



## International Journal of Applied Business and Economic Research

ISSN : 0972-7302

available at <http://www.serialsjournals.com>

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Volume 15 • Number 22 (Part 2) • 2017

### Managing Forex Risk Exposure: A Study on SMEs and Unlisted Non-Financial Firms in India

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#### ABSTRACT

The recent studies on forex risk exposure management have highlighted the significance of managing the forex risk exposure despite their size in terms of turnover and market cap and also on the basis of their exposure to forex risk. The relevance of such kind of financial arrangements in a company is realized in case of any unexpected circumstances happening in global arena. There are various financial instruments are available to manage the forex hedging risk. In case of Indian context, the focus of past research had been on listed and large-sized companies. Both unlisted companies and SMEs were not at the epicenter of research in related area. A structured questionnaire was used to collect the desired information. A final data set of 407 respondents was used for examining the forex risk exposure management by unlisted non-financial firms and SMEs in India. The findings thus obtained have implications for various stakeholders.

*Managing Forex Risk Exposure: A Study on SMEs and Unlisted Non-Financial Firms in India.*

*Keywords:* Forex Risk Exposure, Hedging Forex Risk, Unlisted non-financial companies, SMEs, India.

#### 1. INTRODUCTION AND BACKGROUND

There is no disbelief in benefits of hedging the Forex risk exposure. It helps the firms to mitigate their potential losses due to fluctuations in foreign exchange rate. Etteman, Stonehill and Moffett (2004) gave a conceptual model on impact of hedging on the future cash flows of the business. It showed that the future expected value of a firm is maximum with a hedging strategy rather than remaining unhedged. Hrubošová, at el. (2013) conducted a study on hedging foreign exchange risk, mostly in small and middle enterprises. It was documented that many companies were facing Forex risk under difficult time of financial crisis. The study concluded that the trend of CZK/EUR in 2012 gives opportunity for using financial derivatives

such as forwards, currency options and swaps to protect assets and liabilities against higher exchange rate volatility. The recent studies on the related field have highlighted the significance of managing the forex risk exposure despite their size in terms of turnover and market cap and also on the basis of their exposure to forex risk. The relevance of such kind of financial arrangements in a company is realized in case of any unexpected circumstances happening in global arena. There are various financial instruments available to manage the forex hedging risk. The choice of risk management tool is dependent upon many factors and one of these factors includes the quantum of forex risk exposure. Generally a company with more exposure to forex risk uses more expert services to identify various hedging strategies for their business. Most of the traditional hedging structures included Plain Vanilla Call, Plain Vanilla Forward, Call Spread, Calendar Spread, Risk Reversal, Seagull while the enhanced tools include Knock Out, Knock In, Range Binary, Window Option and Fade-In Option. A study conducted by Bligh (2012) documented that forward contract, money market, futures market, option, and currency swaps are popular hedging instruments in American Market. The foreign currency risk managers found option contracts are more expensive than the other hedging instruments available. The recent and past research findings on this topic need to be reviewed to understand the significance of managing the forex risk exposure by the companies.

## **2. REVIEW OF LITERATURE**

The following section has mentioned evidences from past research regarding forex risk exposure and management by firms across the world.

Collier and Davis (1985) documented that majority of UK multi nationals had a centralized group of currency risk management and a framework of formal exposure management policies. The active management of currency translation risk associated with centralized control while, on the other hand, the decision to closeout seems to be linked to some extent with a less centralized structure.

Batten, Mellor and Wan (1993) conducted industry-wide on foreign exchange risk management practice and product usage of large Australian-based firms. Results are discussed from an empirical field study of seventy-two firms operating in Australia. The physical products included spot, forwards, forward forwards and short and long-term physical swaps. Jeswein *et. al.*, (1995) studied the use of derivatives by US corporations and categorised foreign exchange risk management products in three generations. Forward contracts fit in to first generation; future, options, future-options, warranties and swaps belong to second generations and foreign exchange agreements belong to third generation. The study concluded that first generation was in maximum demand followed by second and third generation products. The study further concluded that the use of this risk management tool was not significantly related to the size of the company but it was related to the international involvement of the company. A study by Goetz & Hu (1996) argued that currency swaps are more cost-effective for hedging foreign debt risk and forward contracts are further cost-effective for hedging foreign operations risk. Further, He and Ng (1998) conducted a study on foreign risk exposure of 171 Japanese multinationals and it was identified that 25% of the sampled firms experienced noteworthy Foreign Exchange exposure. The authors have also looked at the relationship between Forex exposures and studied the variables that were tacit to reflect derivatives usage. It was evidenced that firms that were opting some mechanism to predict and hedging strategy were less exposed to Forex risk in comparison to their counterparts. Also, Bodnar *et. al.*, (1998) conducted a survey on large companies and documented that majority of the companies were not using derivative instruments effectively to hedge their risk rather they were considering other operational approaches to manage their risk exposures.

