

INVESTING THE PRICING OF EXCHANGE RATE RISK IN THE STOCK MARKET: EVIDENCE FROM PAKISTAN STOCK MARKET

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ABSTRACT

Objective: This paper is designed to empirically examine the pricing of exchange rate risk in the stock market in Pakistan.

Methodology: The study is based on two-factor and multi-factor arbitrage pricing models. The empirical evidences are based on 15 years monthly data from January 1998 to December 2015, for exchange rate, discount rate, inflation, t bill and the Karachi Stock Exchange (KSE) 100 indexes is collected from State Bank of Pakistan and Karachi Stock Exchange.

Results: The results, however, conclude that the exchange rate risk is priced in the stock market. Whereas, the remaining factors such as risk premium attached to foreign currency exposure and the term structure of discount rate appear to have significant effect on exchange rate risk. We can generalize that the exchange market in Pakistan are influenced by the stock market.

Policy implication: This paper provides empirical evidence that the risk exposure of exchange rate is largely influenced by the changes in stock market. Therefore the concerned persons are proposed for the consideration of this issue.

Key Words: Exchange Rate Risk, Multi-Factor Arbitrage Pricing Models, Stock Market, Risk Premium.

* The material presented by the author does not necessarily portray the viewpoint of the editors and the management of the Institute of Business & Technology (IBT)

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1. INTRODUCTION

In the present period of growing globalization and upgraded cash instability, changes of return rates have a generous effect on associations' advantages and operations. Exchange rate unpredictability impacts multinationals and significant organizations, and small & medium-sized firms likewise, undoubtedly the people who simply work in their country of inception. While considerable and supervision exchange rate risk is a topic of plain consequence to business visionaries, budgetary masters should be familiar with it too due to the tremendous effect it can have on their ventures. Securities exchange responds consequently of different elements going from financial, exchange rate, political and Liquidity conduct of any nation. The majority of the observational confirmation in view of restrictive resource valuing tests focuses towards the presence of a huge cost of risk identified with the coin figure stock exchanges of both created and rising nations. These studies, in any case, just centered around testing whether the trade danger variable summons a noteworthy danger premium in value returns, chiefly at the total business level. Study is concentrated as a stock exchange peculiarity on the value business hones in Pakistan. It is critical for a financial specialist to comprehend the working of capital markets. The relationship in the middle of data and offer costs is clarified by the business productivity. So by the day of week impact, the financial specialist will consider the mean of return for distinctive days. Anyway when for and speculator, it is important to consider return just. It will not give better results. In a choice making process, a social monetary leader must consider returns as well as the change and unpredictability of profits. Securities exchange provides exchanging offices to human being and institutional speculators to trade their possessions. On the other side stable exchange rate help firms to diminishing their operational danger, look at their speculation execution that whether firm getting benefit or confronts misfortune furthermore help in supporting. Other than this swapping scale change additionally influenced macroeconomic components these elements are business costs, expansion rates, investment rates, work wages, and unemployment and yield level. In past period, the nation ineffectively performed, nonetheless, throughout the previous few years, the exchange rate is assuming an extremely imperative part in nation financial circumstances. This paper introduces a basic hypothetical model that aids clarify how resource costs are influenced by liquidity hazard and shared trait in liquidity. Liquidity risk is frequently noted in the money related press. The likelihood that liquidity may disappear from a business, thus not be accessible when it is required, is a major wellspring of risk to a financial specialist. The risk premium connected with shared characteristic in liquidity is created by the riches impacts of illiquidity. Additionally, this risk premium would conceivably apply in an economy in which financial specialists can pick which securities to offer. In such a model, a financial specialist who holds a security that gets to be illiquid. As a rule, cost of stock costs are in light of expected future money streams created by resource and on the premise of offered rebate rate. Regardless of this, there is a considerable measure of different components that influence the costs of stocks like political approaches liquidity danger and swelling effect of the nation. Securities exchange has an in number connection with the worldwide and residential solidness of a nation. The territorial, national and worldwide vulnerability and unsound budgetary standings influences the stock trade in a nation. The monetary circumstances expansion, subsidence and value variances have direct effect on the course of stock exchange. Debasements and different components including world occasions likewise had direct consequences for the trust value of the framework all in all. The districts which are at war or confronting some terrorist exercises as we are confronting in our nation have cut our Annual Developmental Programs, has likewise unfavorably influenced our business, trade and securities exchanges inside the influenced

district. Karachi stock trade is the greatest stock trade in Pakistan among the Lahore and Islamabad stock trades (now all three stock markets are merge as Pakistan stock exchange) because of its high market underwriting, high turnover.

