Enterprise Risk Management Lessons, Trends & Laws

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Lessons from the Field

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ERM Definition

- 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 Fall 2003

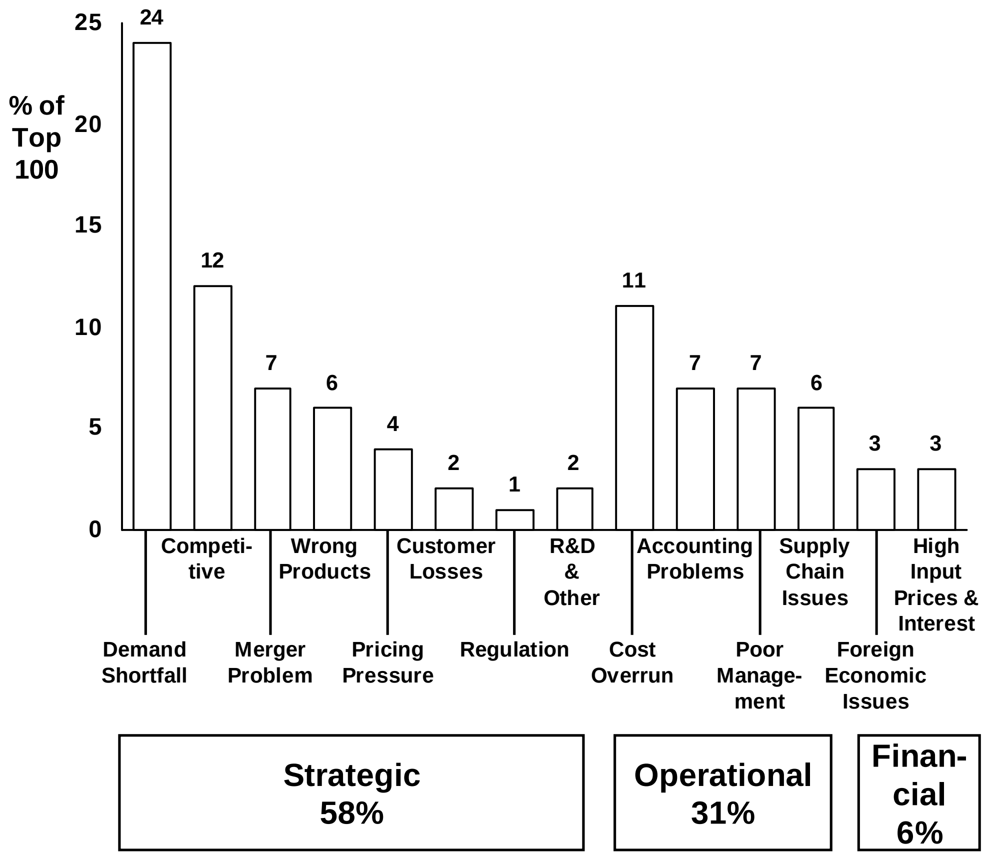
There are knowns, known unknowns, and unknown unknowns.

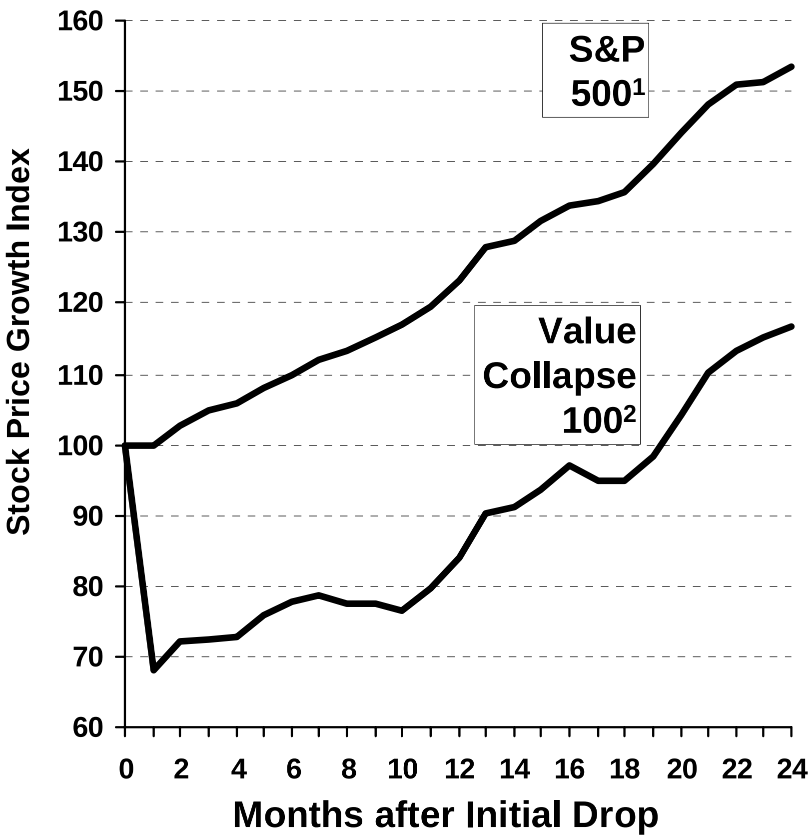
Author unknown

Strategic Risk: Value Collapse in The Fortune 1000

- Studied Fortune 1000 between 1993-98
- Ten percent of the Fortune 1000 lost over 25% of shareholder value within a one-month period. Even after two years, the Value Collapse 100 had not recovered.
- Most of these losses can be attributed to ____________ risk.

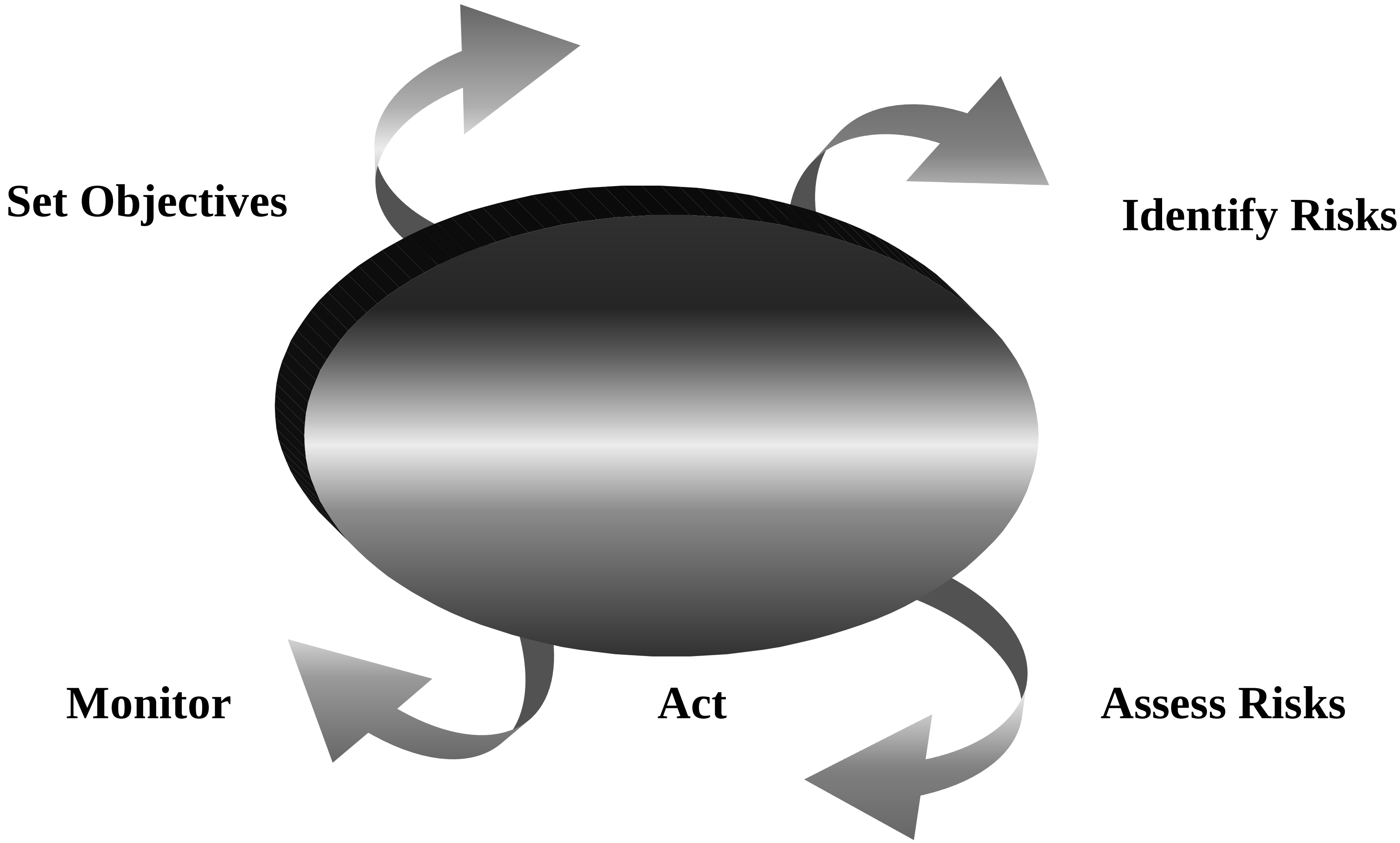
Strategic Risk: Value Collapse in The Fortune 1000





Source: Mercer Value Growth Database, Mercer analysis.
Note: [1]S&P 500 index is the sum of the S&P indexes corresponding to time period for each of the 100 companies. suffering stock drops.
[2]Data was not available for all companies for all 24 months after the stock drop (e.g., for stock drops in the last two years. Where data was not available, companies were excluded from that month for both the 100 companies. index and the S&P 500 index.

The ERM Process



The Management Challenge: Four Barriers to Strategy Execution

The Vision Barrier

Only 5% of the workforce understands the strategy

The People Barrier

Only 25% of managers have goals/incentives linked to strategy

9 of 10 companies fail to execute strategy

The Management Barrier

85% of executive teams spend less than one hour per month discussing long-term strategy

The Resource Barrier

60% of organizations don’t link budgets to strategy


DILBERT By Scott Adams
DOGBERT CONSULTS
IT'S EASY TO CREATE A STRATEGY.
scottadams@aol.com
www.dilbert.com
WRITE DOWN EVERY-THING YOU DO, PRECEDED BY THE PHRASE, "INCREASE OUR MARKET SHARE BY..."
© 2001 United Feature Syndicate, Inc.
WHAT IF WE CHANGE WHAT WE DO?
CALL ME AND I'LL SELL YOU SOME MORE VALUABLE ADVICE.

Wal-Mart’s ERM Process

Enterprise Risk Management

Business Vision	Business Objective	Risk Framework	Identify Risk Universe	Risk Workshop	Control & Action Workshop	Monitor Evaluate Manage
Market Share Respect Individual Service to Customer Strive for Excellence	Expansion Opportunity Distribution Customer Service Retention Development Leadership	Categorize Risk Standard Framework Reference	Survey Stakeholders Compile Data Share Data Schedule Workshop	Cross Divisional Discussions Additional Risk Prioritize Risk	Evaluate Risk Existing Controls Deficiencies Action Plan Responsibility	Action and Timeline Monitor Progress Address Gaps Report Results

Company Perspective

- “I think the point to risk management is not to try and operate your business in a risk-free environment. It’s to tip the scale to your advantage. So it becomes strategic rather than just defensive.”

  Peter Cox, CFO, United Grain Growers Ltd.

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

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

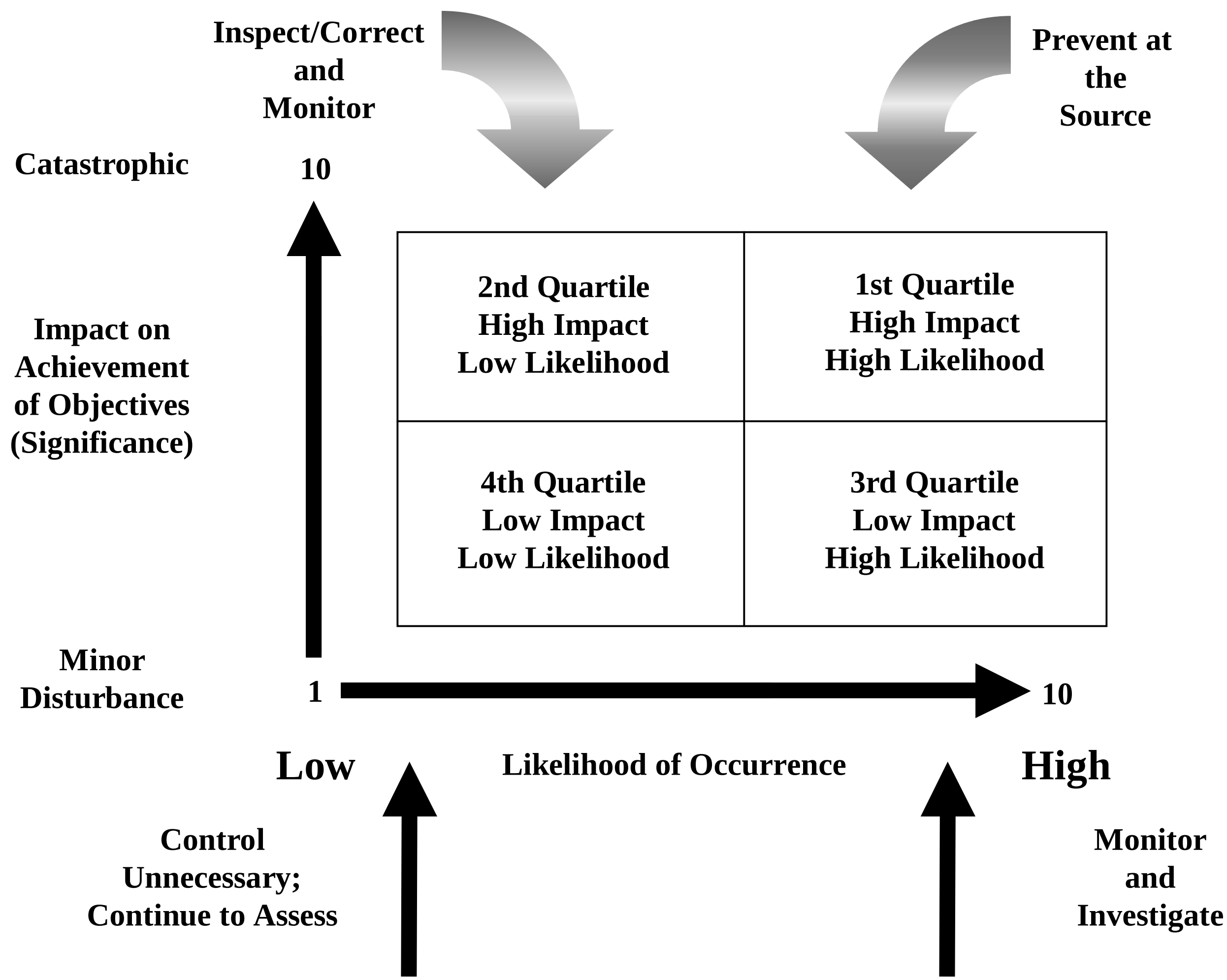
Operations Risk	Empowerment Risk	Financial Risk	Information Processing/ Technology Risk	Integrity Risk
Customer Satisfaction	Leadership	Currency	Access	Management Fraud
Human Resources	Authority	Interest Rate	Integrity	Employee Fraud
Product Development	Limit	Liquidity	Relevance	Illegal Acts
Efficiency	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