In a study based on Indian companies by Yadav and Jain (2000), a sample of 44 companies was taken and these companies were exposed to Forex risk due to international operations. The findings of the study indicated that 30 percent of the companies hedge their exposure and some steps are taken by all companies to manage their international business. Pramborg (2004) made a comparison of hedging practices of Swedish and Korean non-financial firms. It was identified that companies in both the countries were hedging currency risk for different objectives. Korean firms mostly focused on reducing fluctuations in cash flows, while Swedish firms more commonly emphasized reducing fluctuations of accounting numbers. Saito and Schiozer (2005) confirmed the evidences of using derivatives by Brazilian non-financial firms, using a sample of 74 companies. Even the banking industry has been found unable to manage their risk properly despite having a complete panel of treasurers and finance experts for this purpose. Nedzvedskas and Aniūnas (2007) identified that among various components of market risk exposure, currency risk is the major component affecting the overall risk profile of the company. Their study documented that the Lithuanian commercial banks were not managing their currency risk in an appropriate manner. The limits set by their Central Bank was quite liberal before the adoption of Basel II norms. The authors of the paper suggested an effective model for commercial banks in Lithuania to manage currency risk.

Dash *et. al.*, (2008) made a comparison of performance of different Forex risk management strategies for short term Forex cash flows. The results of the study indicated the currency options strategy yielded the highest mean returns in all sample periods for outflows irrespective of variation in exchange rates while forwards strategy was found better one in case of inflows. In another study by Sivakumar and Starker (2008) various companies from different sectors were studied and it was concluded that forwards and currency options were the most preferred instruments of hedging used by sampled Indian companies for short term and swaps were preferred by these companies during long term.

Jain, Yadav and Rastogi (2009) examined risk management of different companies and concluded that about two-fifths of the firms were risk averse but did not hedge their full exposure. A majority of the firms were following cost-center approach towards risk management. Ownership has been observed as a significant determinant of firms' strategy towards risk management. While a majority of foreign controlled firms and private sector business group firms were characterized as partial hedgers, the majority of the public sector firms belonged to the category of negligible hedgers. The study concluded that the adoption of risk management techniques is still in infancy. In another study by Schiozer and Saito (2009) stated the determinants of currency risk management in non-financial firms in Argentina, Brazil, Chile, and Mexico. The findings of their study clearly indicated that the firm size is directly related to the decision of firm to use derivative for hedging. In a more recent study by Bodnar *et. al.* (2013) indicated that lack of financial literacy of Italian firm had an effect on the decision to use currency and interest rate derivatives to manage these two types of risks, i.e. currency risk and interest rate risk. Dash *et. al.*, (2013) documented that currency options are a better tool to hedge forex risk affecting cash flows of the business. In order to hedge currency risk in cash inflows, out-of-the-money currency put options can result in best results and in order to hedge currency risk in cash outflows, out-of-the-money currency call options can result in better results. The study concluded that a company not hedging its currency risk is always riskier than its counterparts.

Vu (2015) studied hedging practice of Vietnamese exporting small and medium sized enterprises (SMEs) and provided a better understanding of the choice of forex risk treatment by SMEs in an emerging economy. Exporting SMEs gained more experience of dealing with foreign exchange (forex) risk, when

export intensity increased. These firms were exposed to high levels of forex exposure, perceived higher forex risk, allocated more resources associated with forex risk management, and increased the use of hedging techniques, especially external hedging techniques. Vietnamese exporting SMEs were inert when dealing with forex risks and vacillated over allocation of resources linked with forex risk management. The firms lacked a purposeful strategy for forex risk management.