KSE offers great expansion potential for global financial specialists close by fabulous value profit products. Cash administrators have hopeful view point's with respect to future benefit capability of Pakistani firms given that Pakistan populace is sixth biggest on the planet and that this populace still has numerous requests to satisfy. Money markets are an intriguing creature. There have dependably been issues and opportunities. The day exchanging blast changed money markets significantly affected. Individuals no more needed to have admittance to an inside man or a position on the share trading system. The historical backdrop of the Stock Market demonstrates that different nations, as ahead of schedule as 1531, had officially settled a framework for exchanging securities and different products. Belgium really had the World's first framework, with Amsterdam soon taking after. Also, despite the fact that Wall Street is by all accounts the money related community for America today, this wasn't generally the case either. Really, exchanging America really started in Boston where bonds, shrouds, molasses, and even contracts were purchased, sold, and exchanged. At last as exchanging advanced all through the World, America formally settled their decent footing in 1792 by arranging a formal stock and bond exchanging framework, and Wall Street was created. At present the greatest and most fluid stock trade in Pakistan, was secured on September 18, 1947. In this study it is examined that the amount of stock exchange is unpredictable because of diverse relation between said variables which likewise influence the economy. The study analyzed facts & figure which get influence by stock market.

Risk premium is the base measure of cash by which the normal profit for an unsafe resource must surpass the known profit for a risk free resource, or the normal profit for a less risky resource, with a specific end goal to prompt a single person to hold the risky resource instead of the risk free resource. The securities profit and loss in a specific period is called return. The arrival comprises of the salary and the capital increases relative on a venture. It is generally cited as a rate. The yearly rate profit acknowledged for a venture, which is balanced at changes in costs because of expansion or other outer impacts. The sum one would foresee getting on a speculation that has different known or expected rates of return. Generally, the normal return is an instrument used to figure out if or not a venture has a positive or negative. Despite the fact that this is the thing that you anticipate that the arrival will be, there is no ensuring that it will be the genuine return. Then again, shareholders' desires are as of now calculated into expected returns. Sudden return is the bit of a venture increase or misfortune that is attributable to unforeseen occasions. While Unexpected Returns presented and investigated the ideas driving common securities exchange cycles. The returns of stock exchange are the profits that the financial specialists produce out of the share trading system, and when the cost of goods and administrations are rising and cost of purchasing power is falling so it is called inflation.

2. LITERATURE REVIEW

There are boundless measure of exploration writing accessible on the subject and far reaching examination have been led in both created and creating nations that has concentrated on distinguishing the effect of Pricing of conversion scale chance in money markets. In short the most significant and current studies in this connection are illustrated as takes after. A study by Acharya and Pedersen (2005) checked the connection between resources valuing with liquidity risk, the main purpose of that research was to analyze asset prices affects by commonality in liquidity and liquidity risk. The yearly information was taken by 1963 to 1999. It was applied regression strategy to break down and developed a model by Balanced liquidity CAPM by utilizing irregular variables Security and illiquidity cost with an aggregate offer of securities and profit offer costs as all arbitrary variables was characterized on likelihood break. The conclusions showed that investors require a return premium and we analyzed that investors also wants to pay premium for getting securities as it would be liquid when the market return is going to be low. This research identified that most stocks' illiquidity's are absolutely identified with business sector illiquidity. The second effect of securities return and market liquidity on expected return as we judged influences obliged returns contrarily in light of the fact that speculators are ready to acknowledge a lower profit for a benefit with an exceptional yield in times of business illiquidity. This paper determines a basic model of liquidity risk. The model demonstrates that positive stuns to illiquidity, if constant, are connected with a low contemporaneous return and high anticipated future returns. Ahmed and Rosser (1995) gave an attention on the subject of non-straight theoretical rises in the Pakistani securities exchange. The exploration was taking into account ARCH model on every day securities exchange, information from 1987 to 1993. The study concluded by utilizing two variables SBP index and exchange rate that the Pakistan Stock Market amid the time of examination appears to have displayed very perplexing flow, alongside clearly solid patterns that may demonstrate the presence of speculative air pockets. According to the record non straight structure which was essential, has been rejected by conclusion. Asghar et al. (2011) have recorded a study on Impact of profit arrangement on stock value hazard. Information was collected from Karachi stock exchange and state bank of Pakistan. The regression & correlation techniques were applied to analyze results. The aftereffects of the study were uncovered as value instability of correlation and profit yield was true important as contrast with different factors. In addition price volatility has negative connection to the development in resources. This was additionally induced from the research as all factors were connected with the value unreliability. Banz (1981) has conducted a study on connection among market value and return of common stocks. Applied CAPM model on NYSE for fifty years data as monthly price and return data were included. It is discovered that littler firms have had higher risk balanced returns, all things considered, than bigger firms furthermore he discovered a critical negative relationship between the proportion of book esteem and business sector estimation of value and its return, additionally reports that this relationship is simply an intermediary for the size impact. Brunnermeier and Pedersen (2009) it has been filled in as ARCH structure. It was demonstrated that edges balance out the value and lessening with business sector illiquidity if lenders realize that costs separate because of provisional business sector illiquidity and realize that liquidity will be enhanced right away as correlative clients arrive. This is on the grounds that a bigger value price because of current illiquidity diminishes the measure of future value decreases. There are a few sorts of suppliers of business sector liquidity, that is, dealers that go about as mediators by purchasing or offering. At the point when markets are illiquid, market liquidity is exceedingly touchy to further changes in financing conditions. At long last, the model

