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RISK MANAGEMENT: A CROSS INDUSTRY PERSPECTIVE

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Abstract
A major lesson of the global crisis which the Banking industry has learnt is the imperative for sound and comprehensive risk governance. An integrated view of risk control and long-term value creation is the need of the hour. The global crisis has impacted the economic capital allocation and the value of business. It is very essential that everyone who deal with risk management should know the architecture of risk management and the nuances of Enterprise Risk Management, Risk taxonomy, measurement and control. This article covers the risk validation, stages of maturity in ERM and ERM across industries. The challenges in risk management and the road forward are also analyzed.

INTRODUCTION

In view of increased economic uncertainty and growing complexity of business models, firms across industries face risks which can threaten the very survival of firm. The bankruptcy of Lehman Brothers as a result of US financial crisis and failure of Baring Bank in wake of a trading fraud are cases in point. As a result risk management is getting increased focus and attention from industry, regulators and academia. Historically risk management in corporates started with managing health and safety risks in heavy industrial and natural resources companies. Then with increased financial innovation in 1980s, financial firms and banks started facing greater risks which posed threat to depositors' money. Thus it was imperative for the regulators to bring in standardized regulation which mandated the appropriate risk management in form of regulatory capital requirements. This resulted in Basel I and II regulations. In the wake of various scandals and bankruptcies resulting from poor risk management such as Enron, the Sarbanes-Oxley regulation was introduced in the United States in 2002, stipulating governance rules for companies. US financial crisis revealed the inadequacy of existing regulations. This led to Basel III regulations which put conditions on the quality and risk absorbing capacity of capital. Thus financial sector has regulatory compliance as a major factor for risk management even though it can be source of competitive advantage if it is properly leveraged. The non-financial sector has not yet witnessed such regulatory overreach. Yet it is imperative for the non-financial firms to be proactive in risk management as it can prevent erosion of value and maintain continuity and stability in their business.

OBJECTIVE

1. To understand the types of risks and the Enterprises Risk Management (ERM) architecture.
2. To analyze the risk taxonomy, appetite and measurement and risk control mechanisms in ERM
3. To identify the challenges and road ahead to Enterprise Risk Management in future.

IMPORTANCE OF RISK MANAGEMENT

"Our point of view is that companies with more mature risk management practices outperform their peers financially. Our client experience, research and study results strengthen that perspective." Randall Miller, Americas Risk Partner, EY
Using a global, quantitative survey (based on 576 interviews with companies around the world and a review of more than 2,750 analyst and company reports) conducted by EY on the maturity level of risk management practices; there was a positive relationship between risk management maturity and financial performance. Financial performance is highly correlated with the level of integration and coordination across risk, control and compliance functions.

THE RISKS FACED BY THE FIRMS

Primarily the risks faced by an organization can be categorized into Financial Risks and Non Financial Risks.

Financial Risks

These risks as the name suggest involve downside potential to financial assets. Typically the financial risk comprises (a) Credit Risk (b) Market Risk (c) Liquidity Risks.

Non Financial Risks

These risks are non financial in nature and is difficult to be identified and/or quantified. However these risks are equally critical for an organization.

a. Strategic
b. Reputational/Branding Risk
c. Compliance/Regulatory Risk
d. Operational Risks
e. Legal Risk
f. Political Risk

The criticality of a specific risk would vary across the industry and depends upon the business model of an organization in a particular industry. For consumer goods industry, quality risk leading to reputational/brand risk is huge as can be seen from the recent incident about Maggi and the resultant impact on Nestle. Some industries may face biggest risk in form of regulatory risk as regulatory changes may impact the competitiveness and profitability of an organization. Recently investment banks have been facing operational risks in form of trading frauds. Based on the Global risk management survey 2013 conducted by Accenture related to top 5 risks expected to rise over the next few years for each industry, findings are as follows: (1 indicates highest and 5 indicates lowest).

