

An Empirical Analysis of ERMI (Enterprise Risk Management Index) on Organisational Turnarounds and Its Impact on Information Technology Sector

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Abstract

Firms around the world are struggling to show the sustainable business performance as they operate in many different regions leading to firms experiencing variation or decline in performance. Especially firms in information technology (IT) experience more variant performance as there services are outsourced globally. In this study we analyzed Indian BSE (Bombay Stock Exchange) listed IT companies using enterprise risk management (ERM) and event study. The sample comprises of 30 Indian BSE listed IT firms, in which 15 firms from large cap and 15 firms from mid cap. COSO (Committee of Sponsoring Organizations) framework (2004) was applied to develop ERMI (enterprise risk management index). Thus, an empirical analysis was conducted and found results that those firms which had adopted ERM Index experienced a positive performance irrespective of firm size thereby enhancing the trust of stakeholders on IT firm.

Keywords: Turnaround, Turnaround strategies, Enterprise Risk Management, Firm Performance, COSO framework, Emerging Economy, Information Technology.

Introduction

In the current dynamic economic environment and increased impact of global risks, to ensure economic growth and competitiveness of countries, what is required is the sustainable development based on innovative competition (Taranenko, 2013). Nations around the world are establishing national innovation strategies to become more competitive, expanding support for science and technology, improving their education systems, spurring investments in broadband and other information technology (IT) areas, and taking a myriad of other pro-innovation steps. The major challenge for the community of nations is to create a robust global innovation system with considerably higher rates of win-win innovation and considerably lower rates of win-lose innovation (Robert & Stephen, 2013).

The most remarkable aspect of economic growth in India since 1900s is its strong performance in the service sector. In the Indian economy, the service sector became quite large without undergoing a historical stage where the manufacturing sector was dominant. Several researchers attribute the service-led success of India to the comparative advantage of the economy. In this approach, the economic liberalization during 1990s is considered having played a crucial role. Nevertheless, this approach cannot explain why other developing countries with cheaper labor failed to achieve similar

accomplishments in their service sectors (Wooseok O et al., 2014). The services sector of India has shown a consistent rise in GDP share and growth rate since the take-off in the journey to economic development. The share of services in India's GDP has risen from 28% in 1950s to 54 % in 2000s (Singh, 2012). The spectacular growth performance in the IT-BPO industry in the last decade has helped the industry contribute substantially to India's GDP. In 2012-13, the IT-BPO industry's contribution to GDP was 8% as compared to 7.5% in 2011-12 (NASSCOM, 2013).

Conceptual Framework

Strategy is a pattern or plan that integrates an organization's major goals, policies, and action sequences into a cohesive whole for the purpose of competitive advantage (Seth & Thomas, 1994). Turnarounds represent the capacity of the organisation to revive itself from sickness. It provides a ladder to rise from the pit (Khandwalla P. 2001). Turnaround theory, as originally defined by Schendel, Patton, & Riggs (1976), includes a decline in firm performance stage, followed by a recovery stage. Hofer (1980) developed the theory further and identified two broad recovery stage turnaround strategies: strategic and operating. Further Schendel et al. (1976) found that downturns in performance were a result of unfavorable environmental shifts combined with organizational inefficiency or inappropriate competitive strategies. Management must be aware of the fact that decline is as probable as success in the life of an organization (Gopinath, 2005).

Leadership is an integral part of any turnaround. The approach to the study of leadership has usually been and perhaps must always be through the study of traits (O'Kane, 2006). Operational restructuring is, generally, the first turnaround strategy implemented by a financially distressed firm, as there is no point in assessing the strategic health if the firm goes bankrupt in the near term (Hofer, 1980). The IT industry, which is knowledge-intensive, is fundamentally different from the manufacturing industry that is more capital-intensive (Malcolm, 2007). In the case of IT industry the focus on risk management is an emerging core competency as there is a need for better data and information management, so that organizations can take action on account of risks. So the executives recognize enterprise risk management (ERM) as a necessity for core competency that facilitates organizations to deliver and amplify stakeholder value.

Enterprise risk management (ERM or E.R.M.) in Information Technology industry includes the technique and procedures used by these organizations to deal with risks and take hold of prospects associated with the accomplishment of their objectives. ERM provides a framework for risk management, which usually engages in identifying particular procedures or situations significant to

the organization's objectives (risks and opportunities), evaluating them on the basis of their possibility and enormity of impact, influential to a response strategy, and observing its progress. By recognizing and proactively concentrating on risks and opportunities, business organisations safeguard and generate value for their stakeholders, including owners, employees, customers, regulators, and society in general.