The study of literature gives a clear indication that only large corporations (India and other countries) are active in making comprehensive strategies to manage their foreign exchange risk exposure while small and medium enterprises are not much aware about all the hedging instruments therefore limit to traditional ways of hedging only. And hence it affects their decision of managing the forex risk exposure too.

### **3. RESEARCH GAP/NEED FOR CURRENT STUDY**

In case of Indian context, the focus of past research had been on listed and large-sized companies. Both unlisted companies and SMEs were not at the epicenter of research in related area. Moreover, whatever evidences are available for these companies; there is no unanimity among the findings obtained from several research studies. Hence, a wide-ranging research is required to discard this disagreement.

### **4. RESEARCH QUESTION**

In consideration with research gaps identified above, the present study has addressed the following research question.

How unlisted companies and SMEs in India manage their forex risk exposure?

### **5. OBJECTIVE OF STUDY**

The present research work is intended to study the forex risk exposure management by unlisted companies and SMEs in India.

### **6. RESEARCH METHODOLOGY AND DATA INPUTS**

The study under consideration is conclusive in nature. In order to meet the objective of present study, primary data has been collected from SMEs and unlisted non-financial firms in India. A structured questionnaire was used to collect the desired information. The final questionnaire was administered after checking the reliability and validity. The structured questionnaire was administered on more than 1200 sample units but due to inadequate response and after removing the invalid (due to missing information and checking the normality of responses) questionnaires, a final data set of 407 respondents was used for examining the forex risk exposure management by unlisted non-financial firms and SMEs in India. The financial companies were not considered as a part of target population due to their distinctive nature. All desired was collected through personal interviews, online survey and telephonic interviews. The structured questionnaires addressed the questions like, awareness regarding forex risk management, forex risk policy, purpose of hedging forex risk, methods to measure forex risk, instrument used to hedge forex risk, type of forex risk exposure and execution of forex risk hedging policy in the company/enterprise.

The owners, CEOs, Finance Controller or other managers involved in forex hedging strategy makers will be the respondents for collecting the relevant information.

The definition of Small & Medium Enterprise will be as under.

“Small and Medium Sized Company” (SMC) means, a company:

- (i) Whose equity or debt securities are not listed or are not in the process of listing on any stock exchange, whether in India or outside India;
- (ii) Which is not a bank, financial institution or an insurance company;
- (iii) Whose turnover (excluding other income) does not exceed rupees *fifty crore* in the immediately preceding accounting year;
- (iv) Which does not have borrowings (including public deposits) in excess of rupees *ten crore* at any time during the immediately preceding accounting year; and
- (v) Which is not a holding or subsidiary company of a company which is not a small and medium-sized company.

*Companies (Accounting Standards) Rules, 2016*

## 7. RESULTS AND DISCUSSIONS

The following section has discussed the results attained through analysis of questionnaire data. Table 1 has shown the awareness level among unlisted non-financial firms and SMEs for forex risk management. The results of the analysis revealed that more than 50% of the companies/firms are aware of the concept of forex risk management. Moreover, 30.0% of the companies are not aware about forex risk management concept, which is a major concern, and it means that there is lack of awareness among Indian companies about this concept. Table 2 has further shown that the majority of the sample units do not have a formal policy for forex risk management.

**Table 1**  
**Awareness level of the Companies Regarding Forex Risk Management**

	<i>Frequency</i>	<i>Percent</i>	<i>Valid Percent</i>	<i>Cumulative Percent</i>
Yes, Fully Aware	61	15.0	15.0	15.0
Yes, but Partially aware	224	55.0	55.0	70.0
Not aware about the concept of forex risk management	122	30.0	30.0	100.0
Total	407	100.0	100.0	

**Table 2**  
**Forex Risk Management Policy**

<i>Do you have a forex risk management policy?</i>	<i>Frequency</i>	<i>Percent</i>	<i>Valid Percent</i>	<i>Cumulative Percent</i>
Yes	75	18.4	18.4	18.4
No	300	73.7	73.7	92.1
No, but currently it is under consideration and soon will be in place	32	7.9	7.9	100.0
Total	407	100.0	100.0	

Further, in most of the cases, the top management, that is, Board of Directors, Company's Management Team, CFO and CEO, decides and take initiative to implement the policy regarding the Forex risk management (Table 3 and Table 4).

