A Study on Financial Risk Management Practices of Selected I.T. Companies in India

Dr. Yagnesh Dalvadi[1] and Dr. Anu Warrier[2]

[1]Professor, Post Graduate Department of Business Studies, Sardar Patel University, Gujarat
[2]Asst. Professor, Dr. APJ Abdul Kalam Government College, Silvassa

ABSTRACT

Risk management has become a key factor in assessing the future performance and effectiveness of management. Now a days many companies deal with foreign players, and receive its return in multiple currencies. They face foreign exchange risk because of sudden & drastic changes in exchange rates, which may cause significantly damaging financial losses from otherwise profitable export sales. Information Technology Company faces this risk higher because major share of its income comes from foreign countries in foreign currencies. It is now important to know: what the status of Indian I.T. companies is, in regards to foreign exposure, what are the instruments they are using for risk minimization, what are the recent statistics of its profit/loss due to Forex transactions and what is the resultant impact on its profitability? This research paper focuses on how selected I. T. companies in India manage their financial risk, who has the authority to establish financial risk management in selected I. T. companies, the ways adopted to support financial risk management policy, preference given to the approaches for dealing with risk, types of financial risks managed, model preferred for measuring credit risk, market risk & operational risk, types of derivative instruments used & resultant impact of financial risk management practices on the overall value & net profit of selected large scale I. T. companies.

Key words: Financial Loss, Financial Risk, Impact of Financial Risk, Risk Management, Risk Measurement Model

Introduction

Risk is a central part of business. It is interwoven in the very fabric of life itself & is required to ensure growth. It is imperative therefore that organization learn to recognize & manage risks. To deal with this aspect, somebody in an organization should be given authority to frame risk management committee & to appoint personnel who have expertise in said aspect to make timely & effective policies & decisions. For effective & efficient management of risks, it is important to first identify those risks which are faced by an organization. Secondly, one has to choose the most suitable method or approach out of various methods/approaches available for measuring different types of risks. Thirdly, for managing risks, one has to choose appropriate tool in relation to the type of risk being managed. One can seek protection from some of the risks through insurance. For others, it may be possible to pass on or share them with other players in the industry through the use of derivatives. Among the various derivative instruments available, like forwards, futures, options & swaps, one can select based on the impact of the same on the overall value & profitability of an organization. The strategy & value system decided on by the senior management can play an important role in managing certain risks. Further, the internal control systems also have a function in risk management.

Review of Literature

Studies by (Kleffner, 2003) could be considered as among the pioneer on Enterprise Risk Management. Their study specifically focused on public listed companies in Canada in 2001, using survey for 336 respondents, who were primarily in charge of risk management in the respecting company. The study found that, out of 118 companies, 31 percent or 37 companies adopted ERM, 29 percent or 34 companies were investigating to adopt ERM, and 40 percent or 47 companies were not practicing ERM. In addition, the study also found factors that influenced companies to adopt

ERM, and 40 percent or 47 companies were not practicing ERM. The study also found the existence of 13 Chief Risk Officers (CRO) in 37 companies which adopted ERM. In addition, the study also found factors that influenced companies to adopt ERM: influence of the risk manager (61 percent); encouragement from the board of directors (51 percent); concern for directors' and officers' liability (28 percent); and compliance with Toronto Stock Exchange (TSE) guidelines (37 percent). (Manab, 2010) studied the drivers and the success of Enterprise Wide Risk Management (EWRM) implementation with corporate governance compliance and value creation in for-profit companies in Malaysia. Out of 132 companies selected, only 85 companies (both financial & non-financial) agreed to participate. It was found that all financial companies (100%) agreed that risk management was their priority as compared to 92.7% non-financial companies. The main motivation factor for companies to adopt EWRM was corporate governance compliance. The study found that corporate governance, mandate from BOD, shareholder value, improved decision making and good business practices are the five main drivers that contributed to the success of EWRM for both financial and non-financial companies. (Daud, 2010) did a comprehensive survey on 500 companies to investigate the level of ERM adoption within the Public Listed Companies (PLCs) in Malaysia & the influence of Chief Risk Offices (CROs) on ERM practices. It was found that only 42% of the companies had completely adopted ERM. Through regression analysis, it was revealed that the "quality" of CROs had a strong influence on the level of ERM adoption. (Copeland, 1996) studied nearly 200 large companies wherein they found that foreign exchange hedging programs have diminished value instead of reaping economic benefits. They suggested that the foreign exchange exposures at the company cash flow level can be managed through hedging. (Jain, 2009) examined the practices & policies of foreign exchange risk & interest rate risk management followed by the corporate firms in India. They found monitoring and evaluating the risk, pricing, valuing and accounting in conjunction with credit and liquidity risk were the main contributors towards use of derivatives among companies. They also observed that the main factor affecting firms' strategy towards risk management was "ownership". (Yusuwan, 2008) studied the problems & challenges for the implementation of risk management in Klang Valley, Malaysia with the help of questionnaire survey & interviews of 27 companies (from both public & private sectors). They found that there was low level of awareness of risk management among respondents for which majority of them blamed top management of their companies. Based on the encouraging perception of respondents towards risk management, they concluded that this concept will become more acceptable in future.

