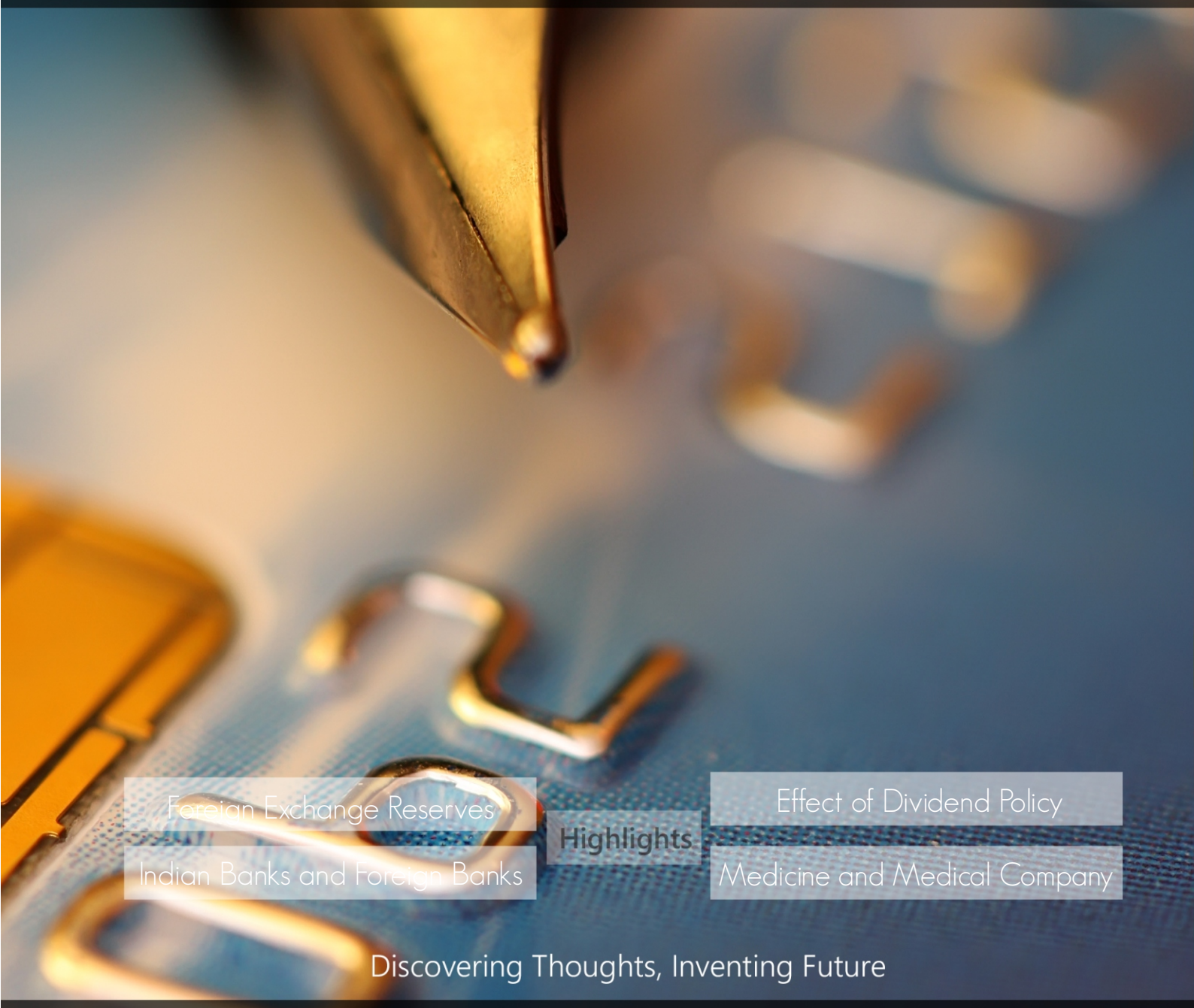
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Effectiveness of Microfinance Loans in Pakistan (A Borrower Perspective)

By Beenish Ameer & Dr. Moazzam Jamil
University of Bahawalpur, Pakistan

Abstract - Purpose: The purpose of this paper is to examine the effectiveness of microfinance loans in Pakistan. The purpose is that how much the microfinance loans are effective in Pakistan from the borrower perspective. The loan which is took by the client of Micro Finance Tamer Bank how that loan amount has been used in the projected business and whether the income has been increased by the loans utilization.

Research methodology: The purpose is to find different factors which are affecting the effectiveness of the microfinance loans. Three variables have been identified to examine the effectiveness of the loans that are procedure, loan consumption and income. To study these factors a logically questionnaire has been developed by the researcher herself and floated to the Microfinance Timer Bank borrowers and the data is analyzed by the regression analysis.

Keywords : *microfinance, effectiveness, loans consumption.*

GJMBR-C Classification : *JEL Code: H81*



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Effectiveness of Microfinance Loans in Pakistan (A Borrower Perspective)

Beenish Ameer [α] & Dr. Moazzam Jamil [σ]

Abstract - Purpose: The purpose of this paper is to examine the effectiveness of microfinance loans in Pakistan. The purpose is that how much the microfinance loans are effective in Pakistan from the borrower perspective. The loan which is took by the client of Micro Finance Tamer Bank how that loan amount has been used in the projected business and whether the income has been increased by the loans utilization.

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Findings: Data findings are procedure is affecting the loan consumption but income does not depend on the consumption of the loans.

Conclusion: Microfinance institution should extend its reach by providing information and should consider the core to make the microfinance loans more effective as it for the low income households.

Keywords : microfinance, effectiveness, loans consumption.

I. Introduction

"Microfinance" is very much defined as financial services for poor and low-income clients offered by different types of service providers. In practice, the term is often used more narrowly to refer to loans and other services from providers that identify themselves as "microfinance institutions" (MFIs).Microfinance is usually understood to entail the provision of financial services to micro-entrepreneurs and small businesses, which lack access to banking and related services due to the high transaction costs associated with serving these client categories. The two main mechanisms for the delivery of financial services to such clients are (1) relationship-based banking for individual entrepreneurs and small businesses; and (2) group-based models, where several entrepreneurs come together to apply for loans and other services as a group.

No doubt, microfinance is very powerful tool to alleviate the poverty and empowerment to women and poor populations. There are numerous NGO's, MFI's, MFB's and other welfare trusts that are operational for the poverty alleviation and they are annoying to attain their goals and assignments. State Bank of Pakistan (SBP), Pakistan Microfinance Network (PMN), Pakistan Poverty Alleviation Fund (PPAF) and other frames are also working for attaining the Millennium Development Goals (MDG's) and contributing for the economic development of the nation. Microfinance in Pakistan is in its very early stage. There is 33% to 35% population living below the poverty line in Pakistan. It means one third of the population of 150 Million people of Pakistan is below the poverty line. These statistics shows situation of the society is very unpleasant. There are number of organizations like Kasha Foundation and Kasha Microfinance Bank, Tamer Microfinance bank, Akhuwat, First Microfinance Bank, Khushhali Bank etc working with the government of Pakistan to reduce it doing their efforts to increase their outreach.

Presently, there are three different models of microfinance services in Pakistan, i.e.6 Micro Finance Banks (MFBs), 10 Micro Finance Institutions (MFIs) and 4 Rural Support Programmers (RSPs), all the three models started with small size short term group lending policy of working capital loans.

Some MFIs and MFBs like Tamer Bank and FMFB have diversified into individual based large loans relative to market average loan size. However, RSPs provide multi product microfinance services including infrastructure development projects like health, education, insurance, mobilization of savings and primarily operate in rural areas.

Besides the three main groups of microfinance other institutions that also provide microfinance services include, commercial banks and government owned institutions etc. Although the main product of these institutions is not microfinance, the government-owned institutions that provide microfinance services to the poor include: micro credit and saving services and subsidized credit for government's Rodger Scheme by National Bank of Pakistan (NBP); credit and saving services by ZTBL; special microfinance services by government owned First Women's Bank, Bank of Khyber, SME Bank, financial savings and money transfer services provided through countrywide network of 7,500 branches of Pak Post Saving Banks, the seven National Saving Schemes (NSS) of Central Directorate of National Savings (CDNS) which accept deposits of about 4 million account holders and the Zakat office that provide charity funds as a social objective. Some

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commercial financial institutions including ORIX leasing also extend microfinance services to their poor customers (CLEAR, 2007).

This research will be used to examine the effectiveness of microfinance loans in Pakistan. The loan which is took by the client of Micro Finance Bank how that loan amount has been used in the projected business and whether the income has been increased by the loans utilization. To investigate the current issues linked with microfinance loans. To find out the areas this can be addressed to improve the microfinance loans.

a) Significance of Study

Despite the importance of micro finance in Pakistan no study is conducted on current issues linked with microfinance loans. The central objective of the study has been to discover the hidden realities related to effectiveness of microfinance loans in Pakistan (borrower perspective). This research is an important advancement in literature of factors affecting on micro finance loan. Microfinance, with the core objective of provisioning of financial services to the pool segments of the society, contributes its role in the form of financial development with primarily focus on poverty alleviation. Most of the people perceive microfinance in narrow sense that it is about micro-credit but for poor people but it has broader extent including, micro-insurance, transactional services and most important are the savings.

b) Literature Review

Raff and Mahmud (2009) examined the Growth and performance of microfinance. The study was conducted in Pakistan for the period of 2004-2007. The considerable variables were subsidized fund, recruitment of new fund, external support, opening of new branches and outreach (to other aspects of outreach). The results told that that sector should more focus on accessible human resources and targets can simply be achieved by adopting an intensive growth strategy. Kondo (2007) conducted research on the impact of microfinance on rural households in the Philippines (A Case Study from the Special Evaluation Study on the Effects of Microfinance Operations on Poor Rural Households and the Status of Women). The variables determined were interest, consumption and per capita income. The findings of this research showed that microfinance loans were shown positive to the per capita income, it also increased the consumption capability and improved saving ability and microfinance can also be proved as an effective poverty alleviation tool. Deventer and Huybrechts (2005) studied the impact of microcredit on the poor in Bangladesh. Income, poverty alleviation and consumption were used as dependent variables and family support as intermediate variable. The findings of this research showed as microfinance institutions have positive role on income, consumption, poverty reduction and having positive influence on female members and their positive influence could be seen through their decision making role, expanding knowledge and awareness. Bi and Panda (2011) studied on the Comparison of performance of microfinance institutions with comercial banks in India. Poverty alleviation, empowerment of women was used as variables. The findings were that microfinance institutions were reporting an impressive growth and India had the largest number of households that were not included in banking system. The results of this research show that microfinance loans were proved as economic tool to alleviate poverty and empowerment of women.

Jagged et al (2011) studied Impact of microfinance on poverty alleviation in Nigeria: An empirical investigation. The study was conducted in Nigeria, poverty was taken as dependent variable and microfinance loans were taken as independent variable. The findings were that there was a significant difference between those persons who used microfinance loans and those who didn't use them. The paper concluded that MFI having significant impact in reducing poverty by increasing income and microfinance could be proved as the more powerful source if program started on depth and outreach than the present outreach. Akram and Husain (2011) studied on the role of microfinance in uplifting income level: A study of District Okara – Pakistan. Microfinance was taken as independent variable and income was determined as dependent variable. The conclusion was that microfinance was proficiently serving the poor by increasing their income level. Mostly respondents conclude that their income level increase after getting microfinance loan and improving their living standard. Charles, James and Hammed (2011) examined the Impact of microfinance on poverty alleviation in Nigeria. Two variables were used, poverty as dependent and microfinance as independent variable. The result findings revealed that there was a vital effect of MFI in reducing poverty by rising income. It also concluded that microfinance institutions having powerful strategy of poverty reduction. However, microfinance can be more effective tool if work is done on outreach. Shiraz and Khan (2009) examined the Role of Pakistan poverty alleviation fund's microcredit in poverty alleviation. Poverty alleviation was taken as variable. The study was conducted in 2005. The paper concluded that microcredit has reduced poverty and loan taking clients had been converted to higher income groups and there was a positive impact of microcredit program on poverty of the country.