**Table 3**  
**Forex Risk Management Policy**

<i>Who Define the foreign forex risk management policy in the Organization?</i>	<i>Frequency</i>	<i>Percent</i>	<i>Valid Percent</i>	<i>Cumulative Percent</i>
Board of Directors	100	24.6	24.6	24.6
Company's Management Team	155	38.1	38.1	62.7
CFO	45	11.1	11.1	73.7
CEO	49	12.0	12.0	85.7
Accountant	17	4.2	4.2	89.9
Finance Controller	13	3.2	3.2	93.1
Any Other	28	6.9	6.9	100.0
Total	407	100.0	100.0	

**Table 4**  
**Implementation of Forex Risk Policy**

<i>Who Implement the foreign Forex risk management policy in the Organization?</i>	<i>Frequency</i>	<i>Percent</i>	<i>Valid Percent</i>	<i>Cumulative Percent</i>
Board of Directors	47	11.5	11.5	11.5
Company's Management Team	173	42.5	42.5	54.1
CFO	23	5.7	5.7	59.7
CEO	99	24.3	24.3	84.0
Treasurer	9	2.2	2.2	86.2
Accountant	11	2.7	2.7	88.9
Finance Controller	7	1.7	1.7	90.7
Any Other	38	9.3	9.3	100.0
Total	407	100.0	100.0	

Table 5 has exhibited the purpose of hedging forex risk by sample units. It is clearly indicated that increasing profitability, hedging against fluctuations in forex rate and to reducing the volatility in earnings and cash flows are the major reasons of hedging the forex risk exposure. In addition to this, many firms use it as a tool of risk management and improve the financial position of their business too. Among various methods to measure the forex risk exposure, majority of the unlisted firms and SMEs prefer to use cash flow estimates and VAR. But there is equal tendency of making rough estimates to measure the forex risk exposure (Table 6).

Table 7 has shown the results of frequency of managing forex risk by the companies. It has been identified that only 15.2 percent unlisted firms and SMEs have a forex risk exposure management whenever they have forex risk exposure. While 36.6% of the respondents say that they manage their forex risk exposure sometimes only and it is not a regular practice in their organization.



**Table 5**  
**Purpose of Hedging Forex Risk**

<i>S.No.</i>	<i>Purpose</i>	<i>No</i>	<i>Yes</i>
1	To Increase profitability	187	220
2	To Hedge against forex rate fluctuation	210	197
3	To Reduce the volatility in earnings	285	122
4	To Reduce the volatility in cash flows	256	151
5	To Use as a risk management tool	260	147
6	To Improve the financial results of the company	326	81
7	To Increase the market value of firm	249	158
8	It is Essential for the sustainability or survival of business	323	84
9	To Gain from speculation	330	77
10	Any Other	404	03

**Table 6**  
**Methods to Measure Forex Risk Exposure**

<i>S.No.</i>	<i>Statements</i>	<i>No</i>	<i>Yes</i>
1	Cash flow estimates	267	140
2	Value at Risk	290	117
3	Scenario Analysis	340	67
4	Leading and Lagging	361	46
5	Matching	346	61
6	Stress Analysis	372	35
7	Rough Estimation	284	123
8	No method is used	329	78
9	If any other, please specify	399	8

**Table 7**  
**Frequency of Forex Risk Exposure Management**

	<i>Frequency</i>	<i>Percent</i>	<i>Valid Percent</i>	<i>Cumulative Percent</i>
Always	62	15.2	15.2	15.2
Often	107	26.3	26.3	41.5
Sometimes	149	36.6	36.6	78.1
Rarely	43	10.6	10.6	88.7
Never	46	11.3	11.3	100.0
Total	407	100.0	100.0	

Succinctly, it can be said that 78.1 % of the companies in the present study have indicated that they manage their forex risk exposure always, often or sometimes while rest of the companies are not frequent in management of forex risk exposure. Further, the respondents were also asked to mention the reason for never adopting a forex risk exposure management policy. As depicted in Table 8, lack of awareness regarding forex risk measurement, lack of availability of hedging instruments, cost of hedging instruments and possibility of insufficient losses are found as major reasons for not adopting a forex risk management policy by unlisted companies and SMEs in India.