Objective

To examine the Financial Risk Management Practices followed by selected I.T. companies.

Research Methodology

The purpose of this research is to make an in-depth study of financial risk management practices reported by selected 20 I.T. Companies in India. For this purpose, the period considered is of consecutive five years starting from 2006-07 to 2010-11. The study is concentrated on financial performance and financial data available from the Questionnaires sent to the company. The said research work is analytical in nature. Population comprises of total 90 companies (software) taken from - Dalal Street, 11/9/2011, Vol. XXVI, No. 19. Sampling frame consists of 66 companies (software) which were common in Dalal Street, 11/9/2011, Vol. XXVI, No. 19 & Capital Market, August 22 – September 04, 2011, Vol. XXVI/13. Out of 66, 20 companies are selected having market capitalization of more than 1,000 crores. The list of the same is given below: Infosys, Wipro Ltd., HCL Technologies, Oracle Financial Ser., Tech. Mahindra Ltd. Vakrangee Limited, Tata Consultancy Services, Patni Computer Sys., Financial Technologies, eClerx Services, Educomp Solutions, Hexaware Technologies, Rolta India, Mindtree Ltd., KPIT Cummins Infosys, Polaris Software, Glodyne Technoserve, Infotech Enterise, Persistent Systems, NIIT Technologies, The data relating to this study are collected from the filled Questionnaires received back from 16 out of 20 selected companies after constant follow-up.

Financial Risk Management Practices of Selected I.T. Companies in India

Table 1: Authority to Establish Financial Risk Management in Selected I. T. Companies

Authority	**Yes**	**%**
Chief Executive Officer (CEO)	3	12
Chief Financial Officer (CFO)	5	20
Board / Committee	11	44
Executive Management Team	0	0
Internal Auditor	3	12
Staff	0	0
Other	3	12
Total	**25**	**100**

Source: Primary Data

Table 2: Company-wise Authority to Establish Financial Risk Management in Selected I.T. Companies

Name of the Company	**Authority to establish financial risk management**						
	Chief Executive Officer (CEO)	**Chief Financial Officer (CFO)**	**Board / Committee**	**Executive Management Team**	**Internal Auditor**	**Staff**	**Other**
Hexaware Technologies Ltd.	x	v	x	x	x	x	x
Patni Computer Systems Ltd. (iGate Computer Systems Ltd.)	x	x	v	x	x	x	x
Eclerx Services Ltd.	x	x	v	x	x	x	x
Oracle Financial Services Software Ltd.	v	v	v	x	x	x	x
Glodyne Technoserve	x	x	v	x	v	x	x
Mindtree Ltd.	x	x	x	x	x	x	Chief Risk Officer (CRO)
Infosys Limited	v	v	v	x	x	x	x
Wipro Ltd.	x	x	v	x	v	x	x
HCL Technologies	x	x	x	x	x	x	Chief Risk Officer (CRO)
Tech. Mahindra Ltd.	x	v	x	x	x	x	x
Vakrangee Limited	x	x	v	x	x	x	x
Financial Technologies	v	v	v	x	x	x	x
Educomp Solutions	x	x	v	x	v	x	x
Rolta India	x	x	x	x	x	x	Chief Risk Officer (CRO)
KPIT Cummins Infosys	x	x	v	x	x	x	x
Polaris Software	x	x	v	x	x	x	x