Swope (2010) studied microfinance and poverty alleviation. The study was conducted for the period of 2005. The study showed the conclusion that the microfinance loans may be the source of increasing income and poverty alleviation. The outreach problem can be solved by village banks that microfinance institutions reached the poor by implementing integrated

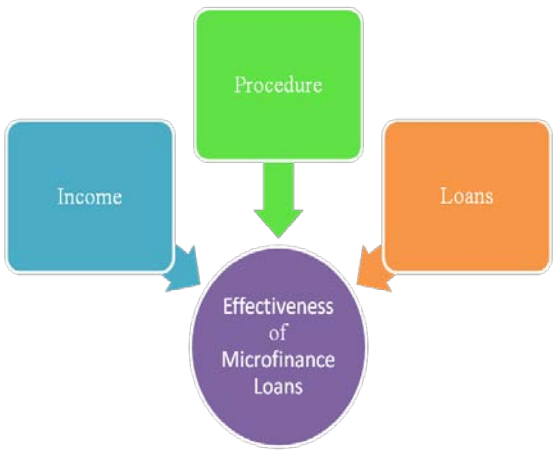
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programs. MFI allowed women to be independent and entered in society as more confident and skilled. Jagged et al (2011) conducted research on Influence of loan disbursement by microfinance and non microfinance institutions on poverty alleviation in Nigeria. Data was collected to determine the relationship between microfinance as an independent variable and poverty as a dependent variable. The research concluded that MFI were the effective tool in reducing poverty by increasing the income level thus people economic capability increased and brought sustainable development. Onwumere, Ibex and Guam (2012) studied the impact of micro-credit on poverty alleviation and human capital development: Evidence from Nigeria from 1999-2008. Microfinance was taken as the independent variable while poverty alleviation was treated as dependent variable. The OLS regression technique was used in this study. The study concluded that microfinance banks increased micro financing activities ultimately did not increase the human capital development however microfinance provided support in eradicating poverty. Thus the experience of Nigeria could be effective for other developing countries.

Mawa (2008) studied the impact of micro-finance toward achieving poverty alleviation.

Poverty alleviation, women empowerments were taken as variable and poverty could be reduced by increased in income. The conclusion drawn from the study that financing on women were more poorer than men and especially in rural areas, microfinance could be the source of reducing poverty and this research suggested that MFI focused on needs of more diversified groups and targeted the most poor. Bakhtaran (2006) studied that Microfinance and poverty reduction: Some international evidence consumption, poverty reduction were used as variables. This paper argued that reducing of poverty alleviation could be done through microfinance loans and by providing access to poor might smooth their Consumption.

II. Theoretical Framework



a) Dependent Independent Variables

The past studies find three factors which can affect the effectiveness of microfinance loans which are procedure, loan consumption and income. Microfinance loan efficiency depends on above three variables. We take microfinance loans as dependent variable while income, procedure and loan consumption as an independent variable.

III. Research Objectives

The research objectives are as follows:

a) Main Objective

The main objective of this study is to examine the factors affecting the effectiveness of microfinance loans (borrower perspective).

b) Sub Objectives

The sub objectives include:

- To investigate the current issues linked with microfinance loans.
- To find out the areas this can be addressed to improve the microfinance loans.
- To study the effectiveness of microfinance loans.
- To make recommendations for improvements in existing lending procedure microfinance loans, if required.

c) Research Questions

In order to determine to determine the effectiveness of microfinance loans. a model was adopted and based on that model, the following questions must be addressed.

- What are the factors which directly or indirectly affect effectiveness microfinance loans?
- Which factors can be changed to achieve success in microfinance loans?

IV. Research Design/Methodology

a) Data Collection/Population

This research is empirical in nature and it is conducted through questionnaires. This study measures the effectiveness of the microfinance loans has been measured towards the clients of the Timer Microfinance Bank in the city Gujarat which is the city of Punjab province. It will be answered with the help of a questionnaire in which all the important variables are included. Since the study is related to the effectiveness of microfinance loans of the consumer so the targeted population in order to collect the data, is the clients of Microfinance Tamer Bank. For the collection of error free data the respondents were asked to fill the questionnaire with complete sincerity & honesty, & not leave any part of the questionnaire unanswered. For the ease of respondents the questionnaire was personally administered where the respondents completed the questionnaire. Using personally administered questionnaires has different advantages such as it reduces the biasness of

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the respondent, it is reasonably brief & economical & lastly it allows the respondent to give an open response.

b) Sampling

Random sampling technique is adopted in which 40 clients were chosen and participated in the research. The main target population was the individual clients who have taken the loan from the bank in which both males and females are included. In order to collect data, the borrowers from the bank were asked to cooperate by filling the questionnaire. Their answers for the questions reflect different characteristics of the consumers towards the effectiveness of the micro-finance loans which is the focal point of the study. The loan borrowers were chosen on the basis of convenience sampling method. The reason for so was because of the scattered & huge population, restricted time & limited budget since it would be quite difficult to study all the branches of Microfinance Timer Bank in such a limited time & with limited resources. A sample of 40 clients was taken for the test and the respondents were approached individually. A total of 62 questionnaires were distributed, out of which 22 questionnaires were filled either improper or were incomplete. Rests of 40 questionnaires were useable.

c) Research Instrument

A logical questionnaire is used for data collection. The research instrument is developed by the researchers themselves. The questionnaire has three variables each variable has its separate questions which are used to record individual response. The first variable which has the three questions is about the procedure of getting the loan and repayment to the bank this part of the questionnaire asks the respondent for their measure on the procedure, in second variable is about the loan it has five questions in which the respondent is asked to the size of the loans and its consumption on the projected business, in the last variable which is about the Income in this there is three questions in it which ask the respondents to give its response whether after using the loan the their income increased or decreased. This questionnaire is not basically on the liker scale. For our ease and for the data analysis we have converted into the liker scale with the dummy questionnaire in this we use the scale of 5 in which 1 show the highest value and 5 show the lowest value.

V. Data Analysis & Findings

Data analyzed by using software, SPSS version 16 by applying following techniques: Cranach's alpha and Regression analysis.

a) Reliability of Variables

Reliability means consistency. It is the degree to which an instrument will give similar results for the same individuals or variables at different times. Reliability can take on values of 0 to 1.0, inclusive. The reliability of variables and their Cranach's are provided in given table.

Table 1 : Reliability Result

Variable	No. of Items Alpha	Cronbach's
Procedure	3	.763
Loans	5	.671
Income	3	.724

b) Regression Analysis

Regression analysis of the variables has been made to check that variables are dependent on each other. At first the two equations has been made

$$\text{Micro Finance Loan} = f(\text{procedure}) \quad (1)$$

Microfinance loan variable take as a dependent variable and the procedure is taken as independent variable. We want to see that how much loan consumption is dependent on the procedure.

ß	t	sig
4.60	3.148	.003

The fact shows that data is significant and Beta is positive it means procedure is significantly affecting the loan consumption. It also justifies as we are expecting if the procedure is good the loan consumption in the projected business will be high. Now, the result which has been analyzed in the equation 1 we will put this data into another equation called equation 2. This equation tells us that how much the income dependent on the consumption of the loan.

$$\text{Income} = f(\text{microfinance loan}) \quad (2)$$

ß	t	sig
-.179	-1.105	.276

The result shows that although the Beta is negative but it is insignificantly affecting the results. It means income does not dependent on the loan consumption it can be increased or decreased by other factors.

VI. Conclusion

The results show that income does not dependent on the loan consumption. There are lot other variables that should be considered when measuring the impact of the income on the households and the SME because the history of the microfinance loaning in Pakistan consists of almost ten years. So, it is not necessary that income is only increased by the loan consumption. It can be increased by the running business also. Secondly, the microfinance should extend its reach to cover the core poor. Most of the people do not know about the procedure of getting the loans from the microfinance institution. They should

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provide more information to the people to aware them about the microfinance schemes. The most important thing is the microfinance institution should provide some training to the lay man so that they must be able to use the loan in more efficient manner. Micro financing institution should consider the core poor the poor is not only which hasn't any rupee but also that one who hasn't any type of training or asset.

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Causality between Exchange Rate and Foreign Exchange Reserves in the Indian Context

By Mayuresh S. Gokhale & J. V. Ramana Raju
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Abstract - Using a time series data of the variables between 1980 and 2010 the present study tries to establish a causal relationship between exchange rate and foreign exchange reserves in the Indian context. Emphasis has been laid on understanding the impact of foreign exchange reserves on the exchange rate. India has accumulated unprecedented foreign exchange reserves and synchronously has been experiencing a large depreciation in its Rupee vies avis US dollar. This trend prompted us to undertake this study to establish some association between the two trends. Our analysis uses Unit Root test, Johansson Co-integration test and Vector Auto Regression (VAR) and concludes that there is no long and short term association between exchange rate (EXR) and foreign exchange reserves (FOREX) in the Indian context.

Keywords : *foreign exchange reserves, exchange rate, fore, ear, vector auto regression (vary) appreciation and depreciation of currency, money supply.*

GJMBR-C Classification : *JEL Code: E49, F31, O24*



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Causality between Exchange Rate and Foreign Exchange Reserves in the Indian Context

Mayuresh S. Gokhale [α] & J. V. Ramana Raju [σ]

Abstract - Using a time series data of the variables between 1980 and 2010 the present study tries to establish a causal relationship between exchange rate and foreign exchange reserves in the Indian context. Emphasis has been laid on understanding the impact of foreign exchange reserves on the exchange rate. India has accumulated unprecedented foreign exchange reserves and synchronously has been experiencing a large depreciation in its Rupee vies avis US dollar. This trend prompted us to undertake this study to establish some association between the two trends. Our analysis uses Unit Root test, Johansson Co -integration test and Vector Auto Regression (VAR) and concludes that there is no long and short term association between exchange rate (EXR) and foreign exchange reserves (FOREX) in the Indian context. It can be concluded that the accumulation of fore reserves are only in anticipation of overcoming any global financial crisis and maintaining credit rating which in turn could repose faith in the investors and attract large investments in the form of foreign direct investment and portfolio investments. The accumulation of fore reserves may not be used as a tool to tame exchange rate as suggested by some authors.

Keywords : foreign exchange reserves, exchange rate, fore, ear, vector auto regression (vary) appreciation and depreciation of currency. money supply.

I. Introduction

Exchange rate fluctuation over a wide range bi - directionally (ceiling and floor) or in unidirectional way tends to have a debilitating effect on the overall trade. Nations following the policy of import linked export promotions will have a deep impact by currency depreciation on production costs there by triggering inflation. The firm level debt component rises increasing its liability. The appreciation of currency creates a dampening environment for the exporters. Today the global trend in currency management is to arrest appreciation and allow depreciation within limits thereby rendering the economies export driven. The exchange rate fluctuation can be intuitively governed by umpteen parameters which may include economic and non-economic factors like the capital inflows, interest rates prevailing in the economy, the rate of inflation, volume of foreign exchange reserves, current account balances, GDP growth rate, fiscal deficit, import to GDP ratios, export to GDP ratios, political stability, development indices, the corruption index, the health of global economy etc. The present study tries to understand the association between the foreign exchange reserves, and the exchange rate in Indian economy between 1980 and 2010. India has experienced an unprecedented increase of foreign exchange reserves (currency assets considered) which stands at 122.48 billion dollars in 2010-11 which is consistent with the Asian trend of accumulating excessive foreign exchange reserves. On the current account balance front India has always faced current account balance deficit except between 2001 and 2003 when the current account balance was in surplus which was largely attributed to enhancement in the export of services. In 2010 the current account deficit stood at -42.807 billion dollars. The exchange rate vis a vis US dollar is consistently on a depreciating mode .The question we are trying to investigate here is whether the independent variables under consideration namely for-eign exchange reserves(FOREX) have a bearing on the dependent variable exchange rate (EXR) ? We further want to contemplate on whether there is an optimization principle applicable in this context which would contain wide fluctuation of exchange rate.