Review of Literature

Ghosh (2013) has conducted empirical investigation on enterprise risk management practices in India. Researcher's objective was to examine the determinants of ERM adoption for top 100 National Stock Exchange Indian companies. They further studied whether ERM adoption leads to increase in firm value. In their findings they suggested that suggest that firm size, leverage, profitability, and firm complexity influence the likelihood of ERM adoption. In their conclusion they highlighted like firms which embrace ERM experience a positive effect on their firm value. But ERM implementation across the globe remains immature, more so in India.

Gordon, Loeb, & Tseng, (2009), have studied the enterprise risk management (ERM) as managing an organization's risk. In this research paper authors had an objective that the relation between ERM and firm performance is contingent upon the appropriate match between ERM and the following five factors affecting a firm: environmental uncertainty, industry competition, firm size, firm complexity, and board of directors' monitoring. They have taken a sample of 112 US firms that disclose the implementation of their ERM activities within their 10Ks and 10Qs filed with the US Securities and Exchange Commission, empirical evidence confirms the above basic argument. In their implications of the study suggested like these findings is that firms should consider the implementation of an ERM system in conjunction with contextual variables surrounding the firm.

Ben-Amar, Boujenoui, & Zéghal (2013) have investigated the relationship between corporate strategy and enterprise risk management. The objective of this study is to examine the link between the firm's corporate strategic choices and its risk management approach. Specifically, this paper investigates whether the firm's corporate strategy affects its level of risk exposure, the perception of risk consequences as well as its risk management strategy. The sample taken for the study are 110 non financial firms listed on the Toronto Stock exchange. In their findings they expressed like risk exposure level, perception of risk consequences and risk management strategy vary according to the firm's business sector. They concluded like a firm's corporate strategy is a key determinant of its risk management approach.

Latham, S. (2009) studied empirically the Contrast of

Strategic Response to Economic Recession in Start-Up versus Established Software Firms. They have surveyed the 137 software executive regarding their strategic response to the most recent economic downturn i.e., 2001-2003. Researcher drew upon Hofer's framework for turnaround strategies to develop hypotheses to explore how smaller; start-up firms adjust their strategies in response to economic recession. The results suggest that start-up organizations are much more inclined to pursue revenue-generating strategies as a means to weathering recession rather than cost reductions, which tended to be the preferred strategy of larger firms. They also have conducted lots of literature review. With the help of Hofer's framework they developed hypotheses are, In response to economic recession, smaller, start-up firms will demonstrate a higher propensity for adopting operating strategies characterized by revenue generation than larger, established firms. The second hypotheses was in response to economic recession, larger, established firms will demonstrate a higher propensity for adopting operating strategies characterized by cost reduction than smaller, start-up firms. And final hypotheses was in response to economic recession, larger, established firms will demonstrate a higher propensity for adopting operating strategies characterized by asset reduction than smaller, start-up firms. Researcher pretested in the early part of 2004 with 50 software company executives; this pretest resulted in a reliability of 0.665 on the original scale items. After analysis of data, the results found were, start-up firms appeared to look for revenue-generating opportunities within markets to sustain revenue streams, larger firms appeared to use recessions as a time to assess their internal structures. Another unique finding was the impact on a firm's performance as differentially perceived by managers at large and small firms, The study also found significant variance with regard to managerial discretion on investment activity in functional area.

Bruton, and Rubanik (2005) have conducted a case study on Micron, a Russian technology firm. Their objective was to investigate the turnaround strategies of high technology firms in Russia. Micron Corporation, one of the two largest semi-conductor producers in Russia, is one of the country's preeminent high technology firms. The firm is notable as the factory whose workers nominated and supported Boris Yeltsin for parliament prior to the fall of the Soviet Union and his assumption of the presidency of Russia. While Micron was initially negatively affected by the country's tumultuous economic situation, it is beginning to turn its performance around. The turnaround is not yet complete, but, already similarities and differences between Micron's turnaround experience and turnaround experiences in the United States are emerging. In this paper researcher explored these similarities and differences. The paper provides lessons for other high technology firms in

transitional countries and for western managers involved in those industries. In this research they have demonstrated how the actions of one of Russia's leading high technology firms have turned the firm's performance around. These actions are similar to, and different from, actions in high technology firms in the United States. The similarities and differences are important not only for Russian firms but for firms from other nations that hope to develop strategic relationships with Russian firms.