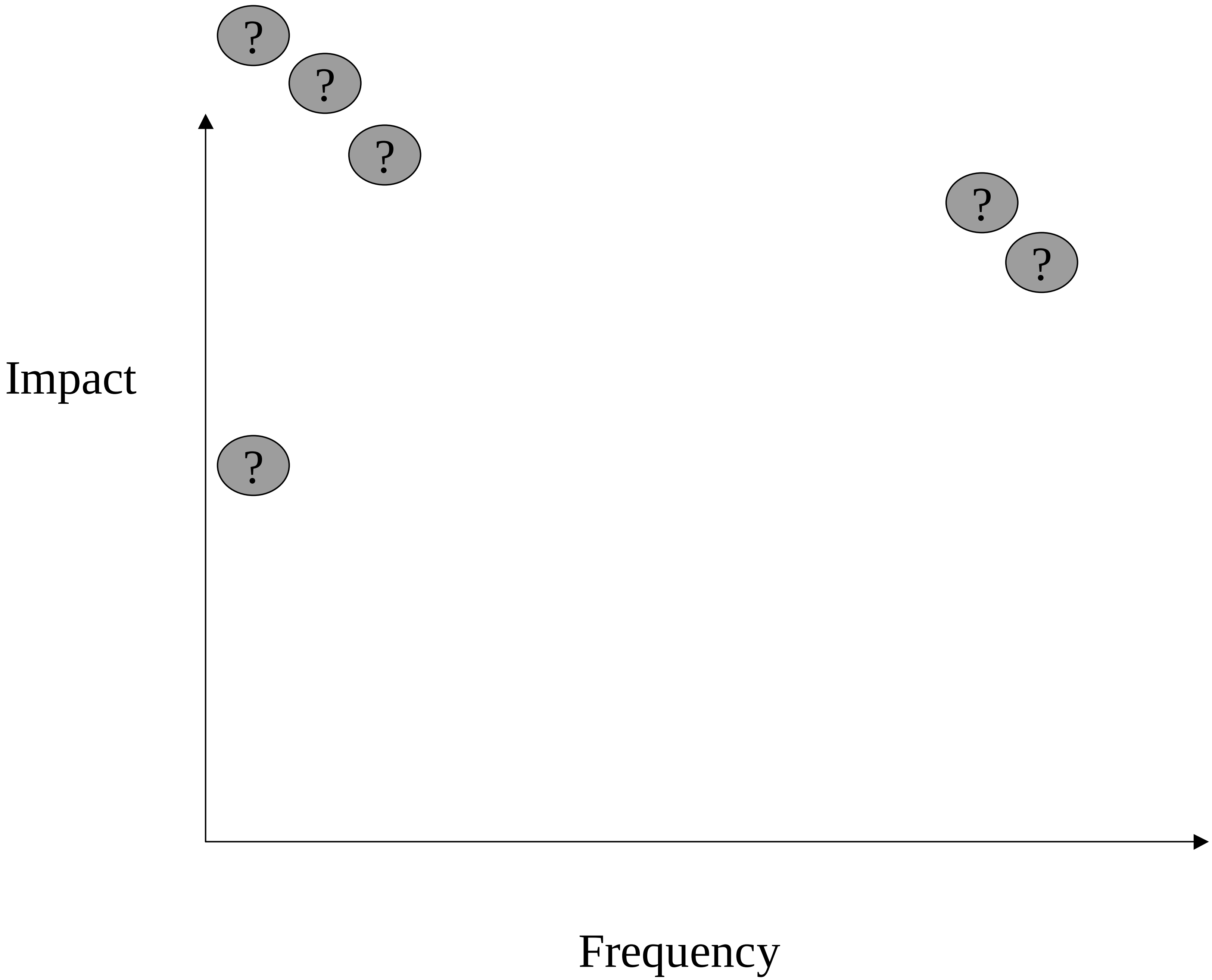
Operational	Financial	Strategic
Pricing	Budget and Planning	Environmental Scan
Contract Commitment	Completeness and Accuracy	Business Portfolio
Measurement	Accounting Information	Valuation
Alignment	Financial Reporting Evaluation	Measurement
Completeness and Accuracy	Taxation	Organization Structure
Regulatory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

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

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


?
?
?
?
?
Impact
?
Frequency

E-Business
Risk Map
1/5/00

Significance	High/Low=6	High/Medium=8	High/High=9
	Organizational Structure	IT Infrastructure	Pricing Accuracy
	Communications - Internal/External	Litigation	Accounting Controls
High	IT Data Integrity	Content Accountability	System Integration
	E-business owner		Hidden Costs
	Third Party Communications		Credit Risk
	Hacking		Due Diligence Risk
			Margin Protection
			Competitiveness
			Profitability Measurement
	Medium/Low=3	Medium/Medium=5	Medium/High=7
	Authority	Regulatory - State Differences	Points of Failure
Medium	Code of Conduct	Regulatory Response	Complex Process/Systems
	Business Exit Strategy	External Data Integrity	Resource Allocation - IT & HR
		Employee Privacy	Intellectual Property
		Customer Privacy	Unauthorized Intermediary
		Technology	Contract Terms
			Transparent Intermediary
			Alliances & Competition
			Order Fulfillment
Low			
	Low/Low=1	Low/Medium=2	Low/High=4
	Qualify Customer		Default
	Strategy		
	Low	Medium	High
		Likelihood	

Instructions

1. Please list the key processes within your area of responsibility (e.g., the six to eight major activities performed within your function).

2. For each of these key processes, please list the:

   a. risks that could impede the process
   b. factors that contribute to the risk
   c. management activities, or controls, that are or should be in place to mitigate the risk

3. Please list the objectives for your area of responsibility (no more than ten key objectives that if attained would ensure success in your area).

4. Please assess the overall readiness within your area of responsibility to seize opportunities and manage risks.

Key Process

CONTRIBUTING FACTORS:

KEY PROCESS RISKS:

MANAGEMENT ACTIVITIES:

Consequences:

Experienced Risks:

Objectives for Your Area of Responsibility

Please list the objectives for your area of responsibility (no more than ten key objectives that if attained would ensure success in your area).

Risk Readiness

Use the following categories to assess the overall readiness within your area of responsibility to seize opportunities and manage risks using the scale at the bottom of the page:

Management Environment **VL L M H VH**

e.g., ethical values, HR policies, accountability, trust, proper resources

Risk Assessment **VL L M H VH**

e.g., objectives clear, risks identified, measurement indicators, monitoring of environment

Management Activities **VL L M H VH**

e.g., policies practiced, expectations and scope, decisions by right people, integrated control processes, timely decisions

Information / Communication **VL L M H VH**

e.g., communication processes, relevant information, coordination of decisions, plans communicated, information needs reassessed

Monitoring **VL L M H VH**

e.g., performance monitored, assumptions challenged, follow up processes, periodic reporting on risk management and control

What is your level of concern with respect to the overall ability of your area of responsibility to seize opportunities and manage risks? Please circle the most appropriate response:

VL = Very Low   L = Low   M = Medium   H = High   VH = Very High

Making Enterprise Risk Management Pay Off

- Barton, Shenkir and Walker
- Published by the Financial Executive Institute in 2001 and by the Financial Times in 2002

Case-Study Companies in FERF Study

Study Company	Industry	Revenues[1]	Employees
Chase Manhattan Corp.[2]	Financial Services	$22,982	74,800
Dupont	Chemical	$26,918	94,000
Microsoft Corp.	Technology	$19,750	31,575
United Grain Growers, Ltd.	Agriculture	C$1,832	1,600
Unocal Corp.	Energy	$6,057	7,550

[1]Most recent fiscal year in millions of U.S. dollars (except for United Grain Growers which is in millions of Canadian dollars).

[2]J.P. Morgan Chase & Co. as of December 31, 2000.

Main Reasons Involved in ERM

- Shareholder value, shareholder value and shareholder value
- Known unknowns and unknown unknowns:
  - Number and complexity of risks
  - Avoid debacles

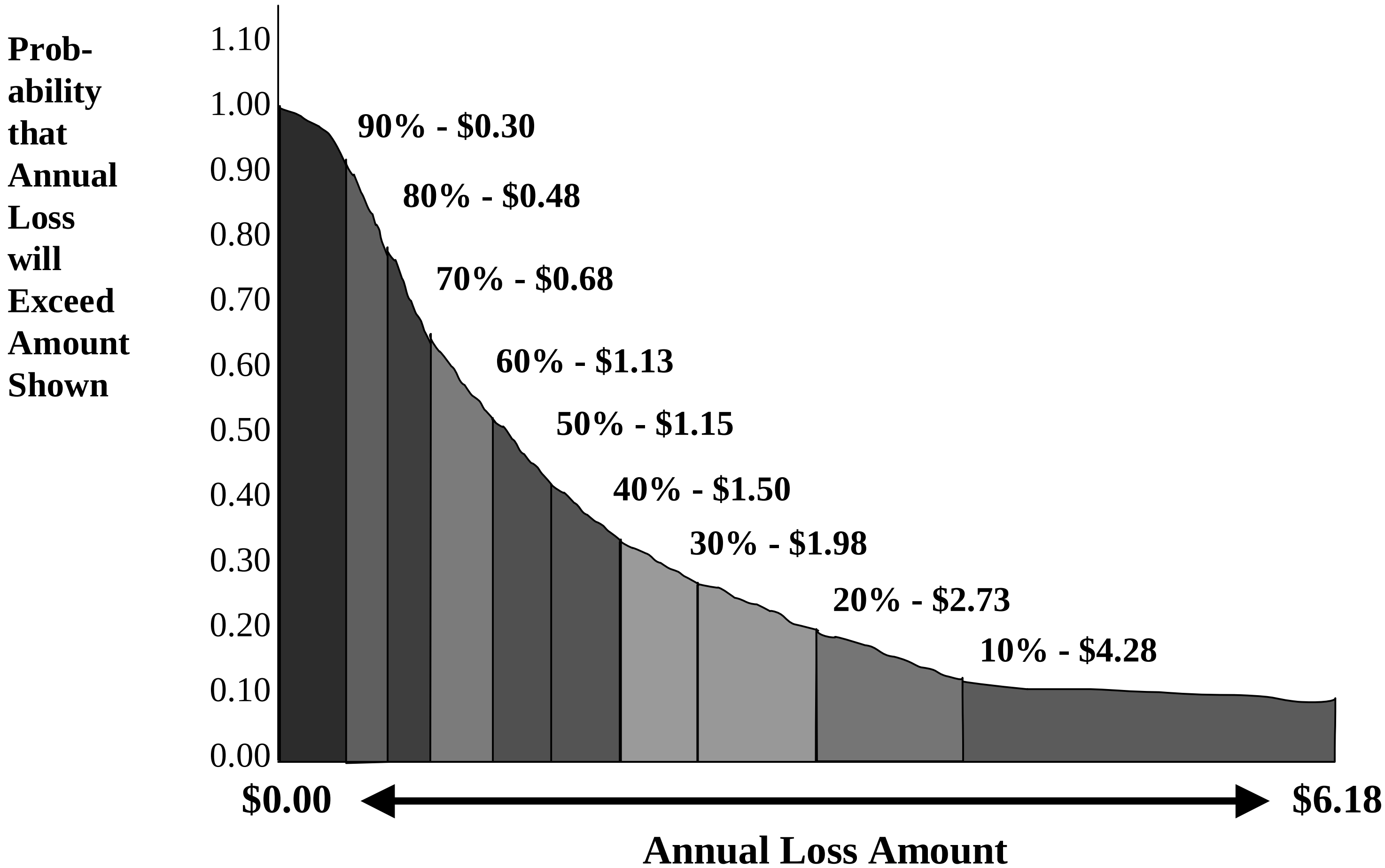
Lessons From Case Study Companies

- No single approach
- Identify risks enterprise-wide
  - Look for integration, value and consistency