II. Literature Review

Countries are known to maintain reserves to effectively manage their exchange rates and reduce adjustment costs associated with fluctuation in the international payments. The 'rule of thumb' of main-taining optimal reserves is equivalent to at least 3 months of imports (Mendoza 2004). High for reserves are maintained to tide over global, economic and financial instability. The 1997 SE-Asian crisis is a good testimony to this (Stieglitz 2006). It is a tool for maintaining lower exchange rate to promote trade and international competitiveness, mercantilist motive (Aizenmann & Lee 2005) High for reserves boost investor confidence and augment investment and growth. According to Dooley, Filbert Landau and Garber (2004) reserve accumulation reflects intervention of Asian Central Banks who want to prevent currency from appreciation against dollar to promote export led growth.

Researchers have come out with certain optimization principles in terms of certain ratios to check the quantum of fore exchange reserves accumulated. Excessive accumulation of the reserves would be futile; therefore a mechanism of judicious utilization of the prevalent for reserves in favor of the economy is imperative.

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a) Reserve to Import Ratio

Tiffin (1960) suggested that the constant reserve to import ratio ranging from 20– 40%. European Central Bank (2006) regards four months import coverage as a 'rule of thumb'.

b) Reserve to Domestic Money Supply (M2)

Matchup (1960), Freckle (1971) suggested that the quantum of fore reserves should be maintained anywhere between 5 to 20% of the money supply.

c) Reserves to Short Term Debt Ratio

Brown (1964) gives analysis of reserves to net external balance ratio on ground that the reserves function as cushion against future Bop deficits. This ratio reflects economy's financial ability to serve existing short term external debt flow. Greenspan and Guidotti (1990) suggested that the fore should at least cover short term debts in countries with limited access to international capital markets.

d) Opportunity Cost

Heller (1966) introduced cost benefit perspective. Aggarawal (1970) modified Heller's model on the ground that opportunity cost of reserve holding is value created by foreign currency held by monetary authority instead of imported productive goods.

Again, Bacchante, Racier and Roof (2006), found that real exchange rate volatility is harmful for the growth of the country and reduces it, this problem is more severe in countries with less financial development. Dooley, Folkerts– Landau and Garber (2003) viewed hoarding of reserves as a mechanism to facilitate growth and maintain undervalued real exchange rate in the context of China.

III. Objective of the Study

The excessive accumulation of fore reserves is been beyond absorption capacity and has distorted the primary ratios which are theoretically optimized. The present study tries to estimate whether such unprecedented levels of fore reserves have a bearing on the exchange rates, which otherwise would have a cascading effect on the trade. An appreciation of the Indian rupee is bound to hit the export valuations and the depreciation would severely distort import bills. The study focuses on estimating empirically long run and short run effect of the quantum of fore reserves on exchange rate using VAR - Vector Auto Regression technique.

IV. Methodology

The time series data (data source like RBI website) of the foreign exchange reserves (only foreign exchange currency reserves considered here) and the exchange rate (Indian Rupee versus dollar) between 1980 to 2010 is considered for the present study. EXR (Exchange rate) is the dependent variable and FOREX (Foreign Exchange Reserves) is the independent variable The data is being statistically processed using Unit Root Test to check the stationary of the variables under consideration, Johansson Co integration test to analyze the long run association between exchange rate and fore reserves and VAR (Vector Auto Regression) to find the long and short run association between the variables.

V. Mathematics of Analytical Tools

When we see a phenomenon over a period of time, observing certain variables in steps of time, then we are essentially generating "Time series data". The analysis of time series is based on the idea that each series is the empirical realization of stochastic process acting behind the economic evolution. In other words an underlying stochastic process generates time series observations.

Let it be a discrete time series. In our case Xt is the independent variable namely the foreign exchange reserve abbreviated as FOREX henceforth. Similarly let yet be the dependent variable which in our case is the exchange rate abbreviated as EXR. The standard technique of regression analysis is based on the tenet that the variable yet has a well defined relationship with Ex. In our modeling the initial assumption is that EXR is a function of FOREX. If one would like to fit a linear regression model then we are essentially looking out for an equation of the type $Y_t=aX_t+b$ (1).

But a critical observation shows that the residuals in the time series of At and Yet do not form a white noise process since there exists a unit root which we observed by running the augmented Dickey-Fuller test (ADF test) which implies that the repressors do not exhibit stationary. After taking first differences, the variables FOREX and EXR together exhibit stationary.

When two or more time series are involved, one needs to check for two way casualty for long run influences. The concept of co integration introduced by Granger and Clive is as follows. The variables Y1, Y2....Yen are said to be co integrated if these variables move together or have a long run association. More generally a vector of I(1) random variables Yet is said to be co integrated if there exists a vector if- such that βi-Yt is trend stationary. In such a case one looks at a linear combination of vectors which exhibits co integration. The rank of the co integration matrix indicates the number of co integrated variables. To test if the variables in our experiment are co integrated we run the Johansen test (MacKinnon-Hag-Michelins criteria) for checking the trace of the co integration matrix. The lack of cointegrationat 0.05 level in our case suggests that there is no long run equilibrium of association between the FOREX and EXR variables in our study.

Hence we proceed to the vector auto regression model without alluding to the adjustment parameters

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that ought to be sought through VECM method in case of a co integrated trend.

a) VAR Model

A typical autoregressive model (AR (p)) of order p is used when the variables concerned are depending on 'p' lags. In (2) below we write the equation that models such an autoregressive process.

$$y_t = c + a_1 y_{t-1} + \ldots\ldots a_p y_{t-p} + \varepsilon_t \quad (2)$$

We note that are stochastic terms incorporating the fluctuations or noises attributed to certain unexpected events happening. A vector auto regression model is considered when n number of variables together follows a correlation with influences from past (lagged) values of themselves. We also note that in our specific case the value of n is 4 and the value of p is 2. The AIS criteria is the one through which we have fixed two lags for our VAR model, since taking lag 2 we get the required stationary of the time series ensemble. The equation (2) is a typical autoregressive model for a single variable. Let represent the variable in the AR model corresponding to, represent the variable in the AR model corresponding to and so on. Thus we have the vector incorporating all the variables that we have considered which we denote for simplicity as indicating its value for the current time series. Similarly its lags are denoted by etc. Thus the autoregressive model considering all the macroeconomic variables reads as in equation (3).

$$Y_t = c + a_1 Y_{t-1} + \ldots\ldots a_p Y_{t-p} + E_t \quad (3)$$

VI. Findings

The ADF Unit root test shows that the exchange rate variable has a unit root at Level i.e. the data is non stationary which is indicated by p values greater than 5 percent. The Null Hypothesis states that the Variable is not stationary or it has a unit root. As the p value is > 5% we cannot reject the Null hypothesis. Therefore at level exchange rate exhibits a unit root or the data is non stationary. At First difference the significant p values for ADF are less than 5 percent. As the values of p are < 5% we can reject the Null hypothesis concluding that at first difference the exchange rate is stationary. The Unit root test for fore indicates significant p-values less than 5 percent indicating that the variable is stationary at Level. To ensure whether the variables under study are co integrated or to check whether they exhibit a long term association we use Johnson's Co integration test. Here we use Trace statistics for our analysis. The p-value at None (no variables being co-integrated) is 0.5561 and At most 1 (1 variable co -integrated) is 0.1922 indicating that EXR and FOREX are not co integrated and do not exhibit long term association among themselves. As the variables under consideration do not exhibit co integration we undertake unrestricted VAR (Vector Auto Regression) model.

The VAR output indicates that coefficients of fore at different lags C3 and C4 in the equation show p-value of 0.3114 and 0.2630 respectively which are insignificant indicating that the foreign exchange reserves variable does not exhibit a long run correlation with the exchange rate. neither the exchange rate coefficients C 6 and C7 as independent variables exhibit any long run correlation with fore reserves. The short run correlation between four and ear can be quantified by Wald test for C3 and C4 the chi square statistic p-value being 0.4805 which is>5% indicating that C3=C4=0 and jointly do not influence the exchange rate. Thus the statistical investigation clearly rules out booth long term as well as short term association among the variables considered.

VII. Conclusions

The quantum of foreign exchange reserves essentially does not exhibit a long run or short run correlation with the exchange rate in case of Indian economy. Although the accumulation of fore reserves are unprecedentedly high thereby exhibiting a marked departure from the thumb rule ratios suggested by several researchers, it does not have a direct bearing on the exchange rate as suggested by some authors and there could be many other parameters that contribute to excessive fluctuating in the currency exchange rate between a U. S dollar and Indian Rupee. The foreign exchange reserve accumulation in the Indian context could have been largely in anticipation of overcoming financial crisis than a tool for regulating the exchange rate. It could also be looked upon as a face lift to the Indian economy through enhanced credit ratings which in turn would attract investors to India in the form of foreign direct investment and portfolio investments thereby supplying the much needed capital for stimulating economic growth.

VIII. Future Cues

Working on the opportunity costs pertaining to the excessive accumulation of foreign exchange reserves, working out judicious ways of managing Fore reserves could be the areas where substantial academic work can be undertaken. We would like to indicate in our future studies an optimal model for managing fore reserves.

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Appendix

Statistical Data Processing Output

At Level	EXR	p-value	At 1 Diff	EXR	p-value	At Level	Forex	p-value
	Trend	0.6567		Trend	.001 2		Trend	0.0017
	Trand Int.	0.9643		Trand Int.	0.0049		Trand Int.	0.0135
	None	0.9848		None	0.0005		None	0.0001

Table 1 : Unit Root Test for ear and fore under intercept, trend and intercept and none

Co-Integration Test

Unrestricted Co integration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigen value	Trace Statistic	0.05 Critical Value	Prob.**
None	0.172344	7.185944	15.49471	0.5561
At most 1	0.056948	1.700382	3.841466	0.1922

Trace test indicates no co integration at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level

Table 2 : Co-integration Test

Vector Auto regression test for Ear and fore to check long run correlation

	Coefficient	Std. Error	t-Statistic	Prob.
C(1)	1.195915	0.24141	4.953882	0
C(2)	-0.235663	0.250368	-0.941268	0.3513
		0.00081	1.023084	0.3114
C(4)	-0.000955	0.000843	-1.13266	0.263
		1.17681	.794769	0.079
C(6)	-25.86141	68.99923	-0.374807	0.7095
		71.5595	.720224	0.4749
C(8)		0.23241	5.103295	0
C(9)	-0.204015	0.24104	-0.846393	0.4015
C(10)	-332.6832	336.3561	-0.9890	0.3276
Determinant residual covariance		1335491		

Equation : EXR = C(1)*EXR(-1) + C(2)*EXR(-2) + *FOREX(-2) + C(5)

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R-squared	0.974092	Mean dependent var	32.05414
Adjusted R-squared	0.969774	S.D. dependent var	14.19296
S.E. of regression	2.467547	Sum squared resid	146.1309
Durbin-Watson stat	2.099706		

Equation: FOREX = C(6)*EXR(-1) + C(7)*EXR(-2) + C(8)*FOREX(-1) + C(9)*FOREX(-2) + C(10)

R-squared	0.976301	Mean dependent var	3049.069
Adjusted R-squared	0.972352	S.D. dependent var	4241.516
S.E. of regression	705.2694	Sum squared resid	11937719
Durbin-Watson stat	1.833393		

Table 3 : Short run association

Coefficient diagnostics to establish short run association

Wald Test:
System: Untitled

Test Statistic	Value	df	Probability
Chi-square	1.465951	2	0.4805

Null Hypothesis Summary:

Normalized Restriction (=0)	Value	Std. Err.
C(3)	0.000832	0.000813
C(4)	-0.000955	0.000843

Restrictions are linear in coefficients.