Doug (2001) conducted the case study on PeopleSoft Inc., the purpose of the researcher was to investigate how CEO MR. Craig turned around the company. After losing \$178 million in 1999, PeopleSoft has been restored to profitability, earning \$146 million last year and posting net income of \$83 million for the first six months of 2001. Some say the most significant contribution of Craig Conway, the company's new president and COO, has been his effect on the company's culture. Under Conway, it is de rigueur to wear suits. Before joining PeopleSoft, Conway shepherded a turnaround at One-Touch Systems, an interactive broadcast network that was later sold to Hughes Network Systems. He also had worked at other software firms, including an eight-year stint at Oracle Corp. researcher also identifies the role of new CEO, and he needed it. In the manufacturing area in particular, Conway had his work cut out. Software analysts viewed Pleasanton, Calif.-based PeopleSoft, which started out with human resources and later expanded into accounting software, as a back-door entrant into the manufacturing market. "PeopleSoft will probably never lead with the manufacturing functionality it offers to its target markets . . ." wrote AMR Research analyst Rod Johnson in a report on PeopleSoft in May 2000

Pearce (2010) conducted study on SME turnaround with the aim of applying the learning in order to achieve a "first time right" outcome to a high profile turnaround initiative. Then researcher highlighted gaps are beginning to be found in the literature in as far as turnaround in emerging market SME's are concerned, and also in as far as research into turnaround during a recession is concerned. These gaps highlight potential research opportunities as various aspects of turnaround are not equally researched. For example, Pandit (2000:51-52) notes that previous turnaround research questions have often highlighted the content of turnaround strategies, but work relating to the context and the process of turnaround are rare. Then they have tried to applied these strategies micro-lending category of financial services to low income customers, ' where the unit of transaction is usually small , typically lower than the average GDP per capita' while South Africa is a developing country and an emerging market. To realize the strategy the business sold unsecured micro-loans to a target market, at that point assumed to be homogeneous in their need for credit, by means of a single channel - inbound telesales. Researchers'

findings were the business could fail if significantly transformational decisions were not taken in time, then perhaps it is also true that some sort of turnaround has been affected. Finally they conclude like the world of turnaround and SME development seemed to take on a whole new life, with some quite insightful pieces coming through on strategy, implementation, human resources, and the business life cycle.

Furrer, Pandian, and Thomas (2007) have conducted empirical study by aiming to assess the impact of corporate strategy on shareholder value in decline and turnaround situations. Researchers assume that such an examination is of importance for several reasons: first, shareholders are undoubtedly the dominant stakeholders in a publicly quoted firm. They can affect the future of a firm by changing the management if the majority of shareholders are not convinced of the effectiveness of their strategies to accomplish the objective they have taken sample of 45 turnaround firms was selected and matched against a control sample which did not face continuous decline over the time period studied. Then they have tested impact of corporate strategy on shareholder value was tested using cumulative beta excess return measures to capture the long-term basis of corporate strategy. The hypotheses were developed by using literature review and the results found were beta excess return measures are superior to case studies or event studies for identifying the long-term effects of corporate strategy. Finally they conclude like one of the major contributions of the results of this research is to empirically support the relationship between corporate strategy and shareholder value, as measured by beta excess returns.

The evolution of Indian software industry is in mid 1970's but its growth was not much impressive as compared to other developing economies as a result its contribution to global software business is not even five percent. The reasons may be improper pricing strategies, improper corporate governance structures, improper policies for IT firms, and less local awareness and application of IT services. The solutions for the stated problem is improve and align the IT policies with IT policies of developed economies. Continuous monitoring the factor of enterprise risk management as it enhances the trust of stakeholders who are vested their interest in the organisation. Literature on turnaround addresses the gap between turnaround strategies and stakeholders relationship with turnaround strategies. Literature review also helped to develop propositions.

Research Methodology

Objectives of the study

1. To analyze the application of Enterprise Risk Management Index (ERMI) (COSO's frame work) as performance enhancer.
2. To analyze the management of contingent variables in

improvement of organization's performance.