More Lessons

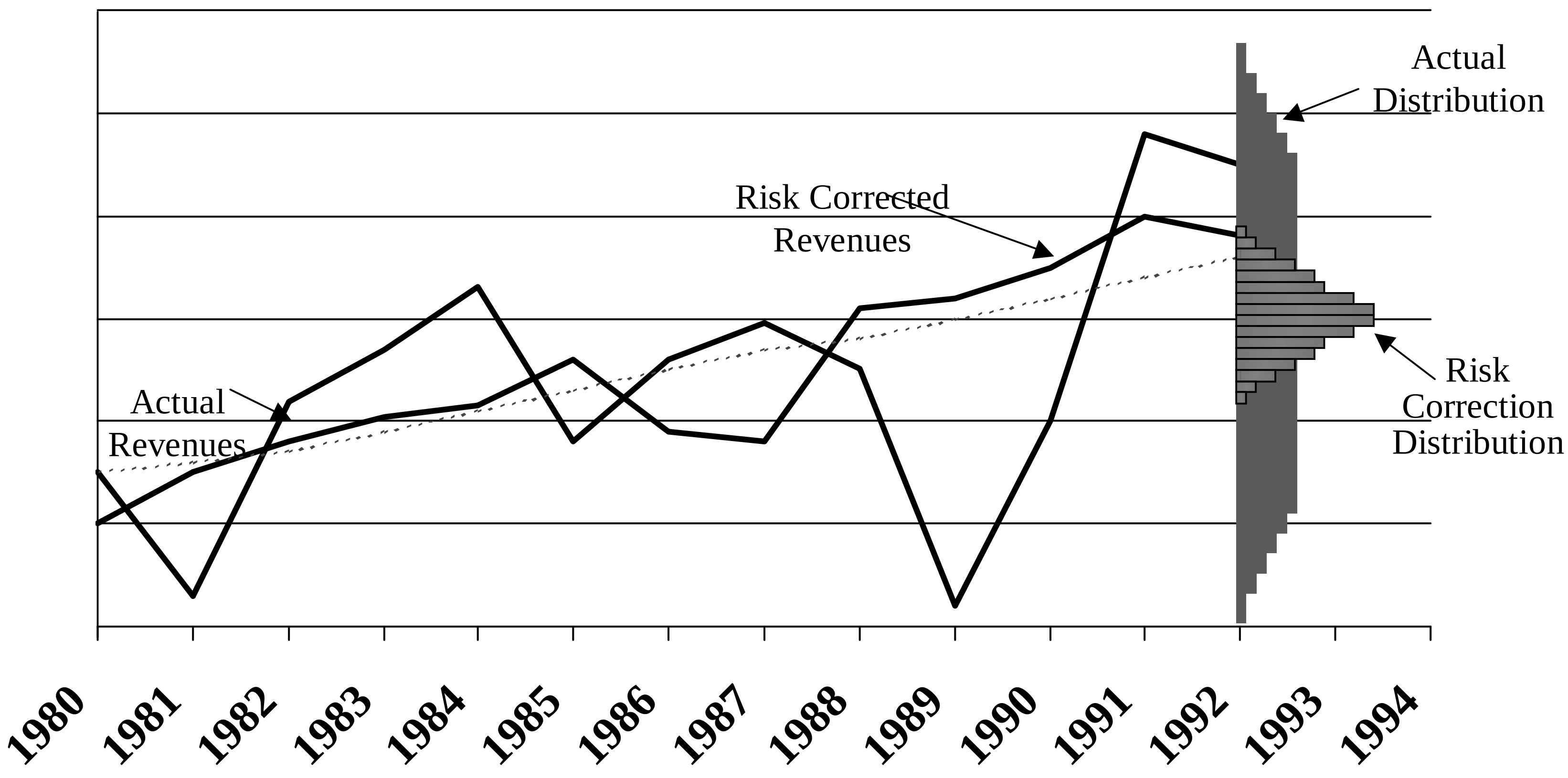
- Assess and measure risk
  - Maps, rankings, lists
  - Can be quantitative or qualitative
- Driving risk awareness throughout organization
- Risk champions

Sample Risk
Gain/Loss Probability Curve

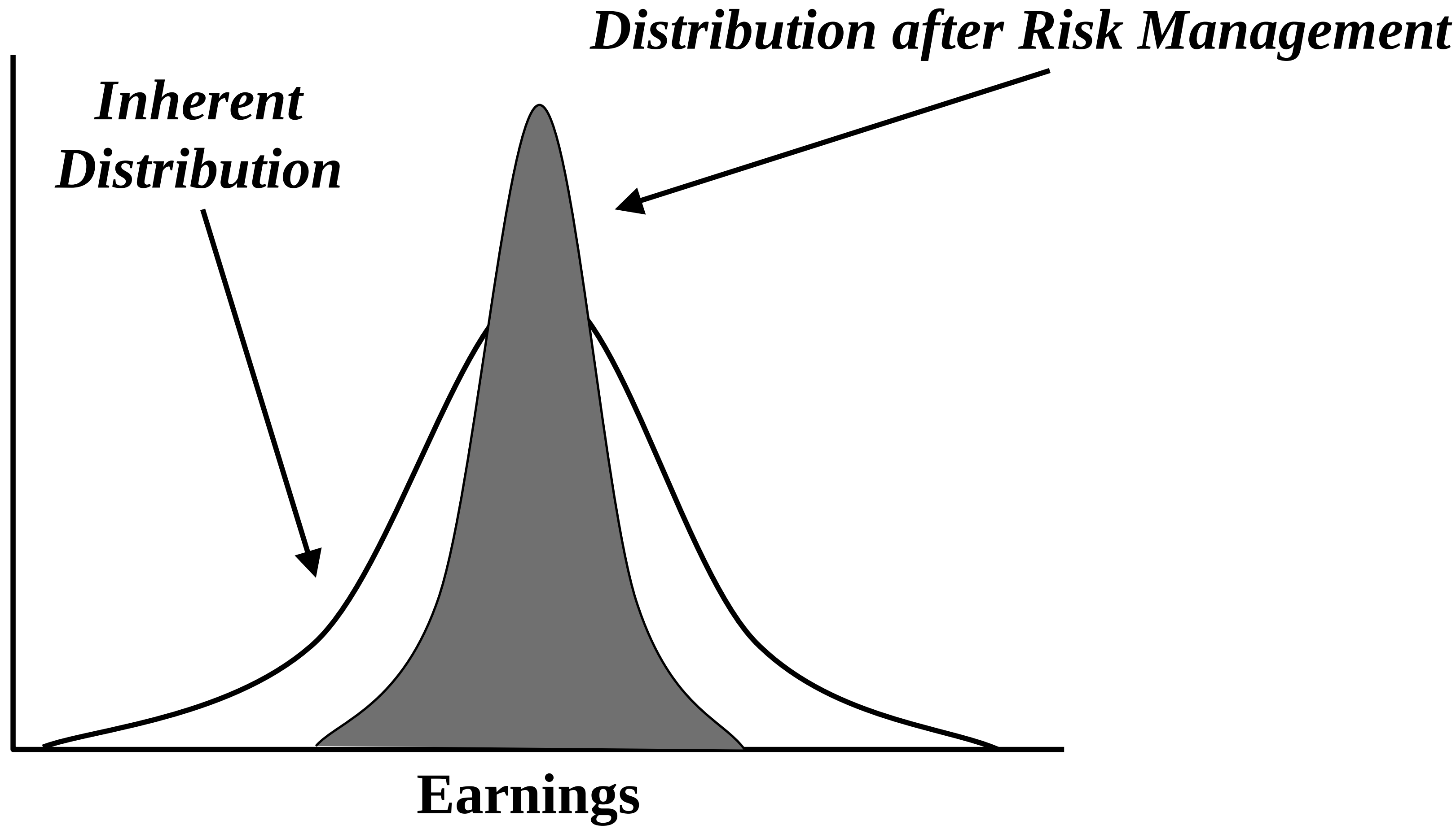


Note: All loss amounts are in millions of dollars.

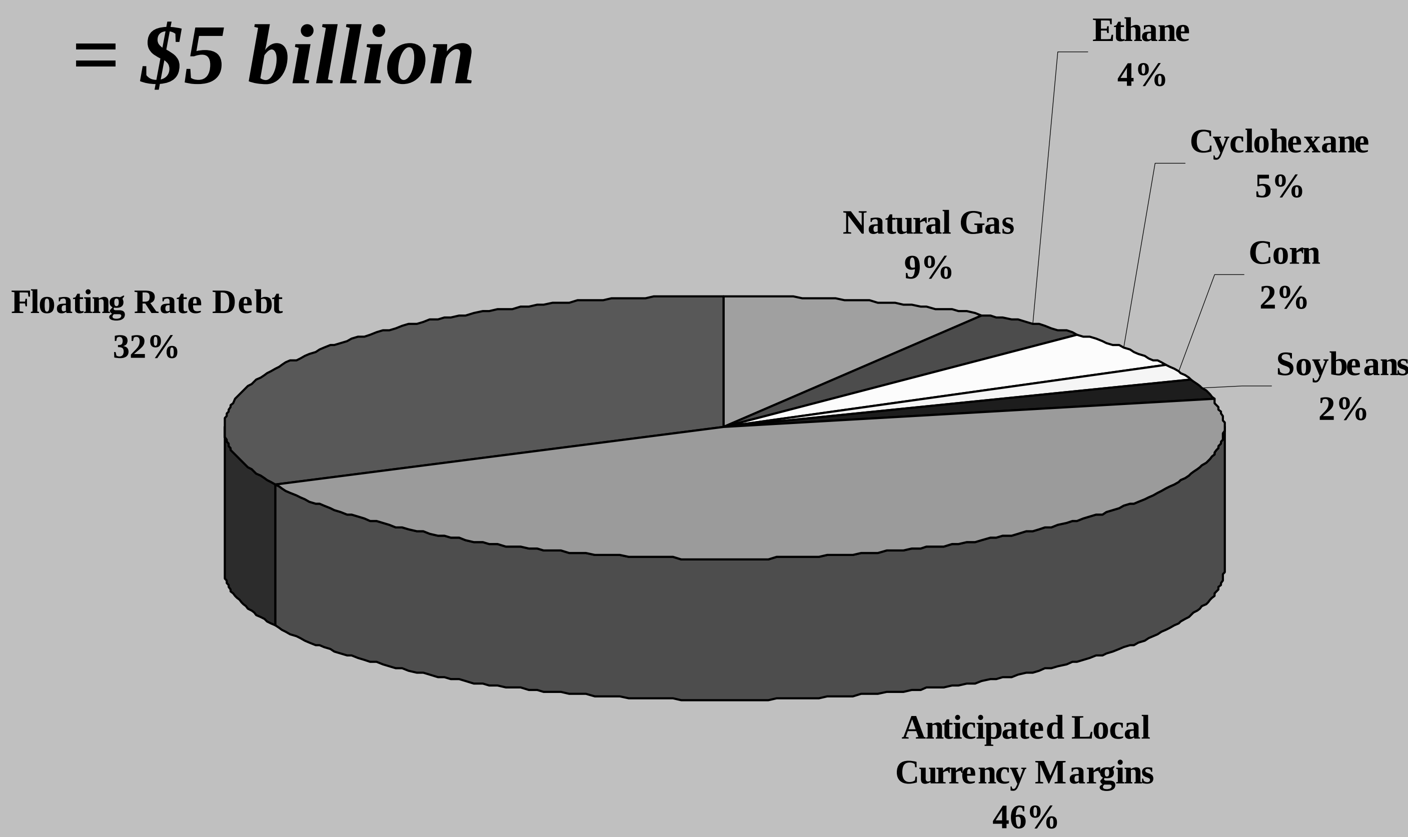
Actual Revenues Versus Risk Corrected Revenues



Goal of Risk Management at Dupont



Notional Amount at Risk = $5 billion



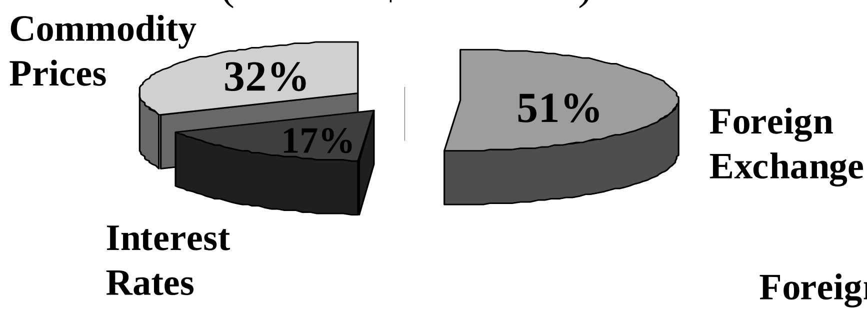
Where’s the volatility?