demonstrates how the Fed can enhance current business liquidity by resolving to enhance financing in a potential future emergency. Further it has been concluded that the national bank can enhance current liquidity by expressing a proposition to reserve merchants if necessary later on, without really making quick move. The Federal Reserve likewise utilized this verifiable channel to further enhance liquidity. Chen, Roll and Ross (1986) archived an examination on economic strengths and the stock exchange. It was investigated an arrangement of financial state variables as methodical impacts on stock exchange returns and have analyzed their impact on resource estimating, from the point of view of effective business hypothesis and objective desires superlative resource valuing hypothesis. It has been said and concentrated on that benefit costs ought to rely on economy. The researched was analyzed the impact on valuing of presentation to developments in genuine per capital utilization. These outcomes were very frustrating to utilization based resource valuing speculations; the utilization variable was never significant. Finally investigation of that effect of a file of oil value changes on resource valuing and discovered no general impact. Another study made by Chung and Majerbi (2009) observed exchange rate premium in the Stock Market, This study were based on exchange and exchange risk factor however. It wasn't attempt to clarify the type of premium risk, neither taken a cross sectional trade risk premium to check whether it can be identified with particular attributes of the hidden resources at a more disaggregated level. Analyzing that problems which got past, the estimated of trade risk is clarifying to the value. In the same way as other developing markets, Korea had encountered essential money emergencies with awesome unhelpful effects on Korea's economy and securities exchange. This determination permits us to utilize financial variables, for example, the change in the conversion scale, as components. Initially tried an unconditional version and accepting completely fragmented market. The information was secured a sum of 246 organizations recorded by utilizing firm returns and firm level month to month returns got specifically as of the Korean business record. This record additionally incorporates definite information on individual firm attributes. The results were described that the individual firm level is unconditional significant risk premium for Korean securities exchange. And also find that exchange market is more significant for risk premium. It showed that stock holders prefer lower firms due to higher exchanging liquidity. A study by Dasgupta, Claessens and Glen (1995) made an investigation about Return behavior on rising stock markets. Developing markets have seen a sharp increment in value inflows as of late. This article were giving descriptive measurements on rising securities exchanges and explores the presence of a portion of the arrival inconsistencies that have been archived in different markets. It has been utilized the measurable approach to figure out the conduct of money markets. Finding these developing markets show few of the same oddities. Discovered the constrain turnover of expense year impacts and little firm impacts. Further discover, however, confirmation of return consistency. Jong and Driessen (2012) conducted a study to check Liquidity Risk Premium in corporate bond market. This paper investigates the part of liquidity risk in the estimating of corporate securities. This was clearly shown that the liquidity risk is an estimated variable for the normal profits for corporate securities. The exposures of corporate security comes back to vacillations in Treasury security liquidity and value market liquidity help to clarify the credit spread riddle. In this paper was broadening the writing on resource evaluating and liquidity danger to corporate securities. The demonstrating methodology is to regard liquidity as a danger component, where the exposures of corporate security come back to liquidity stuns are estimated. Incorporation of two sorts of liquidity presentation, one to value market liquidity and one to Treasury security market liquidity. Most importantly, demonstration of that corporate security returns have a noteworthy presentation to the liquidity elements, regardless of the possibility that it control

for business and instability risk. Moreover, the liquidity elements contribute altogether to the normal profit for corporate securities. In accordance with the US comes about, this finding was that European corporate securities have a huge presentation to liquidity stuns, which serves to clarify the normal security returns. Fama and French (1993) examined the risk factor in the returns in bonds and stocks. The main focus of that study had to recognize the five common risk variables in stocks and bonds return. There were three stock market variables and two bonds market variables. It is applied regression technique on that five variables and concluded that it is a solid cover among the arrival procedure for stocks and bonds and it was anticipated a few genuine inspecting slip in that five variables to estimate singular securities. Farooq, Keungand and Kazmi (2004) made a study to check the association connecting Stock Market Prices and Exchange Rate in Pakistan. The main agenda of that study was to prescribe the short and long run connection by using regression method. Basically three basic reason were found, first and foremost Karachi Stock Exchange is the more quickly developing markets in the district and in addition in the rising economies. Market promotion has expanded lately. Furthermore, Pakistan's economy watched budgetary emergencies as of late. The stock and outside trade markets experienced variances the money related emergency. Thirdly, this examination investigates, shockingly, the relationship between stock costs and conversion scale by breaking down index of Karachi stock exchange. The main focus of the document was to delineate the basic relation between stock indices and exchange rate by causality among that variable. The outcomes demonstrated that long run relation was not found among conversion scale and stock lists of Pakistan. The outcomes showed some intriguing confirmation. Further found that causality work from universal supply costs to conversion scale. So as indicated by their examination general stock file influences conversion scale in the short run, accordingly the financial specialists can utilize data get from securities exchange to foresee the conduct of swapping scale. Ferson and Harvey (1993) worked on foreign equity return to find the predictability risk. It is explored the wellspring of risk and consistency on universal value business returns. It is likewise inspected a few worldwide financial risk element, including a world business portfolio, exchange rate instabilities, measures of overall swelling, structured a definite beta evaluating model. This was considered the consistency in 18 national value business sector returns, utilizing relapses on foreordained variables. The outcome has been arranged various further tests to check the affectability of that outcome to the econometric technique and evaluated unsurprising difference degrees utilizing cross sectional relapse methods.