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A Test of Fama and French Three Factor Model in Pakistan Equity Market

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Abstract - There is a view that investor who want to make investment in stock exchange should make a decision maximize their wealth. For this purpose the investor not only want to know which factor will impact the return but also want to understand the relative weight of various factors level, and which sub factor will impact more for giving factors. So they analyze all relevant factors while making decision that affect the return from investment in future. Variation in stock market return was determined by various theories. It was started with Sharp (1964), Linter (1965), Black (1972) who present Capital Asset Pricing Model (CAPM) which shows how to be related between the average return of stock and market risk factor. Other researcher did not agree because there is other factor more than one factor.

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A Test of Fama and French Three Factor Model in Pakistan Equity Market

Beenish Ameer [α] & Dr. Moazzam Jamil [σ]

I. Introduction

There is a view that investor who want to make investment in stock exchange should make a decision maximize their wealth. For this purpose the investor not only want to know which factor will impact the return but also want to understand the relative weight of various factors level, and which sub factor will impact more for giving factors. So they analyze all relevant factors while making decision that affect the return from investment in future.

Variation in stock market return was determined by various theories. It was started with Sharp (1964), Linter (1965), Black (1972) who present Capital Asset Pricing Model (CAPM) which shows how to be related between the average return of stock and market risk factor. Other researcher did not agree because there is other factor more than one factor. Many anomalies have been identified in CAPM. Base (1977) finds high earning to price (E/P) ratio companies having higher return than low earning to price ratio. Bans (1981) told small stock outperform than large stock. Stuntman (1980) argued that company with high book to market value outperforms companies with low book to market value.

After that Ross (1976) proposed the Arbitrage pricing theory (APT) that developed the model of many factor for assessing the return of stock. APT does not specify the name and number of factors. Arbitrage pricing theory does not deal with the issue of portfolio efficiency. It is more efficient than CAPM. But it depends on economic condition and positive business So APT is not very famous as it should be.

Fama and French (1992) propose a three factor model that suggest as an alternative explanation for the stock market return. They combined these factors market risk premium size and book to market ratio to explain the return of stock. Market risk premium is the difference between the risk free rate and the expected return on the market portfolio, Size premium is that the return of small company stock to be higher than the large stock company, They use SMB (small minus big) to address size risk and HML (high minus low) for value Risk. Value premium is the greater risk adjusted return of value stock over growth stock. The high book to market Ratio stocks are termed as value stock while low book to market stock are growth stock. Fame and French studied for correct and efficiency of model in many times. Fame and French did an empirical test in 1996 and they found out that two classes of stocks were giving more return or performance better than market as a whole. This includes stock with high book to market ratio and small market capitalization. Fama and French commented that since these stocks yield higher return. So this phenomenon is explained by the existence of value premium and size premium in addition to market risk premium as used in traditional capital asset pricing model (CAPM).

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II. Research Questions

- Does CAPM accurately predict the risk/ return trade off in KSE.
- Do Fama and French accurately predict the risk/ return trade off in KSE.

a) Objectives

- To provide insight about application of CAPM in Pakistan equity market.
- To explain the role of size for predicting the equity market returns.
- To explore the relation of value premium in explaining stock market return.

III. Significance

Pakistan has been classified as an emerging market and its equity market is of special interest for several reasons. Its geopolitical situation suggests that it has a great potential for economic activities if it achieves political stability and utilize its resources efficiently. Therefore future investor interested to know the risk and return because as there will be high risk then there will be high return. Therefore such study is needed to explain investor behavior either company worker are foreign invester.This study identify the factor that effect the equity return in Pakistan the relationship between equity return and factor value premium, size premium both to equity market has been investigated. As it is obvious that greater information always preferred over less, so this study is intended to analyze the stock return prediction process by using Capital asset pricing model (CAPM) and Fama & French three factor model. The study will contribute to help investor to make better investment decisions. As this study will make clear whether the market premium is enough to explain the stock market dynamics or other factor predict the stock market return.

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IV. Methodology

This study is an explanatory in nature as Fama and French Three Factor Model is an extension of single factor model CAPM and tries to relate individual security return with the market return. Besides the traditional beta it takes into account two additional factors that are value premium and size premium. Secondary data has been collected from KSE-100 index and was used as benchmark and data of 100 firms has been used. Therefore in this study sample period was from 1st January 2001 to 31st December 2008.

V. Model Specification

Fama and French three factor model is an extension of single factor CAPM. Besides this it includes two additional factors that are size and value premium.

$$R_{it} = R_f + \beta_{it}(R_{mt}-R_f) + \beta_{it}(SMB) + \beta_{it}(HML) + e$$

Where Rit represents expected return on stock i, and Rm-Rf shows market premium, SMB represents size premium and HML represents value premium. The coefficient is the risk sensitivities for the market risk followed by size and value. The market risk coefficient is similar to Sharpe's CAPM but different in the sense that in the three factor model explanatory function will be shared by two other risk factors namely SMB and HML.

VI. Literature Review

The variation in stock return plays vital role for judgment of investor behavior. Sharp (1964) argued that the expected return on a stock based on the systematic risk. CAPM concluded that expected return on an asset above the risk free rate is proportional to the systematic risk and the market beta alone is sufficient to explain security returns and that there is a positive expected premium for investing in beta risks. Ross (1976) presented arbitrage pricing theory (APT) which explains the multifaceted relationship between risk and return. It explained that the expected return of any security can be molded as a linear function of a variety of macro-economic factors, where factor-specific beta coefficients correspond to sensitivity to change in each factor.

Fama and French (1992) studies the cross section of expected return and determine the additional factors of size and book to market equity to identify the stock return other than beta that CAPM was unable to explain. Data was collected from the year 1963 to 1990.It concluded that size was unrelated when variation in beta occurs and book to market has stronger effect than size factor on return. Fama and French (1995) explained the factors that related in explaining the stock return. Average returns on stock are related to firms' characteristics like cash flow/price, past sales growth, size, long term past returns, earnings/price, book-to-market equity and short term past returns. These factors are not explained by CAPM. According to Fama and French APT better measures stock return than CAPM. Fama and French (1996) conducted their study that CAPM wanted, dead or alive. They conducted this study against the claim that beta (systematic risk) from annual return generate stronger positive relation between beta and average return than beta from monthly return. Data was collected from 1928 to 1993 from NYSE. The findings rejected that CAPM explained expected return and concluded that failure of CAPM can only be explained by multifactor APT.

Bun doo (2006) applied Fama and French model (1993) on Stock Exchange of Mauritius. The empirical evidences confirmed that Fama and French model holds for Stock Exchange of Mauritius. This study also found that Fama and French three factor model is vigorous in consideration of time varying betas and they found that both size effect and a book-to-market equity are present on the stock exchange of Mauritius. An augmented Fama and French three-factor model for the SEM shows that the time-variation in beta is priced returns on the SEM are better described by the Fama and French three-factor model.

Fama and French (2000) studied Characteristics, Covariance and Average Returns from the period 1929 to 1997. This result shows that the value premium in average stock returns is robust and the three-factor model is just a model and thus an incomplete description of expected returns.

Was mullah et al. (2011) studied Fama and French three factor models: Empirical evidence from financial market of Pakistan. Multivariate regression analysis was used made on the basis of size and book to market value. Monthly data of 20 banks were taken for the period of five years starting from January 2006 to December 2010. Results showed that Fama and French three factor model explained the variations in returns.

Hasan and jived (2011) studied the relationship among size premium, value premium and equity returns in Pakistani equity market for the period of June 2000 to June 2007 by using Fama and French (1992, 1993) methodology. This is the first study in Pakistan that explores the relationship among stated variables by employing a large sample of more than 250 stocks listed at the Karachi Stock Exchange. An analysis of the results revealed that Size factor is found significantly positively related to portfolio.

Davis et al. (2000) for the period of 1929 to 1997 examined the covariance and average returns. The data was divided in two phases first from July 1929 to June 1963 and second from July 1963 to June 1997. Three factor model was used and the positive relation between average return and book-to-market equity is as strong for 1929 to 1963 and this is close to the premium for July 1963 to June 1997.They found that value premium was higher than size premium.

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Aleati et al. (2000) investigated the relationship common risk factors and average returns for Italian stocks. Data was collected from 1981 to 1993 and time series regression was used. They found that changes in market index, changes in interest rates and SMB and HML represent a good summary of risk captured by cross section of average Italian returns.

Drew and Veeraraghavan are graven (2002) studied the relationship among firm size and book to market equity with stock returns from the 1991 to 1999. They found that single risk factor is not enough in describing the cross section of stock returns. They examined the Explanatory power of a single index model with the multifactor asset-pricing model of Fama and French (1996) for Hong Kong, Korea, Malaysia and the Philippines and they conclude that Fama and French model better explained the stock return than CAPM.

Iqbal and Brooks(2007) studied the effect of CAPM and two step Fama and French procedure on the Karachi Stock Exchange for the period of September 1992 to April 2006.In this study, they found that beta explained the cross sectional variation in expected returns, especially with individual stocks, size and beta portfolios.

Brayant and Eleswarapu (1997) studied the cross sectional determinants of New-Zeeland share market returns. The study was done from the period of 1971 to 1993 on security return, beta, firm size and book to market ratio. They found that betas calculated having little explanation of stock market return and there was positive impact between book to market ratio and average return.

Chordia and avramou (2006) examined the asset pricing model and anomalies size value premium and momentum anomalies were used to explain the asset pricing model. The analysis done over the period of 1964-2001.It concluded that size, book to market value and past returns explained by various asset pricing model.

Yassalou and Liew (2000) examined book to market, size and momentum be risk factors they investigated that the profitability of value premium, size premium and momentum linked to future GDP growth. It concluded that value premium and size premium contained significant information about future GDP growth.

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Risk, Efficiency and Return of PSBs in India

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Abstract - The present study is an attempt to evaluate the performance of public sector banks in terms of credit risk, efficiency and their impact on the profitability of these banks. The study covered the period from 2000 to 2010. With the help of panel data regression analysis the study concludes that NPLs affect adversely the profitability of banks while risk aversion seems to be in favor of the public sector banks in India. Though significant progress has been made in NPLs management, much still need to be done in order to improve the performance of scheduled commercial banks. Keeping in view the gravity of credit risk, the study recommends steps, towards the recovery of such loans, to be undertaken and enforced by the RBI.

Keywords : *NPLs, roa, panel data regression, banks.*

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Risk, Efficiency and Return of PSBs in India

Dr. Gian Kaur [α] & Pardeep Kaur [σ]

Abstract - The present study is an attempt to evaluate the performance of public sector banks in terms of credit risk, efficiency and their impact on the profitability of these banks. The study covered the period from 2000 to 2010. With the help of panel data regression analysis the study concludes that NPLs affect adversely the profitability of banks while risk aversion seems to be in favor of the public sector banks in India. Though significant progress has been made in NPLs management, much still need to be done in order to improve the performance of scheduled commercial banks. Keeping in view the gravity of credit risk, the study recommends steps, towards the recovery of such loans, to be undertaken and enforced by the RBI.

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I. Introduction

Major challenges for Asian banks include macroeconomic stability in a number of countries continued NPLs problems, lack of resilience at the bank level, increasing foreign competitors and demographic shifts which could lead consumers away from traditional deposits. (Deborah scholar, Vice-President of Moody's Financial institute and Sovereign Risk Group,2005).