The Volatility

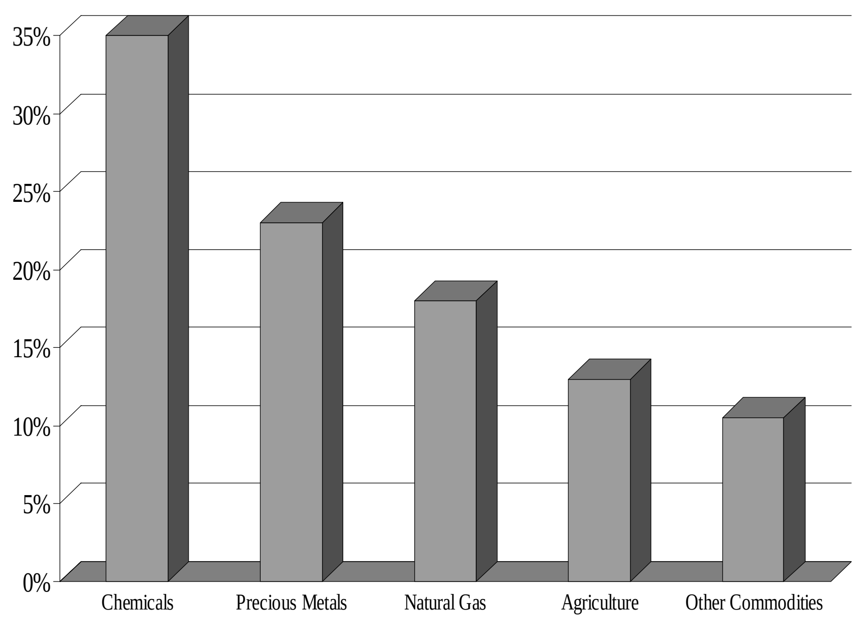
• Natural Gas	→	46%
• Corn	→	18%
• Interest Rates	→	20%
• Euro	→	12%
• JPN Yen	→	9%

Earnings at Risk by Risk Factor

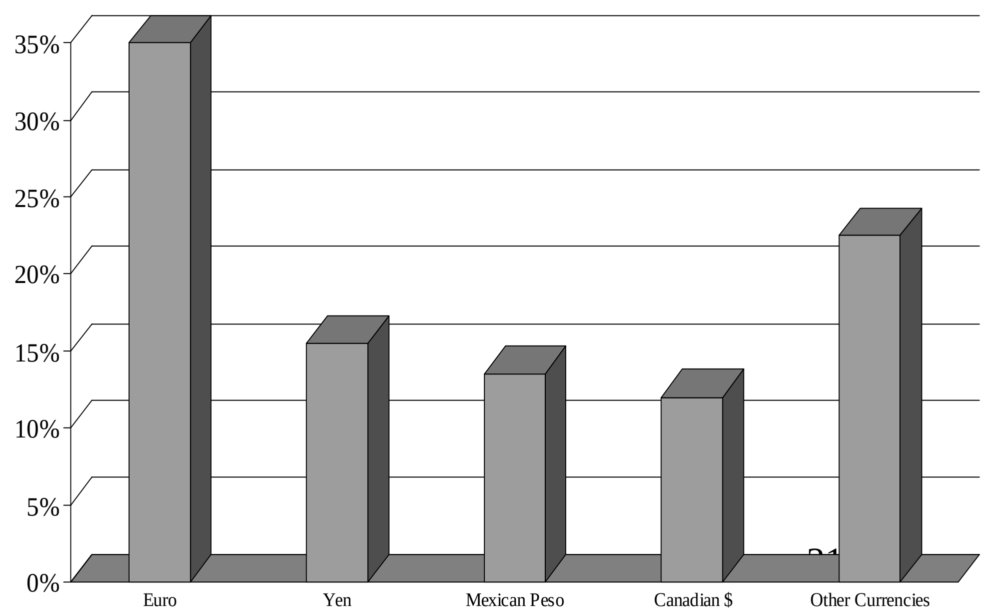
Total DuPont EaR by Risk Category
(100% = $35 million)



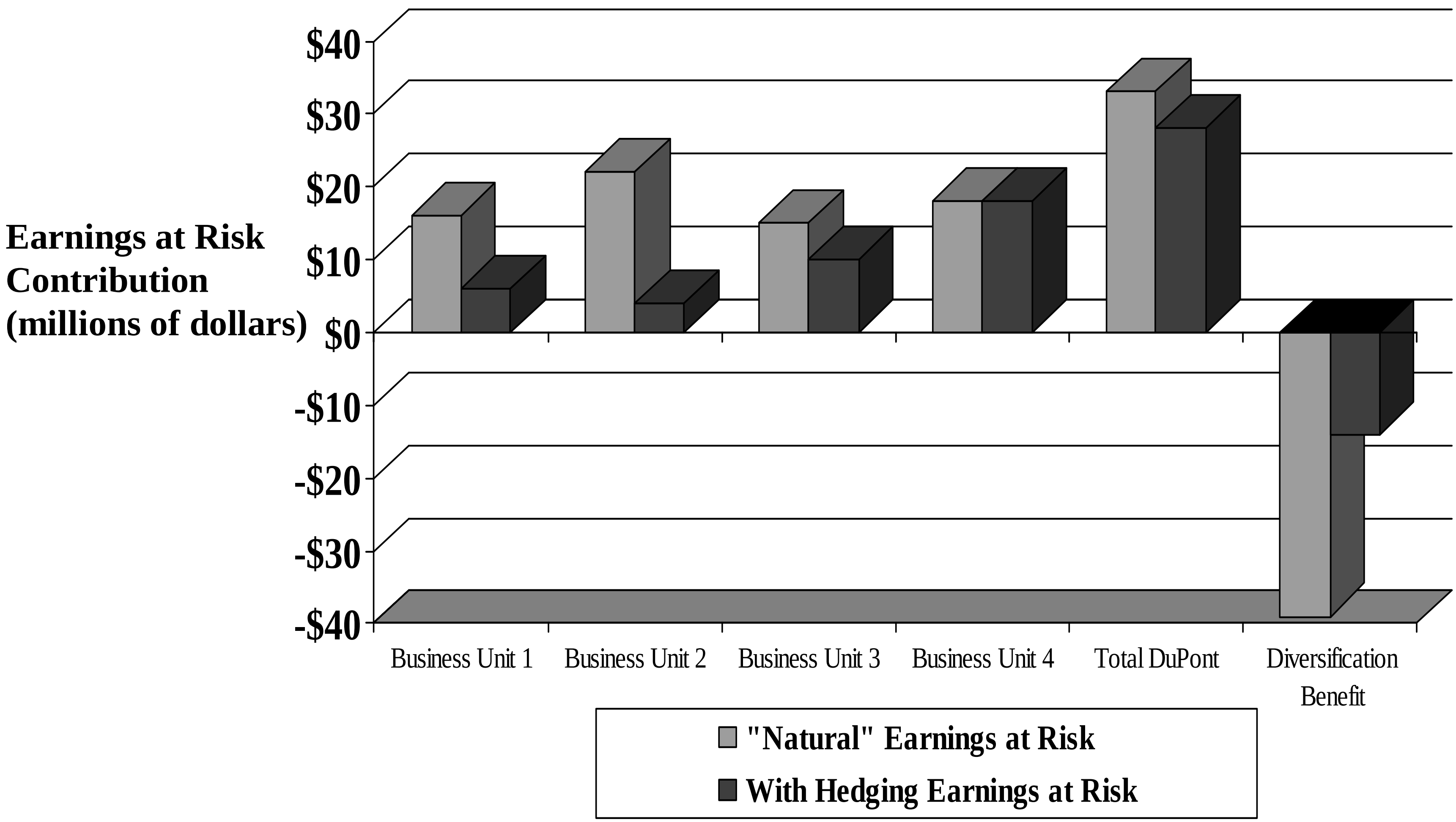
Commodity Contribution to EaR by Major Commodity (100% = $16 million)



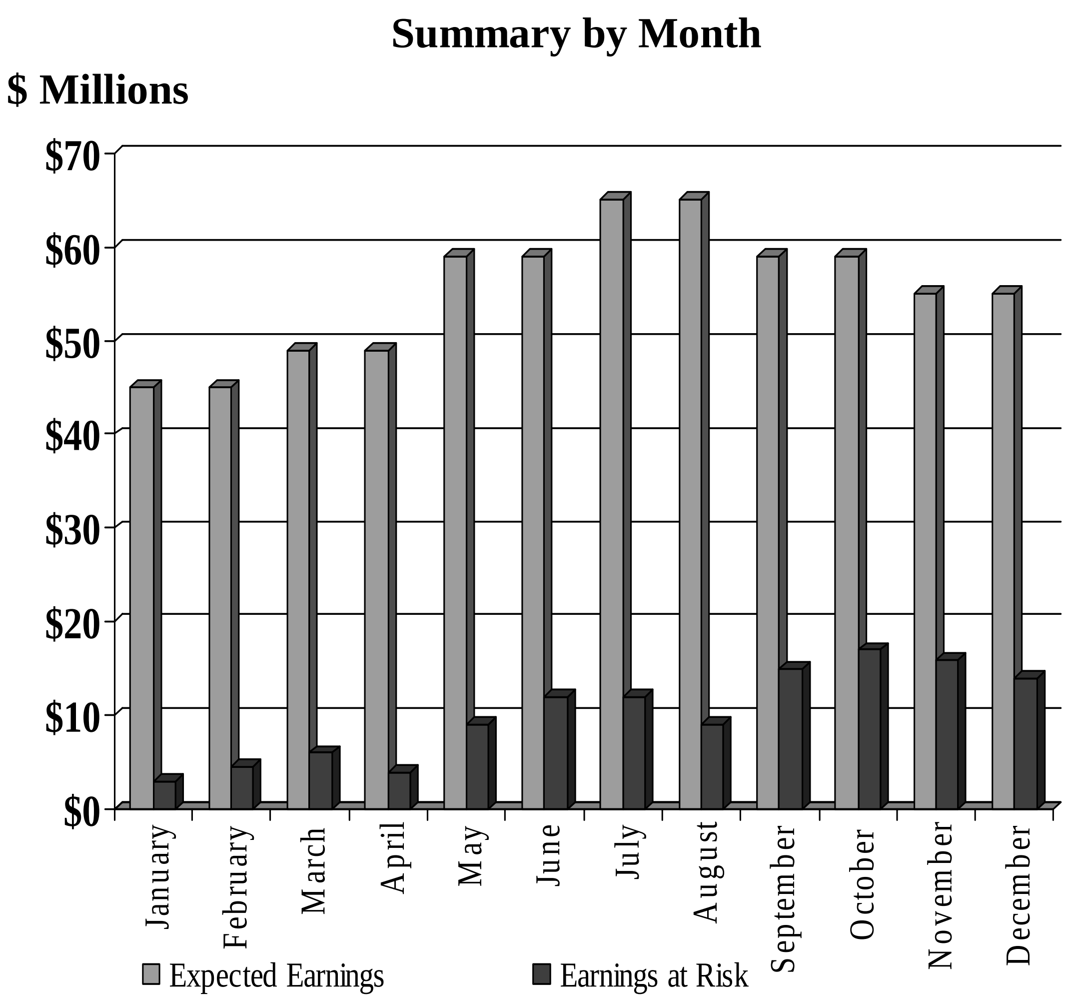
Foreign Exchange Contribution to EaR for Major Currency (100% = $26 million)

