
Risk Management : A brief study on the strategies adopted in selected industries with specific focus on Indian IT services' organisations



Visweswar Kandikonda¹

Risks are inherent to every industry, although the nature of risks might differ between each industry segment. Risks can impact a particular industry in the form of losses on financial, health, manpower, infrastructural, environment, quality, reputation, etc. More and more business houses are expanding their foot-print globally which also means increased risk factors to deal with. Therefore, Risk Management (RM) has become a key focus area within the organisations. Independent RM function is established in most of the organisations to identify, monitor and control various risks to their business.

RM strategies adopted by an organisation are customized to handle & mitigate potential risks faced by them. Organisations are gradually moving towards Enterprise Risk Management (ERM) which would holistically address the risks at a broader level rather than dealing risks at individual element level. This article analyses the risk elements and risk management processes for a selected set of industries along with a specific focus on Indian IT services organizations.

Key Words: Risk Management, industry, potential risks, Enterprise Risk Management

Introduction

Risk by definition is potential of gaining or losing something of value. Something of value can be Financial, Health, Property, Personal, Quality, etc. Risk is also an uncertain condition or event that has an impact on at least one objective of any project that is undertaken. Risks are common across all industries and to name a few, IT, Banking & Financial Services, Infrastructure, Logistics, and Healthcare.

Managing risks aka Risk Management (RM) is therefore an important objective or focus area within any organization. Risk Management is the identification, evaluation, and prioritization of risks. Making informed decisions by consciously assessing what can go wrong, as well as the likelihood and severity of the impact is at the heart of RM. Independent RM function is established within most of the organizations.

During the course of this article, the key elements of Risk Management (RM) across a few industries are elaborated and the strategies adopted for an effective RM is explained. This article will then focus on RM strategies adopted specifically in Indian Information Technology (IT) services organizations and looks to draw comparisons with the broad RM strategies implemented across industries.

Defining Risk and Risk Management

Risk can be broadly classified under 3 categories namely, Preventable Risks, Strategy Risks and External Risks. Preventable risks are internal risks, arising from within the organization that are controllable and ought to be eliminated or avoided. Strategy risks are the ones that companies voluntarily accepts in order to generate superior returns from its strategy. External risks are certain risks that arise from events outside the company and are beyond its influence or control. [1]

This process of risk management as depicted in the below diagram defines six logical steps through which the team manages current risks, plans and executes risk management strategies. It is to be noted that below are logical steps and they do not need to be followed in strict chronological order for any given risk.



Fig. 1 – Risk Management process

¹ Research Scholar, ICFAI University Jharkhand

Risk Management adopted in selected industries

Risk Management strategies adopted in certain selected industries is detailed below.

Risk Management in Financial Services sector

Risk Management in a financial firm, be it Bank or Financial Institution, is primarily concerned with financial risks like bankruptcies, internal irregularities, frauds, etc. This is in sharp contrast to RM for an industrial firm, which generally focuses on physical risk. Since financial risk occurs in the context of the interactions between individuals with conflicting agendas, corporate risk managers spend a good deal of time thinking about organization behavior. The challenge of a modern corporation is to ensure wealth maximization of their stakeholders that is consistent with their risk preference. On the other hand, risks have to be managed effectively with a balance of providing adequate financial returns. [2][3]

Key risk elements of the industry are as given below :

- a) **Market risk** – defined as the potential of changes in the market prices of an institution's holding which may have an adverse impact on its financial condition.
- b) **Credit risk** – defined as a potential economic loss from the failure of an obligor to perform according to the terms and conditions of a contract or agreement
- c) **Operational risk** – many other risks that are generally grouped under this category like Legal risk, Reputational risk, Accounting risk, Enterprise risk, etc.

Management of Risks in financial firms consists of following measures:

- a) **Risk measurement or analysis** : Measuring overall risk of firm's position can be done in two principle ways; a statistically based approach called Value at Risk (VaR) or an approach based on economic insight called stress testing or scenario analysis
- b) **Risk Control** : Two fundamental and complementary approaches are (i) place detailed limits on amount and type of risk (ii) provide incentives to lower management to optimize the trade-off between return and risk

Risk Management in Insurance sector

Companies in the process of providing insurance and other financial services, assume various kinds of actuarial and financial risks. At the same time, they are major providers of funds to the capital market. They use their own balance sheet to facilitate the transactions and to absorb risks associated with them. Therefore, risk management and necessary procedures for risk control is a crucial task for insurers. [4]

Key risk elements of the industry are as given below :

- a) **Actuarial/Insurance risk** – arising from assumptions that actuaries implement into a model to price a specific insurance policy may turnout wrong or somewhat inaccurate [Investopedia]
- b) **Systemic risk** – disruption to the flow of financial services that is (i) caused by an impairment of all or parts of the financial system; and (ii) has the potential to have serious negative consequences for the real economy [Financial Stability Board] [5]
- c) **Credit Risk** – defined as the risk of loss due to the inability or limited willingness of a borrower (obligor), issuer or counterparty to meet its financial obligations. For insurers, the source of credit risk may include (i) Investment portfolio risk (ii) Counterparty risk (iii) Reinsurance counterparty risk (iv) Country/Transfer risk [6]

Management of Risks in the sector consists of following measures:

Journey of corporate risk management in insurance industry has witnessed significant improvements in last few decades, moving away from element-wise risk management towards Enterprise Risk Management (ERM). ERM is a step towards more defined and formalized RM. ERM typically comprises of 8 interrelated components as defined below:

- a) Internal environment
- b) Objective setting
- c) Event identification
- d) Risk assessment
- e) Risk response
- f) Control activities
- g) Information & Communication
- h) Monitoring

Risk Management in Global Supply Chain sector

Businesses today, Indian firms in particular, are restructuring themselves to operate on a global basis, to take advantage of the international product, factor and capital markets. Typically, a firm operating internationally is part of a complex supply chain. Global supply chains require highly coordinated flow of goods, services, information and cash within and across national boundaries. Typical challenges faced by global supply chain firms are related to Economic, Infrastructural, Political, Resourcing, Logistical, etc.