Financial stability paves the way for sustained and rapid economic growth. Among various indicators of financial stability, bank's non-performing loans (NPLs) assume critical Importance as they reflect the bank's assets quality, credit risk and efficiency in the allocation of their resources for productive purpose. The NPL is defined as past due concept, taking into account either non-payment of interest due, principal or both.

The recent global financial crisis surfaced in second half of 2007 and in September, 2008 , America's one of the biggest investment bank-Lehman Brothers collapsed and triggered a chain reaction of economic, financial and psychological crisis engulfing the entire globe.

The Global Financial Stability Report in September 2011 has cautioned that for the first time since October 2008, the risks to global financial stability have increased, signaling a partial reversal in the progress made over the past three years. Banking systems in advanced economies have continued to be on uncertain grounds on account of a lack luster economic revival and increasing sovereign credit strains. The US banking system improved in terms of credit growth and profitability in 2010 and now the question of sustenance of the same (see Table 4). The banking system in the Euro Zone, as a whole, stands vulnerable to mounting credit, market and funding risks as a result of severe deterioration in public finances in certain European countries. Many of these banks require recapitalization to cushion them from the risk of sovereign defaults. The UK banking system too continues to be beleaguered by high leverage and weak asset quality. In major emerging economies, credit growth has been at relatively high levels and being regarded as a cause of concern given the growing inflationary pressures and increasing capital inflows (e.g CD ratio has increased consistently from 48.36 in 2000 to 73.16 in 2010). Further, concerns are also being expressed about the credit growth laying foundations for a weak asset quality in the years to come. On the positive side, both advanced and emerging economies, individually, and multi-laterally, have moved forward towards strengthening macro-prudential oversight of their banking systems. While it is important to keep up efforts towards strengthening the banking systems from within, it is also equally important to develop effective solutions for containing fiscal and economic risks, which at the present juncture threaten the stability of the global banking system from without. All such solutions need to be designed keeping in mind the larger interests of the global economy (Report on Trend and Progress of Banking in India, 2010-11, Global Banking Developments, and Chapter II).

The Indian financial sector continues to be sound and resilient. Banks remain well capitalized and are not excessively leveraged. The Reserve Bank remains vigilant in respect of the underlying trends in asset quality, as well as exuberant credit growth in select sectors and is working on a forward looking provisioning framework (Financial Stability Report, 2011, RBI Monthly Bulletin, December22, 2011)

In 2009, Financial Stability Development Council (FSDC) was formulated to watch financial stability of the Indian economy. The first Financial Stability Report (FSR) was published in March 2010, to focus on renewing the nature, magnitude and implication of risks that have bearing on the macro-economic environment, financial institutions, markets and infrastructure. The fourth FSR published in December 2011, has revealed that the Indian financial system remains stable. Subsequently a Systemic Risk Survey has been instituted during 2011 to review financial system of the economy.

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II. Objectives

The study spans over the period 2000-2010 viz. inclusive of the years (2008-2010) of Global Financial Crisis. The empirical analysis endeavors to capture the impact of the crisis on the Indian state owned banks-the PSBs. The overall objective of the study is to examine the impact of various indicators of banking sector reforms viz. NPAs, CAR and indicators of banking business viz. spread, business per employee and operating expenses.

The study is organized into five sections. Section I deals with a brief overview of the commercial banks in India during the period under study. Section II provides the brief overview of the literature related with the determinants of profitability of banks at national as well as international levels. Section III deals with scope, database and methodology used for the study. Section VI presents trends of the NPLs at the global level, in particular for Asia and Specifically for India. Section V gives the specification of the model to be evaluated along with the analysis of the results.

a) Overview of the Indian Banking Sector

Commercial banking constitutes the largest segment of the Indian financial system. It consists of state owned or public sector banks, private banks under Indian ownership and foreign banks. Among these banks, 27 PSBs dominate the commercial banking sector, accounting for more than 90 percent of the banking business in India.

Until the beginning of the 1990s, several quantitative and functional restrictions are operative. The banking sector was characterized by administered interest rates and large pre-emption of funds in the form of required reserves and directed credit. During 1991, the CRR of commercial banks was at statutory maximum of 15 percent of total of demand and time deposits, SLR to be invested in government and other approved securities were as high as 38.5 percent. This resulted total reserve requirement ratio as 53.5 percent. Under the "social objectives" of credit to the preferred sector, termed as "priority sector" banks were directed to lend 40 % of their net credit to this sector. Post nationalization period witnessed wide spread expansion of banking business in the country.

The initiation of banking sector reforms in the country during the early 1990s was conditioned by the analysis and recommendations of various committees. According to the RBIs Publication, at the end of March 2010, Indian banking sector consisted of 27 Public Sector Banks, 22 Private Sector Banks, 34 Foreign Banks, and 84 Regional Rural Banks. Therefore, Indian banking sector comprised 83 Scheduled commercial banks, made up of a total of 65412 branches and 941375 employees. The total assets of Indian banking sector has reached Rs. 6025141, with an average annual growth rate of 18.49 percent over the period from 2000 until 2010. The public sector banks continue to dominate the banking industry, in terms of lending and borrowing, and it has widely spread out branches, which help greatly in pooling up of resources as well as in revenue generation for credit creation. The profitability of Indian banks has been shown in following table.

Table 1 : Operating profits of Indian Commercial Bank (Amount in Rs. Cores)

Year	Public sector Banks	Private Sector Banks	Foreign Banks
2000-01	13792.95	2848.94	3105.15
2001-02	21676.54	4646.44	3513.61
2002-03	29715.24	7238.69	3727.85
2003-04	39290.10	8324.59	4985.53
2004-05	37413.18	7673.58	4597.44
2005-06	37967.21	9768.07	6658.44
2006-07	42268.18	13469.84	9599.81
2007-08	50307	18881.42	1404.7
2008-09	66972	24194.82	20098

Source : Report on Trend and Progress of Banking in India, Various Issues, RBI.

It has been observed from the table that private sector banks perform better in terms of operating profits than Sector banks.

b) Review of Related Literature

Heron, Sudan (2004) investigated the determinants of profitability of Islamic banks. The study found that internal factors such as liquidity, total expenditures, funds invested in Islamic securities and the percentage of the profit-sharing ratio between the bank and borrower are highly correlated. Further results shows that interest rates, market share and size of the also positively affect the profitability of banks.

Basher, M (2003) analyzed how bank characteristics and the overall financial environment affect the performance of Islamic banks. He utilized bank level data of Islamic banks across eight Middle Eastern countries between 1993 and 1998. The author used internal and external banking characteristics to predict profitability and efficiency. The results indicate that high capital-to-asset and loan-to-asset ratios lead to higher

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profitability. The results also indicate that foreign-owned banks are likely to be profitable. Everything remaining equal, the regression results show that implicit and explicit taxes affect the bank performance and profitability negatively while favorable macro-economic conditions impact performance measures positively.

Kosmidou et al. (2008) investigates the impact of bank-specific characteristics, macroeconomic conditions and financial market structure on UK owned commercial banks' profits, over the period 1995-2002. The findings depict that the capital strength of these banks has a positive and dominant influence on their profitability, the other significant factors being efficiency in expenses management and bank size. These bank-specific determinants are robust to the inclusion of additional macroeconomic and financial market measures of bank performance, which add little to the explanatory power but nevertheless appear to have positively influenced profitability.

Singh, R.K (2009) conducted a study to assess whether selected bank-specific and macro-economic determinants have significantly affected profitability of Indian banks. The study concluded that most of the selected indicators significantly impact banks in India and profitability of banks in India has risen significantly over the years and the selected macroeconomic determinants exert a significant impact on profitability of banks.

Flaming, Valentine et al. (2009) used a sample of 389 banks in 41 SSA (Sub-Saharan Africa) countries to study the determinants of bank profitability. They found that apart from credit risk, higher returns on assets are associated with larger bank size, activity diversification, and private ownership. Bank returns are affected by macroeconomic variables which suggest that macroeconomic policies that promote low inflation and stable output growth do boost credit expansion. Davydenko (2010) used a panel of individual banks' financial statements of Ukraine banks to study the impact of various factors on the profitability of Ukraine banks from 2005 to 2009. According to the empirical results, Ukrainian banks suffer from low quality of loans and do not manage to extract considerable profits from the growing volume of deposits. This study shows that the difference in profitability patterns of banks with foreign capital versus exclusively domestically owned banks. The results also indicate that there is room for consolidation of Ukrainian banks in order to benefit economies of scale.

Ramlall, Indranarain (2009) analyzed the determinants of profitability for the Taiwanese banking system and used bank-specific, industry-specific and macroeconomic factors, under a quarterly dataset, for the period 2002 to 2007. The study found that while credit risk triggers a negative impact on profitability, capital tends to consolidate profits. In general, results imply that Taiwanese banking system is well-diversified.

Bitola and Vera (2006) made an attempt to identify the key determinants of profitability of Public Sector Banks in India. This study is based on step-wise multivariate regression model used on temporal data from 1991-92 to 2003-04.The study concluded that the variables non-interest income, operating expenses, provision and contingencies and spread have significant relationship with net profits.

III. Data Base and Methodology

The study is based on panel data for 26 PSBs over the period 2000 to 2010. An advantage of using panel data is that more observations on the explanatory variables are available. This has the effect of helping to overcome the inherent multi co linearity, which probably exists between the independent variables in OLS estimation. The present study is based on secondary data and all the required data has been culled from Reserve Bank of India publications viz. Report on Trend and progress of Banking in India, Statistical Tables Relating to Banks in India and publications of Indian Banks Association. It is well known that commercial banks in India comprised public sector banks, private sector banks and foreign banks. As the number of private and foreign banks has changed over the time, the scope of the present study is limited only to public sector banks. The bank of Saurshatra and IDBI bank ltd. has been omitted from the study[3]. The period is selected according to the nature of subject and the availability of data. The variables selected for studying the impact on profitability are NPA, CAR, Spread, business per employee and operating expenses.

In panel regression model the cross section analysis provides meaningful analysis of interlink ages among economic and financial variables. The panel data (also called longitudinal data) refer to data for n different entities observed at n different time periods. Here the entities are 26 PSBs in India over the period 2000 to 2010 i.e T=11 and so there are (26×11=286) observations. PSBs-the entities are homogenous and non-variant in the specific time period. As the nature of the problem-the entities considered in this analysis are the state controlled banks and so are assumed to be structurally invariant. Pooling all the (26X11=286) observations, the following function for profitability of PSBs has been estimated:

$$Y_{it}=\alpha+\beta i X_{it}+\mu_{it}$$

Where Y=ROA- a measure of Profitability of banks
X's – Explanatory Variables (See Table.2)
Where i=1 to 26, t=1 to 11,

[3] IDBI ltd has started its operations after 2004 and Bank of Saurshatra closes its operations due to merger of SBS with its parent subsidiary. The inclusion of these banks made the data unbalanced.

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Table 2 : Description of variables used in the regression analysis

Variable	Description	Hypothesized relationship with profitability
OE	Operating expenses	-
SP	Spread	+
NPAs	Non-performing assets as a percent to net advances	–
BPE	Business per employee	+
CAR	Capital Adequacy Ratio	+

Following Panel Data Regression models with Fixed Effect Approach have been estimated.

