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An empirical study on the Factors affecting Foreign exchange markets of Pakistan

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Abstract:
This study explores the dimensions at which foreign exchange markets of Pakistan are under influence of some internal factors i.e Discount rate and interest rate and how it really effects the Forexchange markets of Pakistan. The study also explores the effect of discount rate and interest rate effects on five major currencies for which the data is collected from state bank of Pakistan, economic survey of Pakistan and business recorder, HEC Digital Library, Articles from different Journals, Annual reports of SBP and KSE, International Financial Statistical Yearbook, BOP & BOT Statistical year book. After analyzing the data the study showedthe overall positive impact of the discount rate and interest rate on the foreign exchange of Pakistan which included five major currencies i.e. USD, GBP, JPY, CAD and EURO. We used correlation and regression analysis to test our hypothesis which says that discount rate and interest rate has positive impact on the foreign exchange market of Pakistan.
Keywords: Stock Exchage, Interest Rate, Pakistan Foreign Exchange, Discount rate, Foreign Exchange

Introduction

A foreign exchange market is a market where a convertible currency is exchanged for another convertible currency. In the transaction or execution of conversion, one currency is considered domestic and the other is regarded as foreign, from a certain geographical or sovereign point of view, so is the term foreign exchange derived. As long as national states or blocs of national states that adopt their own currencies exist, foreign exchange markets will persist to serve business, non-business, and sometimes, political needs of business firms, governments, individuals, and international organizations and institutions (Meenai & Ansari, 2004) The foreign exchange market (FOREX) is not a market like the Karachi stock exchange (KSE), where daily trades of stock are conducted in a central location. Instead, a FOREX market refers to the activities of major international banks that engage in currency trading. These banks act as intermediaries between the true buyers and sellers of currencies i.e. governments, businesses, and individuals. These banks will hold foreign currency deposits and stand ready to exchange these for domestic currency upon demand. The exchange rate will be determined independently by each bank but will essentially be determined by supply and demand in the market (Siddiqui, 2009). An exchange rate is the price of one currency in terms of another currency; it is the relative price of the two currencies. (Meenai & Ansari, 2004). . The relative price of two commodities can be decided without the involvement of money, though less explicit. So more important is the role of money as the media of exchange, for it is the bearer of commonly recognized value, exchangeable for many other commodities then or at a future time. In international trade, the situation is slightly different from that in domestic trade in that the value of one commodity is denominated in two or more currencies. (Baccheta & Wincoop, 2009). The discount rate is the interest rate at which central bank lend reserves to depository institutions, primarily to enable these institutions to meet their reserve requirements. (Thorntorn, 1982). The discount rate itself is comprised of two parts: (1) an assumed rate of return that recognizes the time value of money and (2) a risk factor that recognizes the uncertainty associated with achieving future profit forecasts. The discount rate an expert applies in a given situation is both an art and a science. An expert may need to factor in a lower overall rate if the profits at issue are relatively more likely to be achieved. On the other hand, a higher interest rate would be appropriate in a situation where there is less chance of achieving the profits at issue and, therefore, a larger than normal risk is involved. The rate that an eligible depository institution is charged to borrow short term funds directly from the central bank through the discount window and it is also known as the primary rate, or base rate (Batten and Thornton, 1983).

The relationship between interest rates and exchange rates has long been a key focus of international Economics. Most standard theoretical models of exchange rates predict that exchange rates are determined by economic fundamentals, one of which is the interest rate differential between home and abroad. Interest rate provides important suggestion for monitory policy, risk management practices, valuation of financial securities and government policies towards financial markets (Uddin & Alam, 1999)

Problem Statement:
What is the impact of change in Discount Rate and Interest Rate on Foreign Exchange Market of Pakistan? Which way the currencies move with the change in the said variables? To what extent the currencies are affected and in which direction?

Research Objective:
These are main goals of the research on the basis of which the research problem is solved. It explains the purpose of research in measurable terms and defines standards of what the research should accomplish.

1. To find the impact of Discount Rate changes on Pakistani foreign exchange markets.
2. To find the impact of Interest Rate on Pakistani foreign exchange markets.