French, et al. (1987) argued on volatility of expected stock returns. The study was based on regression technique. This exploration inspected the connection between stock returns and securities exchange unpredictability, more considered on proof that the normal business hazard premium is absolutely identified with the anticipated instability of stock returns. It is reasoned that surprising securities exchange returns are adversely identified with the startling change in the unpredictability of stock returns. These negative relations give backhanded confirmation of a positive connection between expected danger premiums and instability.

Galai and Masulis (1976) showed the stock risk factor of option pricing model. In this investigated a consolidate capital resource valuing model and alternative estimating model is viewed as and afterward connected to the determination of value's quality and its efficient danger. It is produced the two models and present some recently discovered properties of the choice estimating model. This has been indicated unanticipated changes in firm capital and resource structures can differentially influence, at last this included venture approach and additionally the reason and impacts of non-stationary in the deliberate danger of levered value and risk obligation. Gul et al. (2013) conducted a study to check the impact of occasion on stock prices or not. The sample was selected of 14 organizations are chosen arbitrarily

from the budgetary area (Insurance and Banking) recorded on the KSE-100 index. The time compass is of four years from 2007 to 2010, and the methodology was to t-statistics method by paired samples. The discoveries from the examination plainly demonstrated that occasion have critical effect on the offer costs of the Karachi Stock Market. Conclusion said that the protection and the keeping banking part indicated high affectability and negative effect to occasions of characteristic catastrophes and the terrorist exercises. Thus it is inferred that occasions have huge effect on the stock costs and the examination speculation that was infer before the study that an occasion has an effect on the stock costs is endorsed. What's more, the monetary segment in Pakistan indicated critical connection to occasion when it happens. Guo and Whitelaw (2006) debated on stock market uncovering risk return.

The study was taking into account experimental model of the ICAPM that independently recognizes the two parts of expected returns the danger segment and the part because of the craving to fence reconstruct in speculation opportunities. Evaluated coefficient of comparative hazard avoidance is certain, factually noteworthy, and sensible in size. On the other hand, expected returns are driven principally by the support part. The clashing results found in past studies are expected, in huge part, to the way that didn't sufficiently recognize the danger segment of expected comes back from the support part. The exclusion of this part is somewhat in charge of the current conflicting results. What's more, there was a positive connection among danger of stock exchange and returns. Hussain, et al. (2011) have made a study to check days of the week impact in stock market. The objective behind that study had to examine the day effect in stock market that which day is more suitable for stock return. A considerable measure of different scientists likewise directed this examination upon the arrival of the week impact on time arrangement information. It is imperative for a financial specialist to comprehend the working of capital markets. The relationship in the middle of data and offer costs is clarified by the business proficiency. The information utilized as a part of this paper comprise of every day utilizing qualities for the major Pakistani securities exchange list, 100 Index of KSE, by Jan 06 – Dec 10. Amid this period exchanging is directing Monday to Friday. Monday to Friday was factors of that study. The regression technique was applied to major the effective for stock return. The Efficient Market Hypothesis clarifies that there are steady market returns for entire week. Experimental aftereffects of this study show that there is a noteworthy Tuesday impact in Pakistani Stock business sector amid a week. On Tuesday there is exceptional yield however on alternate days of the week clarifies consistent returns. Profits for Tuesday are more unpredictable over different days. Hye, ET al. (2009) have conducted a study to check the connection among exchange rate, stock prices and money demand. It has taken data from 1971-2006.