**Table 8**  
**Reasons for 'Never' Having a Forex Risk Exposure Management Policy**

<i>S.No.</i>		<i>No</i>	<i>Yes</i>	<i>NA</i>	<i>Total</i>
1	Lack of Awareness regarding forex Risk Measurement	15	31	361	407
2	Lack of knowledge regarding estimating the effect of exposure	26	20	361	407
3	Cost of Hedging is more than benefit of hedging	15	31	361	407
4	Lack of trained people to manage forex risk exposure	24	22	361	407
5	Possibility of insufficient loss due to no-management	17	29	361	407
6	Less amount of forex exposure is involved	22	24	361	407
7	Availability of natural hedge	22	24	361	407
8	Insufficient hedging instruments available	38	8	361	407
9	No clear guideline in the business regarding this	23	23	361	407
10	Any other, please specify	43	3	361	407

Next important question is related to duration of hedging period. Majority of the sample units used to have hedging position for 90 days or less than 90 days period. Very less number of companies were having a hedging position for a comparatively longer period, i.e., 360 days. (see Table 9)

**Table 9**  
**Average Period of Hedging Forex Risk**

	<i>Frequency</i>	<i>Percent</i>	<i>Valid Percent</i>	<i>Cumulative Percent</i>
Less than 90 Days	116	28.5	28.5	28.5
90 Days	186	45.7	45.7	74.2
180 Days	98	24.1	24.1	98.3
360 Days	7	1.7	1.7	100.0
Total	407	100.0	100.0	

There are various instruments and techniques available for hedging forex exposure risk. But all organizations having forex risk exposure may not be using all these hedging instruments. Therefore, the next question was related to the type of hedging instrument used by the unlisted non-financial companies and SMEs. The results of the same have been exhibited in Table 10. The cash flow matching, asset liability management and OTC forwards, Hybrid debts and Exchange traded options and futures are found as most preferred hedging instrument by the sample units.

**Table 10**  
**Types of Instruments or Techniques used for Hedging Forex Risk**

<i>S.No.</i>	<i>Statements</i>	<i>Always</i>	<i>Often</i>	<i>Sometimes</i>	<i>Rarely</i>	<i>Never</i>	<i>Total</i>
1	Cash Flow Matching	87	74	49	34	163	407
2	Asset Liability management	55	48	58	31	215	407
3	Exchange Traded Futures	38	90	63	53	163	407
4	Exchange Traded Options	43	64	27	36	237	407
5	Swaps	37	44	23	75	228	407
6	OTC Forwards	48	186	62	31	80	407
7	OTC Options	45	77	58	23	204	407



<i>S.No.</i>	<i>Statements</i>	<i>Always</i>	<i>Often</i>	<i>Sometimes</i>	<i>Rarely</i>	<i>Never</i>	<i>Total</i>
8	Structured Derivatives	39	32	26	63	247	407
9	Hybrid Debts	44	60	11	76	216	407
10	Others (Please Specify)	-	-	5	28	374	407

When, the unlisted non-financial firms and SMEs were asked to mention the reasons for never or rarely using different hedging instruments as mentioned in above table, then multiplicity of reasons are identified for not using that hedging instruments. Out of these reasons, most commonly cited are, use of hedging instruments is too complex, it causes accounting problems and does not have the desired features as expected by the organizations having forex risk exposure. Lack of knowledge and concern for higher cost of such instruments in comparison to expected benefit are also among other reasons for not using a specific hedging instrument (Table 11).

