Building a Sustainable Risk Organization

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Waypoints

• Principles
  – Distinguishing risk from uncertainty
  – How does behavior influence risk?

• Key Ingredients of an Effective Risk Organization
  – Culture
  – Mission
  – Talent
What do these organizations have in common?
Distinguishing Risk from Uncertainty
What is Risk?

• Derived from the Italian word *risicare* – meaning “to dare”
• When you get in a car and drive from home to work, there are really only two outcomes, you can arrive without any incident, or you can get into an accident
• In other words there is a risk of a bad outcome.
• Assessing the consequences – over time you observe that between friends, family and eventually yourself that the chances of an accident on any given day are quite low.
• But also the potential for dollar loss if an accident occurs is relatively low, a small dollar fender bender is a most likely outcome.
What actions can you take to reduce the impact of experiencing an accident?

- Sell car, ride a bike, walk, public transportation
- Drive more cautiously
- Buy a safe, lower cost to fix car
- What about buying car insurance?
- How do insurance companies determine how much to charge you for car insurance?
• What do Frank Knight (well-known economist from the 1920s) and Donald Rumsfeld (former US Defense Secretary) have in common?
• In their own ways expressed what distinguishes risk from uncertainty
What is the difference between risk and uncertainty?

- **Risk**
  - “Risk management is not knowing the outcome from an action in advance; rather it's having the ability to reasonably measure its likelihood.”
    
    Frank Knight

- **Uncertainty**
  - Lacking of solid facts or data from which to draw reliable inferences of possible outcomes or altogether unaware of potential outcomes
## Risk & Uncertainty Decision Matrix

<table>
<thead>
<tr>
<th>Awareness of Risky Outcome</th>
<th>Knowledge</th>
<th>Unknown</th>
</tr>
</thead>
<tbody>
<tr>
<td>Known</td>
<td>Quadrant 1</td>
<td>Unknown</td>
</tr>
<tr>
<td></td>
<td>Known</td>
<td>Unknown</td>
</tr>
<tr>
<td></td>
<td>Lacking solid facts or data that exist</td>
<td></td>
</tr>
<tr>
<td>Unknown</td>
<td>Knightian Uncertainty</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Unaware of potential risk or the ability to measure it</td>
<td></td>
</tr>
<tr>
<td>Known</td>
<td>Knightian Risk</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Quadrant 3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Substantial information exists to measure risk well</td>
<td></td>
</tr>
<tr>
<td>Unknown</td>
<td>Outcomes</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Quadrant 4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Data and statistical methods exists to establish reliable estimates</td>
<td></td>
</tr>
</tbody>
</table>
Suppose you’ve had a job for the last 2 years where you’ve been direct depositing $10,000 per month.

On a daily basis on average you spend $9,250 per month.

Looking over your last two years of daily balances you find there have been 20 instances where you have overdrawn your account and 5 where you have bounced checks to friends and family.

Your bank tells you that each day your account is overdrawn will cost a maintenance fee of $35 and each bounced check will cost $25.
• What are the known knowns?
• What are the known unknowns?
• What are the unknown knowns?
• What are the unknown unknowns?
• **Known knowns**
  - Monthly income
  - Bank fees
    - Overdraw costs = $35*20 = $700
    - Bounced check costs = $25*5 = $125

• **Known unknowns**
  - Likelihood of being overdrawn = $20/(365*2) = 2.74%
  - Likelihood of bouncing a check = $5/(365*2) = .69%

• **Unknown knowns**
  - Bank offers overdraft protection online but you never check
  - Adverse impact to credit score from bank account mismanagement that you do not understand

• **Unknown unknowns**
  - A RIF occurs within the agency where you will lose your job in 2 months
Risk as measured in losses can be defined as the following:
- \( Pr(\text{Outcome}) \times (\text{Dollar Impact of the Outcome}) \)

We refer to \( Pr(\text{Outcome}) \) as the probability or incidence of the event, and the second component as the loss severity
- Earthquakes and portfolio risk
The Psychology of Risk
Thought Experiment 1

• While at Vegas you run into someone who offers you this game where you have 2 choices:
  – $1,000, or
  – A 50% chance of receiving $2,000 and a 50% chance of receiving nothing