1. Assuming that the intercept and slope coefficients are constant across time and space and the error term captures difference over time and entities.
2. The slope coefficients are constant, but the intercept varies over time
3. The intercept is constant, but the slope coefficient for a specific variable varies over time
4. The intercept and the slope coefficient for a specific variable vary over time

a) Pre-Emption of Funds

Indian banking industry bears a special feature in credit deployment to different sectors. (1) Banking sectors since independence (1947) to 1969, the year of nationalization of private banks viz.bringing these banks under state control, exhibited concentration of power. Since 1969 and then in 1980, India/RBI-the central bank of India has control over 26 banks – termed as public sector banks(PSBs). Since 1969, the norm of social control was established under which PSBs have been directed to load a specific proportion viz. 40 percent of their net bank credit to the priority sector (PS). This sector covers agriculture, small scale industries and other weaker sections of the society. Studies point out that adverse impact of this variable on the profitability of banks in India. It is due to the fact that (i) rate of interest On such loans is low and administered one and (ii) such loans are proving to more risk. Figures indicate that to total NPLs in India, the contribution of PS loans has increased consistently for the study period (2000-2001). It was 44.5 percent in 2000 and increased continuous to 63.6 percent in 2008, though it moderated slightly in the following years 2009(55.2 percent) and 2010(53.8 percent, Table 2).

As a policy variable to control credit RBI targets lending power of the commercial banks in terms of Required Reserves by fixing the ratios –(i) Cash –reserve ratio(CRR) –the minimum to be kept in the form of reserve against net deposits and (ii) statutory Liquidity Ratio (SLR) the minimum to be invested in government securities.

These ratios touched the maximum viz. 53.5 percent over and above 40 percent of PS lending. And so more than 90 percent of the lending capacity of the Indian banks was pre empted and the profitability of the banks dipped with, among other factors, due to pre-emption funds.

With introduction of banking sector reforms in 1991, these ratios (CRR and SLR) were aimed to be reduced to their minimum levels of (3 percent for CRR) and (25 percent for SLR). And so in a phased manner they have been reduced to about 5 percent (CRR) and to its minimum level of 25 percent of SLRTrends in NPA

Table 3 provides data on the non-performing assets (NPAs). The ratio of non-performing assets (NPAs) to total advances /assets highlights trends in quality of loan assets. A closer examination of the data indicates declining trend in NPAs as percentage to total assets in case of all bank groups. These trends are signs of improvement in the quality of loan assets and a decline in the credit risk exposure of banks at an aggregate level.

NPAs effect on profitability of banks is two pronged. These assets block the bank funds from putting in income earning assets on one hand and do not contribute to the returns of the banks(in terms of interest income earned) on the other hand. Expected sign of NPAs as determinant of profitability of banks, hence is negative.

Table 3 : Gross NPAs of Public Sector Banks in India

Year	NPL/Assets	NPL(PS) as % of total assets
2000	14	44.5
2001	12.4	.45.4
2002	11.1	46.2
2003	9.4	47.2
2004	7.8	47.5
2005	5.4	48.1
2006	3.9	54.1
2007	2.8	59.5
2008	2.3	63.6
2009	2.1	55.2
2010	2.3	53.8

Source : RBI, Report on Trend and Progress of Banking in India (Various Issues).

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All types of banks showed a declining trend in gross NPAs over the period under study but public sector bank has higher ratio as compared to private sector banks reason behind this is that PVT have a secured loan policy as compared to PSB. Even after implementation of prudential norms in early nineties and serious concern raised by govt. about growing size of NPAs, Public Sector Banks paid least attention to all these warnings, which subsequently led to turning fresh loans of banks into non-performing category. So, falling ratio of NPAs in terms of advances is not a true indicator of performance of PSBs in the field of NPAs. In fact, growing size of gross NPAs in absolute form has been real cause of worry. However; there is a silver lining, on account of the steps taken by the banks under the Securitization Act? The gross as well as net NPAs of Public and Private sector banks have started declining after 2002 this showed the reverse trend in contrast to the earlier years.

b) Cross-country trend of NPLs (Non-performing Loans)

According to the global NPL Report 2004, by Ernst and Young, the level of non-performing loan is estimated at about US$ 1.3 trillion during 2003 of which the Asian region accounts for about 77 percent of global NPLs. Within Asia, Japan and China account for 49 percent of the global NPL and about 85 percent Asian NPLs, while Taiwan, Thailand, Indonesian and Philippines together contribute about 5 percent of the global NPLs. India alone accounts for 2 percent of the global NPLs of the financial sector in the world.

Table 4 : Cross country Performance analysis of banks (NPL/Gross Loans) in percent

Country↓ →Year	2002	2006	2007	2008	2009	2011*
United States	1.4	0.8	1.4 (1.2)	2.9 (-0.1)	5.4 (-0.1)	3.8 (0.3)
United Kingdom	2.6	0.9	0.9 (0.4)	1.6 (-0.4)	3.5 (0.1)	3.5 (0.1)
France	4.2	3.0	2.7 (0.4)	2.8 (0.0)	3.6 (0.4)	-- --
Germany	5.0	3.4	2.6 (0.3) 0.3	2.8 (-0.1)	3.3 (0.2)	-- --
Portugal	--	1.3	1.5 (1.2)	2.0 (0.4)	3.2 (0.4)	6.9 (0.5)
Italy	6.5	4.9	4.6 (0.7)	4.9 (0.3)	7.0 (0.2)	11 (0.2)
Greece	--	5.4	4.5 (1.2)	5.0 (0.2)	7.7 (-0.1)	13.4 (-0.3)
Spain	--	0.7	0.9 (1.1)	3.4 (0.8)	5.1 (0.6)	5.3 (0.5)
Ireland	--	0.7	0.8	2.6	9.0	14.1
Brazil	4.5	3.5	3 (3.4)	3.1 (1.5)	4.2 (2.4)	3.4 (3.3)
Russia	5.6	2.4	2.5 (3.0)	3.8 (1.8)	9.7 (0.7)	7.2 (2.3)
India	10.4 (0.8)	3.3 (0.6)	2.5 (0.9)	2.3 (1.0)	2.3 (1.1)	2.2 (1.2)
China	26.0 (0.1)	7.1	6.2 (0.9)	2.4 (1.0)	1.6 (0.9)	1.1 (1.0)
Mexico	3.7	2.0	2.7 (2.3)	3.2 (1.4)	3.1 (1.5)	2.1 (1.6)
Indonesia	24.0	6.0	4.1	4.1	3.3	2.1
Malaysia	15.9	8.5	6.5 (1.5)	4.8 (1.5)	3.7 (1.2)	2.7 (1.8)
Philippins	26.5	7.5	5.8	4.5	4.1	2.9
Thaliand	15.7	8.1	7.9	5.7	5.3	---

Source : Report on Global Financial Stability, various issues, IMF

Note : --- indicates lack of statistical data, * indicates data for the period 2011 varies from Quarter to quarter. Figures in parenthesis indicates Return on assets or profitability of banks.

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However, the trend in the NPL ratios of selected countries has improved. In emerging countries like Thailand and Indonesia, structural reforms after the Asian crisis had an immediate impact on the financial sector inducing a sharp fall in NPLs. In Indonesia, the ratio of NPL to total loans declined from 24 percent in 2002 to 2.1 percent in 2011. For China, the figure stands at 26 percent as against that of 1.1 percent in 2011and India bears the respective figures as 10.4 and 2.2. Therefore, compared globally (see table 3), the performance of Indian banks are now approaching international standards and they are among the better performers in the emerging economics. The figures in the table further indicate the direct and inverse relationship between NPLs and return of the banking assets.

c) Ratio of Intermediation Cost or Operating Cost to Total Assets

Ratio of intermediation cost to total assets has experienced gradual fall in the post reform period for all bank groups except for foreign banks. This variable is one of the indicators of a measure of efficiency of banks. Among the components of operating expenses is the employee cost. The PSB's cost on wages declined following the voluntary retirement scheme in the past 2001 period. However, the most of banks towards information technology. Though adding to basket of operating cost is still a step for increasing efficiency of banks in India.

d) Spread

The variable spread (S), defined, as the excess of interest income over interest expenses is an important indicator of efficiency of banks. This ratio reflects the locative efficiency of banks, the smaller figure indicating higher efficiency. One of the objectives of banking sector reforms was to lower the interest rates. In the process, the lending rates have tended to be sticky as against the deposit rates. Over the time period the ratio of spread to total assets does not exhibit consistent trend. It may be because of the fact that banks have got freedom, in the post-reform regime, to determine the deposit rates as well as lending rates. Moreover the banks have diverted their investment portfolio to non-interest earning business/assets.

The variable spread(S) contributes to the profitability of banks. Hence the relationship between profitability of the banks and spread is hypothesized to be positive.

e) Capital Adequacy Requirements: (CAR)

Maintenance of sufficient capital as a percentage of risk weighted assets, termed as CRA is one of the requirements for banks under the norms of banking sector reforms.CRA can increase either by increases in capital or decrease in risk weighted assets. The latter can be decreased with investment in lesser risk assets so i.e. it is least when assets are totally free i.e. risk weight is zero. Greater the CAR indicates greater potential for investment in risk bearing assets, that yield more income (2.5 percent) than risk free assets like government securities in India. Hence impact of CAR on banks profitability is hypothesized as positive. Overall, the CAR of SCBs India has improved significantly from 10.4 percent in 1996-1997 to 12.2 percent during 2005-2006. For PSBs, the figures are 11.8 and 12.2 for the PSBs, the CAR has increase.

f) Findings

As discussed earlier, this study examines the impact of credit risk and efficiency on the profitability of Indian public sector banks. The results of the panel data regression model with time dummies and fixed effect models I to V am reported in Tables A-E.

i. *All Coefficients Constant Over Time*

By pooling the data on 26 entities over '11' years with 286 observations, the OLS results obtained are given in Table-5 and Table –6 as model -1 and model-2.

Model-1

$$Y_{it}=\alpha+\beta_1 BPE_{it}+\beta_2 NPA_{it}+\beta_3 SP_{it}+\beta_4 OE_{it}+\mu_{it}$$

Model-2

$$Y_{it}=\alpha+\beta_1 BPE_{it}+\beta_2 NPA_{it}+\beta_3 SP_{it}+\beta_4 OE_{it}+ CARit+\mu it$$

Examination of results for model-1 and model-2 indicate that all the slope coefficients are statistically significant with expected signs. Business Variables-BPE and SPE exert positive significant influence on the profitability of the banks, whereas the NPLs a measure of risk-put alarm for the banks as the variable bears negative sign and is highly, significant at 10% level of significance. The negative sign of OE (operating expenditure), too indicate heavy expenditure on the banks, contributing adversely to the profitability of the banks. The variable CAR (Variable of banking sector reforms as well as that of policy of the RBI), when added to the model-1, gives positive impact and estimation of model-2, indicates increase in R2. This shows that capital position has improved in case of Indian banks, compensating the adverse impact of NPAs on ROA. This may be the result of recapitalization of banks by the government since inception of banking sector reforms in 1991.

ii. Time Effect: Intercept varies and slope coefficient are invariant over time e.g Least Square Dummy Variable (LSDV) model

Following model has been estimated:

$$ROA_{it}=\alpha_1+\alpha_2 D_{i2}+\alpha_3 D_{i3}+\text{------}\alpha_{11} Di_{11}+\beta_1 BPE_{it}+\beta_2 NPA_{it}+\beta_3 SP_{it}+\beta_4 OE_{it}+ \beta_5 CARit+\mu it$$

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Where Di_2 =1 for the observation of year 2001
D_{i3} = 0 otherwise
= 1 for year 2002
= 0 otherwise
D_{i11} = 1 for 2010
=0 otherwise

The results are described of this model 3 in Table 7. The coefficients of all the variables bear expected signs with statistically significance as in model -1 and model-2. R2 increases, though slightly. The coefficient of CAR is maintained but not significant. As evident from the results, none of the time dummies turns out to be significant statistically. It may be inferred that the profitability function, as specified, has not changed much over the time under consideration.

iii. Intercept Constant but the slope coefficient of variable SP (spread-interest margin) varies over time.

