MANAGING FOREIGN EXCHANGE RISK -AN EVIDENCE FROM INDIAN MARKET

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Abstract
Managing foreign-exchange risks now constitutes one of the most difficult and persistent problems for financial managers. This paper attempts to ascertain the foreign exchange risk management practices of Tirupur and is confined to 80 associated members of Tirupur Exporters' Association. The study finds wide usage of derivative products for risk management and most of the companies are exposed to transaction exposure. Further in terms of instruments used to manage risk, the preference is mostly in favour of forward contract, followed by futures, options and swap.
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I.FOREIGN EXCHANGE RISK

Foreign exchange risk usually affects businesses that export and/or import, but it can also affect investors making international investments. According to Alder and Dumas Foreign exchange risk is measured by the variance of the domestic currency value of an asset, liability or operating income that is attributable to unanticipated changes in exchange rates. For example, if money must be converted to another currency to make a certain investment, then any changes in the currency exchange rate will cause that investment's value to either decrease or increase when the investment is sold and converted back into the original currency.

FOREIGN EXCHANGE EXPOSURE

DEFINITION

Adler and Dumas defines foreign exchange exposure as 'the sensitivity of changes in the real domestic currency value of assets and liabilities or operating income to unanticipated changes in exchange rate'. Exchange rates are considered by MNCs as a crucially important factor affecting their profitability. This is because exchange rate fluctuations directly impact the sales revenue of firms exporting goods and services. Future payments in a foreign currency carry the risk that the foreign currency will depreciate in value before the foreign currency payment is received and is exchanged into Indian rupees. Thus, exchange risk is the effect that unexpected exchange rate changes have on the value of the firm. Foreign exchange risks therefore pose one of the greatest challenges to MNCs.

A very important dimension of international trade is exposure management and in recent times developing techniques and strategies for foreign exchange exposure management plays a vital role in every organization. Exporting units in general face three kinds of risk- Translation, Transaction and Economic exposure.

Translation Exposure

It is the degree to which a firm's foreign currency denominated financial statements is affected by exchange rate changes. All financial statements of a foreign subsidiary have to be translated into the home currency for the purpose of finalizing the accounts for any given period.

Transaction Exposure

This exposure refers to the extent to which the future value of firm's domestic cash flow is affected by exchange rate fluctuations. It arises from the possibility of incurring foreign exchange gains or losses on transaction already entered into and denominated in a foreign currency. The degree of transaction exposure depends on the extent to which a firm's transactions are in foreign currency.

Economic Exposure

Economic exposure refers to the degree to which a firm's present value of future cash flows can be influenced by exchange rate fluctuations.

Instruments used to manage exposures

FORWARDS - A Forward Contract is a private agreement between two parties who agree to purchase or sale of a specific quantity of a

commodity, government security, foreign currency, or other financial instrument at the agreed price, with delivery and settlement at a specified future date.

FUTURE -A Future Contract is a legally binding agreement to purchase or sell a standardized, exchange-traded stock, commodity, bond, currency, or stock index at a specified price, on a specified future date. In future Contracts, both the parties have obligation to fulfil the contract.

Swap Contract-A Swap Contract is an over-the-counter (OTC) derivative (i.e. they are negotiated outside exchanges), which is an agreement between two parties to exchange commodities, payments or other financial products.

Option Contracts-An Option contract gives the buyer / holder the right, but not the obligation to buy /sell an underlying security at a specific price/strike price/exercise price on or before a certain date/ expiration date. The seller/ writer have the obligation to honors the specified feature of the contract.

HISTORY OF HOSIERY INDUSTRY

The word Hosiery is derived from the French word Bonnet Eric "Hose". Hosiery of knitting principles stretches back to pre-historic times. 'Tirupur is also known as "Knitwear capital" of India. Tirupur is located in the southern part of India. Fifty-six per cent of India's total knitwear exports come from Tirupur. Tirupur contributes to a huge amount of foreign exchange in India. It has spurred up the textile industry in India for the past three decades. Its economic boom boosts the morale of Indian industrialists. Great thing about Tirupur economy is that it is ever growing. It accounts for 14% of the total industrial production and contributes nearly 30% of the total exports to European Union and the USA-the biggest export markets for Indian garments. It also ranked as the second largest employment generator after agriculture. And the production from Tirupur for domestic needs stood at Rs.14000 Crores. Tirupur is one of the largest foreign exchange earning towns in India.

II. Review of Literature

Davis (1989) survey revealed that 45% percent of the companies used forward, 14% used futures, and 9% of the respondents used swaps, options to manage foreign exchange risk management. On the question of the goals of risk management, the Davis survey reported that 22 per cent of firms surveyed did not manage foreign exchange risk, 34 per cent were concerned with eliminating risk selectively and 7 per cent were concerned with eliminating all foreign exchange risk

Collier et al (1990) from their survey found that only a very small percentage of US firms continued to hedge translation exposure.

