Lessons from the Field
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: ¹S&P 500 index is the sum of the S&P indexes corresponding to time period for each of the 100 companies suffering stock drops.
²Data 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

- Set Objectives
- Identify Risks
- Monitor
- Act
- Assess Risks
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.

- The Resource Barrier: 60% of organizations don’t link budgets to strategy.

- The Management Barrier: 85% of executive teams spend less than one hour per month discussing long-term strategy.

9 of 10 companies fail to execute strategy.
DOGBERT CONSULTS

IT'S EASY TO CREATE A STRATEGY.

WRITE DOWN EVERYTHING YOU DO, PRECEDED BY THE PHRASE, "INCREASE OUR MARKET SHARE BY..."

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
  - Market Share
  - Respect Individual
  - Service to Customer
  - Strive for Excellence

- Business Objective
  - Expansion Opportunity
  - Distribution
  - Customer Service
  - Retention
  - Development
  - Leadership

- Risk Framework
  - Categorize Risk
  - Standard Framework
  - Reference

- Identify Risk Universe
  - Survey Stakeholders
  - Compile Data
  - Share Data
  - Schedule Workshop

- Risk Workshop
  - Cross Divisional Discussions
  - Additional Risk
  - Prioritize Risk

- Control & Action Workshop
  - Evaluate Risk
  - Existing Controls
  - deficiencies
  - Action Plan
  - Responsibility

- Monitor Evaluate Manage
  - 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

<table>
<thead>
<tr>
<th>Competitor Sensitivity</th>
<th>Shareholder Relations</th>
<th>Capital Availability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Catastrophic Loss</td>
<td>Legal</td>
<td>Industry</td>
</tr>
<tr>
<td>Sovereign/Political</td>
<td>Regulatory</td>
<td>Financial Markets</td>
</tr>
</tbody>
</table>

### Process Risk

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

### Information for Decision-Making Risk

<table>
<thead>
<tr>
<th>Operational</th>
<th>Financial</th>
<th>Strategic</th>
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<tbody>
<tr>
<td>Pricing</td>
<td>Budget and Planning</td>
<td>Environmental Scan</td>
</tr>
<tr>
<td>Contract Commitment</td>
<td>Completeness and Accuracy</td>
<td>Business Portfolio</td>
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<tr>
<td>Measurement</td>
<td>Accounting Information</td>
<td>Valuation</td>
</tr>
<tr>
<td>Alignment</td>
<td>Financial Reporting Evaluation</td>
<td>Measurement</td>
</tr>
<tr>
<td>Completeness and Accuracy</td>
<td>Taxation</td>
<td>Organization Structure</td>
</tr>
<tr>
<td>Regulatory Reporting</td>
<td>Pension Fund</td>
<td>Resource Allocation</td>
</tr>
</tbody>
</table>

The Economist Intelligence Unit, *Managing Business Risk*, p. 15
Risk Management
Assessing Impact and Likelihood of Occurrence

- Catastrophic Impact on Achievement of Objectives (Significance)
  - 10
  - Prevent at the Source
  - Inspect/Correct and Monitor

- Minor Disturbance
  - 1

Low Likelihood
- 2nd Quartile: High Impact, Low Likelihood
- 4th Quartile: Low Impact, Low Likelihood
  - Monitor and Investigate
- 3rd Quartile: Low Impact, High Likelihood
- 1st Quartile: High Impact, High Likelihood
  - Control Unnecessary; Continue to Assess

