Enterprise Risk Management & Strategy

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Quote of the Day

"One thing a person cannot do, no matter how rigorous his analysis or heroic his imagination, is to draw up a list of things that would never occur to him."

Thomas Schelling

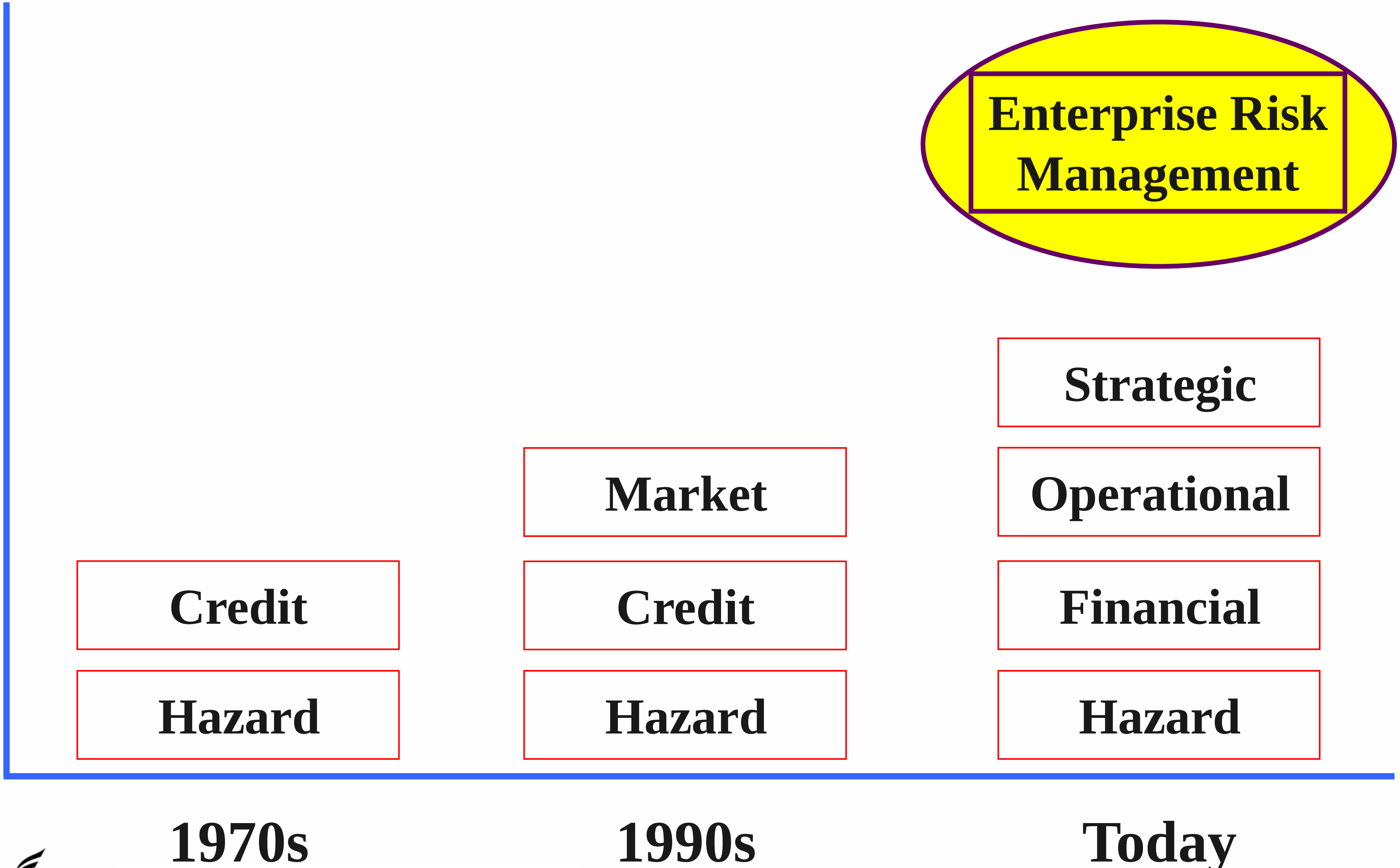
What is ERM

- ERM 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 risks to be within its risk appetite,
  - to provide reasonable assurance regarding the achievement of entity objectives.
    - (COSO 2004) Institute of Internal Auditors - Committee of Sponsoring Organizations