Sampling Design

The study was started by selection of firms which have adopted enterprise risk management. At first step totally 155 BSE listed IT firms are selected. Then in the elimination process key words like "Risk management", "Enterprise risk management", "Internal controls", are used, firm's with existence of 10 years, that is, 2005-06 to 2012-13 were selected. At the final step total of 30 firms are selected for the study. These firms are then divided as per market capitalization (15 large cap firms and mid cap firms).

Methods of Data Collection

The data was collected both from primary and secondary sources. The primary data was collected through an interview schedule. While the secondary sources included data from prowest, Ace Analyser and Company records.

Research Tools

The data was analysed using the COSO framework. While developing ERMI Index (ERMI) we used COSO's four objectives of ERM. In other words, we developed an index of the effectiveness of an organization's ERM based on its ability to achieve its objectives relative to strategy, operations, reporting, and compliance. The basic goal of the ERMI is to combine the achievement of the above four objectives into one metric. The ERMI is then constructed by summing up all eight indicators for the above four objectives,

$$\text{ERMI} = \sum \text{Strategy k} + \sum \text{Operation k} + \sum \text{Reporting k} + \sum \text{Co mpliance k}$$

Strategy: Strategy refers to the way a firm positions itself in the market place relative to its competition. All firms in the same industry compete for the sales opportunities in the same market. Thus, more sales by firm i relative to the industry' s average sales means firm i is outperforming its average competitors. Hence one measure of whether or not a firm has a successful strategy is the number of standard deviations its sales deviates from the industry sales, as shown below

$$\text{Strategy1} = \text{sales} - \mu_{\text{sales}} / \sigma_{\text{sales}}$$

A second measure of whether or not a firm has a successful strategy, especially in the context of ERM, is the firm's ability to reduce its systematic risk. That is, a major benefit of implementing ERM is to diversify, and thus reduce risks, by managing a portfolio of risks arising from all sources (Tufano, 1996; Hoyt and Liebenberg, 2009; Nocco and Stulz, 2006).

$$\text{Strategy 2} = \Delta \beta - \mu \Delta \beta / \sigma \Delta \beta$$

Operations: can be measured as the input– output relation within the process of a firm's operations. More output for a given level of input or less input for a given level of output means better operating efficiency. Higher operating efficiency should lower a firm's overall risk of failure, and thus increase its performance and value.

Operation1 = (Sales)/(Total Assets)

Another measure of operating ratio is the input–output ratio from operations defined by dividing sales by the number of employees. This measure is shown below

Operation2 = (Sales) / (Number of Employees)

Reporting

The reporting concept is easiest to discuss in terms of reporting reliability. Illegal earnings management, financial restatements, and financial fraud all provide evidence of poor financial reporting quality (Cohen et al., 2004). Poor financial reporting should increase a firm's overall risk of failure, and thus decrease its performance and value.

One measure for poor reporting reliability is the combination of the following three readily observed variables: Material Weakness, Qualified Auditor Opinion, and Restatement.

Reporting1 = (Material Weakness) + (Auditor Opinion) + (Restatement)

Reporting2

The absolute value of abnormal accruals has also been used to measure poor financial reporting quality (Johnson et al., 2002). Thus, a second measure of a firm's reporting reliability used in this study is the relative proportion of the absolute value of normal accruals divided by the sum of the absolute value of normal and abnormal accruals.

Normal accruals = normal accruals are estimated as a function of the change in revenue and the level of property, plant and equipment

Compliance: Increased compliance with applicable laws and regulations should lower a firm's overall risk of failure, and thus increase its performance and value. O'keefe et al. (1994) found compliance with Generally Accepted Auditing Standards (GAAS) increases with audit fees. Thus, the first measure of compliance used in the study reported in this paper is the proportion of auditor's fees to net sales revenue,

Compliance1: Auditor Fees/Total Assets

If firms put more effort into regulation compliance, it seems reasonable to expect that they will have less settlement losses and more settlement gains.

Compliance2: Settlement Net Gain (Loss)/Total Asset

Hypotheses

1. Implementation of enterprise risk management (ERM) strategy results improvement in firm's performance.
2. Outcomes of ERMI (COSO's framework, 2004) of Indian large cap IT firms higher rates than mid cap and small cap IT firms.
3. Effective monitoring of contingent variables results more chances to manage the unexpected decline.