X=No √=Yes

Source: Primary Data

It can be seen from the above table that in 11 out of 16 i.e. 68.75% companies Board/Committee have the authority to establish financial risk management in their organization followed by Chief Financial Officer with 31.25%. While in none of the companies, Executive Management Team & Staff have such authority. In only 3 companies (18.75%), Chief Risk Officer (CRO) has such authority which is represented by "Other" in the table.

Table 3: Ways of Supporting Financial Risk Management Policy by Selected I.T. Companies

Ways of Supporting Financial Risk Management	**Yes**	**%**
Allocating resources	8	20.51
Clearly allocating financial risk management responsibilities	13	33.33
Setting up financial risk management teams	3	7.69
Regularly revising financial risk management plans	11	28.21
Listening to problems from employees	0	0
Strictly obeying financial risk management policy	4	10.26
Other	0	0
Total	**39**	**100**

Source: Primary Data

From the above table, it can be seen that 13 out of 16 (81.25%) companies support their financial risk management policy by clearly allocating financial risk management responsibilities followed by 11 (68.75%) companies which are regularly revising their financial risk management plans for the same. No company depends upon listening of problems from employees for the same.

Table 4: While Dealing with Risk, Preference Given to the Approaches by Selected I.T. Companies

Options	**Count**	**Rank**
Risk avoidance	90	1
Loss Control	58	2
Diversification	57	3
Risk Sharing	57	3
Risk Transfer	41	4
Risk Retention	33	5

Source: Primary Data

To rank the risk preference given by selected I.T. Companies, we have given six approaches. The respondents were asked to rank the approaches according to their preference. After getting the rank, we have found out overall ranking by multiplying frequency with the appropriate factor. The table drawn above is the result of the preference given to the approaches while dealing with risk. More preference is given to Risk avoidance approach while Risk retention approach is given least preference.

Table 5: Types of Financial Risks Managed by Selected I.T. Companies

Types of Financial Risks Managed	Yes	%
Credit risk / Counterparty risk	7	20.59
Market risk	9	26.47
Operational risk	16	47.06
Other	2	5.88
Total	34	100.00

Source: Primary Data

It can be said from the above table that all the 16 companies manage operational risk followed by 9 companies (56.25%) managing market risk while credit/counterparty risk is managed by 7 companies out of 16 (43.75%). There are only 2 companies out of 16 (12.50%) which manage "strategic risks" represented by "Other" in above table.

Table 6: Model Preferred for Measuring Credit Risk by Selected I.T. Companies

Model Used for Credit Risk	**Yes**	**%**
Covariance model	0	0.00
Actuarial model	6	66.67
Merton-based simulation model	0	0.00
Macroeconomic default model	0	0.00
Other	3	33.33
Total	9	100.00

Source: Primary Data

It can be known from above table that 6 out of 7 companies use Actuarial model for measuring credit risk while 3 companies depend upon credit rating by agencies & custom framework developed within their companies for the same. This is represented by "Other" in above table.

Table 7: Model Preferred for Measuring Market Risk by Selected I.T. Companies

Model Used for Market Risk	**Yes**	**%**
Sensitivity analysis	7	35.00
Scenario analysis	5	25.00
Stress testing	1	5.00
Value At Risk (VaR)	5	25.00
Gap analysis	1	5.00
Rate-shift scenarios	1	5.00
Simulation	0	0.00
Other	0	0.00
Total	**20**	**100.00**

Source: Primary Data

From the above table, it can be judged that 7 out of 9 (77.78%) companies depend upon sensitivity analysis approach for measurement of market risk followed by 5 (55.56%) companies using scenario analysis & value at risk (VaR) for the same.