The aim of this paper was to expedite the connection among exchange rate, stock prices and money demand, and applied regression model. Discovery that there are four coordinating vectors in among six variables cash interest, stock costs, monetary movement, expansion, swapping scale and premium rate. Critical discoveries of this paper i.e. stock cost have decidedly furthermore, factually huge riches impact and conversion scale inconsequential impact on cash request over the long haul. The negative impact has been observed on cash request for short run swelling. Jorion, (1991) made a study to check the stock pricing risk in the stock market. Evidence was taken from US stock market. The reason for this paper is to examine the valuing of remote trade chance in money markets. Given the expanding openness of the U.S economy, U.S. organizations can be significantly influenced by developments in the estimation of the dollar. Regarding the swapping scale as monetarily exogenous concerning an individual firm, remote trade introduction can be deteriorated into the presentation of net financial resources and genuine resources. The experimental results, in any case, don't recommend that trade danger is evaluated in stocks. The unlimited danger

premium connected to outside cash introduction gives off an impression of being little and never huge. Therefore, dynamic supporting approaches by money related supervisors can't influence the expense of capital, and different reasons must disclose why firms choose to hedge. Mahmood, et al. (2014) led a study utilizing sixteen years information of distinctive political occasions which happen in Pakistan or outside of Pakistan. Karachi stock exchange is best choice for financial specialists who need to enhance their risk by putting into diverse markets in light of the fact that its profits are expanding step by step. In any case political conditions are insecure in Pakistan and number of occasions bothered the KSE-100 list execution because of that financial specialist wavers to put resources into such market. This study proved that after 2012, KSE-100 file is continuously expanding and touching its most noteworthy point of confinement due lessening in military takeovers and additionally two chose governments finished their terms of five years first time in Pakistan history. This study helps the financial specialist to analyze the impact of political occasions on KSE-100 record returns and create method as indicated by the political environment. Just major political occasions are chosen for a chose time skyline which is not covering the all political scenes. It is concluded by applying study technique. Political occasions dependably have an effect on securities exchange file; it might be for short run or may for long run. Anyhow this study demonstrates that political occasions unstable the KSE-100 record return for brief time period it was max 10 to 15 days, in light of the fact that in Pakistan political occasions are less identified with the business sector. Mudassar, ET al. (2013) has made a study. The goal of this study was to find out possibilities for an investor who wants to generate abnormal profit by stock market. Study was productive both for present and potential speculators and also with KSE partners. Money related markets of created nations ordinarily remain/work as powerless structure effective, in this manner there was not a chance for the speculators to create anomalous benefits from the securities though KSE. Amid the study was discovered that the execution of KSE 100 Index stayed in feeble manifestation of wastefulness with financial specialists have possessed the capacity on the way to produce unnecessary profits for their venture the vast majority of the times. Nance, et al. (1993) conducted a study on corporate hedging with testing these theories clarifying corporate supporting arrangement and offer exact confirmation on the relative significance of these corporate supporting intentions by using primary data due to unavailability of secondary data and applied logit regression technique. Money related financial aspects offers a few theories to clarify the corporate buy of supporting instruments. It proposes that supporting can expand the firm esteem by decreasing expected expenses, organization costs. In this exploration, their outcome was steady with the suggestion that supporting and other monetary arrangements are substitutes. The examination of means reported in exploration. It has been proposed that the firm uses have less liquid with higher profits.

A research work by Nath and Samanta (2003) analyzed the element linkages between the outside trade and stock exchanges for India. Log model was applied. Their observational results demonstrate that for the most part returns in these two businesses are not interrelated, however lately; the arrival in securities exchange had causal impact on return in exchange rate with probability of mild impact in converse bearing. These outcomes showed fascinating problems with respect to the conversion standard and reserve cost fundamental connection in India, however securities exchange venture does not constitute an extremely critical allotment of aggregate family reserve funds contrasted with other form of monetary resources, it may have a noteworthy effect on conversion standard development. In an article by Rehman (2014) explored the linkage among exchange rate and macroeconomic factor in Pakistan. The study was based on econometric models to find the proposed hypotheses on five years data from 1998 to 2012. Pakistan is a creating nation and like other creating nations there are

numerous variables in charge of vacillation of exchange rate yet study incorporates just seven variables other than conversion standard these variables are imports, exports, Stock value file, Foreign hold less gold, Industrial creation, Whole deal value record and Money supply. That is consider that these seven variables have an impact on exchange rate and from information examination made in the study this can be demonstrated that truly these variables are influenced by conversion standard. For survival in this aggressive economy there is have to have a stable exchange rate as a result of it conversion scale connection with different variables is look at in this study. A study by Saleem, et al. (2013) figured out the connection among stock return and inflation in long run. The exploration of that study was to analyze the long run connection among KSE return and Pakistan inflation's rate by using sixteen years information 1996 to 2011. Co integration technique was applied to find out the changes in stock return due to inflation. Utilization of granger causality test has done by said factors. The co integration test showed a negative connection among KSE 100 index and exchange rate on the grounds that Pakistan is as under.