These hypothesis are tested by developing enterprise risk management index (ERMI) of 30 BSE listed IT firms.

Limitations & Scope of the Study

The study investigates the turnaround strategies of Indian software companies. It is limited to listed large cap and mid cap companies of information technology sector of BSE (Bombay Stock Exchange). This study focuses on “turnaround content”, the types of strategies adopted by troubled firms, and not “turnaround process” which deals with how firms move from a position of performance decline to full and sustainable recovery. With this focus, the cause of decline is beyond the scope of the study and, therefore, not considered.

Data Analysis

Testing of hypothesis using Enterprise Risk Management Index

In the present business era firms around the world are operating in uniform platform as because of technological advancement. But however stakeholders are not uniform to each other as there is a discrepancies in cultures, believes, values, work culture, etc.,. So there is a need of tool that breaks ambiguous perception of investors on an organisation. As a result Committee of Sponsoring Organizations (COSO) framed ERMI. Application of ERMI in India is too little and is not taken seriously. Following are the data of firm performance and ERMI of BSE listed IT firms.

Table 1: Table showing the Large cap IT firms enterprise risk management components and ERMI Index

Sl. No.	Large cap IT firms	Strategy	Operations	Reporting	Compliance	ERMI
01.	Tata consultancy services (TCS)	9.1800	1.1785	-1.0509	0.00017	9.30777

02.	Infosys Ltd	9.2950	1.2663	-0.0208	-0.0037	10.5368
03.	Wipro Ltd	7.6889	1.1995	-2.28056	0	6.507785
04.	HCL Technologies	5.458648	1.3193	-1.1209	0	5.657052
05.	Tech Mahindra	3.134057	1.7018	-0.00865	-0.04591	4.781262
06.	Oracle Financial Services Ltd.	0.387311	3.8102	-1.39967	0	2.797826
07.	Mindtree	0.235954	1.7068	-1.11471	0.000826	0.828826
08.	Mphasis	0.197821	0.4557	-0.96169	-0.00093	-0.30907
09.	Info edge India	-0.16581	0.6028	-0.77286	0.000271	-0.33556
10.	Hexaware Technologies	0.0629	1.7448	-1.21963	-0.00059	0.587503
11	Rolta India	0.072977	1.0743	-0.95795	0.000282	0.189578
12	Persistent systems	-0.01696	1.3625	-1.87568	0.000567	-0.52958
13	Accelya Kale Solutions	-0.26315	0.9390	-0.33362	0.004964	0.347153
14	Sasken Communications	-0.22018	1.1815	0.478032	0.002158	1.441527
15	Mastek	-0.22916	1.5553	0.653141	0.001121	1.980423
ERMI of Large cap BSE Listed IT firms=43.78						

Source: Authors' Research

From the above table it is clear that effective implementation ERM strategy results higher rate of ERM Index. In addition COSO's framework allows firms evaluate their performance in terms of strategy, operations, reporting and compliance. Results then facilitate to take long term strategic decisions. So researchers opine their perception like implementation of ERM as their fundamental strategy will experience improvement in their performance.

Hypothesis 1: Implementation of enterprise risk management (ERM) strategy results improvement in firm's performance.

However the seriousness of implementing the ERM lies at top five companies, which then helped those firms to enhance their market share. Data from the tables clearly shows that large cap firms have more of ERMI than that of small and mid cap firms. In case of software firms, their operations will be globally at large. As firm expands globally its internal controlling part will become critical thing and it has to be managed by proper framework. Same thing happened in Indian large cap IT firms.

Table 2: Table showing the mid cap IT firms enterprise risk management components and ERM Index