To find that when the change and impact does occur, ultimately who is affected by the changes and impact of these changes

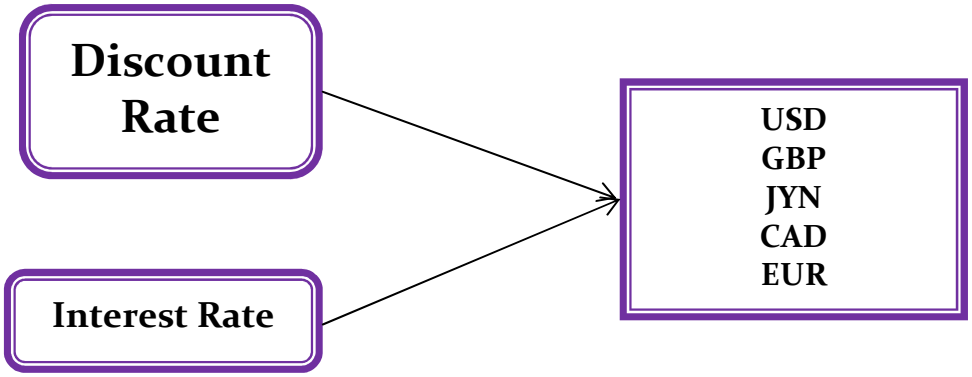
Literature Review:

The exchange rate plays vital role in the financial market and its importance is increasing in the developing economies. Aside from factors such as interest rates and inflation the Exchange rate is one of the most important determinants of a country's relative level of economic health. They play a vital role in a country's level of trade, which is critical to most every free market economy in the world. (Meenai & Ansari, 2004). Exchange rates are among the most watched, analyzed and governmentally manipulated economic measures. Recent studies and analysis has proved an unstable relationship between exchange rate and Macroeconomic fundamentals and this instability has shown a significant effect on the volatility of exchange rates. Moreover, the exchange rate is influenced by other income factors such as interest rates, inflation and even capital gains from domestic securities. As the change comes in interest rates, it is immediately reflected in Exchange rate markets. (Baccheta & Wincoop, 2009). . In most of the countries, exchange rate volatility has a short run effect on export flows and there are substantive casual relationship in which changes in exchange rate volatility Granger cause changes in real exports. (Arize, Osang & slottje, 2000). The real exchange rate contributes importance for capital accumulation because it affects the potential for investors to provide internal finance. As the appreciation in three factors such as discount rates, interest rates and exchange rates attracts the foreign investors in the developed countries. Every investor wants to have transactions in a big money market. (Antinolfi1 & Huybens – 1998). Exchange rate movements can be explained by considering two factors. (1). Credit market conditions changes can be reflected by changes in interest rate differentials across countries. (2). Changes in monetary policy stances of central banks, especially federal reserve's. Using changes in discount rate as a proxy for unanticipated changes in U.S monetary policy, we find that both of these factors have a significant impact on daily movements of the bilateral exchange rate between the U.S Dollar and other currencies of five considered countries. So a bit change in discount and interest rate cause a substantial impact positively on the exchange rate among considered countries here as a sample (Dallas, Batten & Daniel, 1985).

The most significant effect of Monetary and Fiscal policies is felt by Exchange rates and in respond to that exchange rates push other monetary factors like Domestic inflation, interest rates and import prices. One way in which monetary and fiscal policies of the country affects the interest and then inflation rate is by first influencing its exchange rate, and then interest rate which in turn influences import prices which in turn influences domestic prices and ultimately have a great effect on the inflation rate of the country. So, interest rate change and exchange rate have a significant relation in a positive mode. (Fair, 1982). When the money supply in one country increases compared with its trading partners, prices should rise and the currency should depreciate. Studies have also proved that funding in one currency and lending in another, and the probability that the relative values of the two currencies will alter, creates foreign exchange (FX) risk. This Foreign exchange risk occurs in almost every transaction between Micro finance investors (especially foreign investors) and MFIs (Microfinance Institutions). There is no proper hedging mechanism in the countries where MFIs operate and most probably it is very expensive for small amount of transactions as well. In addition, MFIFs (Micro Finance Investment Funds) often compensate for FX risk by increasing their interest rates to MFIs to cover potential losses. FX risk therefore increases the lending costs for the MFIs (and ultimately, for their clients), regardless of whether or not they have access to local currency loan. Thus Interest rate fluctuations exert a great impact on the Foreign exchange risk for MFIs and MFIFs. (Barres, 2005). It is often a matter of confusion for the public that what will happen when Government has brought down the discount rates. As the usual fact when the discount rate goes up the interest rate also move up and when the discount rate moves downward the interest rate also moves downward and many studies proved that the discount rate and the interest rate are interlinked in the direct relationship. The studies also shows a bit impact of this overall scenario in which the interest rate and discount rate are the players and thus affect the overall economy if the controlling authority of both discount rate and interest rate is government then change in discount rate leaves no significant change in the interest rate, thus the

