



Linkage of Risk, Capital, and Financial Management

CAS and SOA Spring 2008 Meeting –
Joint Day of the SOA, CIA, CAS, and IAA
June 18, 2008

ADVISORY

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Table of Contents

- Why Linkage?
- Linkage – What Is It?
- **Benefits and Challenges**
- Linkage – Effective Practices
- Just Starting Out?
- **Beyond Linkage – Performance Management and Risk Management**



Why Linkage?

- Research report commissioned by Joint CAS-CIA-SOA Risk Management Research Team.
- Explore the general principles, processes, and frameworks that would enable companies to enhance integration of risk, capital, and financial management.
- Access the research:
 - <http://www.casact.org/research/erm/linkage.pdf>
 - <http://www.soa.org/files/pdf/linkage-rm.pdf>



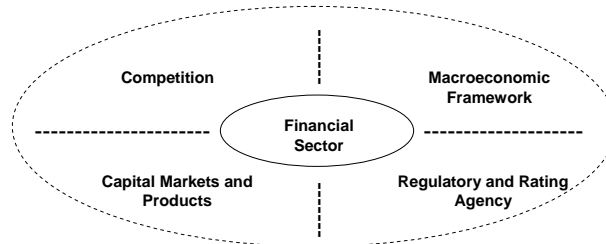
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2

Why Linkage?

- Changing Environment

The Financial Sector has been undergoing dramatic change...



...stakeholders in the insurance sector are demanding better risk management, more transparency, higher returns.

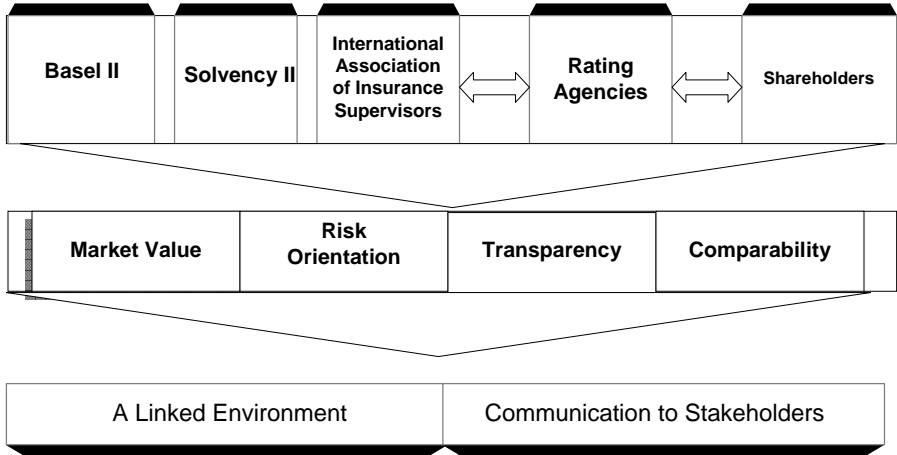


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3

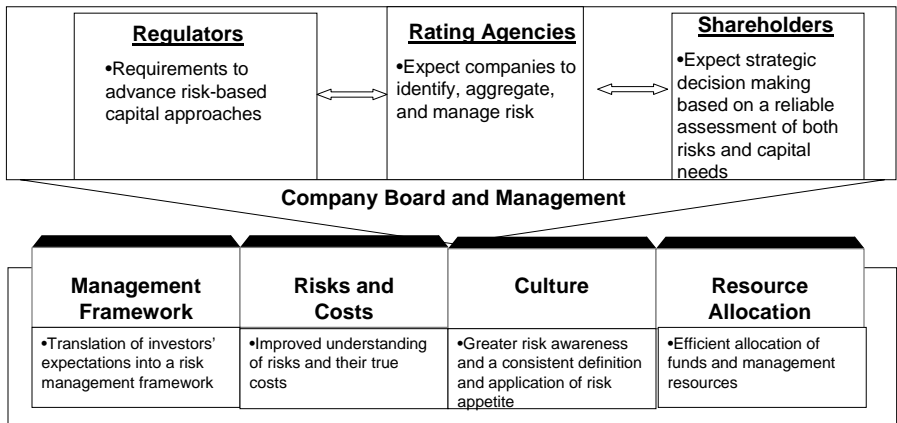
Why Linkage?