A New Paradigm

- A new paradigm: from silo to integration
  - Not managing risk in silos but in an integrated, holistic approach—enterprise wide
  - Includes both the upside (opportunity) and downside (risk)
- People involved:
  - All levels: Executive management and Operating layers of management
  - ERM links to Business Continuity of the Enterprise

Evolution of Risk Management



Risk Framework

- Strategic Risk - examples include risks related to strategy, political, economic, regulatory (compliance), and global market conditions; also could include reputation risk, leadership risk, brand risk, and changing customer needs
- Operational Risk - risks related to the organization's systems, processes, technology, and people; compliance
- Financial Risk - includes risks from volatility in foreign currencies, interest rates, and commodities; also could include credit risk, liquidity risk and market risk
- Hazard Risk - risks that are insurable such as natural disasters; various insurable liabilities; impairment of physical assets; terrorism

Source: Walker, Shenkir, Barton, *ERM: Pulling It All Together*, IIARF, 2002, p. 3.

Two Views of Risk

- INHERENT RISK – Level of risk that resides prior to mitigation action

- RESIDUAL RISK – Level of risk that remains after mitigation action

Risk Identification Techniques

- Internal interviewing and discussion:
  - interviews, questionnaires, brainstorming, Self-assessment and other facilitated workshops, SWOT analysis (strengths, weaknesses, opportunities, and threats)

- External sources:
  - comparison with other organizations, discussion with peers, benchmarking, risk consultants

- Tools, diagnostics and processes:
  - checklists, flowcharts, scenario analysis, value chain analysis, business process analysis, systems engineering, process mapping

    - Adopted from AICPA, Managing Risk in the New Economy, p. 9

Business Risk Model™ – A Common Language

Environment Risk

Competitor | Sensitivity | Shareholder Relations | Capital Availability
Catastrophic Loss | Sovereign/Political | Legal | Regulatory | Industry | Financial Markets

Process Risk

Operations Risk	Empowerment Risk	Financial Risk	Information Processing/ Technology Risk	Integrity Risk
Customer Satisfaction	Leadership	Currency	Access	Management Fraud
Human Resources	Authority	Interest Rate	Integrity	Employee Fraud
Product Development	Limit	Liquidity	Relevance	Illegal Acts
Efficiency	Performance Incentives	Cash Transfer Velocity	Availability	Unauthorized Use
Capacity	Communications	Derivative		Reputation
Performance Gap		Settlement		
Cycle Time		Reinvestment/Rollover		
Sourcing		Credit		
Commodity Pricing		Collateral		
Obsolescence/Shrinkage		Counterparty		
Compliance				
Business Interruption				
Product/Service Failure				
Environmental				
Health and Safety				
Trademark/Brand Name Erosion				

Information for Decision-Making Risk

Operational	Financial	Strategic
Pricing	Budget and Planning	Environmental Scan
Contract Commitment	Completeness and Accuracy	Business Portfolio
Measurement	Accounting Information	Valuation
Alignment	Financial Reporting Evaluation	Measurement
Completeness and Accuracy	Taxation	Organization Structure
Regulatory Reporting	Pension Fund	Resource Allocation
	Investment Evaluation	Planning
	Regulatory Reporting	Life Cycle

The Economist Intelligence Unit, *Managing Business Risk*, p. 15

Qualitative and Quantitative Approaches to Assessment and Measurement

Qualitative:

Risk identification
Risk rankings
Risk maps with impact and likelihood
Risks mapped to objectives or divisions
Identification of risk correlations

Qualitative/Quantitative:

Validation of risk impact
Validation of risk likelihood
Validation of correlations
Risk corrected revenues
Gain/loss curves
Tornado charts
Scenario analysis
Benchmarking
Net present value
Traditional measures

Quantitative:

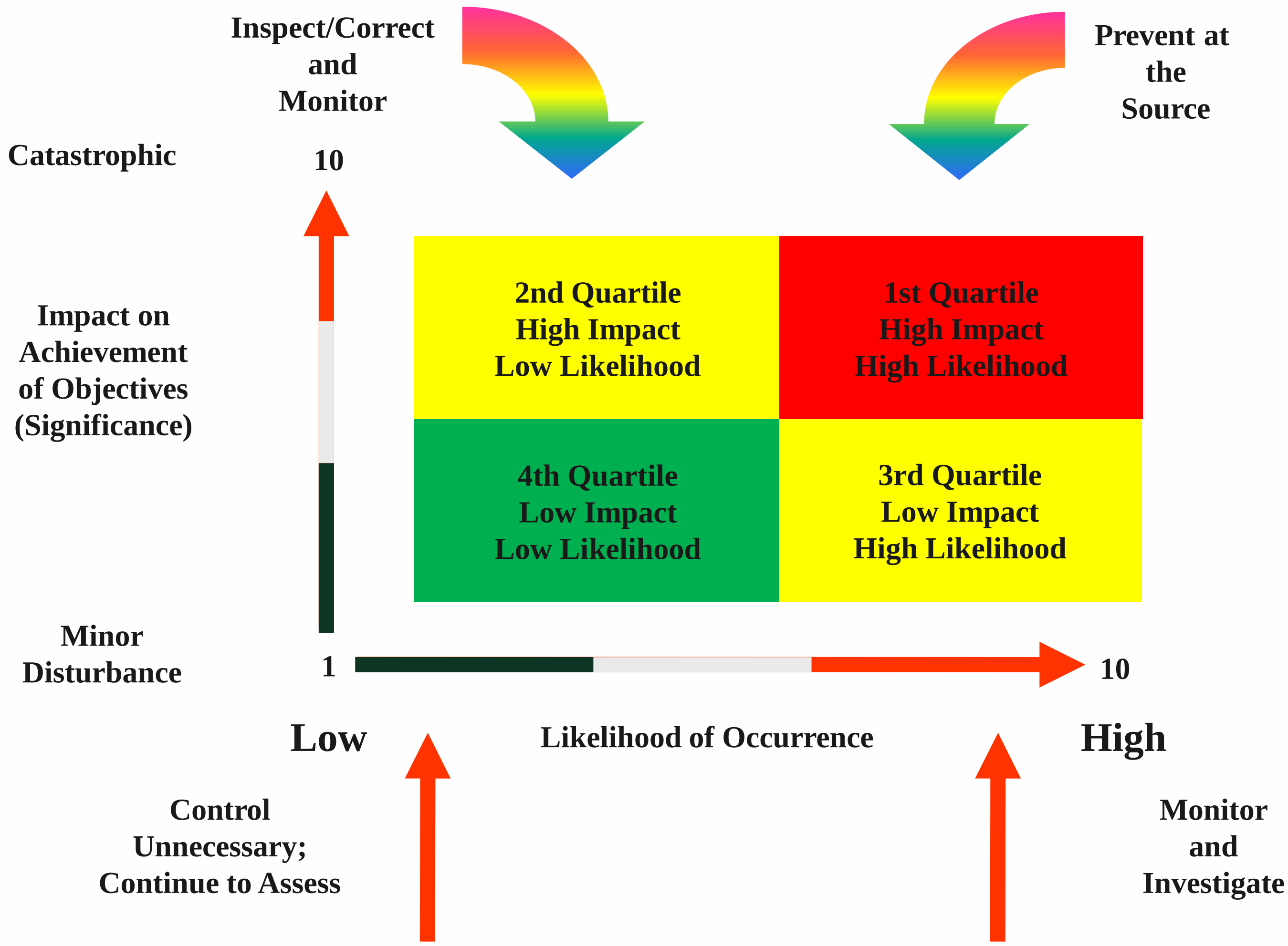
Probabilistic techniques:
- Cash flow at risk
- Earnings at risk
- Earnings distributions
- EPS distributions

Level of difficulty and amount of data required

Source: Shenkir and Walker, *ERM: Tools and Techniques for Effective Implementation*, IMA, 2007, p. 12.