3. RESEARCH METHODS

Month to month closing costs for discount rate, exchange rate, bond rate t bill bond rate the Karachi Stock Exchange (KSE) 100 indexes were gathered from State Bank of Pakistan and KSE. Characterizing all profits to be nominal returns in additional of the risk free rate, a two-component rendition of Ross (1976) APT infers a straight connection between expected returns affectability to market and exchange rate developments. Since the research examines the exchange rate risk in securities exchange. The Basic Regression Model is as:

$$E(\tilde{R}_i) = u_0 + u_1 S_i^m + u_s S_i^s,$$

Where the component of exchange rate is orthogonal to the business sector, with real assumptions behind the APT in conformity; this setup, as the transformation of the original variables the index of market can be interpreted, this is not known.

Since the business sector itself must comply (1) $S_m^s = 0$, the relationship additionally can be composed as

$$E(\tilde{R}_i) = u_0 + [E(\tilde{R}_m) - u_0] S_i^m + u_s S_i^s.$$

In the event that is zero, the model crumples to the Black model.

The pricing of exchange rate presentation could be contrived by empirical test as follows. Accepting stationary, the assets profit rate i at time t can be statistically measurably deteriorated into a normal segment $E(\tilde{R}_{it})$ and a development,

$$\tilde{R} = E(\tilde{R}_{it}) + S_i^m [\tilde{R}_{mt} - E(\tilde{R}_{mt})] + S_i^s \tilde{F}_{st} + \tilde{E}_i,$$

Where

$$\tilde{F}_{st} = \tilde{R}_{st} - (\hat{Y}_0 + \hat{Y}_1 \tilde{R}_{mt})$$

The movement of exchange rate is regression residual \tilde{R}_{st} against return rate in the stock market; by preparation, \tilde{F}_{st} has zero mean. Given that it is going to be when all is said in done, some connection between the conversion standard and the business sector; one can't just utilize the swapping scale as the second element. Without or thog onalization, the second

variable could give off an impression of being evaluated as a result of a nonzero relationship with a valued business sector

Under objective desires, substituting (2) in (3) yields

$$\tilde{R}_{it} = [u_0(1 - S_i^m) + u_s S_t^s] + S_i^m \tilde{R}_{mt} + S_i^s \tilde{F}_{st} + \tilde{E}_{it}.$$

The first model is to be tried. Conversion standard presentation, or all the more unequivocally, the part of swapping scale hazard orthogonal to the business sector, is valued if the coefficient 5S is nonzero, which would suggest dismissal of the mean-difference proficiency of the business intermediary.

a. Multi Factor Model

One downside to the past methodology is that the finding that the exchange rate presentation is evaluated could be translated regarding discarded components, for example, risk inflation, for which the exchange rate might intermediary. In this way, including the exchange rate as another variable; consider the accompanying return-creating procedure,

$$\tilde{R}_{it} = E(\tilde{R}_{it}) + \sum_{j=1}^6 S_i^j [\tilde{F}_{jt} - E(\tilde{F}_{jt})] + S_i^s F_{st}^6 + \tilde{v}_{it},$$

Where \tilde{F}_{jt} are the variables that incorporate the business sector return, and where is built as the lingering of a projection mathematical statement of the exchange rate on alternate elements

$$, \tilde{F}_{st}^6 = \tilde{R}_{st} - (\tilde{X}_0 + \sum_{j=1}^6 \hat{X}_j \tilde{F}_{jt}).$$

Ross' APT suggests that normal returns are straightly identified with the loadings,

$$E(\tilde{R}_i) = u_0 + \sum_{j=1}^6 u_j S_i^j + u_s S_i^s,$$

So that the second model to be tried can be composed as

$$\tilde{R}_{it} = [u_0 + \sum_{j=1}^6 u_j S_i^j + u_s S_i^s] + \sum_{j=1}^6 S_i^j [E(\tilde{F}_{jt}) - E(\tilde{F}_{jt})] + S_i^s \tilde{F}_{st}^6 + \tilde{v}_{it},$$

Where, as some time recently, exchange rate presentation is valued if the coefficient 5S is observed to be unique in relation to zero.

The study has been examined the mentioned viewpoints of our KSE 100 index which is going to be used to test their effect on Stock Market. Hence, these variables may be utilized as indicators as a part of our Regression Model:

- 1) R_m , the quality weighted securities exchange return as gave by the Karachi Stock Market information base;
- 2) DEI, the "change in expected inflation" arrangement, where expected inflation is developed as the contrast between the 1-month Treasury bill rate and the real interest rate;
- 3) UPR, the "risk premium" arrangement, characterized as the distinction among return and securities government securities;

- 4) UTS, the "term structure" arrangement, characterized as the distinction between the arrival on an arrangement of long term government securities and the risk free rate.
- 5) Our main focus was to analyze the causes of exchange rate risk exposure in stock market through two factor model and multi factor model.
- 6) Regression model is applied to find out the exchange rate risk exposure in stock market under two factor-models, the results are depicted in table 4.1 and 4.2 (see appendix)

The integrity fit and quality of Model may be tried through ANOVA and the estimation of Adjusted R square. R square demonstrates that on average model give sensibly good explanation.