To examine this possibility, the model is outlined as:

$$ROA_{it}=\alpha+\beta_1 BPE_{it}+\text{-------}\beta_5 CAR_{it}+\lambda_2 D_{t2}SP_{it}+\lambda_3 Dt3SPit\text{--------}+\lambda_{11}D_{11}SPit+\mu_{it}$$

Here Di_2 = 1 for the variable SP for 2001
= 0 otherwise
D_{i3} = 1 for SP for 2002
= otherwise
D_{i11} = 1 for SP for 2010
= 0 otherwise

Table 8 reproduces the estimates of the above equation. It is observed that time has not put any differential impact on this function. Over the period since reforms in the banking industry, the portfolio behavior of the banks has changed with diversification in its lending and investing policies .Income from non-interest assets has increased. However the value of R2 has increased as compared to the results with fixed effects in Tables 5 and 6 (from .6339 to .6491).Such exercise was also conducted with the other variables considered in the model, but the effect was negligible.

iv. Intercept and slope coefficient of SP varies over time

Following model has been estimated to meet the objective

$$ROA_{it} = \alpha_1+\alpha_2 Di_2+\text{--------}+\alpha i_{11}Di_{11}+\beta_1 BPEit+\text{-------}\beta_5 CAR_{it}+\lambda_2 D_{t2}SP_{it}+\lambda_3 Dt3SPit\text{--------}+\lambda_{11}D_{11}SPit+\mu_{it}$$

D_{i2} =1 for 2001
= 0 otherwise
D_{i11} =1 for 2010
=0 otherwise

Results of this model are produced in Table 9. As observed R2 has increased from 0.6491 (with slope dummies) and from 0.6339 (with intercept dummies) to 0.6543. However, the coefficients with differential coefficients are not significant.

Table : 5 (Model-1)

	Coefficient	Std. Error	t-ratio	p-value
Constant	0.645858	0.171111	3.7745	0.00020***
BPE	0.000786736	0.000318206	2.4724	0.01407**
NPA	-0.0742188	0.00998933	-7.4298	<0.00001***
SP	0.299006	0.0522344	5.7243	<0.00001***
OE	-0.223042	0.0631938	-3.5295	0.00049***
R-squared	0.629838			
Adjusted R-squared	0.587906			
Durbin-Watson	1.956952			

Note : ***, **,* denotes the level of significance at 1%, 5% and 10% respectively.

Table : 6 (Model-2)

Explanatory Variables	Coefficient	Std. Error	t-ratio	p-value
Constant	0.594013	0.17327	3.4283	0.00071***
BPE	0.000781423	0.000317092	2.4643	0.01439**
NPA	-0.0726944	0.00999509	-7.2730	<0.00001***

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SP	0.295177	0.0520988	5.6657	<0.00001***
OE	-0.222182	0.0629716	-3.5283	0.00050***
CAR	0.00456061	0.00271258	1.6813	0.093938
R-squared	0.633896			
Adjusted R-squared	0.590825			
Durbin-Watson	1.917549			

Note : ***, **,* denotes the level of significance at 1%, 5% and 10% respectively.

Table 7 : (Model 3)

	Coefficient	Std. Error	t-ratio	p-value
Constant	0.577734	0.184121	3.1378	0.00191***
BPE	0.00079358	0.000325073	2.4412	0.01535**
NPA	-0.0716457	0.0102538	-6.9872	<0.00001***
SP	0.296358	0.0532307	5.5674	<0.00001***
OE	-0.224275	0.0640208	-3.5032	0.00055***
CAR	0.00426848	0.00280748	1.5204	0.12970
Dt_2	0.0238977	0.0738895	0.3234	0.74665
Dt_3	-0.0212538	0.0740296	-0.2871	0.77428
Dt_4	0.0384069	0.0744328	0.5160	0.60632
Dt_5	0.0243112	0.0736787	0.3300	0.74171
Dt_6	0.00727716	0.0741539	0.0981	0.92190
Dt_7	-0.0275667	0.0738994	-0.3730	0.70945
Dt_8	-0.0198867	0.0737216	-0.2698	0.78758
Dt_9	0.0489137	0.0736818	0.6639	0.50741
Dt_10	0.034679	0.0742109	0.4673	0.64070
Dt_11	0.0606652	0.0739134	0.8208	0.41258
R-squared	0.638737			
Adjusted R-squared	0.579755			
Durbin-Watson	1.926033			

Note : ***, **,* denotes the level of significance at 1%, 5% and 10% respectively.

Table 8 : (Model 4)

	Coefficient	Std. Error	t-ratio	p-value
Constant	0.519035	0.183508	2.8284	0.00506***
BPE	0.000920301	0.000347044	2.6518	0.00853***
NPA	-0.072091	0.010068	-7.1604	<0.00001***
SP	0.228816	0.0934803	2.4477	0.01508**
OE	-0.196453	0.065468	-3.0007	0.00297***
Car	0.00423162	0.00270872	1.5622	0.11952
DS2	0.0401762	0.122923	0.3268	0.74407
DS3	0.0674525	0.110539	0.6102	0.54228
DS4	0.128407	0.11199	1.1466	0.25266
DS5	0.131728	0.108709	1.2117	0.22677
DS6	0.0293088	0.106701	0.2747	0.78379
DS7	-0.046102	0.107531	-0.4287	0.66849
DS8	0.014729	0.108408	0.1359	0.89204
DS9	0.140888	0.100175	1.4064	0.16086
DS10	0.0847627	0.0689462	1.2294	0.22010

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R-squared	0.649140			
Adjusted R-squared	0.593515			
Durbin-Watson	1.956471			

Note : ***, **,* denotes the level of significance at 1%, 5% and 10% respectively.

Table 9 : (Model 5)

	Coefficient	Std. Error	t-ratio	p-value
Constant	0.506674	0.195739	2.5885	0.01024**
BPE	0.00091133	0.000355586	2.5629	0.01100**
NPA	-0.0708054	0.0103329	-6.8524	<0.00001***
SP	0.217672	0.0955086	2.2791	0.02356**
OE	-0.201454	0.0666011	-3.0248	0.00276***
CAR	0.00386168	0.00280905	1.3747	0.17052
DS2	0.0639291	0.127825	0.5001	0.61745
DS3	0.0917677	0.113834	0.8062	0.42097
DS4	0.144014	0.114392	1.2589	0.20929
DS5	0.146597	0.111218	1.3181	0.18875
DS6	0.0390757	0.108948	0.3587	0.72017
DS7	-0.036749	0.110073	-0.3339	0.73878
DS8	0.0256683	0.110754	0.2318	0.81692
DS9	0.145768	0.101928	1.4301	0.15401
DS10	0.0888224	0.0703147	1.2632	0.20776
Dt_2	0.0294251	0.0741739	0.3967	0.69194
Dt_3	-0.0153676	0.0742978	-0.2068	0.83631
Dt_4	0.0519968	0.075154	0.6919	0.48970
Dt_5	0.0337804	0.0744439	0.4538	0.65041
Dt_6	0.0178665	0.07471	0.2391	0.81120
Dt_7	-0.0269238	0.074968	-0.3591	0.71981
Dt_8	-0.0168655	0.0741974	-0.2273	0.82038
Dt_9	0.0471006	0.0751675	0.6266	0.53152
Dt_10	0.04142	0.0743853	0.5568	0.57817
Dt_11	0.0660435	0.0742906	0.8890	0.37491
R-squared	0.654339			
Adjusted R-squared	0.582570			
Durbin-Watson	1.967788			

Note : ***, **,* denotes the level of significance at 1%, 5% and 10% respectively. DS11 is omitted due to coli neatly.

IV. Conclusion and Suggestion

Empirical results relating to ROAs of PSBs in India as determined by different bank variables for the period 2000-2010 highlights that:

1. Effect of the policy variables and bank business have put significant impact on ROA, but
2. Over the time, the banks 'performance has not been affected by other structural variations in the economy-political, technological or global upheavals etc. It indicates that Indian banking industry is resilient to economic and other shocks.

Burden of NPLs on the financial institutions has become a global phenomenon and so for Indian Banking Industry. Though the NPLs as share of total bank loans have decreased since inception of Banking Sector Reforms (cross country comparison in this context is in favor of India), the empirical results above alarms for the negative impact of this variable on ROA. The findings of this study suggest that NPLS, may be targeted seriously by the monetary policy. More vigilant and strict policy towards recovery of bad loans is demanded from the government and RBI.

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The Volatility of Market Risk in Groups of Viet Nam Listed Medicine and Medical Company Groups During and after the Financial Crisis 2007-2011

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Abstract - This survey uses the sample of total 14 listed firms of related medical industry in the Viet Nam economy and especially, the stock exchange which has been affected by the global crisis during the period 2007-2011. Specifically, we perform the risk re-analysis and estimation for the listed firms in Medicine, Medical equipment and Human resource industries.

First of all, using quantitative and analytical methods to estimate asset and equity beta values of three (3) groups of sub-medical listed companies in Viet Nam Medicine, Medical equipment and Human resource industries with a suitable traditional model, we found out that the beta values, in general, for most companies are acceptable, excluding a few cases. There are 57% and 71% of listed firms with lower risk, among total 14 firms, whose beta values lower than (<) 1, which is measured by equity and asset beta, accordingly.

Keywords : *equity beta, financial structure, financial crisis, risk, asset beta, medical industry.*

GJMBR-C Classification : *JEL Code: G010, G100, G390*



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First of all, using quantitative and analytical methods to estimate asset and equity beta values of three (3) groups of sub-medical listed companies in Viet Nam Medicine, Medical equipment and Human resource industries with a suitable traditional model, we found out that the beta values, in general, for most companies are acceptable, excluding a few cases. There are 57% and 71% of listed firms with lower risk, among total 14 firms, whose beta values lower than (<) 1, which is measured by equity and asset beta, accordingly.

Second, through comparison of beta values among three (3) above industries, we recognized there are still 21% and 7% of total listed firms in the above group companies with beta values higher than (>) 1 and have stock returns fluctuating more than the market index, indicated by equity and asset beta, accordingly.

Ultimately, this paper generates some outcomes that could provides both internal and external investors, financial institutions, companies and government more evidence in establishing their policies in investments and in governance.

Keywords : equity beta, financial structure, financial crisis, risk, asset beta, medical industry.

I. Introduction

After the previous published article on estimated beta for listed construction company groups, here we will compare the estimated beta results of listed Viet Nam medical equipment companies to those in its supply chain activities such as medicine and human resource companies to make a comparative analysis and risk evaluation after financial crisis impacts.

Although risk estimation can be done by using various research methods. Here, we perform a market risk analysis based on asset and equity beta of total 14 listed companies in the category of medical equipment, medicine and human resource firms. This paper emphasizes on analyzing un-diversifiable risk in the above industry in one of emerging markets: Vietnam stock market during the financial crisis 2007-2011. No research, so far, has been done on the same topic.

This paper is organized as follow. The research issues and literature review will be covered in next sessions 2 and 3, for a short summary. Next, methodology and conceptual theories are introduced in session 4 and 5. Session 6 describes the data in empirical analysis. Session 7 presents empirical results and findings. Then, session 8 gives analysis of risk. Lastly, session 9 will conclude with some policy suggestions. This paper also provides readers with references, exhibits and relevant web sources.

II. Research Issues

We mention a couple of issues on the estimating of beta for listed medical equipment, medicine and human resource companies in Viet Nam stock exchange as following:

Hypothesis/Issue 1: Among the three (3) companies groups, under the financial crisis impact and high inflation, the beta or risk level of listed companies in human resource industries will relatively higher than those in the rest two (2) industries.

Hypothesis/Issue 2: Because Viet Nam is an emerging and immature financial market and the stock market still in the recovering stage, there will be a large disperse distribution in beta values estimated in the medical equipment, medicine and human resource industries.