above mentioned relation exists only in open market transactions where interest rate depends upon the discount rate controlled by the central reserves / bank. (Thorntorn, 1982).
The rate that an eligible depository institution is charged to borrow short term funds directly from the central bank through the discount window and it is also known as the primary rate, or base rate. This renowned rate knows as discount rate correlates with the interest rate and both of these correlates with exchange market situation. A considerable change in both the factors uplifts the figures of exchange market in either way. (Batten and Thornton, 1985).The discount rate changes are of two types one is technical change and the other is non-technical change. Technical change reflects no information about the attitude of monetary policy or its affect on the economy and exchange rate as it is almost known to the stakeholders and is almost according to their expectations. Whereas non technical changes of the discount rate, reflects the information about the attitude of monitory policy and exchange rate decisions and thus exchange rate market reflects more in this case. It is the matter of fact that market shifts its paradigm when new monetary policy is going to be announced as this announcement contains the information about discount rate (Smirlock & Yawitz, 1984). One important myth about the floating exchange rates, which is cleared in this article, is that floating exchange rates reflect international economic conditions in somewhat predictable way but not create them, nor the exchange rate, though these economic factors reflect the changes in interest rates and discount rates. (Batten & Ott, 1983).

Theoretical Framework:
For this research, we have selected three variables i.e., one dependent variable (Exchange Rate) and two independent variables (Discount Rate & Interest Rate). This relationship is shown in the figure below.



Hypothesis:
H1: Discount Rate has significant positive impact on the volatility of Pakistani Foreign Exchange Market.
H2: Interest Rate has significant positive impact on the volatility of Pakistani Foreign Exchange market

Population:
From all currencies we have selected five major currencies. In our research these five currencies exchange rate are used as dependant variable and Discount Rate and Interest Rate as independent variables.

Design & Type of Study:
In our study we used descriptive and Hypothetical study. As Descriptive research, also known as statistical research, describes data and characteristics about the population or phenomenon being studied. Descriptive research answers the questions who, what, where, when and how. Hypothetical study also known as Co relational study shows the relationship between the variables and their impact upon each other.

Statistical Tool:
Regression, Correlation analysis in used in our study.

Data Collection:
We collected data from state bank of Pakistan, economic survey of Pakistan and business recorder, HEC Digital Library, Articles from different Journals, Annual reports of SBP and KSE, International Financial Statistical Yearbook, BOP & BOT Statistical year book.

Results & Discussion:

The independent variables are Discount Rate & Interest Rate and following five major currencies exchange rate as dependant variable.

Currency Name	**Exchange Rate Abbreviation (used)**
United State Dollar	USD
Great Britain Pond	GBP
Japanese Yen	JPY
Canadian Dollar	CAD
EURO	EUR

Correlation Analysis:

The discount rate and Interest Rate are very important form their impact point of view on the Pakistani foreign exchange rate market.

United State Dollar (USD)

		DIS	INT	USD
DIS	Pearson Correlation	1	.606(**)	.703(**)
	Sig. (2-tailed)		.000	.000
	N	99	99	99
INT	Pearson Correlation	.606(**)	1	.921(**)
	Sig. (2-tailed)	.000		.000
	N	99	99	99
USD	Pearson Correlation	.703(**)	.921(**)	1
	Sig. (2-tailed)	.000	.000	
	N	99	99	99

** Correlation is significant at the 0.01 level (2-tailed).

The impact of Interest Rate on exchange rate of **U.S Dollar (USD)** is strongly significant with .921(**) and discount rate with .703(**). But the impact of Interest Rate on exchange rate of USD is more significant than discount rate. The relation of USD with discount rate and interest rate is strongly correlated as United States is the international currency and secondly it is the currency by which PKR is pegged. All the investments made and received are in Dollars so a minor change in domestic interest rates changes creates strong impact on the Dollar because the demand and supply factor arises.

