

Exhaustive Study on Hedging Platform and Hedging Methods in Foreign Trade and Its Impact on Exporters and Importers

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Abstract: In recent years forecasting of financial data such as interest rate, exchange rate, stock market and bankruptcy has been observed to be a potential field of research due to its importance in financial and managerial decision making. This research paper intended to discuss impact of currency fluctuation in foreign trade and impact of hedging on importer and exporter. Currency fluctuation involves the appreciation or depreciation of domestic currency against the foreign currency in a certain period and business environment. Methodology used in investigating the impact of currency fluctuation on import/export oriented businesses in Gujarat specifically in Ahmedabad region, include questionnaire and interview. The currency market is considered to be the largest financial market in the world, processing trillions of dollars' worth of transactions each day. Chi square test used to test hypothesis and result reveals that there is no association between education qualification and hedging platform used by importers and exporters.

Keywords: Currency fluctuation, Foreign trade, Hedging, Importers and exporters.

I. INTRODUCTION

The currency market is the market in which participants are able to buy, sell, exchange and speculate on currencies. Such markets are made up of banks, commercial companies, central banks, investment management firms, hedge funds, and retail forex brokers and investors.

The foreign exchange market determines the relative values of different currencies. The primary purpose of the foreign exchange is to assist international trade and investment, by allowing businesses to convert one currency to another currency. The modern foreign exchange market began forming during the 1970s after three decades of government restrictions on foreign exchange transactions.

Currency Exchange give a rate of currencies in pair of currency of two countries e.g. USD ↔ INR for U.S. Dollar and Indian

Rupee. This rate can be used to buy or sell from Currency Exchange. Nowadays the trading of currency is increased and people invest their money in specific currency as per the future scope of profitability. Currency Exchanges monitor events all round the world and the currency rates are managed globally based on the economical valuation of any country's currency.

II. LITERATURE REVIEW

Allayannis examined whether firms use foreign currency derivatives for hedging or for speculative purposes [4]. Using a sample of S&P 500 nonfinancial firms for 1993, we find evidence that firms use currency derivatives for hedging, as their use, significantly reduces the exchange-rate exposure firms face. We also find that, while the decision to use derivatives depends on exposure factors (i.e., foreign sales and foreign trade) and on variables largely associated with theories of optimal hedging (i.e., size and R&D expenditures), the level of derivatives used depends only on a firm's exposure through foreign sales and trade.

Pritamani considered existing literature reports insignificant total exposure for multinational or exporting firms, where total exposure incorporates both firm-specific and macroeconomic effects [5]. We propose a dual-effect hypothesis to explain this result which seemingly contradicts conventional wisdom. According to our proposed hypothesis, firms are affected by both the domestic economy and foreign markets. These effects are at least partially offsetting for exporters and additive for importers. The resulting predictions of insignificant total exposure for exporters and positive total exposure for importers are borne out in our tests. The literature also reports insignificant residual exposure for multinationals or exporting firms, where residual exposure estimates the firm-specific exposure. This result is explained by biases in the residual exposure estimates introduced by the choice of the value-weighted market index as the control portfolio.

Peter specified a model of differential risk-bearing by import demand and export supply sides of the market for traded goods,

the theoretical impact of exchange risk on both equilibrium prices and quantities is analyzed [7]. For several empirical cases of 1965-1975 U.S. and German trade it is found that exchange rate uncertainty has had a significant impact on prices but no significant effect on the volume of trade. These price effects support previous survey results on the currency denomination of export contracts, namely that with the exception of some U.S. imports, most trade is largely denominated in the exporter's currency.

Kim investigated operational hedging by firms and how operational hedging is related to financial hedging by using a sample of 424 firm observations, which consist of 212 operationally hedged firms (firms with foreign sales) and a size and industry-matched sample of 212 nonoperationally hedged firms (firms with export sales) [12]. We find that nonoperationally hedged firms use more financial hedging, relative to their levels of foreign currency exposure, as measured by the amount of export sales. On the other hand, though operationally hedged firms have more currency exposure, their usage of financial derivatives becomes much smaller than that of exporting firms. These results can explain why some global firms use very limited amount of financial derivatives for hedging purpose despite much higher levels of currency risk exposure. We also show that hedging increases firm value.

M. Kawai examined a risk-averse firm's decisions on the level of trade, when the exchange rate and the commodity price are uncertain, and the extent of forward exchange and commodity futures commitments [6]. First we verify the Separation Theorem and the Full Double Hedging Theorem. Second, we investigate the implications of the existence of both forward foreign exchange and commodity futures markets in comparison to the case where only one (or no) market is available to the firm. The second exercise enables us to focus on conditions under which establishing forward-futures arrangements promotes international trade.