Davis et al (1991) used case studies to examine foreign exchange risk management in twenty-three large UK and US multinational companies. The firms were found to be highly risk averse with respect to transaction risk, with translation risk lower in their risk aversion priorities.

Jesswein et al (1993) focused on the use of derivatives by US corporations. They found that the use of risk management was not significantly related to the size of the company. On further analysis they found the usage is significantly related to the company's degree of international involvement

It is very interesting to note from Bodnar and Gebhardt (1998) that the larger the size of a firm the more likely it is to use derivative instruments in hedging its exchange rate risk exposure. Over 50% of the respondents used forward, 20% used currency option and 10 % of the respondents used swaps to manage foreign exchange risk.

Pramborg (2004) compared the hedging practices of Swedish and Korean non-financial firms. They found that the hedging strategies between the firms differed. The firms which used derivatives in Swedish firm were significantly higher than the Korean firms. The objectives of Korean firm to manage risk was minimize fluctuations in cash flows, whereas Swedish firms aimed to minimize fluctuations in earnings

Michael Papaioannou (2006) reviewed the traditional types of exchange rate risk faced by firms. The author has outlined the main advantages and disadvantages of various exchange risk management strategies. A set of widely accepted best practices in managing currency risk and main hedging instruments in OTC and exchange-traded markets was also highlighted by the author.

Sathya Swaroop Debasish (2008) in his study covered 18 categories of industries, with responses from 501 Indian enterprises. 53% of the respondents reported that they are using derivatives to manage foreign exchange risk. The study finds wide usage of derivative products for risk management and the prime reason of hedging is reduction in volatility of cash flows. Majority of the respondents used forward contract to manage foreign exchange risk.

III.RESEARCH METHODOLOGY

Objectives

- To study the foreign exchange risk management practices in Tirupur hosiery units.

- To study the rate of various exposure present in the organization.
- To study the various instruments used by the organization to manage the foreign exchange risk.

Scope of the study

Exporting can be a great opportunity to develop new customers and increase profits. However, trading internationally presents extra risks and challenges. Exporters can't eliminate these risks altogether, but they can manage and minimize them. This research helps to identify the tools and techniques used to manage foreign exchange risk.

Research design

The research design used for the study is descriptive in nature. It includes surveys and facts findings enquiries of different kinds. The major purpose of descriptive research is description of state of affairs, as it exists at present.

Sampling

The required sample was drawn from TEA database.155 associate members were listed in TEA database. The method of mail survey was adopted and the questionnaire was mailed to the all the associated members. Only 80 members replied and the response rate was 52%.

Data collection

Primary data was collected through structured questionnaire. Secondary data was collected using company records, internet, magazines and journals.

Limitations

- The study is confined only to the hosiery units located in Tirupur.
- Foreign Exchange mainly depends on Macro environment which is highly unpredictable.
- The study is conducted with the help of primary data which might have bias

IV. Analysis and interpretation

Table No 1 indicates that out of 80 respondents, 37.5% of them belong to 6-10 years of existence. It is found that 30% of the respondents belonged to the group of 11-15 years. It shows that the least occupied group is less than 5 years of existence. It also reveals that majority of the respondents (36%) have employed a capital in the range 1-2 crore. 33.8 % of the respondents belongs to the group of 3-4 crore. Only 8.8 % respondents represent the capital employed group of less than 1 crore.

Table No 2 shows that 7.5% of the respondent's operating revenue is less than 25 %, 22.5% of the respondent's operating revenue is between 26% and 50 %. Majority of the respondents (48.8%) operating revenue falls under the category of 51-75%.21.3% are above 75% of revenue.

Table 3 reveals that in terms of managing foreign exchange risk, it is found that finance department (43.8%) is responsible. In 22.5 %of units the foreign exchange risk it is managed by EXIM department. 33% of the respondents reported that the foreign exchange risk is managed by both finance and EXIM department and in 1.3% of the company it is managed by others.

It is interesting to note from table 5 out of 80 respondents, 55% of them are exposed to transaction exposure. 67.5% of them are facing Translation exposure. 70% of them are exposed to economic exposure.

From Table 6, it is inferred that the level of transaction exposures faced by the respondents are medium.43.75% of the respondents faces a medium level of translation exposure.21.6% of the respondents faces a medium level of economic exposure. It shows that majority of the respondents faces only a medium level of different types of exposures.

Majority of the respondents uses forward tool to manage Transaction, Translation and economic exposure. Next to forward, the respondents also use future contract to manage their exposures. The least used tool by the respondents is Swap.