**Table 11**  
**Reasons for 'Never' or 'Rarely' Using Hedging Instruments**

<i>S.No.</i>		<i>Strongly Disagree</i>	<i>Disagree</i>	<i>Neutral</i>	<i>Agree</i>	<i>Strongly Agree</i>	<i>Total</i>
1	Too Complex	0	5	17	194	191	407
2	Not Allowed	0	161	222	17	7	407
3	Causing Accounting Problems	2	5	36	210	154	407
4	Not having the desired features	2	11	61	162	171	407
5	Cost of using it is more than expected benefits	0	10	41	222	134	407
6	Does not have sufficient exposure	5	6	43	193	160	407
7	Not offered by my banker	6	181	152	57	11	407
8	Insufficient exposure	4	4	46	211	142	407
9	Does not want to disclose much about Forex risk exposure of business	2	9	166	224	6	407
10	Not liquid enough	304	16	44	43	0	407
11	Too Risky	5	8	207	181	6	407
12	Other (Please Specify)	356	3	19	27	2	407

Next, which hedging instrument is used for partial, full or dynamic hedge? As mentioned in Table 12, Futures are mostly used for the purpose of full hedging (145) followed by partial hedging and dynamic hedging respectively. Forwards contracts are mostly used for partial hedge (164). Further, Option contracts are mostly used for partial or full hedging. In case of Swap, it is mostly used as partial hedging whereas its full and dynamic hedging usage is almost same. Similarly, results for other hedging instruments are also exhibited in Table 12.

**Table 12**  
**Shows the Usage of Different Hedging Instruments/Techniques**

<i>S.No.</i>	<i>Statements</i>	<i>Partial Hedge</i>	<i>Full Hedge</i>	<i>Dynamic Hedge</i>	<i>Total</i>
1	Futures	140	145	122	407
2	Forwards	164	123	120	407
3	Options	151	147	109	407
4	Swaps	161	124	122	407

<i>S.No.</i>	<i>Statements</i>	<i>Partial Hedge</i>	<i>Full Hedge</i>	<i>Dynamic Hedge</i>	<i>Total</i>
5	OTC Forwards	162	216	29	407
6	OTC Options	152	168	87	407
7	Structured Derivatives	168	197	42	407
8	Hybrid Debts	215	174	18	407
9	Other (Please Specify	197	190	20	407

Further, the respondents were asked about their hedging strategy regarding three types of forex risk exposures, i.e., translation, transaction and economic. For, translation exposure, majority of the companies are hedging for shorter duration than the maturity of the their forex risk. While, in case of transaction exposure, majority of the respondents said that there is matching between the duration of transaction exposure and maturity of hedging instrument. The longer hedging strategy is opted for meeting forex risk exposure due to economic exposure. Likewise, the next important question asked was related to readjusting the hedging position considering market scenario. The Indian companies/firms have shown a tendency of readjusting their hedging position on monthly basis or for a longer duration than a month, i.e., quarterly, semi-annually, and yearly etc. Only 97 out of 407 respondents said that they readjust their hedging position on daily or weekly basis. In addition to this, 43.5% of sample units do not follow any fixed timeline for the execution of forex risk hedging strategy while 31% of respondents execute their hedging strategy at the time of submitting bid (Table 13). Table 13 has shown the results related to execution of a forex risk hedging strategy by the Indian non-financial firms and SMEs.

**Table 13**  
**Strategy for Executing of Forex Risk Hedging**

	<i>Frequency</i>	<i>Percent</i>	<i>Valid Percent</i>	<i>Cumulative Percent</i>
There is nothing fixed timeline for execution strategy	177	43.5	43.5	43.5
At the time of submitting bid	126	31.0	31.0	74.4
At the time when an order is received from the customer	57	14.0	14.0	88.5
At the time when revenue is realized from the customer	47	11.5	11.5	100.0
Total	407	100.0	100.0	

## 8. CONCLUSION, DISCUSSION AND IMPLICATION

The findings of survey mentioned above have clearly indicated that there is lack of awareness regarding forex risk exposure management. The unlisted non-financial companies and SMEs in India are not found having a clear policy document to implement a forex risk hedging strategy. Even the awareness regarding available hedging instruments is very low. In addition to this, the companies do not believe in a full hedging of forex risk exposure. Majority of the unlisted companies and SMEs are opting a partial hedge strategy to manage their forex risk exposure. Moreover, the Indian unlisted non-financial firms and SMEs are not readjusting their hedging position frequently.

The findings thus obtained have implications for various stakeholders. Regulators and Corporate financial advisor need to develop various forums and platforms where the unlisted companies and SMEs

can be made aware regarding forex risk exposure management and issues related to forex risk management policy. The unlisted companies and SMEs need to understand the relevance of clear guidelines for internal purpose specifying their forex risk exposure management strategies.

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