Risk Management: Assessing Impact and Likelihood of Occurrence

Adapted From The Economist Intelligence Unit, *Managing Business Risk*, p. 30 and Deloitte & Touche, *Perspectives on Risk*, p. 13



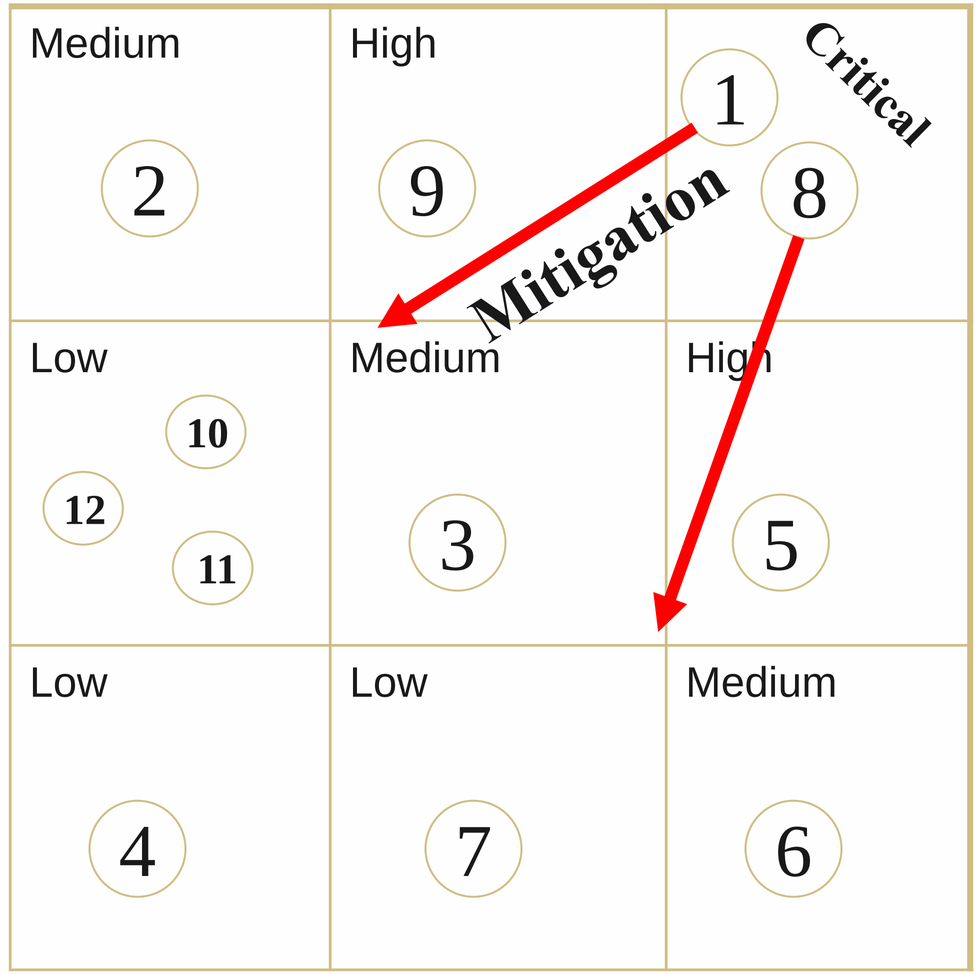
Risk Mapping

Impact on Strategic Objective

Critical
(> 20%)

Major
(5 – 20%)

Manageable
(< 5%)



Remote
(< 10%)

Possible
(10 – 50%)

Likely
(> 50%)

Likelihood

Risk Mapping

Severity of Impact		?		Probability of Occurrence				
	Critical	> $15 M	5					
	High	$10 – 15 M	4					
	Moderate	$5 – 10 M	3					
	Low	$1 – 5 M	2					
	Not Significant	< $1 M	1					
	Annualized impact measured in terms of ? Probability measured over a one year time horizon			1	2	3	4	5
				< 10%	10 – 30%	30 – 60%	60 – 90%	> 90%
				Slight	Not Likely	Likely	Highly Likely	Expected

Robin Hood Case

- Applying the ERM techniques

Linking ERM And Strategy

- ERM is a process,
  - "applied in strategy setting and across the enterprise" (COSO, 2004)

Linking ERM to Strategy

- "Strategy that lacks alignment to risk management is not only insufficient but downright dangerous…Risk management is pointless unless it is closely tied to the company's strategic objectives."
  - T. Nagumo, Bank of Tokyo-Mitsubishi Balanced Scorecard Report (Sept.-Oct. 2005)