THE ROLE OF FINANCE AND ACCOUNTING IN ENTERPRISE RISK MANAGEMENT

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2014 Emanuel Saxe Lecture
Baruch College
Recent Events Have Brought Risk Management to the Fore

Financial crises

Regulatory changes and compliance requirements (e.g., SEC disclosure requirements, NYSE listing requirements)

Natural disasters

Supply chain disruptions

Environmental failures

Criminal actions

Rapidly changing and volatile competitive environments

What role can Finance and Accounting play in helping organizations effectively manage, monitor, and potentially exploit risk situations to enhance performance?
The COSO ERM Framework Consists of 8 Interrelated Components and 4 Objectives

Elements of ERM as outlined in the framework:

- Is a process
- Is effected by people
- Is applied in strategy setting
- Is applied across the enterprise
- Is designed to identify potential events
- Manages risks within risk appetite
- Provides “reasonable assurance”
- Supports achievement of key objectives
Potential Benefits of ERM

- Align risk appetite (the level of acceptable risk) and strategy
- Enhance risk response decisions (avoid, mitigate, share, accept)
- Reduce operational surprises and losses
- Identify and manage enterprise-wide risks in an holistic, integrated manner
- Seize opportunities
- Improve deployment of capital
Risk Management Maturity and Stock Price Volatility

Volatility: A measure of the risk of price moves for a security calculated from the standard deviation of the day to day logarithmic historical price changes. The 260-day price volatility equals the annualized standard deviation of the relative price change for the 260 most recent trading days closing price, expressed as a percentage.

All references to Bloomberg as a source relate to market data only. All Risk Maturity data are presented by Aon plc.

Source: Aon and Wharton research
Risk Management Maturity and ROE

1 = Initial, 2 = Basic, 3 = Defined, 4 = Operational, 5 = Advanced

ROE 13
ROE 14

Return on Equity: Yearly return as of March
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Source: Aon and Wharton research
What is the Role of the Finance Organization in ERM?
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(or “Don’t we already do this?”)
The “Owners” of Enterprise Risk Management (%)

- Inter-Disciplinary Risk Committee
- Non-Officer
- Board Audit Committee
- Treasurer
- CIO/CTO
- Chief Risk Officer
- COO
- CFO
- CEO
Finance’s Many Risk Management Roles at IBM

Enterprise Risk Management Department (3 Headcount):
- Supports the ERM Steering Committee and Executive Councils in assisting the business in identifying and managing enterprise level risks
- Sets standards for ERM assessment & reporting
- Integrates risk with strategy & execution
- Institutionalizes ERM knowledge


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Finance’s Contribution to Managing Different Risks

- Episodic/Catastrophic
- Compliance
- Financial fraud
- IT
- Market
- Credit
- Supply Chain
- Reputational

- Full/Primary (Controls Process of Identifying, Monitoring, and Managing Risk)
- Partial (Regularly Contributes Some Input)
- Ad Hoc (Meets Occasional Requests) or None

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It Matters Who Reports to Finance

Risk functions reporting to Finance

- Compliance: 51%
- Risk management: 52%
- Internal audit: 63%
- Treasury: 70%

Reporting relations influence risk focus

- **Risk management** is positively related to Finance’s contribution to managing each type of risk except supply chain and negatively with financial fraud.

- **Internal audit** is negatively related to contributions to managing financial fraud.

- **Compliance** is positively associated with contributions to compliance, supply chain, IT, and episodic risk management.

- **Treasury** is only associated with traditional areas of credit and liquidity risk management, and negatively with reputation.
Key Contributors to Cross-Functional Risk Management (%)

- Don't manage across functions
- Market intelligence
- Planning
- Treasury
- Legal
- R&D
- Manufacturing
- Supply chain
- Human resources
- IT
- Marketing
- Audit
- Finance

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Perceived Importance Versus Effectiveness of Finance Activities

1 = Ineffective to 5 = Very Effective

1 = Unimportant to 5 = Critical
So can ERM practices improve Finance effectiveness?
So can ERM practices improve Finance effectiveness?

*(this requires firms to implement them!)*
Risk Management Activities Conducted Enterprise-Wide (%)

- Economic capital allocation
- Fully embedded process controls
- Risk-adjusted forecasts and plans
- Specific risk thresholds
- Sharing risk data with value network
- Historical comparison of key risk...
- Predictive analytics
- Routine management monitoring...
- Formalized risk identification
The Use of Risk Performance Measures

Risk metrics and indicators are identified and tracked:

- 22.2% rarely or never
- 39.4% inconsistently or on an ad-hoc basis
- 38.4% consistently for key risks

Identified risk metrics and indicators track:

- 52.7% risk management activity implementation and completion
- 33.9% resources used to implement and complete risk management activities
- 56.3% risk exposure

Quantitative thresholds and tolerances have been established:

- 28.4% no
- 42.2% inconsistently or on an ad-hoc basis
- 29.4% consistently for key risks
The Integration of Performance and Risk Management

