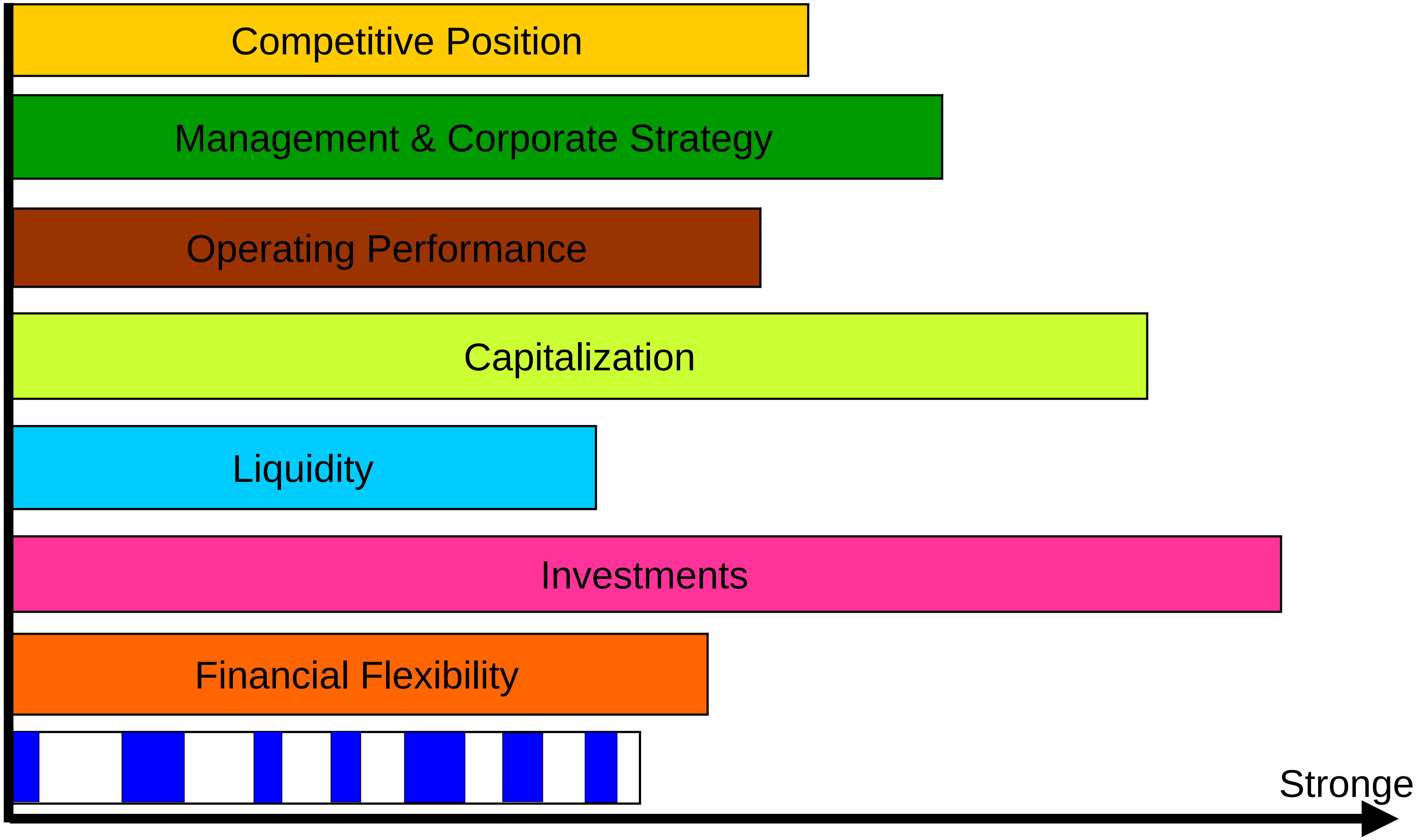
Risk & Economic Capital Models

Risk Management Culture

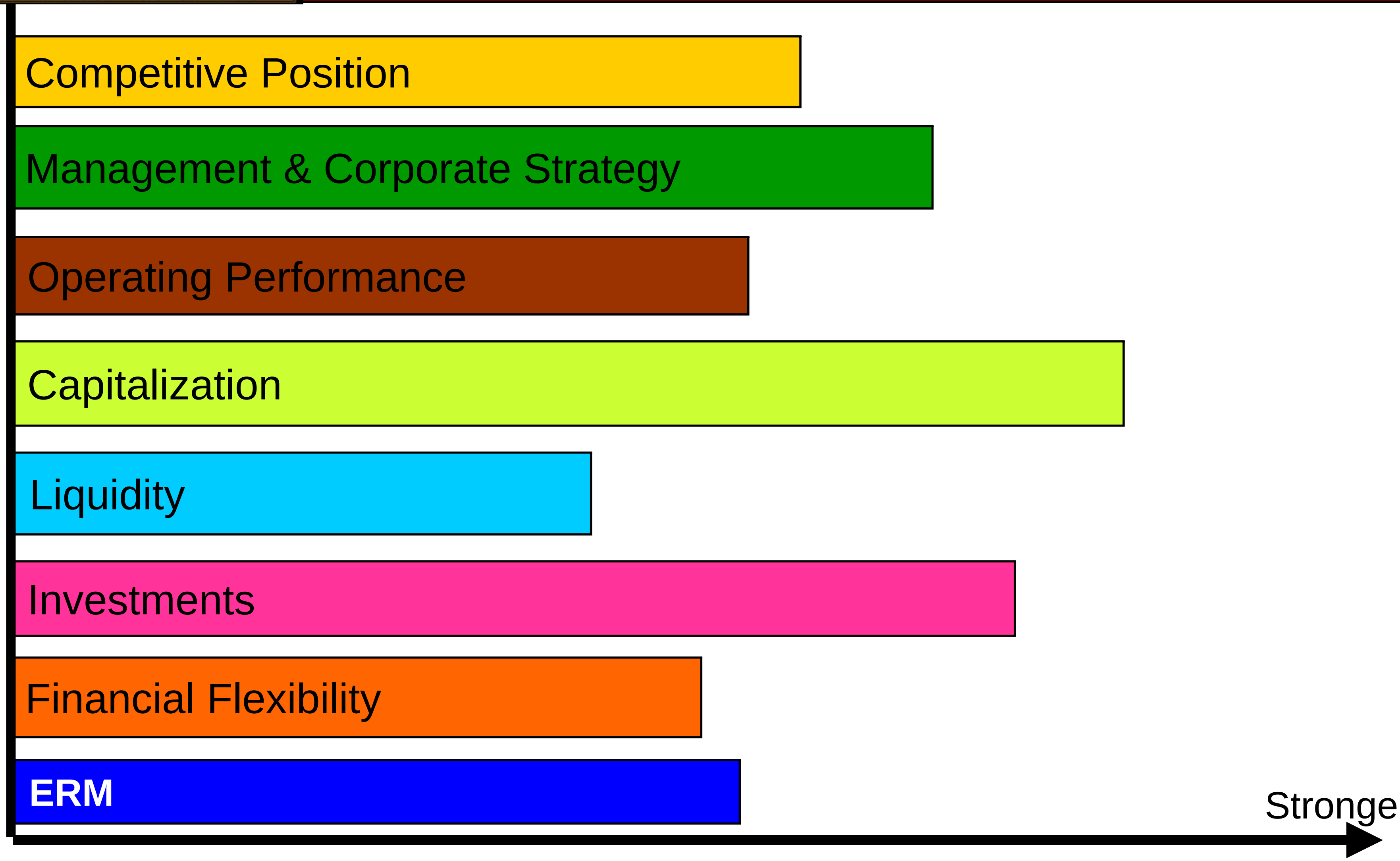
ERM within the S&P Rating Profile



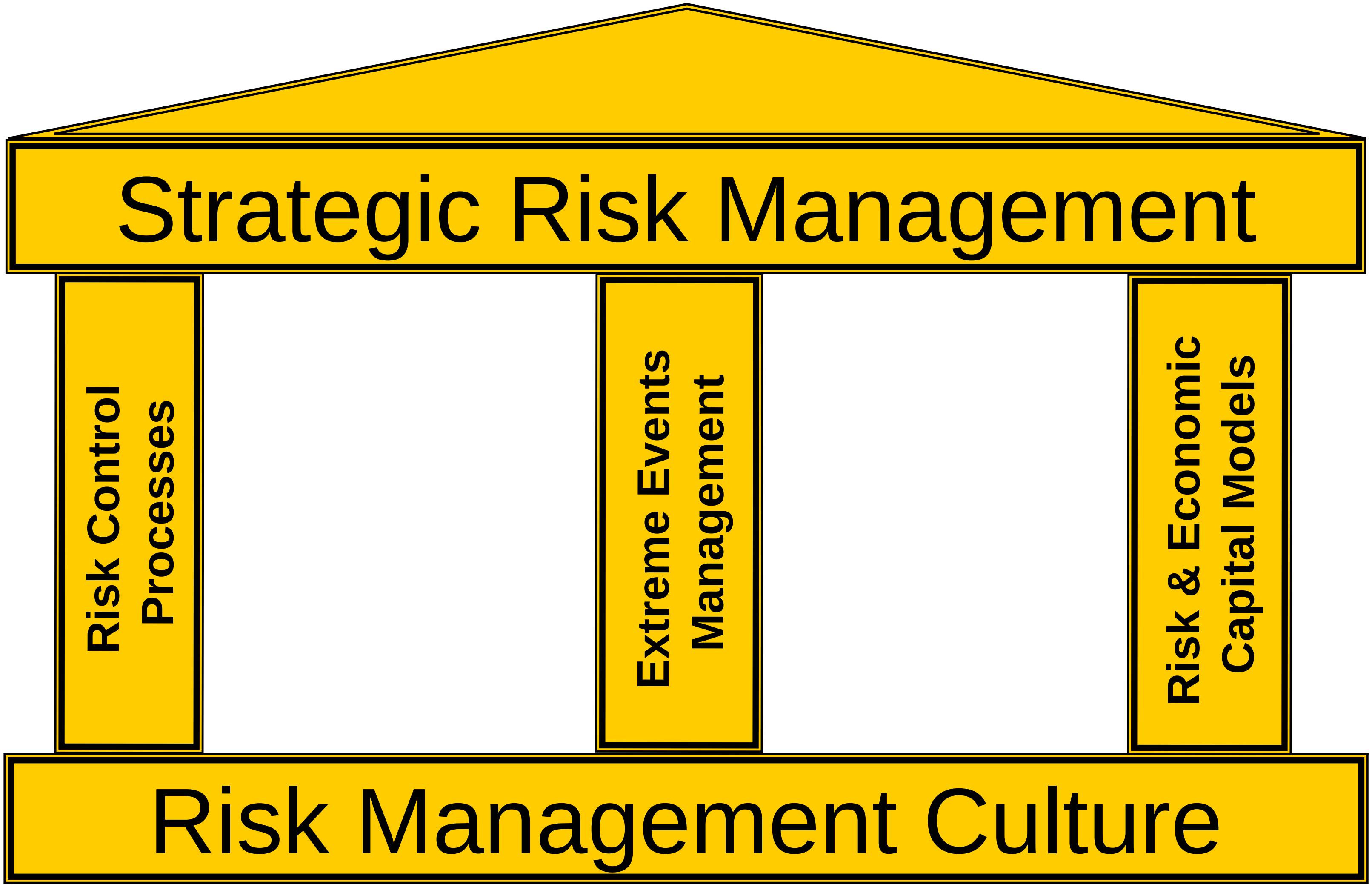
ERM within the S&P Rating Profile



ERM within the S&P Rating Profile



S&P's Evaluation of ERM



Risk Management Culture

- **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**

Risk Management Culture

What will we look for?

- **Corporate committment 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**

Strategic Risk Management

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

Risk Management Culture

Risk Control Process

Risk Control

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

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**

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

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

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

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**

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**

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**

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**

ERM Quality - Weak

- **Limited capabilities to consistently –**

  <u>identify</u>, <u>measure</u>, and **<u>manage</u>** 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**

Conclusions & Implementation

- **Taking risks is a fundamental part of business definition for insurance companies**
- **All companies need to have capabilites 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

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

Questions?

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