	Banking	Capital Market	Energy	Govt. Admin	Health Care	Insurance	Life Sciences	Postal	Utilities
Legal risks	1		1	1	1	1	1	1	3
Business risks	2	3	3	3	2	3	3	4	5
Regulatory requirements	5	1		4		5	4		1
Market risks						2	2	5	2
Credit Risk	3	2			3			2	4
Operational Risk		4	4	5			5		
Strategic Risk	4		2		4	4		3	
Emerging Risk		5		2					
Political Risk					5				
Reputation and Brand Risks									
Liquidity Risks			5						

ENTERPRISE RISK MANAGEMENT

Published in its 2004 ERM framework, The Committee of Sponsoring organizations of the Treadway Commission (COSO) defines ERM as "… 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 risk to be within its risk appetite, to provide reasonable assurance regarding the achievement of entity objectives."

Enterprise risk management can contribute to successful and effective risk governance, thereby enabling companies in identifying, measuring and effectively managing those risks that threaten strategic objectives. Increasingly ERM is being seen as a competitive necessity for firms across the sectors.

OBJECTIVES OF ENTERPRISE RISK MANAGEMENT

- Regulatory Compliance
- Value Protection
- Driver of Profitability

The objective would change across the industry as well as within the industry.

ERM FRAMEWORK

RISK GOVERNANCE

Role of Board: Regulators are paying greater attention to the role of the board of directors in for providing overall direction to risk governance, for approving the institution's risk appetite and risk policy and for overseeing their implementation by management. In financial institutions, regulators stipulate a risk committee of the board of directors that will be responsible for overseeing enterprise-wide risk management practices. In addition, the board risk committee is required to include at least one independent director and at least one risk management expert. As corporate/industrial firms face uncertainty and risks which could well undermine their business model, they have started board level supervision of risk management. For

example, risk experts from financial sector are joining board of industrial firms to provide fillip to risk management function in the respective organization.

ERM Set up: There are two set-ups for ERM organization and it is driven by level of centralization of the risk organizational structure.

- Decentralized: In this approach, line management owns all the risks and a lean central risk management provides basic support and co-ordination to the respective business units. Many of the corporate that follow a decentralized approach conduct regular surveys and have strong risk culture.
- Centralized: Here the risk function closely controls and owns most of the risks while remaining risks are overseen by line managers with close supervision and control provided by central risk function.

Both decentralized and centralized designs for the risk function have their own merits and are suited for different business models and risks faced by a particular industry. For example, typically a bank will have centralized risk management function which will owns some of the risks (market risks/liquidity risks) while supervising business units for management of operational/credit risks. Similarly core risks in the energy sector can be best managed by a centralized risk function. The quality risks in high intensive/consumer goods industry can be best managed by a decentralized setup.

Risk Ownership: After the global financial crisis, the growing importance of risk management has resulted in elevating the ownership of risk management into an executive board level position. Number of organizations having CRO's are on the rise and the transfer of ownership from CFOs to CROs and CEOs is a growing trend as pointed out by Global risk management survey 2013 conducted by Accenture. Even though it is a standard practice to assign the ownership of risk management to a member of the board, many organizations believe that risk management is the second line of defense and the risk management responsibility should lie with the operational and business managers. Most of them also acknowledge that from board members to business unit heads and their teams has to become more actively committed to identifying and mitigating risks.

RISK TAXONOMY/APPETITE/ MEASUREMENT

Risk taxonomy: Establish a standard taxonomy/terminology for risk management is critical for most organizations since it creates a transparent and standardized risk framework for all the stakeholders within an organization. However there are wide differences in financial sector and other sectors with regard to risk taxonomy. This can be attributed to the fact a bank typically faces financial risks which are easier to categorize and standardize. The non-financial risks are typically categorized into operational risks. Secondly banks across the world follow similar business models. Risk intermediation and disaggregation is a critical component of their business model. Further a lot of research has gone into risk management of banks in form of different Basel regulations. However non-financial firms may not follow standard taxonomy. The obvious reason is that financial risks constitute small part of their business. Non-financial risks such as operational, strategic, quality risks will be non-standardized. So specific risk may be allocated to a particular category based on the business model of that organization. For example, Commodity price will be a financial risk for a commodity trading company however this will be a strategic risk for a company having investments in economies such as Russia dependent on natural commodities.