Global supply chain risk management is the identification and evaluation of risks and consequent losses in the global supply chain, and implementation of appropriate strategies through a coordinated approach among supply chain members with the objective of reducing things such as – losses, probability, speed of event, speed of losses, the

time for detection of the events, frequency, or exposure [7]
Key risk elements of the industry are as given below :

- a) **Supply risk** – like supplier opportunism, inbound product quality, transit time variability, supplier insolvency, etc.
- b) **Demand risk** – like demand variability, forecast errors, competitor moves, etc.
- c) **Operational risk** – Inventory ownership, asset and tools ownership, Product quality and safety issues, Currency issues, etc.

Management of Risks in the sector consists of following measures :

Risk management is a continual process that involves long-term dedication of supply chain members. Below are the typical strategies adopted for handling and mitigation of several risks : [7] [8]

- a) **Risk Identification** – Using multiple sources and classifying risks into supply, operations, demand and security risks
- b) **Risk assessment and evaluation** – Decision analysis, case studies and perception based
- c) **Selection of appropriate risk strategy** – avoidance, postponement, speculation, hedging, etc.
- d) **Implementation of supply chain risk management strategy** – complexity management, organizational learning, information technology and performance metrics
- e) **Mitigation of supply chain risks** – Preparing for unforeseen risk events

Risk Management in Indian IT Services' sector

Software projects generate variable performance outcomes and are high risk activities. Industry surveys suggest that only about 35-40% [12] [13] of software projects succeed within the agreed Cost, Time, Quality and Scope. Billions of dollars are lost annually through project failures or projects that do not deliver promised benefits. The need to manage risks increases with the system complexity, both technical and non-technical.

Risk elements as argued by Boehm and Ross (1989) [10] fall into two categories as defined below:

- a) **Generic risks** – which are common to all projects like Manpower attrition, Scope creep, Network issues, Location outages, etc.

- b) **Project-specific risks** – which are specific to a particular project like Technology complexity, Requirement gaps, Schedule variance, etc.

Risk Management in IT services is more than a process or methodology. It is a real-time threat management capability that is developed within an organization, through learning, practice and other mechanisms, over a period of time. Risk Management process as defined in the pictorial (Fig. 1) of this article is a general guideline followed in many of the IT organizations.

Risk Management typically involves two broad steps namely:

- a) **Risk Assessment**
 - i. Risk identification
 - ii. Risk analysis
 - iii. Risk prioritization
- b) **Risk Handling**
 - i. Risk management planning
 - ii. Risk management execution
 - iii. Risk monitoring and control

Since Indian IT services organizations manage projects that are outsourced from their customers located in various global geographies, the expectation from the customers are very high in delivering projects with right quality and within agreed timelines. Also, competition within the Indian IT industry is very high and hence they are always at the risk of losing a customer to the competition if the project deliveries at not up-to the mark.

Hence, IT organizations adopt a clearly defined Project Management (PM) practice based on models defined by reputed institutes like PMI, CMMI, etc. Risk Management is an integral part of the PM practices. Risk Management (RM) guidelines are well defined and documented within the organizations. Periodic internal and external audits are conducted to ensure the effectiveness and compliance to the RM policies. Being proactive in risk prevention and control is at the heart of good risk management [11]

Potential Risks are identified at various stages of the Project lifecycle like a) Proposal stage b) Contractual stage c) Project initiation stage and d) Project execution stage. Risk monitoring and control is a continuous activity throughout the project lifecycle. Below is a sample risk register followed within the project which helps in monitoring and controlling the project risks at several stages.

S.N	Risk Description	Probability of Occurrence	Impact	Overall Risk	Risk Mitigation Plan	Risk Status*
1	Scope creep	Medium	High	Extreme	Define Change Control board	Amber
2	Resource attrition	High	High	High	Define backup plan	Red
3	Network outage	Low	Low	Low	Define alternate plans	Green

*Risk status : Green-No risk; Amber-Some risk, needs close monitoring; Red-Confirmed risk, action needed

Conclusion

It is clear from this article that every industry faces several risks as part of their operations, be it internal or external risks. However, risk elements could vary by the type and nature of the industry. Higher the complexity of the industry operations, higher will be the risks. Therefore, Risk Management is an important function with the organisations. Element-wise RM is giving way to more formalized ERM.

Indian IT service organisations face typical risks by way of servicing their predominantly international clientele. Industry surveys depict just 35-40% of successful software projects. Therefore, RM gets a focused attention within the IT organisations. Based on the analyses done in this article, it can be concluded that the Risk Management Process (like risk identification, analysis, control, etc.) followed within the IT organisations broadly matches that of the other non-IT industries.

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