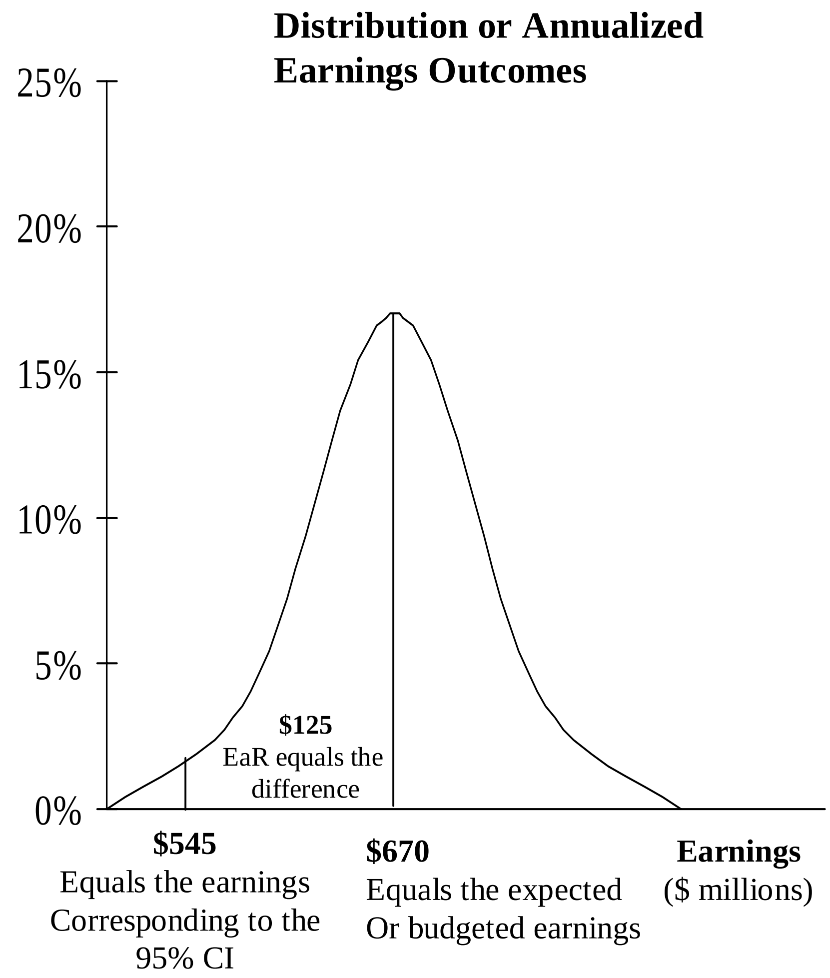


Earnings at Risk Hedge Effectiveness Comparisons

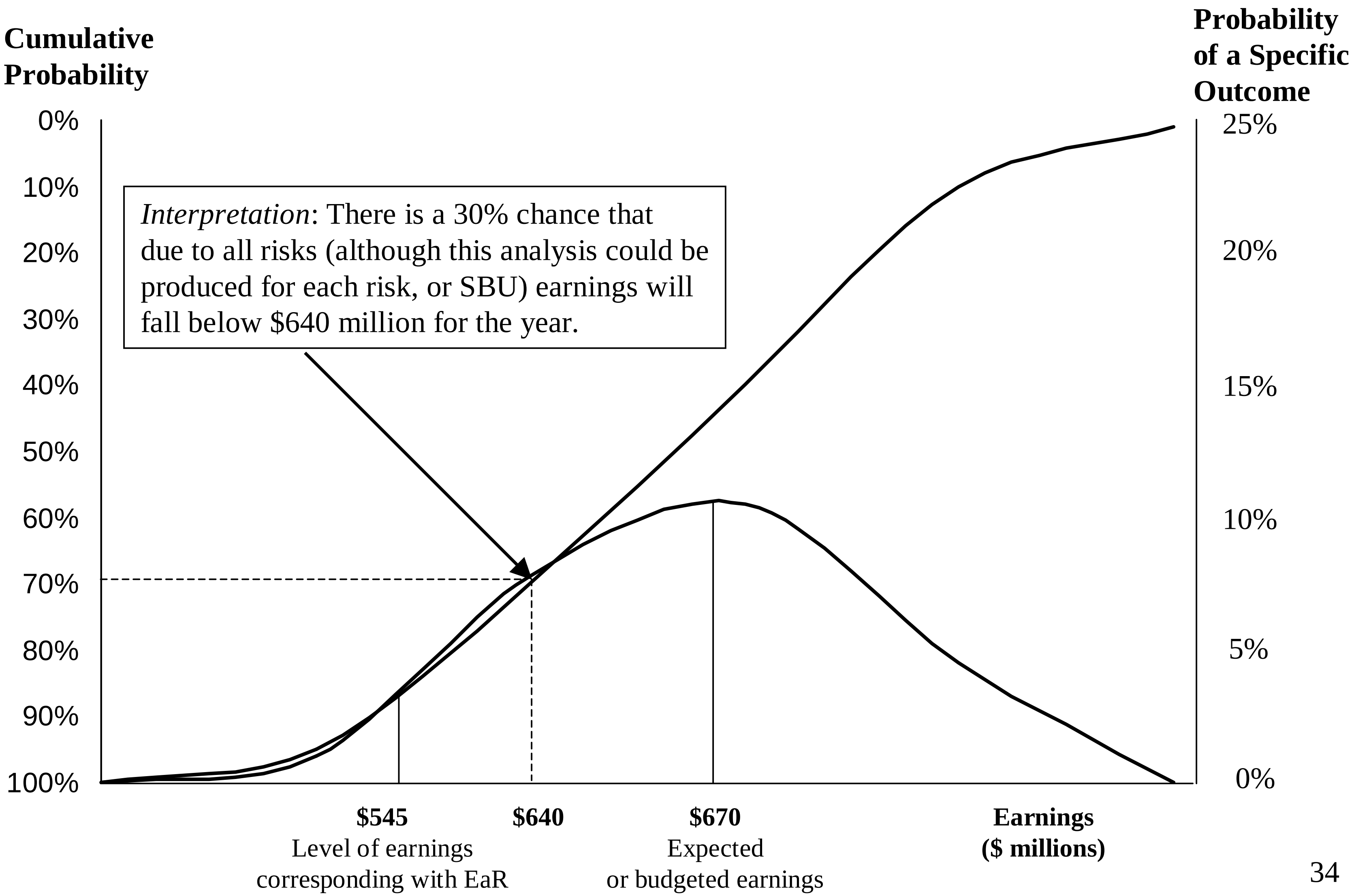


Expected Earnings and EaR for Budget Year 2000

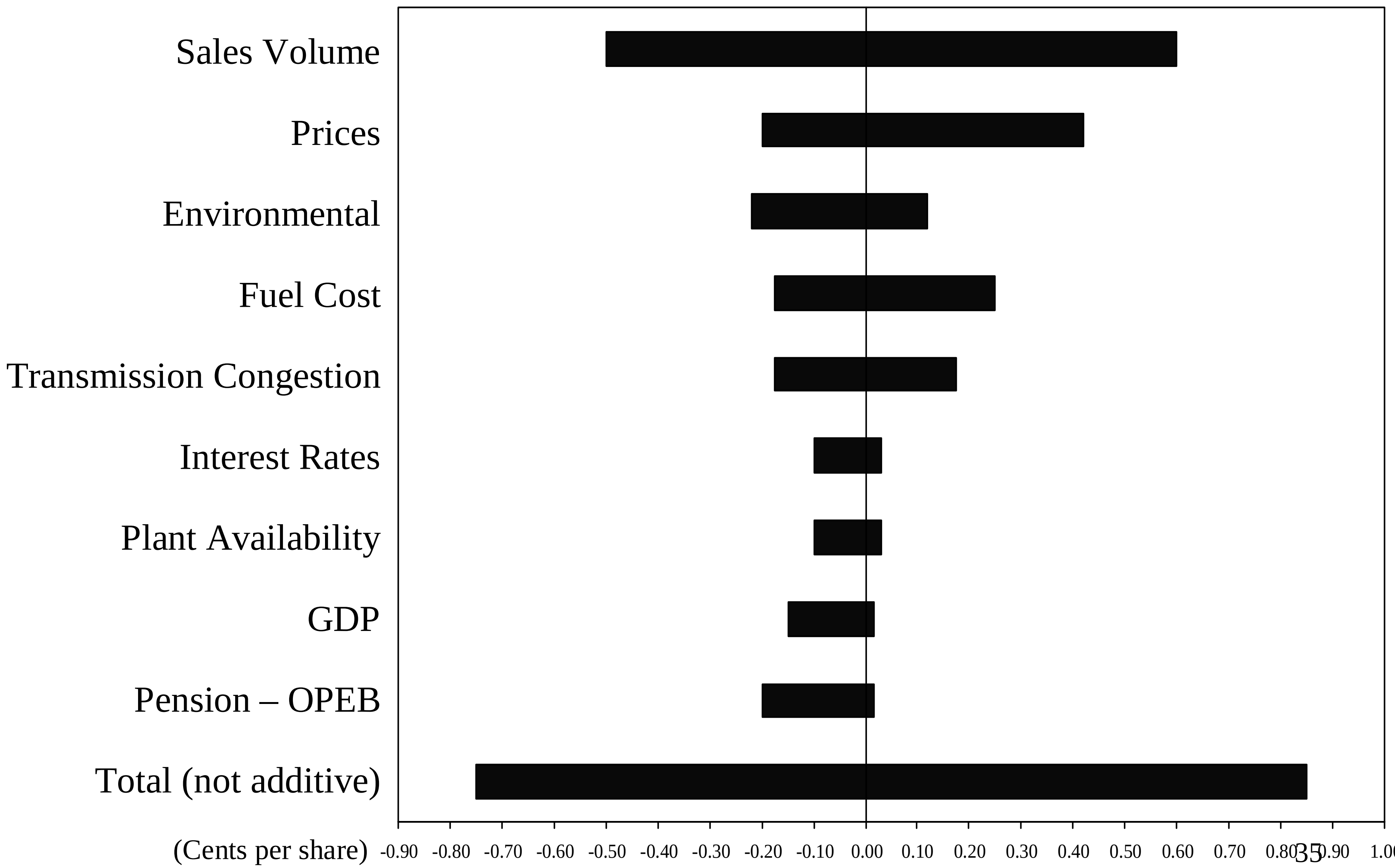




Probability Assessment of Earnings Outcomes Illustration



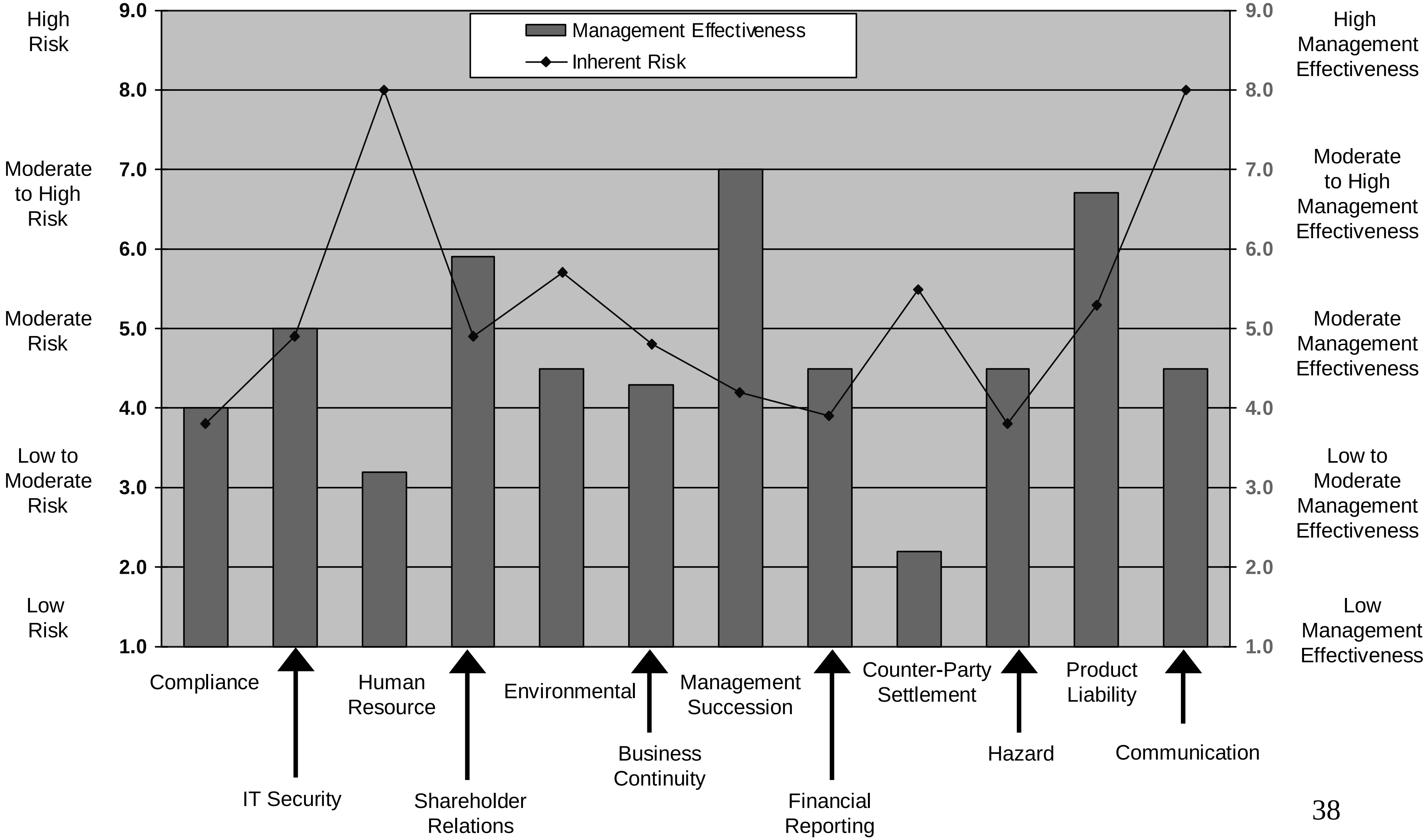
Earnings Variability by Key Factor



Risk, Quantification and Gap Analysis

Weather	1	1	1	1	1	1	1	1	3	1	1	1	1	1	1	1	1	1	20
Basis/Price Risk	1	1	2	1	2	1	1	1	1	1	1	1	1	2	1	1	1	2	22
Foreign Exchange	2	1	2	1	2	1	2	1	1	1	1	1	1	1	1	2	1	2	24
Regulatory Risk CWB, Transportation	1	1	1	1	1	1	1	1	2	2	2	1	1	3	1	2	2	1	25
Inventory	1	1	2	1	1	2	1	2	1	2	1	3	1	1	1	2	1	1	25
Transportation	1	1	1	1	2	2	1	1	2	2	1	1	1	1	2	2	2	1	25
Major Property (e.g., terminals)	1	2	3	1	1	1	1	1	2	1	2	1	2	1	1	1	1	3	26
Credit/Receivables	2	2	2	1	2	2	2	1	1	1	1	1	1	1	2	2	2	2	28
EDP System Failure	1	2	3	1	2	2	1	1	2	1	1	2	2	2	2	1	2	1	29
Leverage (debt/equity)	1	2	2	2	1	2	2	1	2	1	1	1	2	1	1	2	2	3	29
Customer/Supplier/Finance Counterparty	2	2	3	1	1	2	2	2	1	2	1	2	1	1	1	1	2	2	29
Data accuracy	2	2	3	2	1	2	2	1	2	2	1	1	1	1	2	1	3	1	30
Interest Rate	2	2	3	1	2	2	2	1	2	1	2	1	2	1	2	2	1	3	32
Business Interruption	3	3	2	1	1	2	2	2	2	2	1	1	2	1	1	2	1	3	32
Spoilage/Disease	1	1	1	1	3	3	3	2	1	2	2	2	2	1	1	3	1	2	32
Strategic Planning	2	3	2	2	1	1	1	1	2	1	1	3	2	2	2	2	3	2	33
Environmental	3	2	2	2	1	3	2	2	1	2	2	2	2	1	1	2	2	1	33
Process Compliance/Execution	3	2	2	2	1	2	2	1	2	1	1	1	2	1	2	3	3	3	34

The Gap (source MMC 2003)



"Those who live only by the numbers may find that the computer has simply replaced the oracles to whom people resorted in ancient times for guidance in risk management and decision making."