– External stakeholders see linkage as best practice.



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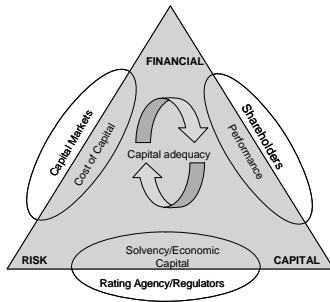
Why Linkage?



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Linkage – What Is It?

HOLISTIC STATE – RISK ADJUSTED VALUE MANAGEMENT

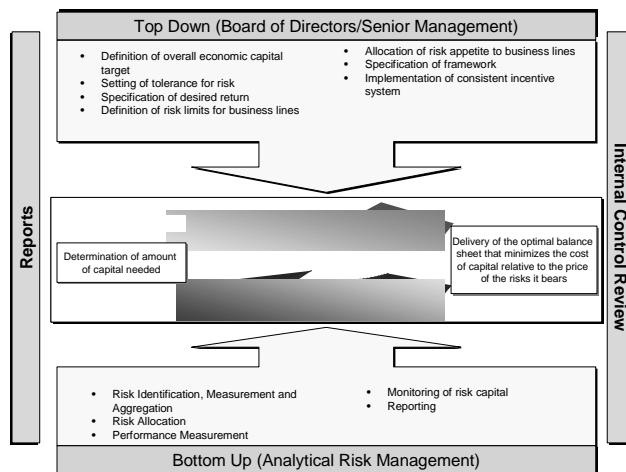


- ◆ Risk management – the discipline by which an organization identifies, assesses, controls, measures, and monitors various risks and opportunities for the purpose of achieving the entity's strategic and economic objectives.
- ◆ Capital management – the discipline by which an organization manages the capital requirements needed to satisfy regulatory and rating agency requirements as well as management tolerance for risk, economic constraints, and performance objectives for the overall organization including the deployment of the capital to the individual business units.
- ◆ Financial management – the discipline by which an organization evaluates its performance utilizing risk-adjusted measures that reflect returns, capital consumption, and volatility on an overall and individual business unit basis.



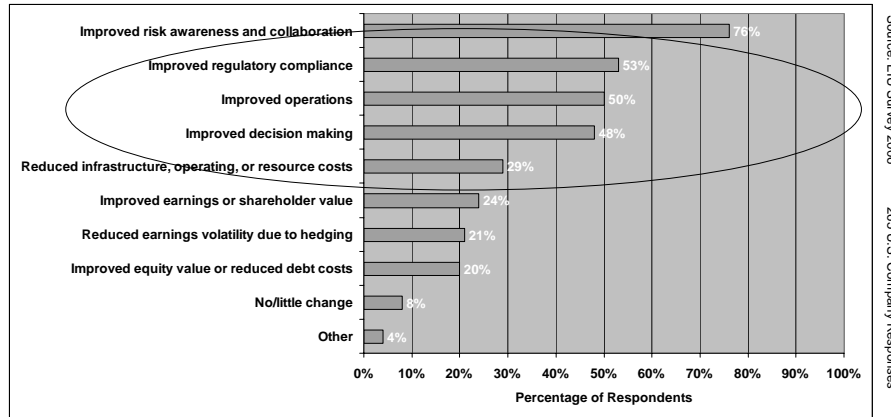
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Linkage – What Is It?