Sl. No.	Mid cap IT firms	Strategy	Operations	Reporting	Compliance	ERMI
01.	Cyient Ltd	0.046328	1.3202	-1.34667	0.002068	0.021951
02.	Financial Technologies Ltd.	-0.15534	0.7395	-1.98935	0.000148	-1.40502
03.	KPIT Technologies	0.176975	1.5761	-0.07034	0.000454	1.683145
04.	NIIT technologies	0.101231	1.4047	-0.31357	0.000386	1.192788
05.	Polaris consulting ltd.	-0.0176	1.3898	-1.12032	0.000254	0.252115
06.	Zensar Technologies	-0.02882	1.8667	-1.79268	0.000742	0.04598
07.	R Systems International Ltd	-0.18304	1.7539	-2.35179	0.003665	-0.77726
08.	Sonata Software Ltd.	-0.12198	2.8464	-1.50629	0.0004	1.218522
09.	3i Infotech	-0.15664	0.4996	-2.25393	0.001008	-1.90993
10.	Take Solutions	-0.17727	1.5640	-1.09148	0.000574	0.29584
11.	Nucleus software export ltd	-0.29966	0.9078	-0.61248	0.000727	-0.00363
12.	Infinite Computer Solutions	-0.13599	1.6700	-0.1678	0.000367	1.366597
13.	Genesys International	-0.29973	0.4109	-2.8088	0.00053	-2.69707
14.	Geometric Global	-0.09921	1.3889	-2.06913	0.010087	-0.76935
15.	Lycos Internet explorer	-0.01373	2.6016	0.049064	0	-2.636902
ERMI of Mid cap BSE Listed IT firms= -0.984						

When firms expands globally, its internal controlling aspect will become a critical issue and it has to be managed by proper framework. In case of software firms, their operations will be globally large. Thus, the issue of controls in an organisation is also observed in Indian large cap IT firms. Thus, Outcomes of ERMI (COSO's framework, 2004) of Indian large cap IT firms higher rates than mid cap.

Hypothesis 2: Outcomes of ERMI (COSO's framework, 2004) of Indian large cap IT firms higher rates than mid cap IT firms.

An unexpected future event is an unavoidable thing but it can be managed to some extent by using risk management index. It contains some contingent variables like environmental uncertainty, firm size, firm complexity, management board of directors, etc. These independent variables describe certain estimation, so managing these variables allow globally managed IT firms to operate confidently.

Following data describes how Indian BSE listed IT firms managed their contingent variables so as to improve their performance.

Table 3: Table showing the Contingent variables of Large Cap IT firms

Sl. No.	Large cap IT firms	Environmental uncertainty	Industry competition	Firm complexity	Firm size	Monitoring by board of directors (MBD)
01.	Tata consultancy services (TCS)	0.284114768	0.8046	2	10.2682	0.99304
02.	Infosys Ltd	-0.028771249	0.938385168	3	10.2753	1.37941
03.	Wipro Ltd	0.139168163	0.953773232	8	10.34085356	1.21737
04.	HCL Technologies	0.315193555	0.974670325	3	9.6027742	1.05994
05.	Tech Mahindra	0.261091627	0.991306331	2	8.636677495	1.01592
06.	Oracle Financial Services Ltd.	-0.080432275	0.999656851	2	8.697251077	1.09393
07.	Mindtree	0.10744	0.999775	2	7.05306701	1.37211
08.	Mphasis	0.039708396	0.999830094	3	8.308297653	1.14275
09.	Info edge India	-0.017733497	0.999992113	3	6.486025278	1.41940
10.	Hexaware Technologies	0.060526618	0.999836601	5	7.180535197	1.40017
11.	Rolta India	0.538583413	0.999846571	3	8.191807713	1.27800
12.	Persistent systems	0.278636896	0.999931695	2	6.66821413	1.07815
13.	Accelya Kale Solutions	0.312811797	0.999997541	2	5.6524	1.04204
14.	Sasken Communications	0.142966959	0.999994858	2	6.334975446	2.44823
15.	Mastek	0.039299689	0.999979114	1	6.527623229	0.58585

Table 4: Table showing the Contingent variables of Mid Cap IT firms

Sl. No.	Mid cap IT firms	Environmental uncertainty	Industry competition	Firm complexity	Firm size	Monitoring by board of directors (MBD)
01.	Cyient Ltd	0.427092591	0.999880654	2	7.007258675	1.55862
02.	Financial Technologies Ltd.	0.205576453	0.999990842	2	7.957764608	1.09112
03.	KPIT Technologies	0.177778785	0.999822071	2	6.840540588	1.55862
04.	NIIT technologies	-0.06125202	0.999869751	4	7.004621823	0.77491
05.	Polaris consulting ltd.	0.110283733	0.999855989	4	7.00462	1.02656
06.	Zensar Technologies	0.057435785	0.999866336	4	6.70973	1.16043
07.	R Systems International Ltd	0.183568	0.99998969	2	5.652450193	1.23559
08.	Sonata Software Ltd.	0.038460139	0.99993988	2	6.450277319	0.54375
09.	3i Infotech	1.386342118	0.999958065	2	8.032163095	0.55740
10.	Take Solutions	0.050867395	0.999983695	2	6.281346282	1.04418
11.	Nucleus software export ltd	-0.141705412	0.999997062	2	5.851148284	1.02616
12.	Infinite Computer Solutions	0.136732874	0.999926399	2	6.508073416	0.53638
13.	Genesys International	0.109793661	0.999999862	1	4.84103251	0.92618
14.	Geometric Global	0.003479129	0.999970579	3	6.176860078	1.00015
15.	Lycos Internet explorer	0.333694811	0.99993135	2	6.587473489	0.67362