Wei focused on a puzzle in empirical international finance is the difficulty in finding a large and negative effect of exchange rate volatility on international trade [10]. A common explanation is the availability of hedging instruments. This paper examines the empirical validity of this explanation using data on over 1000 country pairs. Which countries have currency hedging instruments is not perfectly observable. This paper deals with the problem by specifying an endogenous regime-switching regression. There are two main findings. First, there is no evidence in the data to support the validity of the hedging hypothesis. Second, for country pairs with large trade potential, exchange rate volatility deters goods trade to an extent much larger than that typically has been documented in the literature (without using the switching regression specification).

Carter investigated the influence of both financial and operational hedges on the foreign-exchange exposure of U.S. multinational corporations [2]. Three important contributions of our research are:

- We provide evidence that exposure of U.S. MNCs to foreign-exchange risk is asymmetric;

- Our results demonstrate that both operational and financial hedges can effectively reduce foreign-currency exposure; and
- We find evidence suggesting that operational hedges serve as real options in that exposure varies not only as to whether the firm is a "net importer" or "net exporter" but also across weak and strong dollar states. Prior research assuming symmetric exposure to foreign-exchange risk may be need to be re-evaluated in light of our finding that many MNCs have asymmetric foreign-exchange exposures.

Barkoulas concluded effects of exchange rate uncertainty on the volume and variability of trade flows [11]. Employing a signal extraction framework, we show that the direction and magnitude of importers' and exporters' optimal trading activities depend upon the source of the uncertainty (general microstructure shocks, fundamental factors driving the exchange rate process, or a noisy signal of policy innovations), providing a rationale for the contradictory empirical evidence in the literature.

Roger focused on transactions exposure to foreign exchange risk can be completely hedged in the forward market, the same is not true for economic exposure [8]. We show that in some cases a portfolio of currency options can be constructed which hedges economic exposure, when the firm has ex post production flexibility. In the more general case of uncertainty in multiple exchange rates, however, more elaborate options than those currently available are required to hedge economic risk completely.

Auboin studied a wide body of economic literature on the relationship between currencies and trade [1]. Specifically, two main issues are investigated: the impact on international trade of exchange rate volatility and of currency misalignments. On average, exchange rate volatility has a negative (even if not large) impact on trade flows. The extent of this effect depends on a number of factors, including the existence of hedging instruments, the structure of production (e.g. the prevalence of small firms), and the degree of economic integration across countries. Exchange rate misalignments are predicted to have short-run effects in models with price rigidities, but the exact impact depends on a number of features, such as the pricing strategy of firms engaging in international trade and the importance of global production networks. This effect is predicted to disappear in the long-run, unless some other distortion characterizes the economy. Empirical results confirm that short-run effects can exist, but their size and persistence over time are not consistent across different studies.

Sarris discussed the recent world food price spike raised to the fore the issues of how countries can manage their basic staple food imports in times of crises [9]. There are many risks to food imports, ranging from price risks to risks of nonperformance and hence threats to domestic food supplies. The paper first provides a review of the risks and food import access problems faced by various low and middle-income net food staple importing countries and reviews pertinent policies to deal with them.

Sauer studied large panel of industrialized and developing countries to investigate the link between exchange rate volatility and exports [3]. Although the empirical literature on this relationship is extensive, a clear consensus about its nature and importance is yet to emerge. Using fixed and random-effects models to capture cross-country differences, pooled export equations are estimated for the entire panel and various subsets of countries. The results, which are robust across different volatility measures, indicate that negative effects exist for LDC exports, especially from Latin America and Africa, but not for exports from Asian LDCs or industrialized countries

III. OBJECTIVES OF THE STUDY

The basic idea for undertaking the study of fluctuations in currency market and influence on foreign exchange is to gain the knowledge about why the major developed countries currency

rates influence other currencies value is shown in Table I and Table II.

- To understand the basic concept of hedging.
- To find the impacts of hedging on exporters and importers.
- To find the effect of currency price fluctuation on exporters and importers.

A. Research Methodology

Sample size- 203

Sample area- Gujarat region

Sampling method- Convenience sampling

Research instruments- Questionnaire

TABLE I: PROFILE OF RESPONDENTS

S. No.	Content	Classification of Respondents Response (in %)		
1	Gender	Male	Female	Prefer not to say
		38.9	60.1	0
2	Preference Investing in Currency Market	Yes	No	May be
		72.9	13.8	13.3
3	Willingness to Take Risk	Yes	No	May be
		65.0	17.7	17.2
4	Risk Taking Ability	More risk	Moderate risk	Avoid risk
		26.6	49.8	23.6
5	Types of Business	Import	Export	Both
		38.1	25.2	36.8
6	Do You Hedge the Funds?	Yes	No	
		91.0	8.4	
7	Preference for Multiple Hedging	Yes	No	
		72.7	26.6	
8	Hedging Helps Minimizing the Risk	Yes	No	May be
		66.9	14.3	18.8
9	Hedging Increases the Cost of Hedging	Yes	No	
		68.8	15.6	15.6