Adapted From The Economist Intelligence Unit, Managing Business Risk, p. 30 and Deloitte & Touche, Perspectives on Risk, p. 13
<table>
<thead>
<tr>
<th>Significance</th>
<th>High/Low=6</th>
<th>High/Medium=8</th>
<th>High/High=9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organizational Structure</td>
<td>IT Infrastructure</td>
<td>Pricing Accuracy</td>
<td></td>
</tr>
<tr>
<td>Communications - Internal/External</td>
<td>Litigation</td>
<td>Accounting Controls</td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>IT Data Integrity</td>
<td>Content Accountability</td>
<td>System Integration</td>
</tr>
<tr>
<td>E-business owner</td>
<td>Hidden Costs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Third Party Communications</td>
<td>Credit Risk</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hacking</td>
<td>Due Diligence Risk</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Margin Protection</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Competitiveness</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Profitability Measurement</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medium/Low=3</td>
<td>Medium/Medium=5</td>
<td>Medium/High=7</td>
<td></td>
</tr>
<tr>
<td>Authority</td>
<td>Regulatory - State Differences</td>
<td>Points of Failure</td>
<td></td>
</tr>
<tr>
<td>Code of Conduct</td>
<td>Regulatory Response</td>
<td>Complex Process/Systems</td>
<td></td>
</tr>
<tr>
<td>Business Exit Strategy</td>
<td>External Data Integrity</td>
<td>Resource Allocation - IT &amp; HR</td>
<td></td>
</tr>
<tr>
<td>Employee Privacy</td>
<td>Intellectual Property</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Customer Privacy</td>
<td>Unauthorized Intermediary</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Technology</td>
<td>Contract Terms</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Transparent Intermediary</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Alliances &amp; Competition</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Order Fulfillment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low/Low=1</td>
<td>Low/Medium=2</td>
<td>Low/High=4</td>
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<tr>
<td>Qualify Customer Strategy</td>
<td>Default</td>
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</tr>
<tr>
<td>Low</td>
<td>Medium</td>
<td>High</td>
<td></td>
</tr>
</tbody>
</table>

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

**KEY PROCESS RISKS:**

- __________________________________________
- __________________________________________
- __________________________________________
- __________________________________________
- __________________________________________
- __________________________________________

**CONTRIBUTING FACTORS:**

- __________________________________________
- __________________________________________
- __________________________________________
- __________________________________________
- __________________________________________

**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:

<table>
<thead>
<tr>
<th>Management Environment</th>
<th>VL</th>
<th>L</th>
<th>M</th>
<th>H</th>
<th>VH</th>
</tr>
</thead>
<tbody>
<tr>
<td>e.g., ethical values, HR policies, accountability, trust, proper resources</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Risk Assessment</th>
<th>VL</th>
<th>L</th>
<th>M</th>
<th>H</th>
<th>VH</th>
</tr>
</thead>
<tbody>
<tr>
<td>e.g., objectives clear, risks identified, measurement indicators, monitoring of environment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Management Activities</th>
<th>VL</th>
<th>L</th>
<th>M</th>
<th>H</th>
<th>VH</th>
</tr>
</thead>
<tbody>
<tr>
<td>e.g., policies practiced, expectations and scope, decisions by right people, integrated control processes, timely decisions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Information / Communication</th>
<th>VL</th>
<th>L</th>
<th>M</th>
<th>H</th>
<th>VH</th>
</tr>
</thead>
<tbody>
<tr>
<td>e.g., communication processes, relevant information, coordination of decisions, plans communicated, information needs reassessed</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Monitoring</th>
<th>VL</th>
<th>L</th>
<th>M</th>
<th>H</th>
<th>VH</th>
</tr>
</thead>
<tbody>
<tr>
<td>e.g., performance monitored, assumptions challenged, follow up processes, periodic reporting on risk management and control</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Study Company</th>
<th>Industry</th>
<th>Revenues(^1)</th>
<th>Employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chase Manhattan Corp.(^2)</td>
<td>Financial Services</td>
<td>$22,982</td>
<td>74,800</td>
</tr>
<tr>
<td>Dupont</td>
<td>Chemical</td>
<td>$26,918</td>
<td>94,000</td>
</tr>
<tr>
<td>Microsoft Corp.</td>
<td>Technology</td>
<td>$19,750</td>
<td>31,575</td>
</tr>
<tr>
<td>United Grain Growers, Ltd.</td>
<td>Agriculture</td>
<td>C$1,832</td>
<td>1,600</td>
</tr>
<tr>
<td>Unocal Corp.</td>
<td>Energy</td>
<td>$6,057</td>
<td>7,550</td>
</tr>
</tbody>
</table>