From the above tables data it is a clear evident that firm which have adopted ERM will be able to tolerate external unexpected factors.

Hypothesis 3: Effective monitoring of contingent variables results more chances to manage the unexpected decline.

Another observation of the study implies that implementation of ERM strategy enhances firm's market cap as majority of large cap firms have implemented ERM and were able to gain 80% and above market share in India, as a result stakeholders trust will enhance.

Table 5: Summary of statistics of Contingent variables and ERMI and firm performance of Large cap and mid cap IT firms

Variables	Total Sample		Large Cap Firms in 2013-14		Mid Cap Firms in 2013-14)		Test of differences in the means	
	Mean	Std Dn	Mean	Std Dn	Mean	Std Dn	Differences	p-value
P	32.3052	40.97294	43.76	31.45	20.85	46.97	22.916	0.128
ERMI	1.3532	3.08903	2.79	3.671	-0.09	1.357	2.881	0.008
EU	0.1943	0.27207	0.13	0.155	0.26	0.345	-0.136	0.174
IC	0.9887	0.0376	0.98	0.052	1	0	-0.022	0.102
FC	2.6667	1.34762	2.93	1.624	2.4	0.986	0.533	0.286
FS	7.3058	1.44213	7.92	1.631	6.7	0.923	1.219	0.018
MBD	1.116	0.25947	1.18	0.255	1.05	0.256	0.128	0.180
No of observations	30		15		15			

Based on the summary of statistics, the ERMI and firm performance showed a significant difference that is, ERMI between large cap firms (M=2.79, SD=3.61) and mid cap firms (M= -0.09, SD=1.357) with $p = 0.008$. There also exists a significant difference in the scores of Firm size between large cap firms (M=7.92, SD=1.631) and mid cap firms (M= 6.7, SD=0.923) with $p = 0.018$.

From the above tables data it is a clear evident that firm which have adopted ERM will be able to tolerate external unexpected factors. Effective monitoring of contingent variables results more chances to manage the unexpected decline. Another observation of the study implies that implementation of ERM strategy enhances firm's market cap as majority of large cap firms have implemented ERM and were able to gain 80% and above market share in India, as a result stakeholders trust will enhance. Adoption of ERM strategy enhances stakeholder's trust on an organisation.

Conclusion:

Performance of an organisation is directly propositional to many attributes like environmental uncertainty, industry competition, firm complexity, etc., so it has to be managed properly by means of enterprise risk management. Firms which have implemented ERMI have experienced impressive results irrespective of external environment. Majority of Indian multinational firms have not adopted ERMI as it is basic need to gain the confidence of stakeholders. The role of top executives, especially the CEO, in turnaround firms has attracted a great deal of attention from the popular business press (Abebe M. 2009). Thus, it is evident that the size of the firm has an impact on their performance. This means that having too much of assets or too little assets will have a bearing on the performance of the firms. Thus, it is essential to have an optimum amount of assets in the organisation.

The firms have better financial performance as well as better possession of market capitalization this is clearly evident from large cap software firms in India. In addition to enterprise risk management the firm performance is depend on better employee oriented governance this is strongly evidenced from Large cap IT firms rather than mid cap IT firms.

It is expected that the results of the study would be insightful to the regulators who need to protect and safeguard the interest of shareholders, to board members who need to offer risk perceptions, to senior executives who need to manage risks, as well as to the employees, investors and other stakeholders interested in risk profile of the company. Overall, the support that we present suggests that the inclusion of variables that capture enterprise risk management initiatives which includes strategy, operations, reporting and compliances in turn enhance the explanatory power of turnaround benefits to stakeholders in the IT sector.

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