Great British Pound (GBP)

		DIS	INT	GBP
DIS	Pearson Correlation	1	.606(**)	.330(**)
	Sig. (2-tailed)		.000	.001
	N	99	99	99
INT	Pearson Correlation	.606(**)	1	.778(**)
	Sig. (2-tailed)	.000		.000
	N	99	99	99
GBP	Pearson Correlation	.330(**)	.778(**)	1
	Sig. (2-tailed)	.001	.000	
	N	99	99	99

** Correlation is significant at the 0.01 level (2-tailed).

For **British Pound (GBP)** the impact of Interest Rate and Discount rate is also strongly significant with .778(**) and with .330(**) respectively. The impact of discount rate change is least strongly related with the exchange rate of GBP. British Pound is also one of the major currencies which are engaged in international trade and transactions. In Pakistan trading in British Pound is connected in different ways. But GBP in Pakistan is more

widely used in trade in general public i.e. if we talk about the investments at country level; it is not a currency which is used widely as compared to USD.

Japanese Yen (JPY)

		DIS	INT	JYN
DIS	Pearson Correlation	1	.606(**)	.711(**)
	Sig. (2-tailed)		.000	.000
	N	99	99	99
INT	Pearson Correlation	.606(**)	1	.888(**)
	Sig. (2-tailed)	.000		.000
	N	99	99	99
JYN	Pearson Correlation	.711(**)	.888(**)	1
	Sig. (2-tailed)	.000	.000	
	N	99	99	99

** Correlation is significant at the 0.01 level (2-tailed).

For **Japanese Yen (JPY)** the impact of Interest Rate and Discount rate is also strongly significant with .888(**) and with .711(**) respectively. The relation of JPY is very strong with both the independent variables but still it's not the currency which is internationally used for trading. This is the currency against which the PKR is strong in value.

Canadian Dollar (CAD)

		DIS	INT	CAD
DIS	Pearson Correlation	1	.606(**)	.546(**)
	Sig. (2-tailed)		.000	.000
	N	99	99	99
INT	Pearson Correlation	.606(**)	1	.880(**)
	Sig. (2-tailed)	.000		.000
	N	99	99	99
CAD	Pearson Correlation	.546(**)	.880(**)	1
	Sig. (2-tailed)	.000	.000	
	N	99	99	99

** Correlation is significant at the 0.01 level (2-tailed).

For **Canadian Dollar (CAD)** the impact of Interest Rate and Discount rate is also strongly significant with .880(**) and with .556(**) respectively. The impact of Interest Rate on the exchange rate of CAD is least significant from all the selected currencies. Canadian Dollar is the emerging currency all over the world because of increasing foreign demand for Canadian securities and according to some research and reports CAD is now equal to the value of USD. This currency though is highly affected with the change in interest rate and discount rate in Pakistan; one of the reasons may be, Pakistan is the exporter of basic goods and is also the importer from Canada. So the involvement regarding investment and transactions posses a strong positive impact of interest rate and discount rate on the currency exchange rate.

EURO

		DIS	INT	EUR
DIS	Pearson Correlation	1	.606(**)	.553(**)
	Sig. (2-tailed)		.000	.000
	N	99	99	99
INT	Pearson Correlation	.606(**)	1	.907(**)
	Sig. (2-tailed)	.000		.000
	N	99	99	99
EUR	Pearson Correlation	.553(**)	.907(**)	1
	Sig. (2-tailed)	.000	.000	
	N	99	99	99

** Correlation is significant at the 0.01 level (2-tailed).

The last selected currency is **EUR**. The impact of Interest Rate and Discount rate is strongly significant with .907(**) and with .553(**) respectively. EURO is the currency to be used as international currency as against USD and GBP. It directly gets affected with the change in the interest rates or economic changes within a country as the investments are to be made; investments with higher preference is there where the investor finds benefit. The country's economic conditions such as monetary tools play important role in determining the value of the internationally traded currencies and as far as EUR is concerned, it is in strong relation with the change in interest and discount rate of Pakistan.