Stock Market Causes Exchange Rate Risk Exposure

Criteria for Testing the Exchange Rate risk exposure under Two Factor Model

$$\tilde{R}_{it} = [u_0(1 - S_i^m) + u_s S_t^s] + S_i^m \tilde{R}_{mt} + S_i^s \tilde{F}_{st} + \tilde{E}_{it}.$$

The first model is to be tried. Exposure of Exchange Rate, or all the more unequivocally, the part of exchange rate risk orthogonal to the business sector, is valued if the coefficient u_s is nonzero, which would suggest dismissal of the mean-difference proficiency of the business intermediary.

Since Beta is Nonzero or significant because sig value is less than 0.05 (as shown in table 4.2). Therefore Hypothesis is rejected.

Regression model is connected to discover the exchange rate risk exposure in securities exchange under multi factors model, the results are depicted in table 4.3 and 4.4 (see the appendix).

If one unit changes in X1 (KSE 100 index), it will bring 0.002 changes in Y (Exchange Rate), on the average while other variables remain the same. If one unit changes in X2 (Risk Premium), it will bring -4.936 changes in Y (Exchange Rate), on the average while other variables remain the same. If one unit changes in X3 (Expected Inflation), it will bring -7.657 changes in Y (Exchange Rate), on the average while other variables remain the same and if one unit changes in X4 (Term Structure), it will bring 36.852 changes in Y (Exchange Rate), on the average while other variables remain the same.

Only term structure is insignificant in this model while all other predictors has their significant affect on exchange rate. Model is overall good as shown by the F-Ratio.

Stock Market Causes Exchange Rate Risk Exposure under Multi Factor Model

Criteria for testing the exchange rate risk exposure under multi factor model, the following regression equation for finding the significance.

$$\tilde{R}_{it} = [u_0 + \sum_{j=1}^6 u_j S_i^j + u_s S_i^s] + \sum_{j=1}^6 S_i^j [E(\tilde{F}_{jt}) - E(\tilde{F}_{jt}^*)] + S_i^s \tilde{F}_{st}^6 + \tilde{v}_{it},$$

Where, as some time recently, exchange rate exposure is estimated if the coefficient u_s is observed to be unique in relation to zero.

Since the Beta Market is Non Zero since sig value is less than 0.05, therefore, the hypotheses is accepted that stock marker causes exchange rate risk exposure Turning to the evaluating of

residual exchange rate risk, the u_s coefficient is observed to be unimportant more than 1998-2014 periods, which confirms the results of the two factor model. The coefficient u_s is insecure crosswise over sub periods. In the second sub period, it is critical taking into account asymptotic standard errors, be that as it may, not in view of reproduced standard blunders. These distinctions underline the significance of utilizing simulations to properly assess importance. The consequences of the two-factor and multi-factor models confirm that the exposure of KSE index to residual exchange rate risk is not deliberately identified with expected returns. On the off chance that the correspondence estimation of sig is under 0.05 and Beta is non zero so Hypothesis is rejected under two-factor model and the same condition if apply in multi factor model so hypothesis is accepted, then that autonomous variable has critical impact on dependant variable. The reporter estimation of Beta (B) shows level and sort of impact. Here sig estimation of exchange rate on KES100 index is 0.000 which is under 0.05 it implies it has huge influence of Exchange Rate Risk, the indication of Beta I positive it implies it has constructive outcome on the Exchange Rate. Here Risk Premium, Inflation and Term Structure have insignificant or there is no impact on Exchange Rate following their sig qualities are more than 0.05 (o.1 on the off chance that we take 60% confidence level).

4. CONCLUSION

The results of the study have shown that one hypothesis out of four have been accepted. The respondents agreed that the financial perspective of the balance Karachi Stock Exchange play a significant effect on Exchange rate risk, that's mean risk is depend on exchange rate. The positive Beta of FP in regression equation further clarifies that financial perspective contributes positively in achieving the research objectives. Further, it was also agreed that risk rises by exchange rate and it was highly significant.

Our study conducted that risk premium in not significant on exchange rate and our hypothesis is rejected, a study conducted by Chung and Majerbi (2009) and they proved that the exchange market is more significant for risk premium. Another study made by Ahmer and Rosser (1995) to check the connection between SBP indexes and exchange rate in Pakistan stock market, in this study Beta was insignificant therefore hypothesis was rejected in that study.

Asghar, Shah, Hamid and Suleman (2011) have recorded a study on Impact of profit arrangement on stock value hazard. Information was collected from Karachi stock exchange and state bank of Pakistan. In addition price volatility has negative connection to the development in resources. In our study risk premium also showed insignificant effect on stock market.