Hypothesis Testing

Size of the Company and type of exposure

H01 = Capital employed in the company and the type of exposures are independent.

Ha = Capital employed in the company and the type of exposures are dependent

The statistical tools of cross tabulation and chi square tests of independence were used for this purpose. In the case the calculated table value for transaction exposure and translation exposure are 0.020, 0.022 which is less than the significant value (0.05).So reject the null hypothesis. So the capital employed and the transaction exposure and translation is dependent (i.e.) there is a relationship between capital employed and the transaction and translation exposure.

H02= There is no association between the Capital employed and hedging

Ha = There is no association between the Capital employed and hedging

Chi-square test was used to test the significance between capital employed and hedging, at 5% level. It is found that the calculated value is .307, which is greater than 0.05. This means the null hypothesis

accepted and alternate hypothesis rejected. There exists no significant difference between the capital employed and hedging.

H03= There is no significance difference between the type of exposures and instruments used to manage exposure

Ha = There is significance difference between the type of exposure and instruments used to manage exposure.

Analysis of variance was used to test the hypothesis. From the above table the calculated values are .439, 015 and .536 for transaction, translation, economic exposures respectively. The transaction exposure value is .015 which is lesser than the significance value .05. Except translation exposure, the instrument used to manage the exposure does not vary according the type of exposure.

V. Findings

Most of the companies are exposed to transaction exposure. In terms of managing these exposures, companies use derivative tools. Forward contract is widely used by the firms to manage foreign exchange risk. It was found that there was a significant relationship between capital employed and transaction, translation exposure except economic exposure. The findings related to relationship between capital employed and hedging shows that there is no significant difference among the capital employed and hedging. There exist a significant difference between the instruments used to manage exposures and translation exposure.

VI. Concluding Remarks

The study sought to ascertain the foreign exchange risk management among hosiery units in Tirupur, their choice of hedging, the level of exposure faced by them and so on. The vulnerability of managing foreign risk increases when the firm's operation goes internationally. Firms tend use the financial innovative instruments like forwards, future, option and swap to hedge against risk. Again the usage of these types of instruments depends on the firm specific characteristics.

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Table 1 - Years of existence and Capital employed of the respondents

S.No	Years of existence	No of respondents	Capital employed	No of Respondents
1	Less Than 5 Years	10 (12.5)	Less than 1 crore	7(8.8)
2	6 to 10 Years	30 (37.5)	1-2 crore	29(36)
3	11 to 15 Years	24 (30)	3-4 crore	27(33.8)
4	16 and Above	16 (20)	4 crore & above	17(21.3)

Table No 2-Respondents' Operating Revenue from Foreign Exchange

S.No	Operating Revenue	No of respondents
1	Less Than 25 %	6 (7.5)
2	26% to 50%	18(22.5)
3	51 % to 75%	39(48.8)
4	75 % and above	17(21.3)

Table No 3- Department responsible for Managing Foreign Exchange risk

S.NO	Department	No. of respondents
1	Finance department	35 (43.8)
2	Exim department	18 (22.5)
3	Both finance and Exim department	26 (33)
4	Others	1 (1.3)

Table No 4 -Types of exposures faced by the company

S.No	Type of Exposure	Yes	No
1	Transaction	44(55)	36(45)
2	Translation	54(67.5)	26 (32.5)
3	Economic	56(70)	24(30)

Table 5- Level of each exposure faced by the company

S.No	Level	Transaction exposure	Translation	Economic
1	Nil	36 (45)	26 (32.5)	24 (30)
2	Low	20 (25)	12 (15)	17 (13.6)
3	Medium	21 (26.25)	35 (43.75)	27 (21.6)
4	High	3 (3.75)	7 (8.75)	12 (9.6)

Table 6- Instruments Used to Hedge Exposures

Exposure/Instruments	Forward	Future	Swap	Option
Transaction exposure	31	10	1	2
Translation exposure	20	17	3	14
Economic exposure	28	21	1	16

Table No 7 -Chi-square test of independence of Capital employed and types of exposure

Type of exposure	Value	Asymp.Sig(2-sided)
Transaction exposure	9.862	0.020*
Translation exposure	9.657	0.022*
Economic exposure	2.322	0.508

*significant at 5 percent level

Table No 8- Chi-square test of Independence of Significance attached to Capital employed and hedging

	Value	Degrees of freedom	Sig
Pearson Chi-square	3.607	3	.307
Likelihood Ratio	4.150	3	.246
Linear-Linear Association	1.126	1	.289
No of valid cases	80		

Table No 9- Anova to test the significance of type of exposures and instruments used to manage exposures

Type of exposure	F	Significance
Transaction exposure	.610	.439
Translation exposure	6.328	.015*
Economic exposure	.389	.536

Dependant variables - Type of instruments *Significant at .05 level