Regression Analysis:

United States Dollar (USD):

Variables Entered/Removed(b)

Model	Variables Entered	Variables Removed	Method
1	INT, DIS(a)	.	Enter

a All requested variables entered.
b Dependent Variable: USD

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.939(a)	.882	.879	3.14574

a Predictors: (Constant), INT, DIS

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	T	Sig.
1	(Constant)	24.379	1.545		15.778	.000
	DIS	.941	.181	.229	5.188	.000
	INT	3.200	.180	.783	17.738	.000

a Dependent Variable: USD

The R2 value for **U.S Dollar (USD)** is .879 which shows change in our selected monetary policy variables (Interest Rate & Discount rate) have 87.9 % impact on USD exchange rate. The value of "t" for Interest Rate and discount rate is 17.7380 & 5.188 respectively.

Great British Pound (GBP):

Variables Entered/Removed(b)

Model	Variables Entered	Variables Removed	Method
1	INT, DIS(a)	.	Enter

a All requested variables entered.
b Dependent Variable: GBP

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.798(a)	.636	.629	8.82471

a Predictors: (Constant), INT, DIS

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	67.333	4.334		15.535	.000
	DIS	-1.469	.509	-.223	-2.888	.005
	INT	5.974	.506	.913	11.802	.000

a Dependent Variable: GBP

The R^2 value for **Britain Pond (GBP)** is .636 which shows change in our selected monetary policy variables (Interest Rate & Discount rate) have 63.6 % impact on USD exchange rate. The value of "t" for Interest Rate and discount rate is 11.802 & -.223 respectively. For Discount rate it is not a strong impact as the relation of Discount rate change is on exchange rate of GBP is least from all the selected currencies. The negative value of B and t is due to the reason that GBP is not as widely used as USD as international currency. Also the EURO replaced Dollar and GBP as internationally traded currency so this is because GBP is not affected directly with the change in Discount rate and showing inverse relation but it does change strongly i.e. 63.6% it is affected with the change in discount rate.

Japanese Yen (JPY):

Variables Entered/Removed(b)

Model	Variables Entered	Variables Removed	Method
1	INT, DIS(a)	.	Enter

a All requested variables entered.
b Dependent Variable: JYN

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.914(a)	.835	.832	.05901

a Predictors: (Constant), INT, DIS

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	T	Sig.
1	(Constant)	-.025	.029		-.872	.385
	DIS	.018	.003	.274	5.260	.000
	INT	.047	.003	.722	13.863	.000

a Dependent Variable: JYN

The R^2 value for **Japanese Yen (JPY)** is .835 which shows change in our selected monetary policy variables (INTEREST RATE & Discount rate) have 83.5 % impact on JPY exchange rate. The value of "t" for Interest Rate and discount rate is 13.863 & 5.260 respectively.

Canadian Dollar (CAD):

Variables Entered/Removed(b)

Model	Variables Entered	Variables Removed	Method
1	INT, DIS(a)	.	Enter

a All requested variables entered.
b Dependent Variable: CAD

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.880(a)	.774	.769	6.04856

a Predictors: (Constant), INT, DIS

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	T	Sig.
1	(Constant)	4.380	2.971		1.474	.144
	DIS	.119	.349	.021	.340	.735
	INT	4.933	.347	.867	14.219	.000

a Dependent Variable: CAD

The R^2 value for **Canadian Dollar (CAD)** is .774 which shows change in our selected monetary policy variables (Interest Rate & Discount rate) have 77.4 % impact on CAD exchange rate. The value of "t" for Interest Rate and discount rate is 14.219 & .340 respectively, which is also a strong impact. This is the currency which is strongly and strong positively posses impact of the change in discount rate and interest rates.