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Benefits



2006 EIU survey of 265 U.S. companies reflects early stages of implementation for many companies.



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Benefits

- Improved understanding of risks and true costs of such risks to the organization
 - Impact on capital, on financial performance
- Ability to measure contribution of business units and functions to overall organization in a consistent manner
- Embedding linkage into overall organization, with enhanced insights into risks and rewards
 - Education and communication
- Reducing volatility in cash flows, capital needs, financial returns commensurate with risks assumed → theoretical?
- Satisfying stakeholders by creating balance between growth, desired returns, and risks in a transparent manner
- Increasing management accountability by linking risks taken with value received



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Challenges

- **Cultural change**
 - Buy-in from senior management, from risk owners
- **Defining risk appetite of the organization**
- **Resource constraints**
 - Time and money
 - Technology
- **No common approach in industry for measuring risk or measuring performance**
- **Integration of multiple capital requirements → regulatory, rating agency, management**



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Linkage – Effective Practices

- **Development of Corporate Oversight Committee**
 - Senior management commitment to implementation
 - The top-down perspective
- **Development of Framework**
 - Consistent terminology and definitions
 - Risk appetite, performance measures



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11

Linkage – Effective Practices

- Risk Identification and Assessment
 - Includes risk aggregation
 - Models/methods likely quantitative and qualitative
- Actual Linkage
 - Economic capital
 - Risk adjusted financial metrics
 - Consistency



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12

Linkage – Effective Practices

- Education and Communication
 - Encouraging a risk-aware environment
- Monitoring
 - Periodic status reports
 - Triggers for action



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13

Just Starting Out?

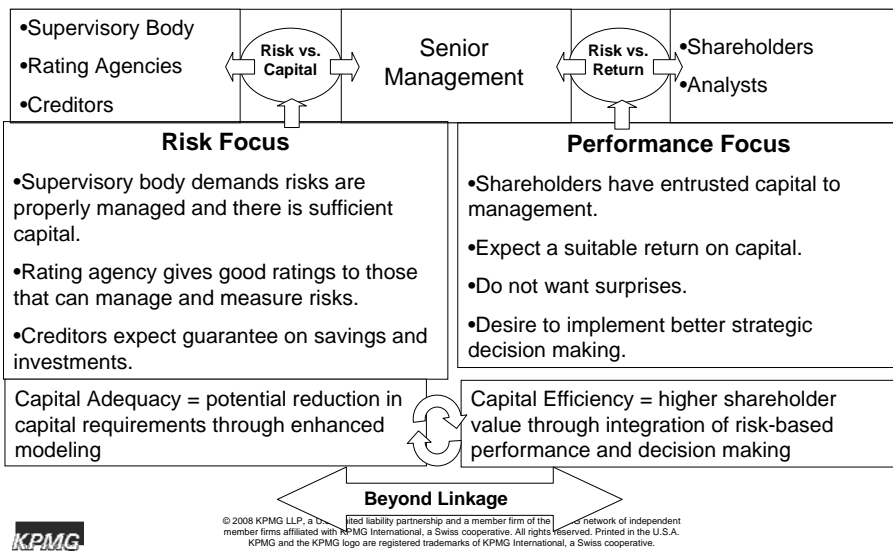
- Buy-in and direction from senior management and Board of Directors
 - All levels with opportunities to shape the process
- A well-defined framework that links risk, capital, and financial management
 - Standardization
 - Monitoring
- Certain components of the process are already in place
- Keep it simple
- Be aware of best practices but realize there are no right answers



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14

Beyond Linkage – Performance Management and Risk Management

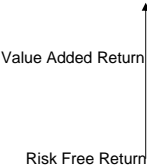


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15

Beyond Linkage – Performance Management and Risk Management

- Business management and planning often focused on seeking higher returns



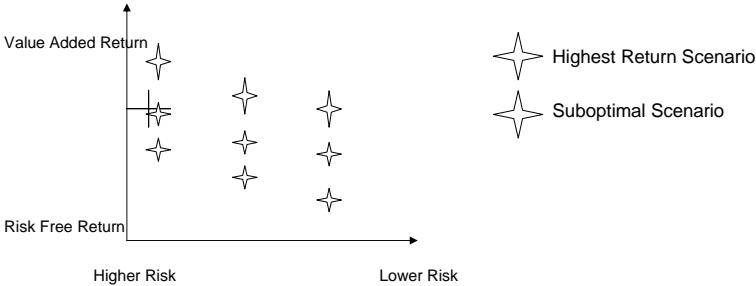
- Risk management focused on defining, prioritizing, leveraging, and managing risk, on the risk continuum