• How many choose the first alternative?
• Why?
Thought Experiment 2

• Now what choice would you make if you were offered to pick between these 2 alternatives:
  – An 80% chance of losing $4,000 and a 20% chance of breaking even, or
  – A 100% chance of losing $3,000

• How many select the first alternative?
Outcomes

• In the first experiment both outcomes have the same mathematical expectation,
  \[-0.5(2,000) + 0.5(0) = 1,000\]
• In other words most people are risk-averse, preferring the certain gain over a fair gamble
• In the second example, the gamble has an expected loss of
  \[-0.8(4,000) + 0.2(0) = 3,200\]
or more than the certain loss of $3,000
• In other words we are risk-seekers in this case when it comes to losses by selecting the first outcome, and hope to avoid the certain loss
• “Failure of Invariance” – Kahneman & Tversky
  – Prospect Theory and asymmetric decisions can explain differences in our decisions involving gains and losses

• Cognitive Bias
  – Herd mentality
  – “Recency Bias”
  – Confirmation Bias
  – Ambiguity Bias
Ingredients of Sustainable Risk Management
The “Culture” Factor
Recipe for Risk Culture Breakdown

• Management cognitive biases
• Short-term outcomes focus
• Apathy or worse by CEO and management toward risk management
• Adversarial views toward risk management
• Poor risk vision
• Inability to translate risk vision into value-added outcomes
Symptoms of Poor Risk Culture

- Abnormal turnover in risk management personnel
- Limited access of Chief Risk Officer to Board
- Lack of balance in management meetings on business and risk issues
- Low morale among risk management personnel
- Risk management recommendations consistently overridden
- Strategic plans lacking risk objectives
- Lack of stature and credibility of risk organization
Key Roles in Fostering Risk Culture

• Board actively engaged in understanding risks
• CEO embraces and articulates desire for strong risk culture
• Executive Committee reinforces CEO message regarding risk management and views risk as a partner in building the franchise
• Risk management projects balance, credibility and partnership across the enterprise
Ingredients for Cultivating Risk Culture

- Awareness
- Acceptance
- Incentives
- Bias
- Temperament
- Clarity
- Balance
Advanced Risk Culture

- Role clarity
- Situational risk awareness
- Strong operational process and controls
Ingredients of Sustainable Risk Management
The “Mission” Factor
ERM Defined

• Led by the Chief Risk Officer in most organizations, ERM comprises functions, roles and responsibilities that cover:
  • Framing of risk boundaries for management and the board- risk appetite and risk limits
  • Governance over risk management practices, policies and controls
  • Risk assessment methodologies
    • Risk identification
    • Risk measurement and monitoring
    • Risk management
Framing Risk Boundaries:

• The CRO assists and guides the board and senior management in developing their risk appetite

• This requires an understanding of the enterprise’s business strategy, vision and mission and being able to characterize the impacts of adverse outcomes on the institution’s financial stability

• Illustrative Examples:
  • Banking: The organization will not pursue products or services that it does not understand (e.g., subprime auto loans)
  • FDIC: The BIF has a loss tolerance such that 99.5% of the time losses in the BIF will not exceed $X billion
What are the Key Components to Effective ERM?

Risk Governance

- ERM establishes the structure by which risk management resources are distributed and leveraged across the enterprise
- Sets out the guiding principles on risk-taking across the company based on the board’s risk appetite statement
- Establishes the processes and standards by which risks are taken, managed and escalated
- Establishes accountabilities across the company for risk-taking
Risk Identification

- Entails the assessment of internal and external factors contributing to risk and uncertainty for the firm
- Internal factors include enterprise strategy, practices and operations and control environment
- External factors include macroeconomic environment, competitive landscape and customers
- A key tool in risk identification are risk control self-assessments (RCSAs)
Risk Measurement & Monitoring

- Three key elements of this process entail:
  - Data Management
  - Analysis/Technology
  - Reporting

- Objectives
  - Accurate measurement of risks (creation of Key Risk Indicators (KRIs) and tolerances)
  - Timely measurement and reporting of risks
  - Comprehensive assessment of risk
Risk Management