Peter Bernstein, Against The Gods: The Remarkable Story of Risk

Enterprise Risk Management: Pulling it all Together

- Walker, Shenkir and Barton
- Published by the IIA in 2002

Case-Study Companies in IIA Study

Company	Industry	Revenues[1]	Employees
Canada Post Corp.	Postal Delivery	C$5,900	61,000
FirstEnergy Corp.	Electric Utilities	$7,000	13,800
General Motors Corp.	Manufacturing	$184,600	386,000
Unocal Corp.	Oil & Gas Operations	$9,200	6,800
Wal-Mart Stores Inc.	Retailing	$193,300	1,244,000

[1]Most recent fiscal year ending on or before September 30, 2001, in $ millions U.S. (except Canada Post Corp., which is in Canadian dollars).

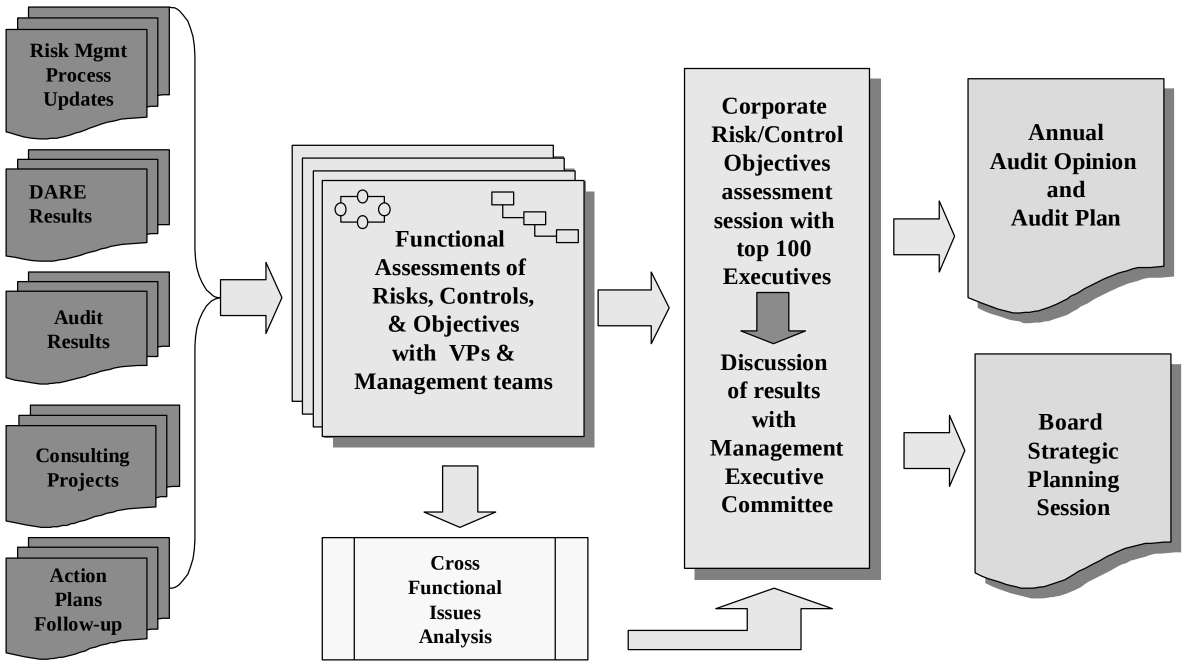
Elements of Effective Risk Management

- C-level support and CAE leadership
- Link to value (the CFO challenge)
- Changes in internal auditing
- Ownership vs. facilitation
- Risk integration
- Risk Infrastructure
- Corporate Governance

- I will show the committee the risk maps, which identify the top risks for each division, and give them an example of the action plans under development. I will also describe how the monitoring process works, and the manner in which we will link action plans and metrics to shareholder value.
  - John Lewis, Chief Audit Executive, Wal-Mart

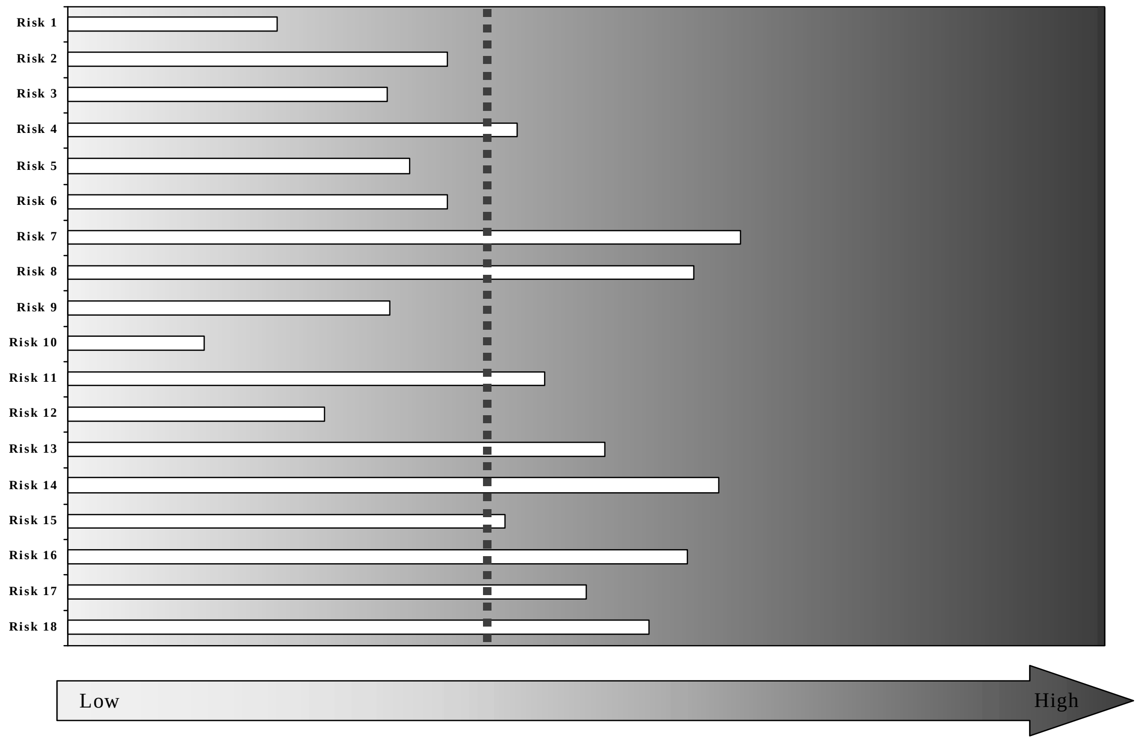
ERM & Corporate Governance

Canada Post's ERM Process

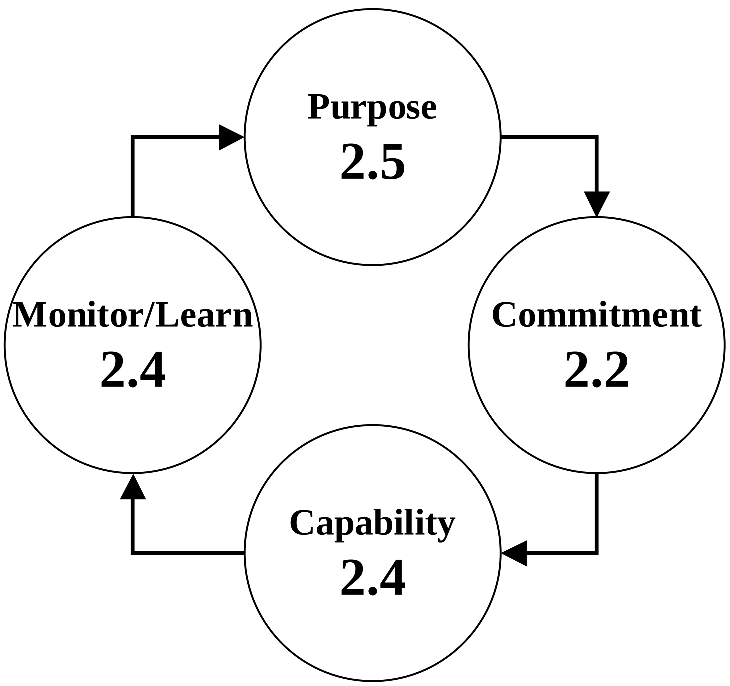


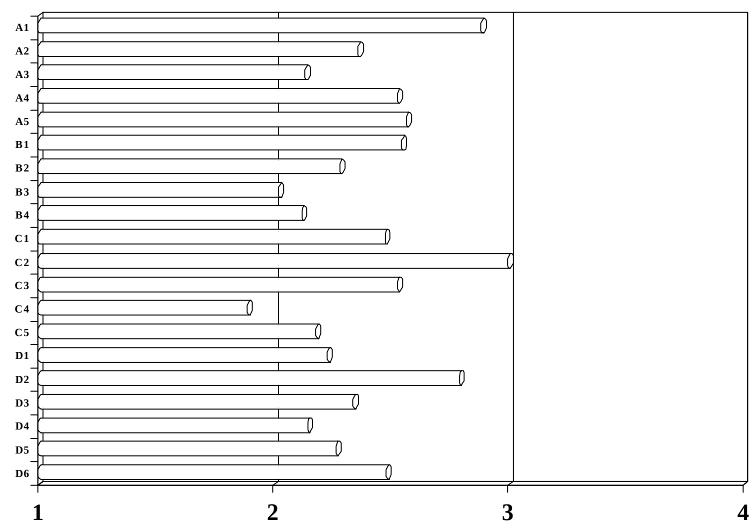
Reporting to the Board of Directors

- Top risks identified.
- Assessment of top risks.
- Most challenging objectives.
- Control effectiveness (over time).
- Outstanding action plans.


Risk 1
Risk 2
Risk 3
Risk 4
Risk 5
Risk 6
Risk 7
Risk 8
Risk 9
Risk 10
Risk 11
Risk 12
Risk 13
Risk 14
Risk 15
Risk 16
Risk 17
Risk 18
Low
High