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Beyond Linkage – Performance Management and Risk Management

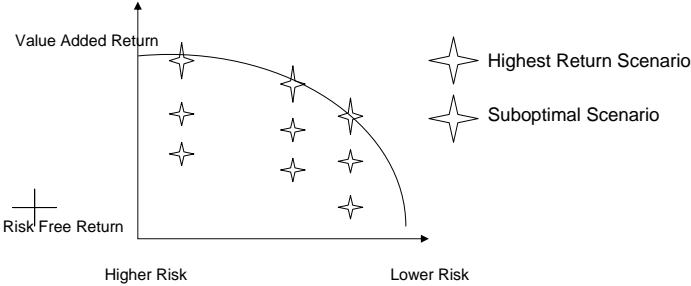
- Integrating performance management and risk management involves process of defining the optimal level of return for a given risk tolerance
- Run scenarios to obtain highest return for given level of risk



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Beyond Linkage – Performance Management and Risk Management

- The collection of points with the most efficient usage of capital = “efficient frontier” or “performance frontier”



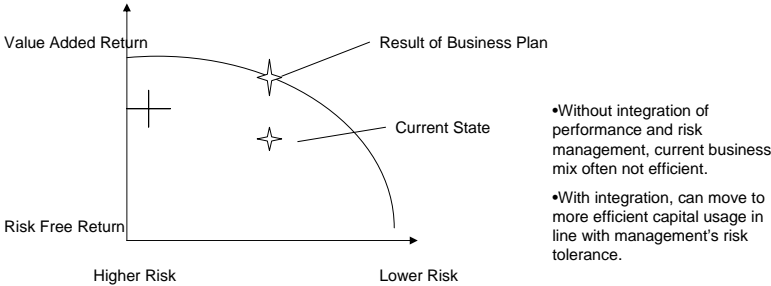
- The diagram shows two factors, risk and return, for simplicity. In actual modeling, many variables would be considered, with the most favorable scenarios determined based on management criteria.



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Beyond Linkage – Performance Management and Risk Management

- Business plans can now take into account resulting economic capital needs
 - Adjust for business mix, reinsurance, layers, and limits to get favorable business outcome
 - Both profitability and resulting economic capital can be considered over multiple scenarios



•Without integration of performance and risk management, current business mix often not efficient.
 •With integration, can move to more efficient capital usage in line with management’s risk tolerance.



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Beyond Linkage – Performance Management and Risk Management

- Practical Applications and Considerations
 - Underwriting and product development
 - Potential returns at various pricing levels
 - Levels of uncertainty: claims, lapse rates, supply/demand, etc.
 - Stage in underwriting cycle
 - Sales strategies and distribution channels
 - Competition
 - Underwriting authority levels
 - Agent compensation/commission structure



Beyond Linkage – Performance Management and Risk Management

- Practical Applications and Considerations (cont'd)
 - Risk mitigation strategies, e.g., reinsurance, hedging, investments
 - Potential returns relative to given strategies
 - Levels of uncertainty: claims, credit, liquidity, etc.
 - Diversification impact on risk
 - Mergers and acquisitions
 - Required economic capital of target
 - Reserving risk
 - Risk based expense structure
 - Growth potential
 - Diversification benefit of target



Beyond Linkage – Performance Management and Risk Management

- Practical Applications and Considerations (cont'd)
 - Business performance and management remuneration
 - Performance metrics – risk adjusted vs. plan



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22

– Questions/Comments?



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23



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