Table 8: Approaches Preferred for Measuring Operational Risk by Selected I.T. Companies

Model Used for Operational Risk	**Yes**	**%**
Qualitative approaches	11	47.83
Structural approaches	2	8.70
Actuarial approaches	6	26.09
Mixed approaches	4	17.39
Other	0	0.00
Total	**23**	**100.00**

Source: Primary Data

It can be said from above table that 11 out of 16 (68.75%) companies use qualitative approaches for measuring operational risk followed by 6 (37.50%) companies using actuarial approaches for the same.

Table 9: Type of Derivative Instrument Used for Hedging Overall Financial Risks by Selected I.T. Companies

	Yes	**%**
Forwards contract	16	69.57
Futures contract	0	0.00
Options contract	7	30.43
Swaps contract	0	0.00
Other	0	0.00
Total	**23**	**100.00**

Source: Primary Data

It can be said from above table that all the 16 (100%) selected I.T. companies use forwards contract for hedging overall financial risks followed by 7 (43.75%) companies using options contract for the same.

Table 10: Resultant Impact of Financial Risk Management Practices on the Overall Value of Selected I.T. Companies

	Positive	**%**	**Negative**	**%**	**Neutral**	**%**	**Total**
Yes	14	87.50	0	0.00	2	12.50	16
No	2	12.50	16	100.00	14	87.50	32
Total	**16**	**100.00**	**16**	**100.00**	**16**	**100.00**	**48**

Source: Primary Data

From the above table, it can be said that 14 out of 16 i.e. 87.50% companies admit that the resultant impact of financial risk management practices on their overall value is positive while only 2 (12.50%) companies say that the impact was neutral.

Table 11: Resultant Impact of Financial Risk Management Practices on the Net Profit of Selected I.T. Companies

	Positive	**%**	**Negative**	**%**	**Neutral**	**%**	**Total**
Yes	13	81.25	0	0.00	3	18.75	16
No	3	18.75	16	100.00	13	81.25	32
Total	**16**	**100.00**	**16**	**100.00**	**16**	**100.00**	**48**

Source: Primary Data

From the above table, it can be said that 13 out of 16 i.e. 81.25% companies admit that the impact of financial risk management practices on their net profit is positive while only 3 (18.75%) companies say that the impact was neutral.

Table 12: Use of Models for Measurement of Credit Risk & Impact on the Overall Value of Companies

Impact	**Models**	
	Actuarial Model	**Other Model**
Positive	5	1
	83.3%	33.3%
Neutral	1	2
	16.7%	66.7%
Total	**6** **100%**	**3** **100%**

Source: Primary Data

From the above table, it can be seen that the companies in which Actuarial model is used for measuring Credit Risk, find more positive impact of on the overall value of their companies.

Table 13: Use of Models for Measurement of Credit Risk & Impact on the Net Profit of Companies

Impact	Models	
	Actuarial Model	**Other Model**
Positive	5	1
	83.3%	33.3%
Neutral	1	2
	16.7%	66.7%
Total	**6** **100%**	**3** **100%**

Source: Primary Data

From the above table, it can be seen that the companies in which Actuarial model is used for measuring Credit Risk, find more positive impact on the net profit of their companies.

Table 14: Use of Approaches for Measurement of Market Risk & Impact on the Overall Value of Companies

Impact	Approaches					
	Sensitivity Analysis	**Scenario Analysis**	**Stress Testing**	**VaR**	**Gap Analysis**	**Rate-shift Scenarios**
Positive	6	5	1	5	1	1
	85.7%	100.0%	100.0%	100.0%	100.0%	100.0%
Neutral	1	0	0	0	0	0
	14.3%	0.0%	0.0%	0.0%	0.0%	0.0%
Total	**7** **100%**	**5** **100%**	**1** **100%**	**5** **100%**	**1** **100%**	**1** **100%**

Source: Primary Data

From the above table, it can be seen that the companies in which Scenario Analysis, Stress Testing, VaR, Gap Analysis & Rate-Shift Scenarios are preferred for measuring market risk, find more positive impact on the overall value of their companies.