EURO:

Variables Entered/Removed(b)

Model	Variables Entered	Variables Removed	Method
1	INT, DIS(a)	.	Enter

a All requested variables entered.

b Dependent Variable: EUR

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.907(a)	.823	.819	8.01372

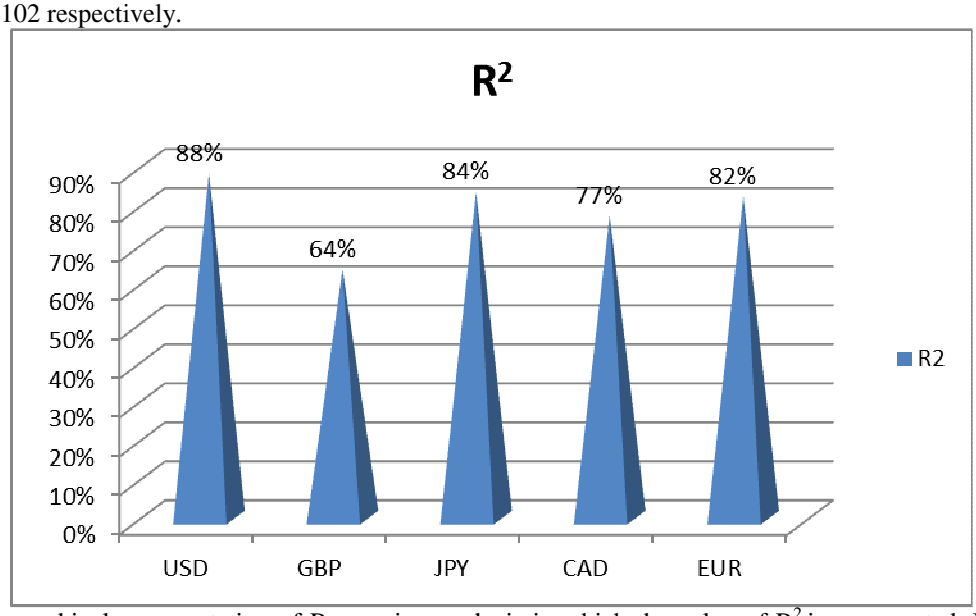
a Predictors: (Constant), INT, DIS

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	6.937	3.936		1.762	.081
	DIS	.047	.462	.006	.102	.919
	INT	7.689	.460	.904	16.728	.000

a Dependent Variable: EUR

The R^2 value for **EUR** is .823 which shows change in our selected monetary policy variables (Interest Rate & Discount rate) have 82.3 % impact on EUR exchange rate. The value of "t" for Interest Rate and discount rate is 16.728 & .102 respectively.



This is the graphical representation of Regression analysis in which the value of R^2 is represented. Basically it shows the combined impact of discount rate and interest rate on the currencies. From the graphical representation USD is the highest affected currencies. The simplest reason for this can be that USD is the currency by which PKR is pegged. All the exports and imports are done in Dollars. So the change in monetary policy has a greater impact on USD. The other currencies also have a strong relation with the interest rate and discount rate. The reason for which is the foreign trade which includes imports and exports.

Stabilized monetary policy variables such as Interest Rate & Discount rate helps in strengthen the economy. A strong economy would help in increasing foreign reserves and Foreign Direct Investment (FDI). Pakistan an impoverished and underdeveloped country has suffered from decades of internal political disputes and low levels of foreign investment. These monetary variables are directly associated with change in foreign investment. When more foreign investors invest in State Bank of Pakistan's securities, they need to sell their own currencies (like U.S dollar, British pound, Euro, etc) in order to buy Pakistani rupees. A higher exchange rate makes the foreign goods valuable in Pakistan which results in increase in imports and reduces exports.

Several key findings emerge from the study. Our result strongly supports our Hypothesis. The discount rate and Interest Rate are very important form their impact point of view on the Pakistani foreign exchange rate market.

The impact of Interest Rate on exchange rate for PKR_USD, PKR_CAD, PKR_JPY and PKR_ Euro is strongly significant while for PKR_GBP it is least significant. The impact of discount rate on our selected currencies is also significant. Discount rate impact on exchange rate for PKR_GBP is least from all the selected currencies.