- Formal risk and performance monitoring - Separate
- Formal performance monitoring - Risk not incorporated
- Formal performance monitoring incorporating risk indicators
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<th>ERM Practices and Perceived Finance Effectiveness</th>
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## ERM Practices and Perceived ERM Benefits (1 = No impact to 5 = Significant impact)

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**Broader Cross-Functional Contribution Is Also Positively Associated with Perceived Finance Effectiveness and ERM Benefits (NOT Just Cross-Functional Finance Contribution)**
Risk-Based Forecasting and Planning—A Closer Look

• Association for Financial Professionals (2014) finds:

  – Vast majority of respondents face similar or greater earnings uncertainty than they did following the financial crisis
  – 35 percent face greater difficulty forecasting earnings and risks than three years prior
  – 46 percent believe that forecasting earnings and risks will be even more difficult in three year time

• AFP survey found the primary challenge to organizations’ ability to forecast metrics is integrating risk and forecasting data into strategic decision making
## RBFP - Linking ERM and Financial Planning and Analysis

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<th>Typical Approaches to Financial Forecasting</th>
<th>Risk-Based Forecasting and Planning</th>
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<td>Forecasts based largely on single-point estimates and metrics</td>
<td>Migrate from single point forecasting and single input sensitivity to multi-factor perspectives</td>
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<td>Sensitivity analysis focused on single variables</td>
<td>Build in the use of quantitative distributions and aggregation of individual volatilities to evaluate ranges of possible outcomes</td>
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<td>Strong variability in assumptions and inputs across business units</td>
<td>Shock the financial forecast with major risk drivers to get a cash flow or earnings distribution for each period</td>
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<tr>
<td>Inadequate application of formal stress testing</td>
<td>Better linkage between the uncertainty in cash flow and earnings and the impact on key balance sheet metrics and financial ratios</td>
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<td>Limited integration between strategic planning, financial forecasting and budgeting, and risk analysis</td>
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<td>Single sourcing of inputs</td>
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Source: Adapted from Deloitte (2012), “Risk-Adjusted Forecasting and Planning: Navigating the ‘New Normal’ of Increased Volatility”
The State OF RBFP Practices in US Firms

70% align risk assessment criteria with management perceptions of risk tolerance rather than with quantified risk appetite and risk tolerance statements

Only 44% consistently analyze risk drivers to identify common drivers between key risks

More than a third of the respondents rarely or never explicitly reference risk assessments or analysis plans in their budgeting process.

Only 29% of the firms explicitly incorporate different risk-based return expectations for different business units and functions in budget and resource allocation decisions

Only 21% formally apply risk appetite and/or tolerance concepts to strategy development, and just 27% formally incorporate key risk information from the risk management process in the strategic planning process

Source: Aon Risk Maturity survey
Does RBFP Improve Forecasting Ability?

RBFP practices in 140 publicly-listed US firms from Aon Risk Maturity survey

Responses used to assess extent of:

- Quantitative risk assessment and analysis
- Identification of risk drivers and interdependencies
- Incorporation of risk considerations in budgeting, capital and project decisions, and strategic planning

Examine the earnings forecasting benefits from RBFP

- Indirect through volatility reduction
- Direct through improved forecasting ability
Risk-Based Planning and Forecasting and Volatility

Estimated Percentage Change in Volatility Ranking

Analysis is based on work by Christopher Ittner and Jeremy Michaels of The Wharton School. Firm volatility as reflected in cash flows, earnings, sales and stock price.
Risk-Based Planning and Forecasting and Earnings Forecasts

Estimated Percentage Difference From Average Earnings Forecast

Analysis is based on work by Christopher Ittner and Jeremy Michaels of The Wharton School.

Forecast Error: absolute value of actual earnings per share less management’s forecast, as a percentage of price at the beginning.

Forecast Bias: similarly defined as error, except we do not take the absolute value of the forecast error.

Forecast Width: the upper bound of the forecast range minus the lower bound, as a percentage of beginning of period price.
The Forecasting Benefits From RBFP Are Greater When Volatility is Higher

Estimated Percentage Difference From Average Earnings Forecast Error

Analysis is based on work by Christopher Ittner and Jeremy Michaels of The Wharton School
Firm volatility as reflected in cash flows, earnings, sales and stock price
Conclusions

Finance and accounting professionals (and academics) are in a unique position to play a leading role in ERM initiatives.

This will require going beyond traditional compliance and risk mitigation to support broader performance management efforts:

- Development/analysis of risk measures (e.g. “Key Risk Indicators”)
- Financial quantification of risks
- Integration of ERM into traditional finance and accounting areas
  - Investment decisions
  - Budgeting and financial reporting
  - Performance management
  - Compensation and incentives
  - Forecasting
  - Supplier selection
As stated by an executive at Hydro One (an early ERM adopter):

“The objective is to balance the level of risk exposure with the right amount of control, optimizing resource use and return”