Table 15: Use of Approaches for Measurement of Market Risk & Impact on the Net Profit of Companies

Impact	Approaches					
	Sensitivity Analysis	**Scenario Analysis**	**Stress Testing**	**VaR**	**Gap Analysis**	**Rate-shift Scenarios**
Positive	5	3	1	4	1	1
	71.4%	60.0%	100.0%	80.0%	100.0%	100.0%
Neutral	2	2	0	1	0	0
	28.6%	40.0%	0.0%	20.0%	0.0%	0.0%
Total	**7** **100%**	**5** **100%**	**1** **100%**	**5** **100%**	**1** **100%**	**1** **100%**

Source: Primary Data

From the above table, it can be seen that the companies in which Stress Testing, Gap Analysis & Rate-Shift Scenarios are preferred for measuring Market risk, find more positive impact on the net profit of their companies.

Table 16: Use of Approaches for Measurement of Operational Risk & Impact on the Overall Value of Companies

Impact	Approaches			
	Qualitative Approaches	**Structural Approaches**	**Actuarial Approaches**	**Mixed Approaches**
Positive	8	1	6	3
	72.7%	50.0%	100.0%	75.0%
Neutral	3	1	0	1
	27.3%	50.0%	0.0%	25.0%
Total	**11 100%**	**2 100%**	**6 100%**	**4 100%**

Source: Primary Data

From the above table, it can be seen that the companies in which Actuarial Approaches are preferred for measuring Operational risk, find more positive impact on the overall value of their companies.

Table 17: Use of Approaches for Measurement of Operational Risk & Impact on the Net Profit of Companies

Impact	Approaches			
	Qualitative Approaches	**Structural Approaches**	**Actuarial Approaches**	**Mixed Approaches**
Positive	8	1	6	3
	72.7%	50.0%	100.0%	75.0%
Neutral	3	1	0	1
	27.3%	50.0%	0.0%	25.0%
Total	**11 100%**	**2 100%**	**6 100%**	**4 100%**

Source: Primary Data

From the above table, it can be seen that the companies in which Actuarial Approaches are preferred for measuring Operational risk, find more positive impact on the net profit of their companies.

Key Findings and Observation

It is also found that in majority companies Board/Committee & CFO have the authority to establish financial risk management in their organization and 13 out of 16 (81.25%) companies support their financial risk management policy by clearly allocating financial risk management responsibilities. While dealing with the risk, preference is given to risk avoidance by selected I.T. Companies. Study shows that all the 16 companies manage operational risk followed by 9 companies (56.25%) managing market risk, while credit/counterparty risk is managed by only 7 companies out of 16 (43.75%). 6 out of 7 companies use Actuarial model for measuring credit risk while 3 companies depend upon credit rating by agencies & custom framework developed within their companies for the same. 7 out of 9 (77.78%) companies depend upon sensitivity analysis approach for measurement of market risk followed by 5 (55.56%) companies using

scenario analysis & value at risk (VaR) for the same. 11 out of 16 (68.75%) companies use qualitative approaches for measuring operational risk followed by 6 (37.50%) companies using actuarial approaches for the same. All the selected I.T. companies use forwards contract for hedging overall financial risks followed by 7 (43.75%) companies using options contract for the same. The study shows that majority of the companies have positive resultant impact of financial risk management practices on their overall value & net profit.

References

(n.d.). Retrieved March 2015, from http://bmdynamics.com: http://bmdynamics.com/issue_pdf/bmd110159_Malaysia_8_16.pdf.

(n.d.). Retrieved February 2015, from http://www.penerbit.utm.my: http://www.penerbit.utm.my/onlinejournal/51/E/JT51EDIS06.pdf.

(2011, September 4). *Capital Market, August 22 , Vol. XXVI/13.*

(2011, 9 11). *Dalal Street, Vol. XXVI, No. 19.*

Annual Reports of the selected I.T. companies for a period of consecutive five years initiating from 2006-07 to 2010-11.

Belk, P. (2002). "The Organization of Foreign Exchange Risk Management: A Three Country Study". *Managerial Finance, Volume 28, Issue 11* , pp. pp 43-52.