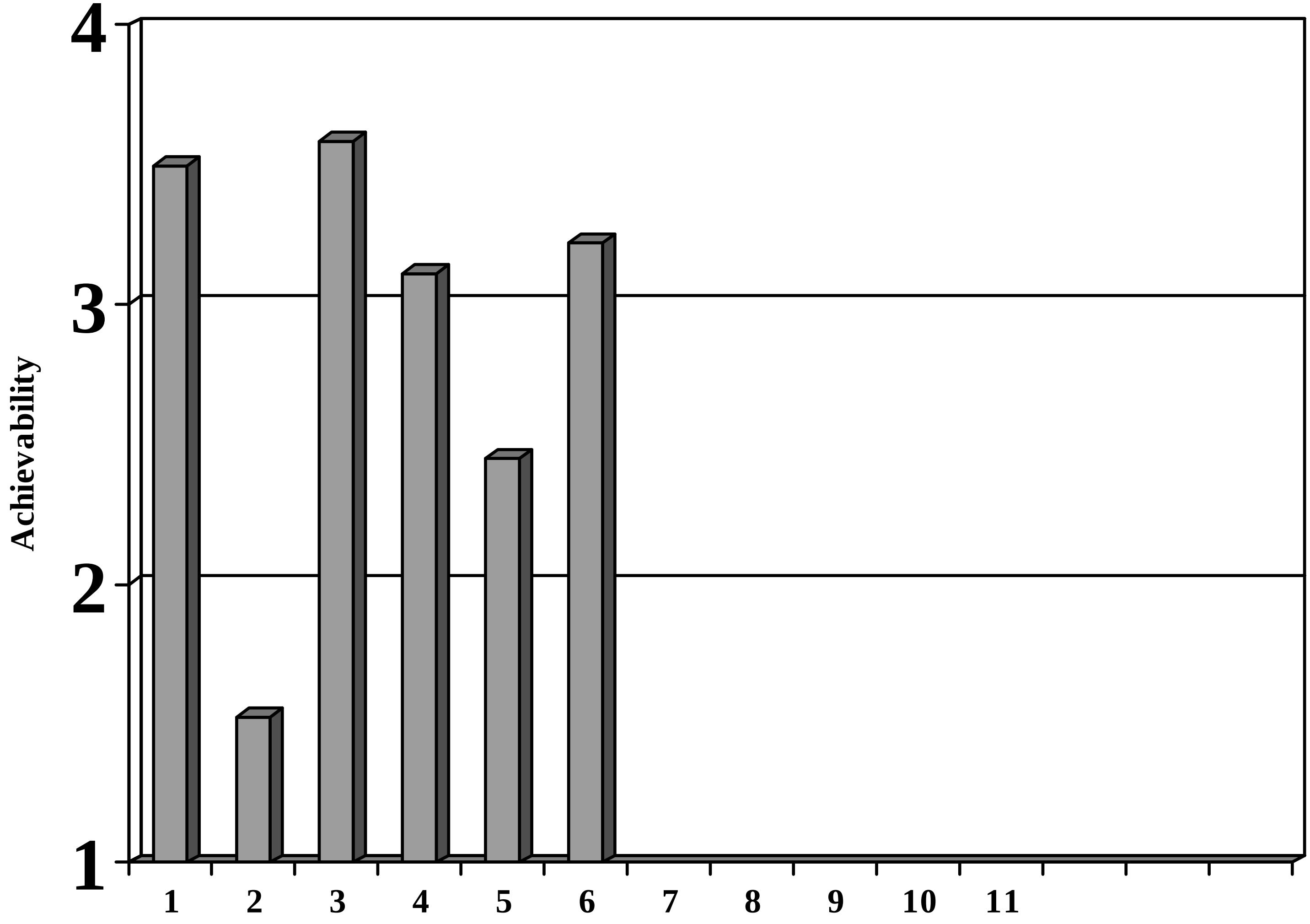
Corporate Control Effectiveness



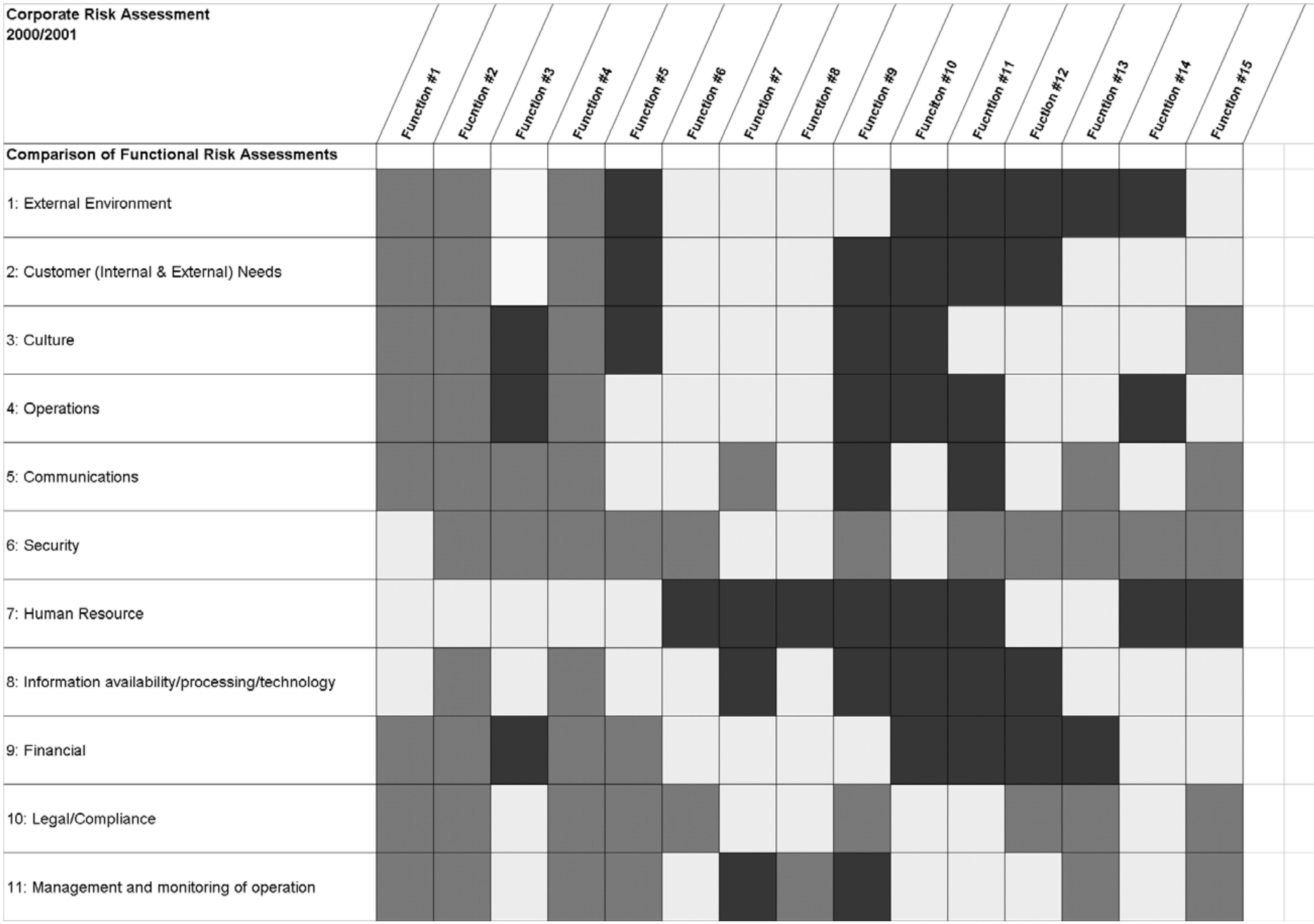


1= Not very effective
2= Somewhat effective
3= Substantially effective
4= Very effective

Achievability of Objectives

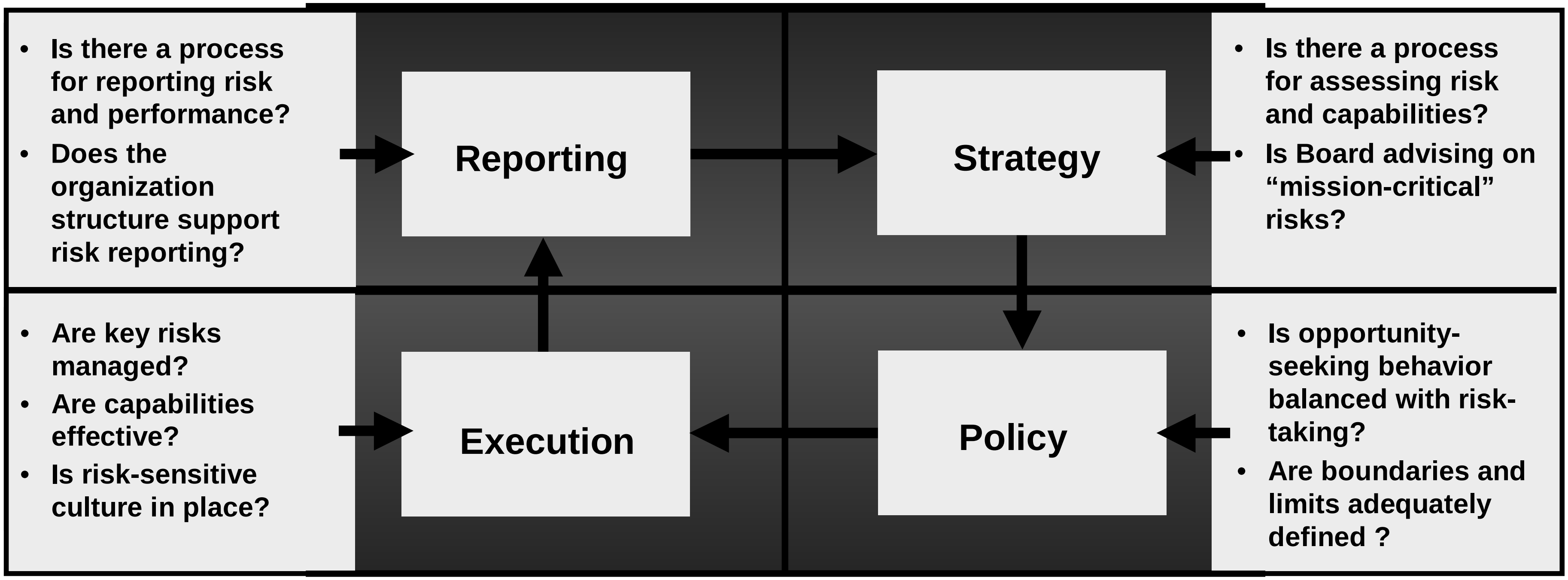


FUNCTIONAL RISK ASSESSMENT SUMMARY 2000 / 2001



Key Governance Questions Relating to ERM

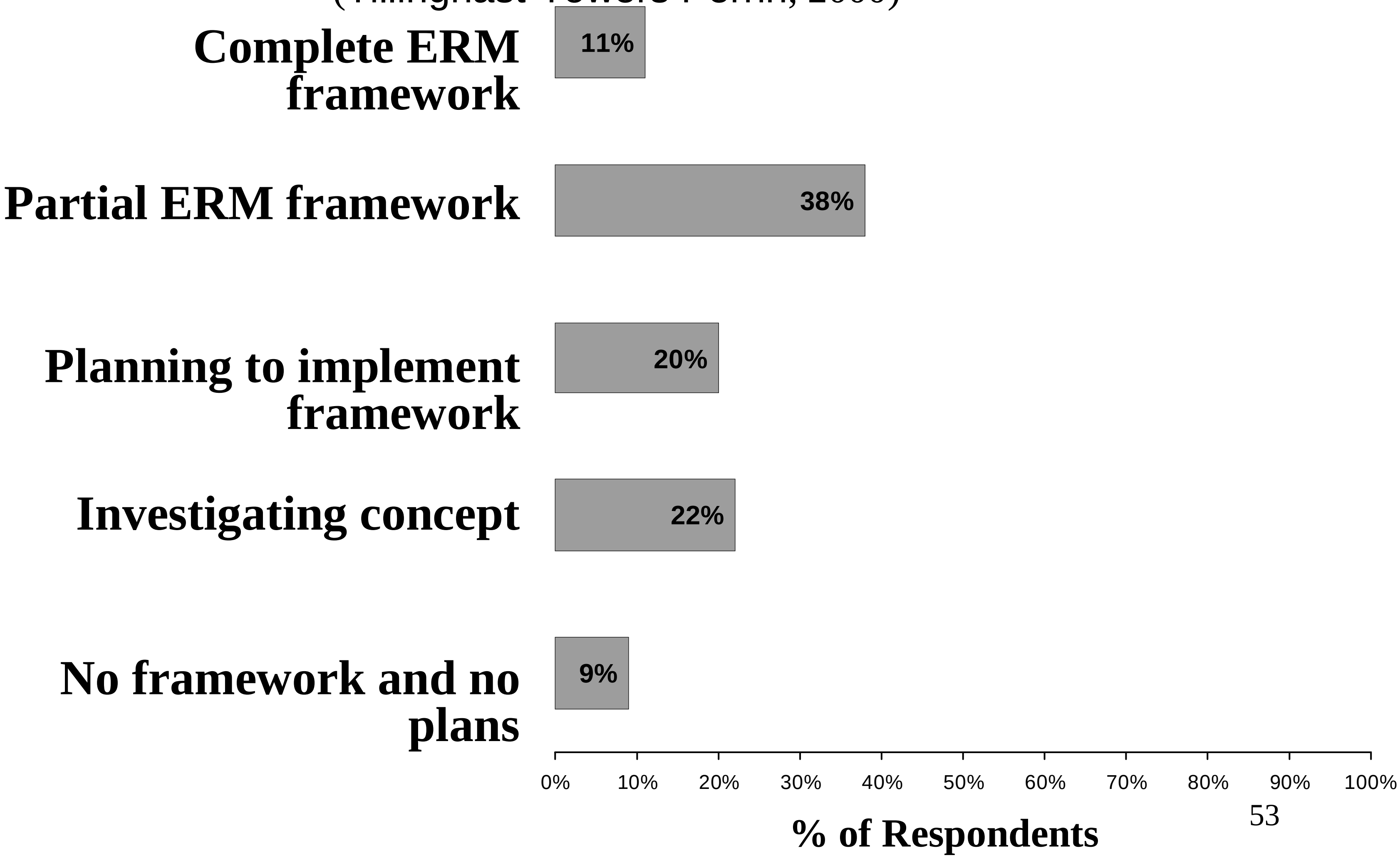
(source MMC 2003)



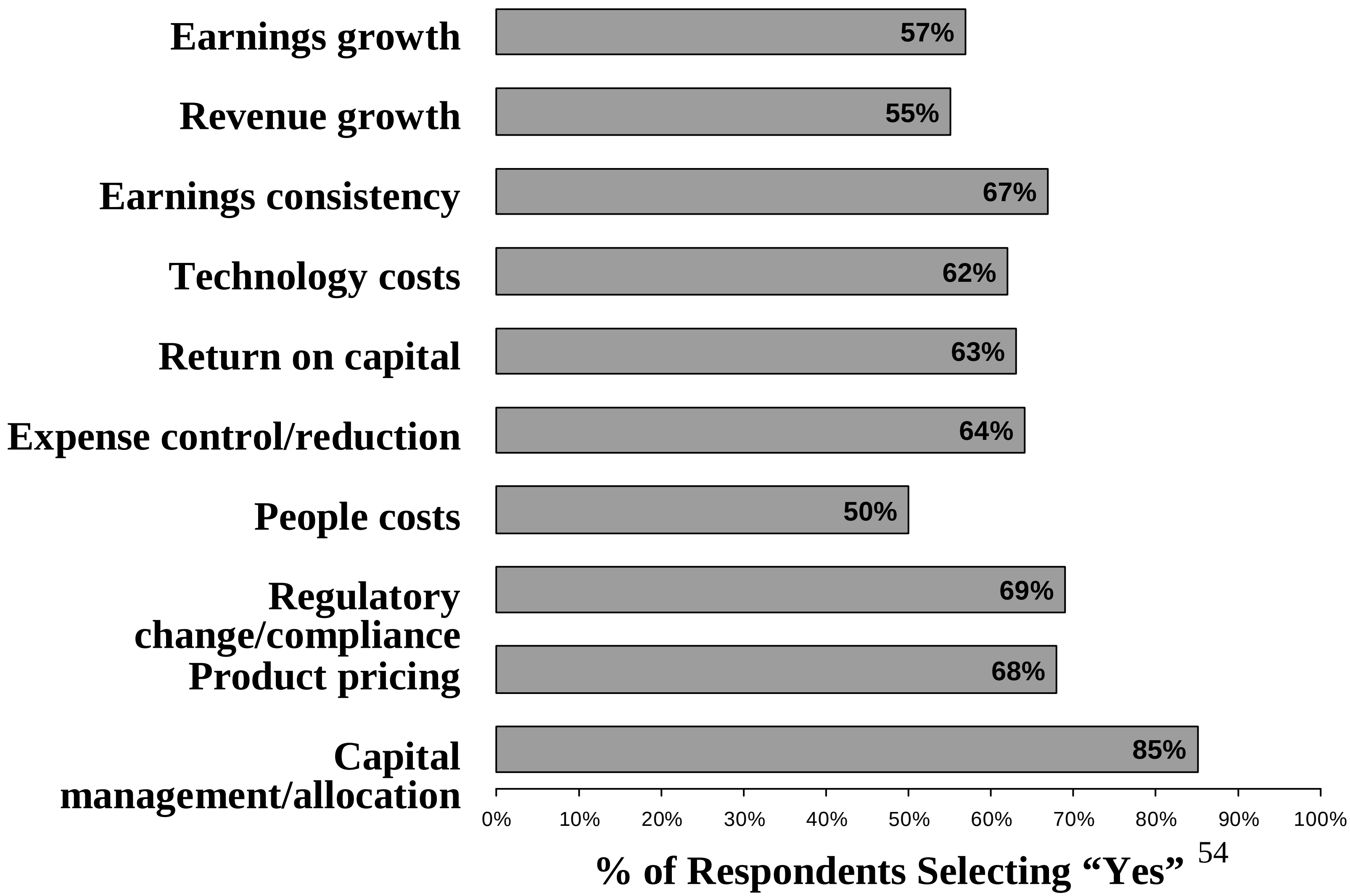
Trends

How would you characterize the status of your ERM framework?