Risk Appetite: According to consulting firm KPMG's article (2008), Risk appetite can be defined as "How much risk does an organization need to take in order to attain appropriate or sought after returns?" Risk appetite can be defined in the matrix form in the most basic form as follows:

Risk Type	**Willingness to accept Risk**					
	Low		Medium		High	
	1	2	3	4	5	6
Forex Volatility					X	
Reputation Risk				X		
Credit risk			X			

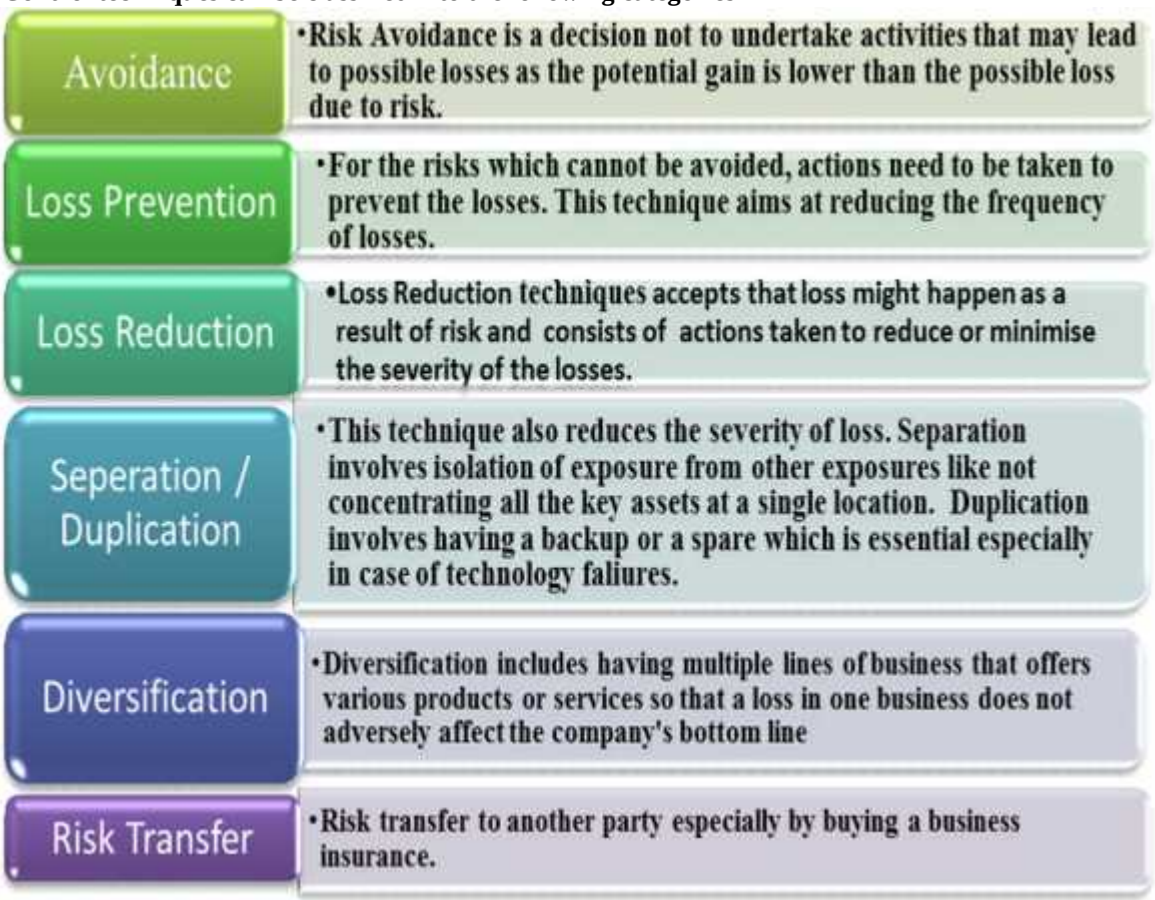
The above example is one of the ways in which different risk types can be classified based on the risk appetite of the organization and the necessary controls can be defined based on the same. Importance of defining Risk appetite across risk types is that it will help the top management in the focus and resources needed on the particular risk type.