Bodnar, G. M. (2003). "The Impact of Institutional Differences on Derivatives Usage: A Comparative Study of US and Dutch Firms". *European Financial Management, Volume 9, Issue 3, Doi: 10.1111/1468-036X.00221.* , pp 271–297.

Comparative_Analysis_of_Foreign_Exchange_Risk_Management_Practices_among_Non_Banking_Companies_in_India. (n.d.). Retrieved February2015, from http: //www .academia.edu /5302230/ Comparative_Analysis_ of_ Foreign_Exchange_Risk_Management _Practices_among_Non_Banking_Companies_in_India.

Copeland, T. E. (1996, February). "Why derivatives don't reduce foreign exchange risk". *Mckinsey Quarterly* , pp. 66-79.

Daud, W. W. (2010). "The Effect of Chief Risk Officer on Enterprise Risk Management Practices: Evidence from Malaysia". *International Business and Economics Research Journal, 9 (11)* .

Dun, B. (2010). *"Financial Risk Management"*. Tata McGraw Hill Education Private Limited, New Delhi, Seventh r eprint, pp 3-84.

Fok, R. C. (1997). "Determinants of Corporate Hedging and Derivatives: A Revisit". *Journal of Economics and Business, Volume 49, Issue 6 ,* pp 569-585.

G. M. Bodnar, G. G. (1998). "Derivatives usage in risk management by U.S. and German non-financial firms: A comparative survey". *National Bureau of Economic research, Working Paper No. 6705.*

He, J. a. (1998). "The Foreign Exchange Exposure of Japanese Multinational Corporations". *Journal of Finance, Volume 53, Issue 2* , pp 733–753.

Jain, P. Y. (2009). "Risk Management Practices of Corporate Firms in India: A Comparative Study of Public Sector, Private Sector Business Houses and Foreign Controlled Firms". *Decision (Indian Institute of Management Calcutta), Volume 36, Issue 2,* , pp. pp 73-97.

Jesswein, K. C. (1995). "Corporate Use of Innovative Foreign Exchange Risk Management Products". *Columbia Journal of World Business* , pp 70-82.

Joshua, A. (2005). "Managing Foreign Exchange Risk among Ghanaian Firms". *The Journal of Risk Finance, Volume 6, Issue 4* , pp 306-318.

Kleffner, A. E. (2003). "The Effect of Corporate Governance on the Use of Enterprise Risk Management: Evidence from Canada". *Risk Management and Insurance Review, 6(1),* pp. 53-73.

Manab, N. A. (2010). "Enterprise-Wide Risk Management (EWRM) Practices: Between Corporate Governance Compliance and Value Creation". *International Review of Business Research Papers, 6(2),* pp. 239-252.

Marshall, A. P. (2000). "Foreign Exchange Risk Management in UK, USA and Asia Pacific Multinational Companies". *Journal of Multinational Financial Management, Volume 10,* , pp 185-211.

Nydahl, S. (1999). "Exchange Rate Exposure, Foreign Involvement and Currency Hedging ofFirms: Some Swedish Evidence". *European Financial Management, Volume 5, Issue 2 ,* pp. pp 241-257.

Pramborg, B. (2005). "Foreign Exchange Risk Management by Swedish and Korean Non Financial Firms: A Comparative Survey". *Pacific-Basin Finance Journal, Volume 13,* , pp 343-366.

Sathya, D. S. (2008). "Foreign Exchange Risk Management Practices – A Study In Indian Scenario". *BRAC University Journal, Volume V, Issue 2* , pp 81-91.

Sivakumar, A. &. (2008). *"Corporate hedging for foreign exchange risk in India".* RetrievedJanuary b 2015, from http://www.iitk.ac.in/infocell/announce/convention/papers/Marketing,%20Finance%20and%20International%20Strategy -07Anuradha%20Sivakumar%20Runa%20Sarkar.pdf.

Yusuwan, N. A. (2008). "Client's Perspective of Risk Management Practice in Malaysian Construction Industry",. *Journal of Politics and Law,* 1(3), pp 121-130