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

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

[Diagram showing actual revenues and risk corrected revenues over the years 1980 to 1994]

- Actual Revenues
- Risk Corrected Revenues
- Actual Distribution
- Risk Correction Distribution
Goal of Risk Management at Dupont

Inherent Distribution

Distribution after Risk Management

Earnings
Notional Amount at Risk
= $5 billion

Floating Rate Debt 32%
Natural Gas 9%
Ethane 4%
Cyclohexane 5%
Corn 2%
Soybeans 2%
Anticipated Local Currency Margins 46%

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 Prices: 32%
- Foreign Exchange: 51%
- Interest Rates: 17%

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

- Chemicals: 35%
- Precious Metals: 25%
- Natural Gas: 20%
- Agriculture: 15%
- Other Commodities: 10%

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

- Euro: 35%
- Yen: 30%
- Mexican Peso: 25%
- Canadian $: 20%
- Other Currencies: 15%
Expected Earnings and EaR for Budget Year 2000

Summary by Month

Distribution or Annualized Earnings Outcomes

- **$545**:
  - Equals the earnings corresponding to the 95% CI

- **$125**:
  - EaR equals the difference

- **$670**:
  - Equals the expected or budgeted earnings

<table>
<thead>
<tr>
<th>Month</th>
<th>Expected Earnings</th>
<th>Earnings at Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>$70</td>
<td>$0</td>
</tr>
<tr>
<td>February</td>
<td>$60</td>
<td>$0</td>
</tr>
<tr>
<td>March</td>
<td>$60</td>
<td>$0</td>
</tr>
<tr>
<td>April</td>
<td>$50</td>
<td>$0</td>
</tr>
<tr>
<td>May</td>
<td>$40</td>
<td>$0</td>
</tr>
<tr>
<td>June</td>
<td>$30</td>
<td>$0</td>
</tr>
<tr>
<td>July</td>
<td>$30</td>
<td>$0</td>
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<tr>
<td>August</td>
<td>$20</td>
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<tr>
<td>September</td>
<td>$20</td>
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<td>October</td>
<td>$10</td>
<td>$0</td>
</tr>
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<td>November</td>
<td>$10</td>
<td>$0</td>
</tr>
<tr>
<td>December</td>
<td>$10</td>
<td>$0</td>
</tr>
</tbody>
</table>
**Probability Assessment of Earnings Outcomes Illustration**

*Interpretation:* There is a 30% chance that due to all risks (although this analysis could be produced for each risk, or SBU) earnings will fall below $640 million for the year.
Earnings Variability by Key Factor

- Sales Volume
- Prices
- Environmental
- Fuel Cost
- Transmission Congestion
- Interest Rates
- Plant Availability
- GDP
- Pension – OPEB
- Total (not additive)

(Cents per share)
Risk, Quantification and Gap Analysis
<table>
<thead>
<tr>
<th>Category</th>
<th>Score</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
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<td>1</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Basis/Price Risk</td>
<td>22</td>
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<td>1</td>
<td>2</td>
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<td>Foreign Exchange</td>
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<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Regulatory Risk CWB, Transportation</td>
<td>25</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>2</td>
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<tr>
<td>Inventory</td>
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<td>2</td>
<td>1</td>
<td>3</td>
<td>1</td>
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</tr>
<tr>
<td>Transportation</td>
<td>25</td>
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<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Major Property (e.g., terminals)</td>
<td>26</td>
<td>1</td>
<td>2</td>
<td>3</td>
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<td>1</td>
<td>1</td>
<td>1</td>
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<td>Credit/Receivables</td>
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<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>EDP System Failure</td>
<td>29</td>
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<td>3</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
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<td>Leverage (debt/equity)</td>
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<td>Interest Rate</td>
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<td>Business Interruption</td>
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<td>Spoilage/Disease</td>
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<tr>
<td>Strategic Planning</td>
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<td>Environmental</td>
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<td>Process Compliance/Execution</td>
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</table>