Risk Measurement: Also, once the risk appetite is formalized, firms decide on the measurement tools to help the top management in decision making. It is always better to replicate most of the tools used by the regulators as part of measurement tools. Unlike financial risks, risk measurement is difficult for non-financial risks. Risk quantification for them is difficult and lack of historical data makes it more difficult to model risk elements.

Brazilian pulp producer Aracruz Celulose, considered forex volatility is not a major risk to it as it is mainly pulp producer. But however it discounted the fact that with passage of time, it has accumulated huge open forex reserves in anticipation of the dollar appreciation. Had the company identified in its risk appetite that for forex volatility willingness to accept risk is less as it is primarily a manufacturing company and its expertise related to foreign exchange trading and hedging is less, it would have hedged most of its positions at a minimal cost and would have avoided losses to the tune of $2.5bn.

Risk Control: Risk control is an essential part of risk management that ensures long term sustainability and profitability of the organization. Based on the risk assessments and the risk status, the firm has to develop techniques and measures to eliminate or reduce the risk. Risk control usually involves implementing new policies and standards and adopting changes in procedures. Broadly.

Risk Control techniques can be classified into the following categories



RISK CAPABILITY

Apart from the various processes and controls, for an organization to build the capability to anticipate and address the various risks, it has to make sure that it has the people with the right skills & that it has implemented proper technologies and analytical capabilities to support the needs of the firm. Accenture 2013 Global Risk Management Study reveals that improving an organizations ability to analyze data & finding and retaining talent as the two key focus areas for most organizations.

Skilled Resources: Organizations should build strong recruitment strategy so that they can obtain the skills needed in the risk management function. This should be complemented by retention strategies and adequate trainings to make sure that the resources are well equipped. Even though organizations hire risk management specialists and train them on the business processes, many organizations prefer to recruit people from business units to the risk management department and train them on the risk management skills. This also ensures in spreading the risk culture once they move back to the business units.

Data Analytics & Technology: Analytical capabilities to convert data into information and insights that help decision making have become the need for the hour. IBM suggests that 90% of the world's data has been generated only in the past two years. To address such high volumes of data for improving the decision making organizations are moving from spreadsheets and traditional databases towards sophisticated technologies like big data technologies, parallel processing or in memory processing systems.

RISK CULTURE

One of the critical pillars in the entire ERM framework that is valid across the industries will be the risk culture of an organization. Irrespective of the well-established policies and controls, major organizations fail because of non-existence of positive risk culture within the organization. Based on the article by Heiligtag, Schlosser & Stegemann (2014), risk culture can be classified in ten dimensions across four verticals.

One case study that can throw light on the importance of the Risk Culture is Allied Irish Bank case study. A currency trader John rusnak, through imaginary positions has accumulated huge open position. Even though back office was aware it was not escalated to the top management. Loss suffered was $691 million.