The exchange rate has played an important role in terms of the flexibility in Pakistan's macroeconomic framework to deal with changes in the external terms of trade because of the narrow export base. On some occasions, the Pakistan rupee was depreciated against the US Dollar and other currencies in large single-digit steps, because of the fact that the authorities became highly concerned about the adverse impact of the real appreciation on external competitiveness.

The State Bank of Pakistan (SBP) has given a high priority to achieving a low rate of inflation, but the monetary policy also aims to support the national objectives of economic diversification and export competitiveness. By attempting to keep the real effective exchange rate of the Pakistan rupee stable, the authorities aim to avoid worsening in external competitiveness.

The present rising trend of interest rates was expected to continue in future in view of different factors such as liquidity constraints, modest inflationary expectations, and also rising interest rates in the international financial markets. In summary Interest rates were gradually increasing in response to liquidity constraints, rising interest rates in the international financial markets and inflationary expectations.

Conclusion:

Our results show the overall positive impact of the discount rate and interest rate on the foreign exchange of Pakistan which included five major currencies i.e. USD, GBP, JPY, CAD and EURO. We used correlation and regression analysis to test our hypothesis which says that discount rate and interest rate has positive impact on the foreign exchange market of Pakistan and these hypotheses are proved true after the analysis we made. On the basis of our results, the impact of the independent variables on USD is 88 percent i.e. value of R^2 is .882 which represents that when a change in interest and discount rate occurs, USD gets affected by 88% and its Beta is also in positive which further explains that it gets affected 88% positively with a change in discount rate and interest rate. The reason for this is discussed earlier that USD is firstly the international currency and secondly PKR is pegged with USD. So due to this reason USD posses strong impact with the change in discount rate and interest rate as this is directly related with the economy of the Pakistan as all the transactions are made in this currency.

The other result was regarding GBP. Its value of R^2 is .636 i.e. it gets affected 63.6% when a change in discount rate and interest rate occurs. But according to our results and findings the GBP doesn't get impact positively i.e. it has a negative trend against discount rate. But it does get affected which shows its strong relation. The GBP is not as widely used international currency as USD or EURO. All the major transactions are done in USD or EURO as EURO also replaced GBP as internationally traded currency. So the GBP has now not much positive impact with the change in interest rate and discount rate.

The other currency which we tested is JPY and hypotheses also proved positive. The R^2 of JPY is .835 which means that with the change in interest rate and discount rate JPY gets impact of 83.5%. The currency has been maintained throughout around 1PKR under or above. Pakistan has been in trade with Japan through imports and exports due to which the currency is maintained and this way JPY gets in relation with the interest and discount rate of Pakistan and has strong impact of these variables.

Then the other currency on which we applied our analysis is Canadian Dollar and the results also prove the hypotheses positive. The value of R^2 of CAD is .774 which shows there is a 77.4% impact on the currency with the change in discount rate and interest rate. Beta is also positive which again further explains like USD that when a change in interest rate and discount rate occurs, CAD changes with 77.4% positively or directly in the direction of those two independent variables. CAD is one of those currencies after USD and EURO which is used for international transactions. CAD as a matter of fact, is emerging as international currency as Canadian stocks are in high foreign demand which eventually affects the currency. Because of its being international currency its importance increases as it becomes the currency in which the transactions are to be made so in this case it gets affected with the economic factors of a country and in Pakistan it is highly affected by the change in discount rate and interest rate. The reason may be that the transactions are being made in this currency internationally.

The final currency which we analyzed to testify our hypotheses is Euro. The value of R^2 of Euro is .823 which means that with the change in discount rate and interest rate, Euro has an impact of 82.3%. And being the Beta in positive, it confirms that with the change in interest rate and discount rate, EURO has a positive impact of 82.3%. As discussed earlier in the correlation analysis that EURO is the currency which has replaced USD and GBP as international currency so that means in Pakistan also the international transactions are also made in EURO which becomes significant with the variation in the monetary indicators of Pakistan.

We can conclude from the above results and discussions that all the five currencies we have chosen for our consideration as their impact through the foreign investment, on the country's economy. They all reflect positive impact with our two independent factors interest rate and discount rate. We can also see the changing, fluctuating non constant trend of these which is because of the ongoing recession and downfall of economies in the country.

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