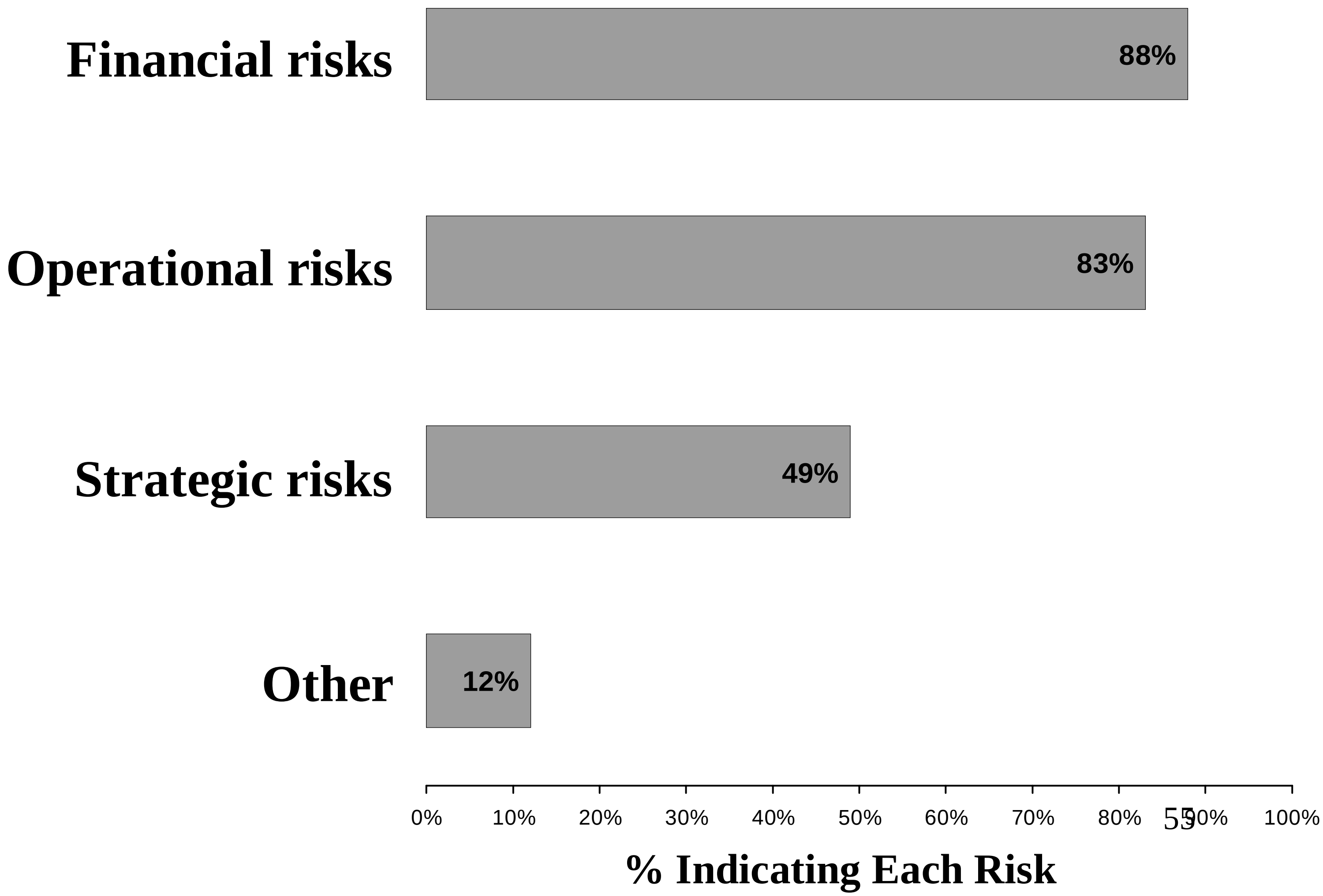
(Tillinghast-Towers Perrin, 2000)



Will ERM help you address this business issue?



Which of the following risks are included in your internal audit plan?



Adoption is wide (Economist and MMC, 2001)

- 33% of Asian companies have adopted some form of ERM
- 34% of North American companies are implementing some form of ERM
- Europeans are ahead in adoption (53%)

ERM can improve their P/E ratio and cost of capital

- 84% believe there is a link between ERM and P/E and cost of capital

Communicating ERM to investors is beneficial

- More than 50% believe there is something to gain by communicating their ERM efforts to the investment community

Non-traditional risks

- Executives report that their most significant risks are not the traditional finance or insurance risks
- These are also among the most poorly managed risks.

Risks Should Drive the Audit Committee Agenda

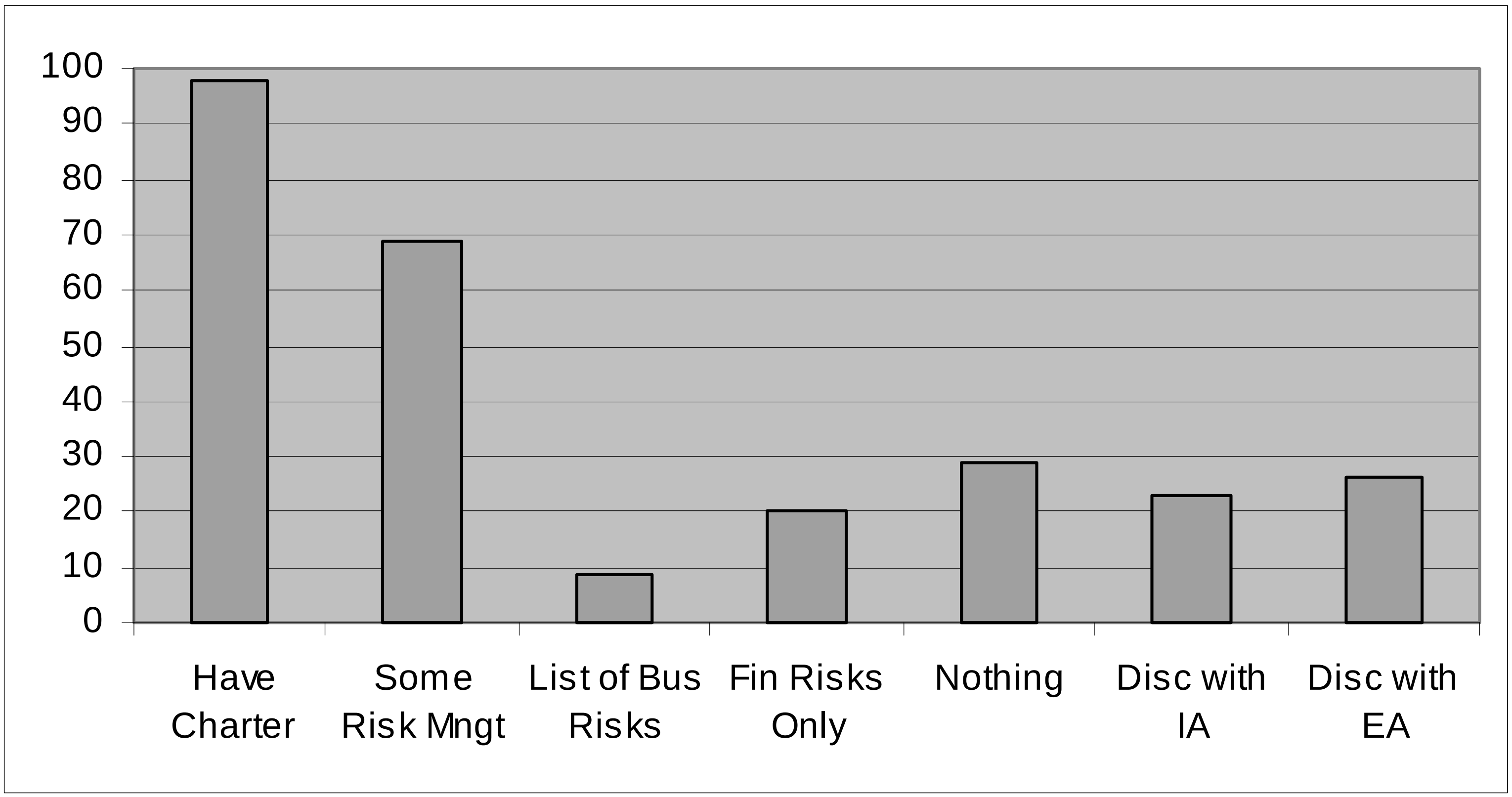
- Risk Oversight
  - "…making sure that management has instituted processes to identify, and bring to the board's attention, the major risks the enterprise faces."
    - Report of the NACD Blue Ribbon Commission
    - "Risk Oversight-Board Lessons for Turbulent Times"

Based on Management's Risk Assessment Process

- Audit Committees should focus on:
  - Accountability for, and
  - Effectiveness of
    - Management's Risk Assessment Process
    - Controls Related to Risks
      - Source: KPMG's Audit Committee Institute

Audit Committee Involvement

(per 2003 proxies of Fortune 100)



Advanced ERM Co’s (PWC’s Global CEO Survey, 2004)

- Have significantly higher benefits, for example
  – 74% of advanced co’s report that ERM helps create value (compared to 39% of nonadvanced)

Commitment: ERM as a Priority

- 39% of CEOs agree
- 38% of Boards agree

The Laws

Laws and Key Documents

- Turnbull and the UK
- Kontrag and Germany
- South Africa and the King Report
- Australia and New Zealand Standard
- Sarbanes-Oxley?

Math

- ERM Compliance + Ad hoc procedures = Survival
- ERM Process + Focus on Value + Corporate Governance = SUCCESS

Summary: Why Enterprise Risk Management?

1. ________________
2. ________________
3. ________________

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Company Perspectives

- "Enterprise risk management is a great, great process. I could not say more about it."
  Mario Pilozzi, Wal-Mart Canada COO

- "An organization cannot shrink its way to greatness—it must grow and one of the keys to successful growth is excellent risk management."
  Jacqueline Wagner, GM General Auditor

Company Perspectives

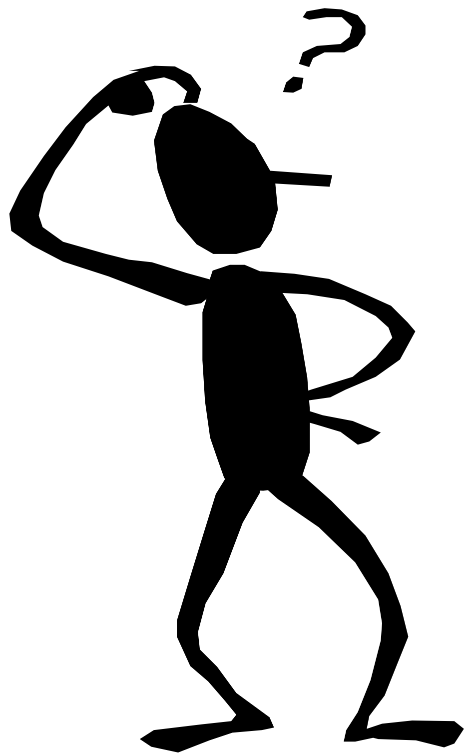
- “The approach we have taken in financial risk and business risk is to try to quantify what we can and not necessarily worry that we are unable to capture everything in our measurement.”

  George Zinn, director of corporate finance, Microsoft Corp.

Company Perspectives

- “What we have is a control process now. We don’t have a value creation process. That’s what we’re trying to do.”
  Susan Stalnecker, Treasurer, DuPont Co.

Questions and Answers



“The past seldom obliges by revealing to us when wildness will break out in the future.”

Peter Bernstein

Against the Gods: The Remarkable Story of Risk

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