With the late swings in the estimation of the exchange rate, the effect of exchange rate developments on basic stock returns has turned into a vital issue for money related chiefs. This paper inspects the exposure of conversion standard to developments in the worth in PKR. It was demonstrated first that Pakistani commercial ventures show critical cross-sectional contrasts in their introduction to developments in the dollar.

The premium appended to immaculate trade presentation is observed to be of the request of 0.2 percent for per annum, which is both monetarily and factually unimportant. Exchange standard drisk seems, by all accounts, to be diversifiable. Thus, dynamic supporting arrangements by monetary chiefs can't influence the expense of capital, and reasons other than valuing contentions must clarify why firms effectively oversee trade risk. Srinivasulu and Dufey (1983).

An expression of alert about the technique is all together, be that as it may. The experimental tests, as executed here, lay on the kept up supposition that the cost of trade risk is steady through time. At the end of the day, these are tests of a nonzero unconditional risk premium. The proof reported here is reliable with the discoveries in the worldwide fund writing that unqualified expected comes back from forward business sector theory are for the most part rather little. Be that as it may, there is presently gathering proof, abridged, for example, Giovannini and Jorion (1989), that the foreign trade business sector is portrayed by nonzero restrictive risk premia. Whether these outcomes convey to the valuing of trade risk in the stock exchange is an open inquiry, which is left for future exploration.

Approach Division is mindful fundamentally for managing arrangement matters in the territories of fare/import exchanges, issuance of Authorized Dealer's permit, Foreign Currency Accounts Scheme. Foreign Exchange Exposure Limits, Exchange Risk Cover Fee on Medium & Long Term Loans, investigation of recommendations for raising advances/money related commitment by open area associations from universal contributor organizations, administration of trade portions for open segment ventures and so on. A large portion of the world economies moved from settled to adaptable exchange rate framework. This new improvement expanded the variability of exchange rate in the general macroeconomic execution and it turned into the focal center of the fiscal dominant presences in both the created and creating nations. A steady conversion scale assumes a huge part in the settlement of major macroeconomic variables like yield, value level and outside trade holds. While, it is instability prevents speculation, exchange stream and financial development in an economy. It likewise gives extra total request and supply transmission directs which help in the usage of suitable fiscal strategy. Swapping scale is dictated by various elements, the distinguishing proof of which can be helpful for keeping up financial steadiness and understanding fiscal ills. Among the creating nations, Pakistan encountered one of a kind descending pattern in rupee esteem and continuous moves in the conversion standard frameworks. These unmistakable components make Pakistan economy an intriguing contextual investigation for the observational examination of the rupee conversion scale and its part in the fiscal approach and macroeconomic execution. The motivation behind the present study is to discover which of the macroeconomic pointers has driven the Pak-rupee Real Exchange Rate (RER) deteriorations amid the study period.

For the demonstration of result it is important because the instability of floating exchange rate is due to the inherent differences between commodity and foreign exchange markets. The determination of the expected future rate is impossible, because it is more difficult to reject the forward parity condition. It is used as the predictor of the current spot rate with the entire future spot rate, and it requires no estimation. In this study the performance of estimated univariate time series models or candidate structural model is no good instead it is worst. From a methodological stand point the view that the outcome of sample model fit is an important criterion when evaluating exchange rate, but the estimation of out of sample is failure with time series models that are well approximated the major country exchange rates. In this study, only exchange rate is taken to predict inflation in Pakistan. But in the country like Pakistan inflation is predict by the various variables like interest rate, money supply, foreign trade and so on. So in the future research other variables should be included.

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APPENDIX

TABLE 4.1

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	42436.696	1	42436.696	414.012	000 ^a
Residual	20705.251	202	102.501		
Total	63141.947	203			

TABLE 4.2 Dependent Variable: Exchange Rate

Variable	Coefficient	Std. Error	t-Statistics
C	52.730	1.103	47.825
X1	0.002	0.000	20.347

R-squared 0.672

Sum of squared residual 20705.251

F Statistics 414.012

The result shows that KSE 100 index has significant effect on exchange rate.

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	42144.059	4	10536.015	102.607	.000 ^a
	Residual	20331.349	198	102.684		
	Total	62475.409	202			

a. Predictors: (Constant), UTS, DEI, KSE-100 Index, Rm

b. Dependent Variable:

Variable	Coefficient	Std. Error	t-Statistic
C	53.210	1.138	46.739
X1	0.002	0.000	20.138
X2	-4.936	8.180	-0.603
X3	-7.657	14.974	-0.511
X4	36.852	26.189	1.407

R-squared	0.675
Adjusted R-squared	0.668
S.E of the estimate	10.1333
Sum of squared residual	20331.349
F Statistics	102.607