37
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

<table>
<thead>
<tr>
<th>Company</th>
<th>Industry</th>
<th>Revenues(^1)</th>
<th>Employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canada Post Corp.</td>
<td>Postal Delivery</td>
<td>C$5,900</td>
<td>61,000</td>
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<tr>
<td>FirstEnergy Corp.</td>
<td>Electric Utilities</td>
<td>$7,000</td>
<td>13,800</td>
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<tr>
<td>General Motors Corp.</td>
<td>Manufacturing</td>
<td>$184,600</td>
<td>386,000</td>
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<tr>
<td>Unocal Corp.</td>
<td>Oil &amp; Gas Operations</td>
<td>$9,200</td>
<td>6,800</td>
</tr>
<tr>
<td>Wal-Mart Stores Inc.</td>
<td>Retailing</td>
<td>$193,300</td>
<td>1,244,000</td>
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</tbody>
</table>

\(^1\)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

- Chief Risk Officer
- Board Reporting
- Audit Committee Reporting
- Risk Champions
- Management Accountability
- Internal Audit Follow-up
- Volume and Frequency of Information
- Change in Audit Approach
- ERM Committee
- Management Follow-up
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.
Corporate Control Effectiveness

Purpose

Commitment

Capability

Monitor/Learn

2.5

2.4

2.4

2.2

1= Not very effective
2= Somewhat effective
3= Substantially effective
4= Very effective
Achievability of Objectives

Achievability

1 2 3 4 5 6 7 8 9 10 11
# FUNCTIONAL RISK ASSESSMENT SUMMARY 2000 / 2001

## Corporate Risk Assessment 2000/2001

### Comparison of Functional Risk Assessments

<table>
<thead>
<tr>
<th>Function</th>
<th>Function 2</th>
<th>Function 3</th>
<th>Function 4</th>
<th>Function 5</th>
<th>Function 6</th>
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<th>Function 12</th>
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<th>Function 14</th>
<th>Function 15</th>
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<tbody>
<tr>
<td>1: External Environment</td>
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<td>2: Customer (Internal &amp; External) Needs</td>
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<td>3: Culture</td>
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<td>4: Operations</td>
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<td>5: Communications</td>
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<td>6: Security</td>
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<td>7: Human Resource</td>
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<td>8: Information availability/processing/technology</td>
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<td>9: Financial</td>
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<td>10: Legal/Compliance</td>
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<td>11: Management and monitoring of operation</td>
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</table>
Key Governance Questions Relating to ERM
(source MMC 2003)

- Is there a process for assessing risk and capabilities?
- Is the Board advising on "mission-critical" risks?
- Is opportunity-seeking behavior balanced with risk-taking?
- Are boundaries and limits adequately defined?

- Is there a process for reporting risk and performance?
- Does the organization structure support risk reporting?
- Are key risks managed?
- Are capabilities effective?
- Is risk-sensitive culture in place?
Trends
How would you characterize the status of your ERM framework?

(Tillinghast-Towers Perrin, 2000)

- Complete ERM framework: 11%
- Partial ERM framework: 38%
- Planning to implement framework: 20%
- Investigating concept: 22%
- No framework and no plans: 9%
Will ERM help you address this business issue?

- Earnings growth: 57%
- Revenue growth: 55%
- Earnings consistency: 67%
- Technology costs: 62%
- Return on capital: 63%
- Expense control/reduction: 64%
- People costs: 50%
- Regulatory change/compliance: 69%
- Product pricing: 68%
- Capital management/allocation: 85%
Which of the following risks are included in your internal audit plan?

- Financial risks: 88%
- Operational risks: 83%
- Strategic risks: 49%
- Other: 12%
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. ______________
Company Perspectives

- “Enterpris 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