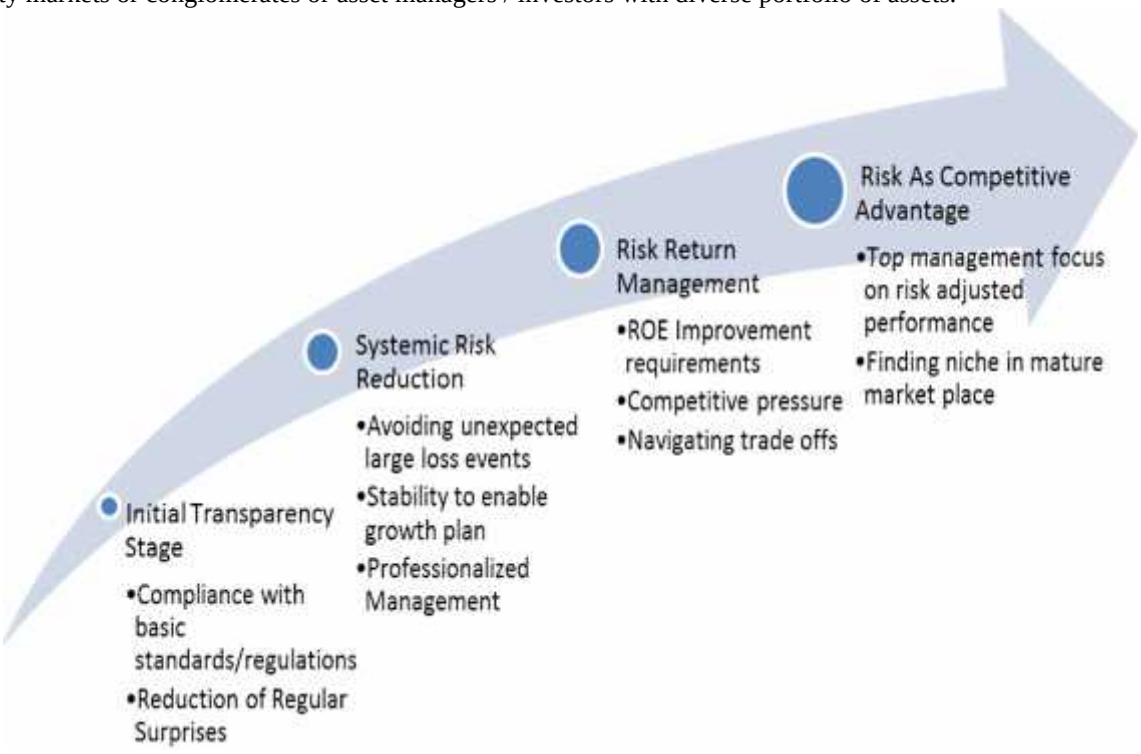
RISK VALIDATION/RISK AUDIT

Continuous validation of the models and updation of the metrics and processes is mandatory to proactively manage risk and to achieve best risk adjusted return among the peers. In this regard, risk auditing plays a major role in identifying and addressing the gaps in risk management structure, policies and processes. In the financial sector, the risk auditing is properly documented and streamlined to suit the needs of the industry. Even external audits are regularly conducted and also as per the second pillar proposed by Basel committee the national supervisors on a regular basis conduct stress tests to identify whether the banks can sustain in terms of adverse scenarios. The inputs from these tests published as financial stability report serve as a beacon for the banks to update their policies regularly for better risk management. Also companies with good corporate governance have well established policies related to risk auditing/ risk validation and risk updations. However, still there are many firms which can improve in this regard by establishing proper policies and identifying teams for internal audit to stay updated on time to time basis. It will be interesting to observe how the regulators across different industries can establish some formal mechanisms to identify risk inherent in their respective industries on a frequent basis in the future. Example for the risk auditing in other industries is, auditing regularly carried out by PSA (Petroleum Safety Authority Norway) related to Petroleum companies to identify the risks faced by them and their implications.

Four stages of Maturity in ERM

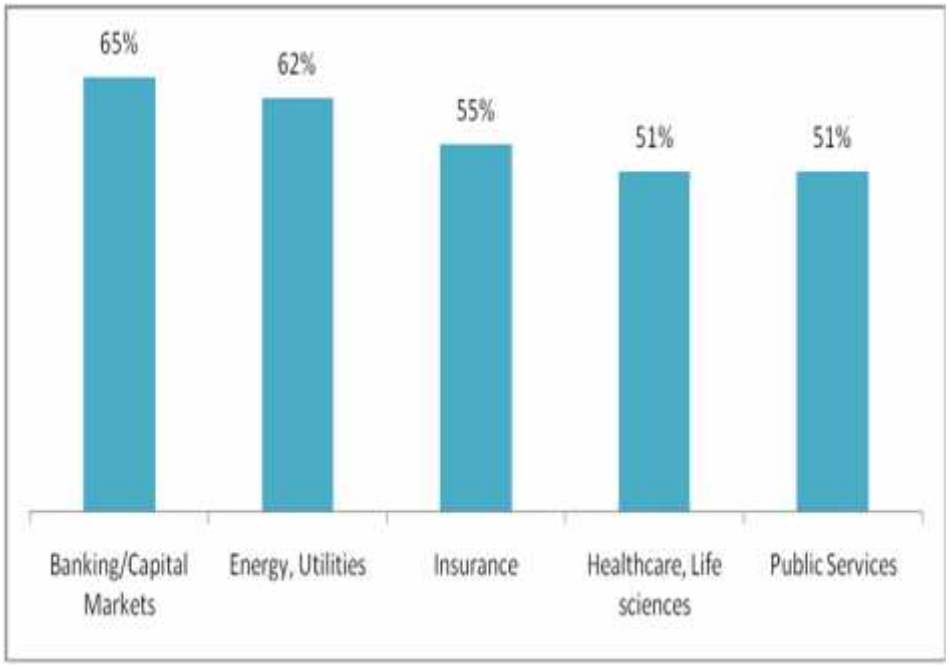
Risk management practices in various industrial sectors go through different stages of maturity based on objectives of risk management and tools. According to a Working paper on Enterprise Risk Management by Mckinsey & Company, the stages of maturity of Risk Management practices can be divided into 4 as shown in the diagram below.