TABLE II: LIKER SCALE RATING

S. No.	Content	Highly Satisfied	Satisfied	Neutral	Dissatisfied	Highly Dissatisfied
1	Ratings Given for Hedging the Fund (%)					
	Banks	22.1	18.2	55.2	4.5	0
	Agency	7.8	59.7	29.2	3.2	0
	Sub Broking Firms	9.1	33.1	50.6	7.1	0
	Stoke Brokers	3.2	46.1	38.3	11.0	1.3
2	Satisfaction Level Regarding Whole Process of Hedging (%)					

S. No.	Content	Highly Satisfied	Satisfied	Neutral	Dissatisfied	Highly Dissatisfied
	Controls the Risk	14.9	46.1	36.4	1.3	1.3
	Smooth Operations	11.0	58.4	27.9	2.6	0
	Maintaining Liquidity	13.6	46.8	35.7	2.6	1.3
	Cost Occurrence	9.7	48.1	37.0	5.2	0
	Legal Documentation	11.0	52.6	31.8	3.9	0.6
3	Preferable Method for Hedging	Future	Forward	Option	Others	
		40.3	31.8	27.3	0.6	

B. Hypothesis: 1

H_0 : There is no relationship between educational qualification of the person and choosing the platform for hedging the funds.

H_1 : There is relationship between educational qualification of the person and choosing the platform for hedging the funds.

TABLE III: CROSS TABULATION: EDUCATIONAL QUALIFICATION * PLATFORM FOR HEDGING FUNDS

		Platform for Hedging Funds			
		Banks	Agency	Stock broker	Sub Broker
Educational Qualification	Schooling	1	2	0	0
	UG	6	4	1	1
	PG	7	0	6	0
	Diploma	3	2	3	0
	Professional Degree	4	3	4	1
Total		21	11	14	2

TABLE IV: CHI-SQUARE TESTS

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	13.153 ^a	12	0.358
Likelihood Ratio	17.355	12	0.137
Linear-by-Linear Association	1.410	1	0.235
N of Valid Cases	48		

Interpretation

Null hypothesis is accepted as Table III and Table IV shows significance value is more than 0.05. There is no relationship between educational qualification of the person and choosing the platform for hedging the funds. Investors should consider hedging at least a portion of the foreign-currency exposure within their equity allocation, based on the following criteria:

- Availability of a low-cost hedging program or hedged equity product;
- Belief that the foreign currency is unlikely to be a diversifier in the investor's local market;

- Smaller domestic allocation, resulting in greater currency exposure;
- A portfolio objective specifically targeting volatility.

C. Hypothesis: 2

H_0 : There is no association between import export business and the method of hedging the funds.

H_1 : There is association between import export business and the method of hedging the funds.

TABLE V: CROSS TABULATION: EXPORT IMPORT BUSINESS * PREFERABLE METHOD OF HEDGING

		Q17 Preferable Method of Hedging			Total
		Future	Forward	Option	
Q10 Export Import Business	Yes	24	20	3	47
	No	0	0	1	1
Total		24	20	4	48

TABLE VI: CHI-SQUARE TESTS

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	11.234	2	0.004
Likelihood Ratio	5.223	2	0.073
Linear-by-Linear Association	4.898	1	0.027
N of Valid Cases	48		

Interpretation

Null hypothesis stat that there is no relation between import export business and method of hedging chosen by businessman. Result value of Chi Square test presented in Table V and Table VI. So inference can be drawn that there is association between import export business and the method of hedging the funds. The case for hedging an equity portfolio is more nuanced, since hedging's impact on risk is a function of two key factors: the relative volatility of the asset versus that of the foreign currency, and the asset currency correlation.

IV. EXPECTED CONTRIBUTION OF THE STUDY

The study will contribute to the government, multinational companies, stockbroking institutes, banks, hedgers and other financial institutes with not forgetting the exporters and importers who are trading into the currency market and dealing in foreign currency.

V. CONCLUSION

To sum up, currency derivatives are option options and futures contracts through which you can buy or sell specified quantities of pairs of currencies at a future date (which is predetermined). The price or exchange rate is decided on the date of purchase. The derivatives are similar to options and futures in the stock market, aside from the fact that currency pairs are the underlying assets.

Most of exporters and importers find hedging costly and says that it increases the cost of transaction but it is a safe mode when you are dealing in foreign market.

In considering the hedging decision, some investors may distinguish between a strategic versus a tactical approach. Extensive research indicates that short-term currency movement is very volatile and extremely difficult to forecast accurately, diminishing the case for a short-term tactical approach to currency management.

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