• Management responses to risk:
  • **Avoid**- determination not to accept excessive risk-producing activities
  • **Mitigate**- reduction of risk so that the residual or remaining risk is within the enterprise’s risk appetite
  • **Transfer**- preference to transfer some part of risk to other counterparties based on risk appetite
  • **Retain**- preference to accept and retain risk consistent with risk appetite

What are the Key Components to Effective ERM?
Key Characteristics of Effective ERM Practices

• Incorporate enterprise strategy into risk appetite and vice-a-versa
• Establish risk governance
• Issue policies
• Establish risk assessment methods
• Promote a strong risk culture
• Evaluate and balance risk and return
Establishing A Risk Taxonomy

- Risk Taxonomy - depending on how the enterprise is structured, the vast majority of risks faced lie within the following risk types:
  - Financial Risks
    - Credit (including Counterparty)
    - Interest rate
    - Liquidity
    - Price Risk
  - Operational
  - Compliance
  - Strategic
  - Reputation
- How would you assess FDIC’s risk taxonomy?
Ingredients of Sustainable Risk Management

The “Talent” Factor
• Ingredients for making a good risk professional vary by position, but these three are essential in some combination:
  – Risk and business domain expertise – *gets you noticed*
  – Organizational management – *moves you up*
  – Leadership – *keeps you there*
Risk & Business Domain Expertise

• Experience and judgment over the business cycle
• Understanding of core FDIC processes
  – Policies and procedures
  – Key drivers of risk
  – Risk mitigation strategies
  – Processes and controls
• Empirical orientation to risk management
  – Data driven
  – Analytics driven capabilities
• Native curiosity and ability to think broadly about risk issues
Organizational Management

- Demonstrated ability to conceptualize a risk management problem into an actionable plan
- Attention to detail without being mired in a 99.9% solution
- Sense of urgency
- Team orientation – leave your ego at the door
- Effective allocation of resources for the task
Leadership Qualities

- Awareness – Risk Intelligence
  - To situations
  - To individuals and groups (“reading” skills)
- Vision – lean forward
- Influence – shape the conversation with insight and stature
- Inspire – bring others along to your vision
- Leverage – be a force multiplier
- Communicate – 360 degrees
- Balance – are you a watch dog or a lap dog?
- Courage – if you see something say something
Risk Practitioner Competency Composition

Risk Analyst
- 10% Organizational Management
- 10% Leadership Skills & Impact
- 80% Business & Risk Acumen

Risk Manager
- 10% Organizational Management
- 20% Leadership Skills & Impact
- 50% Business & Risk Acumen

Risk Leader
- 25% Organizational Management
- 50% Leadership Skills & Impact
- 25% Business & Risk Acumen
<table>
<thead>
<tr>
<th>Competency</th>
<th>Risk Analyst</th>
<th>Risk Manager</th>
<th>Risk Leader</th>
</tr>
</thead>
</table>
| **Organizational** | • Independent contributor  
• Focus on how to complete individual projects  
• Follows management direction | • Augments expertise with staff  
• Builds effective team  
• Provides management direction | • Leverages talent across the organization  
• Builds effective organizations  
• Establishes and communicates risk vision |
| **Leadership**     | • Tactical Thinking - project focused  
• Take interactions at face value  
• Narrow communicator | • Strategic Thinker - risk/LoB focus  
• Develops ability to read staff and peers  
• Narrow influencer | • Strategic Thinker - enterprise focus  
• Ability to Read Individuals at all levels  
• Broad Influencer |
| **Business & Risk** | • Specific Domain Expertise  
• Reliance on personal knowledge  
• Fact provider | • Business or Risk-specific expertise and knowledge  
• Reliance on team/personal knowledge  
• Fact interpreter | • Enterprise Domain Understanding  
• Reliance on organizational knowledge  
• Info gathering & opinion/implication formation |

**Note:** This table outlines the key competencies required for different roles in risk management.
The Essence of Effective Risk Management

- Sound risk culture
- Solid risk mission
  - Governance practices
  - Policies, controls,
  - Data, analytics, technology
- Exceptional risk talent
Questions?
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