An average financial institution will be in the stage 3 of this spectrum, while small regional banks will be in stage 2 and some investment banks would have moved on to stage 4. Other sectors like Retail & Telecom are moving on from stage 1 to 2. Companies with exposure to technology and R&D risks and companies with exposure to natural resources are either in Stage 3 or moving on from stage 2 to 3. Companies moving into stage 4 include energy companies using increasingly liquid commodity markets or conglomerates or asset managers / investors with diverse portfolio of assets.



ERM Adoption across Industries

Based on the Global risk management survey 2013 conducted by Accenture, ERM adoption by different industries is as below.



CHALLENGES TO EFFECTIVE RISK MANAGEMENT

Building superior Data Analytics capability: Data analytics is a critical element for risk assessment and management since it helps in estimating the risk elements for the firm. However most organizations find it challenging to implement an effective data analytical system due to various reasons like

- Lack of skilled staff to develop the analytical models
- Outdated legacy systems & lack of system integrations
- Poor data quality
- Difficulty in embedding risk analytics in management process

Having skilled Risk management Talent: Finding and retaining the right management talent can be fundamental to effective operation of the risk management function.

The above chart shows the shortages faced by the firms in terms of risk management talent as per the Global risk management survey 2013 conducted by Accenture. The below chart puts the findings of the Survey regarding the biggest Obstacles to risk management talent development program.

Sharing of Risk Culture across the firm: In firms with centralized governance structure most often the risk awareness and culture mostly is restricted to the centralized risk function and it does not spread across the organization. This approach works well for risks such as market/liquidity risks which originate centrally and can be managed centrally as well. However some of the non-financial risks such as operational risk, credit risk, business risks require that risk culture pervade across the organization.

Risk Management: Going Forward

In the coming years, Risk management is going to become even more critical for firms across the sectors. Further firms can use it as a source of competitive advantage in a transformational way and leverage it to have an edge over its competitors. To do so though, firms need to have a superior risk attitude and build appropriate risk capability in order to manage its risk environment. It will have to look ahead for new risks with dramatic shift in environment and industry structure and be prepared for managing them effectively. Further, even with the most robust preventative risk strategy in place, unforeseen events can still occur that would threaten the performance and survival of the firms. Thus it is essential for the firms to develop reactive strategies that would enable the organization to respond quickly to such events.

REFERENCES

1. Corporate Governor Series: Enterprise risk management: Creating value in a volatile economy, Corporate Governance Community Summer 2009 -Grant Thornton.
2. Global Risk management Survey, Ninth edition – Deloitte.
3. Allied Irish bank case studies - Mountain mentor associates .
4. http://www.psa.no/groups-at-particular-risk/audit-of-groups-exposed-to-risk-mongstad-article8220-962.html
5. Understanding and articulating Risk appetite – KPMG.
6. Enterprise-risk-management practices: Where is the evidence? - Mckinsey Working paper on Risk, number 53.
7. Enterprise risk management: What's different in the corporate world and why - Mckinsey Working paper on Risk, number 40.
8. Risk management for an era of greater uncertainty - Accenture 2013 Global Risk Management Study.
9. http://www.pomsassoc.com/6-fundamental-techniques-risk-control/.