Hypothesis/Issue 3: With the above reasons, the mean of equity and asset beta values of these listed medical equipment companies tend to impose a high risk level, i.e., beta should higher than (>) 1.

III. Literature Review

Fame, Eugene F., and French, Kenneth R., (2004) indicated in the three factor model that "value" and "size" are significant components which can affect stock returns. They also mentioned that a stock's return not only depends on a market beta, but also on market capitalization beta. The market beta is used in the three factor model, developed by Fame and French, which is the successor to the CAPM model by Sharpe, Trey nor

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and Linter. As Luis E. Pierre (2010) pointed, the task of estimating cost of equity in emerging markets is more difficult because of problems such as collecting data in short periods. Mo Chaudhury (2011) found out over 2007/08 crisis period, unconditional daily returns fell to negative level, unconditional volatility surged more than 200 percent, correlation between stocks weakened and the risk reduction benefit of portfolio diversification rose. Marcin, Mariusz, Marek, and Karol (2012) mentioned that the reliability and fitness of calculated betas are relevant to the valuation and investment of investors in emerging markets. And Xiaowei Kang (2012) found that combining weighted or alternative beta strategies can gain significant traction in investment community and reduce risk. Next, Wolfgang, Lukas and Ranko (2013) discovered during the financial crisis, the relation between stock returns and implied volatility exhibits differences consistent with European institutional and cultural clusters; for example, German stock market tends to be more responsive to changes in implied volatility compared to UK stock market.

IV. Conceptual Theories

a) Determinants of Equity and Asset Beta

There are several kinds of business risks including systematic and unsystematic risk. In financial markets, systematic risk relates to the overall risk of the whole market, is affected by some factors such as: the volatility of expected return of a single stock, interest rate fluctuations or economic crisis, cannot be avoided by diversification, and is measured by a financial metric, beta which is also called systemic risk. Market risk, indicated by beta β, can be known by the decreasing value of an investment because of movement of market factors.

Market risk coming from market factors can be contrasted with internal risk coming from internal factors of a company.

Firms with beta > 1 will have the movement of stock price higher than the market benchmark. Companies whose beta values < 1 have the risk lower than the entire market risk. For example, if beta of a company is 1, 25, it means that the volatility of stock price is 25% more than that of the entire market.

V. Methodology

During the period 2007-2011, the time highlighting impacts from financial crisis, we use the data from the stock exchange market in Viet Nam (HOSE and HNX and UPCOM) to estimate systemic risk results.

First of all, we use the market stock price of total 14 listed companies in the medical equipment, medicine and human resource industries in Viet Nam stock exchange market to calculate the variability in monthly stock price in the same period; second, we estimate the equity beta for these three (3) listed groups of companies and make a comparison. Third, from the equity beta values of these listed companies, we perform a comparative analysis between equity and asset beta values of these 3 companies groups in Viet Nam. Finally, we use the results to suggest policy for both these enterprises, financial services institutions and relevant organizations.

The below table gives us the number of medical equipment, medicine and human resource firms used in the research of estimating beta:

Market	Listed Medical equipment companies (1)	Listed Medicine companies (2)	Listed Human Resource companies (3)	Note (4)
Viet Nam	0	4	2	Estimating by traditional method
	2	4	2	Estimating by comparative method
Total	**2**	**8**	**4**	**Total firms in groups: 14**

(Note: The above data is at the December 12th, 2012, from Viet Nam stock exchange).

VI. General Data Analysis

This is a study sample of 14 firms in 3 categories of industries: medical equipment, medicine and human resource companies groups, and here are the results: the mean of equity beta is valued at 0,538 while that of asset beta is about 0,320. These data are quite acceptable values during the crisis. Additionally, the sample variance of asset beta is low (0, 1449) which is a good number, while that of equity beta is somewhat higher (0,570) showing the gap of 0,425. This shows us that the effectiveness of using financial leverage has decreased the systemic risk for the entire group.

However, the max and min values of beta are still somewhat large. Max equity beta value is up to 2,091 that are a little bit high, compared to max asset beta value is just 1,075 that is acceptable. Looking at

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the table 2 (below), we can see there is 21%, or 3 listed firms still have beta values larger than (>) 1, whereas there is 57% or 8 firms whose beta values lower than (<) 1 and higher than (>) 0.

Value of equity beta varies in a range from 2,091 (max) to -0,946 (min) and that of asset beta varies in a range from 1,075 (max) to -0,163 (min). Some companies still has larger risk exposure than most of the others. There are 3 listed companies whose both equity and asset betas are lower than (<) 0, which means the stock return moves in a opposite direction to the market benchmark.

Next, Asset beta max value is 1,075 and min value is -0,163 which show us that if beta of debt is assumed to be zero (0), the company's financial leverage contributes to a decrease in the market risk level.

Lastly, we can see the relatively high difference between max equity and max asset beta values, which is about 1, 0153, whereas there is a smaller difference between equity and asset beta variance values which is just 0,425; so, there is certain impact on systemic risk of certain firms in term of using leverage while it indicates for most of firms that financial leverage can enable them to reduce market risk. And there is not quite big effect from financial leverage on the gap between company's beta variance values.

Table 1 : Estimating beta results for Three (3) Viet Nam Listed Medical equipment, Medicine and Human resource Companies Groups (as of Dec 2012)

Statistic results	Equity beta	Asset beta (assume debt beta = 0)	Difference
MAX	2,091	1,075	1,0153
MIN	-0,946	-0,163	-0,7831
MEAN	0,538	0,320	0,2177
VAR	0,5700	0,1449	0,4250
Note: Sample size : 14			

(Source : Viet Nam stock exchange data).

Table 2 : The number of companies in research sample with different beta values and financial leverage

Equity Beta	No. of firms	Financial leverage (average)	Ratio
<0	3	76,09%	21%
0<beta<1	8	55,07%	57%
Beta > 1	3	36,44%	21%
total	14	47,1%	100%

Asset Beta	No. of firms	Financial leverage (average)	Ratio
<0	3	76,09%	21%
0<beta<1	10	54,02%	71%
Beta > 1	1	9,72%	7%
total	14	43,0%	100%

VII. Empirical Research Findings and Discussion

a) Medical Equipment Listed Companies Group

During the crisis 2007-2011, the market for these companies still exists, but has certain difficulties because of increasing input prices.

This group has the smallest size with only 2 firms. The table 3 below shows us the results of the mean of equity beta and asset beta are 0,096 and 0,029, accordingly. These values are good numbers in term of indicating a low and acceptable un-diversifiable risk because of the smallest study size.

Besides, the variance of equity and asset beta of the sample group equals to 0,0102 and 0,0014 accordingly which are much lower than the variance of the entire sample equity and asset beta of 0,57 and 0,14. The effect from financial leverage makes these beta values fluctuate a little bit less from the sample beta mean.

We might note that equity beta values of 2 firms in this material category are the lowest compared to those of firms in the rest two (2) groups. Among three (3) industries, the systemic risk of medical equipment group companies is a bit lower than those of the rest two groups.

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Besides, the estimated equity beta mean is 0,096 and sample variance is 0,0102, which is not supporting our 2nd research hypothesis or issue that there would be a large disperse distribution in beta values estimated in this industry as well as our 3rd research hypothesis or issue that the mean of equity and asset beta values of these listed companies tend to impose a high risk level or beta should higher than (>) 1.

Table 3 : Estimating beta results for Viet Nam Listed Medical Equipment Companies (as of Dec 2012)

Order No.	Company stock code	Equity beta	Asset beta (assume debt beta = 0)	Note	Financial leverage
1	DNM	0,168	0,056	APC as comparable	66,6%
2	JVC	0,025	0,003	DNM as comparable	88,5%
Note : Raw data, not adjusted.					

(Source : Viet Nam stock exchange data)

Table 4 : Statistical results for Vietnam listed Material companies

Statistic results	Equity beta	Asset beta (assume debt beta = 0)	Difference
MAX	0,168	0,056	0,1118
MIN	0,025	0,003	0,0220
MEAN	0,096	0,029	0,0669
VAR	0,0102	0,0014	0,0088
Note: Sample size : 2			

b) Medicine Listed Companies Group

Because of the necessity in a developing economy, the market for medicine firms is definitely established and potential although it may be affected by impacts from the financial crisis.

The Table 5 below shows us the equity and asset beta mean of 8 listed medicine companies, with values of 0,682 and 0,414, accordingly. This result means the risk is low and acceptable although the equity/asset beta values are the highest among 3 groups. This partly, maintains the public confidence of business operation of the whole industry and partly, indicates the good effect from using financial leverage.

Besides, the variance of beta values among these 8 firms is normal, from 0,7144 to 0,1389 for equity and asset beta, accordingly, whereas there are only one special case with beta higher than (>) 2.

Please refer to table 5 and 6 for more information.

Table 5 : Estimating beta results for Viet Nam Listed Medicine Companies (as of Dec 2012)

Order No.	Company stock code	Equity beta	Asset beta (assume debt beta = 0)	Note	Financial leverage
1	AMV	1,191	1,075		9,7%
2	APC	0,419	0,383	DLV as comparable	8,6%
3	DBM	2,091	0,765	PGT as comparable	63,4%
4	DBT	0,661	0,192	PGT as comparable	70,9%
5	DCL	0,840	0,374	PGT as comparable	55,4%
6	DDN	-0,946	-0,163		82,8%
7	DHG	0,592	0,432		27,2%
8	DHT	0,610	0,251		58,8%

(Source : Viet Nam stock exchange data).

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Table 6 : Statistical results for Vietnam listed Medicine companies

Statistic results	Equity beta	Asset beta (assume debt beta = 0)	Difference
MAX	2,091	1,075	1,0153
MIN	-0,946	-0,163	-0,7831
MEAN	0,682	0,414	0,2685
VAR	0,7144	0,1389	0,5756
Note: Sample size : 8			

c) Human Resource Listed Companies Group

Among 3 groups, this is the group with the 2nd smallest number of listed firms (sample size = 4) and with the 2nd lowest values of equity and asset beta mean and equity beta var of about 0, 47, 0, 28 and 0, 61 accordingly. However, the asset beta var of about 0, 2214 is the highest among 3 industries. The using of leverage has influenced these firms' risk exposure a bit less than the medicine industry.

Different from firms in the medicine industries, 4 listed human resource firms has lower equity and asset beta mean and equity beta var values, estimated at 0,469 and 0,278 and 0,6075, which implies there is a more concentration in market risks among firms in this industry. The equity and asset beta values are distributed in a smaller range, from -0,199 to 1,502, and from -0,058 to 0,958 which are acceptable, esp., asset beta values are quite low, indicating the effectiveness of using financial leverage.

Please refer to Exhibit 2 for more information.

Table 7 : Statistical results for Vietnam listed Human Resource companies

Statistic results	Equity beta	Asset beta (assume debt beta = 0)	Difference
MAX	1,502	0,958	0,5436
MIN	-0,199	-0,058	-0,1412
MEAN	0,469	0,278	0,1914
VAR	0,6075	0,2214	0,3861
Note: Sample size : 4			

d) Comparison Among 3 Groups of Medical Equipment, Medicine and Human Resource Companies

The below chart 1 shows us among the 3 groups, equity beta and asset beta values of the medical group are the lowest (0,1 and 0,3 accordingly) while those of the medicine group are the highest (0,68 and 0,71 accordingly). Assuming debt beta is 0, financial leverage has helped many listed firms in these industries lower the un-diversifiable risk.

Furthermore, we see the equity and asset beta mean values of all 3 groups have gaps but acceptable. Therefore, it also rejects our 3rd hypothesis that the mean values of equity/asset beta of all 3 groups impose higher risks.

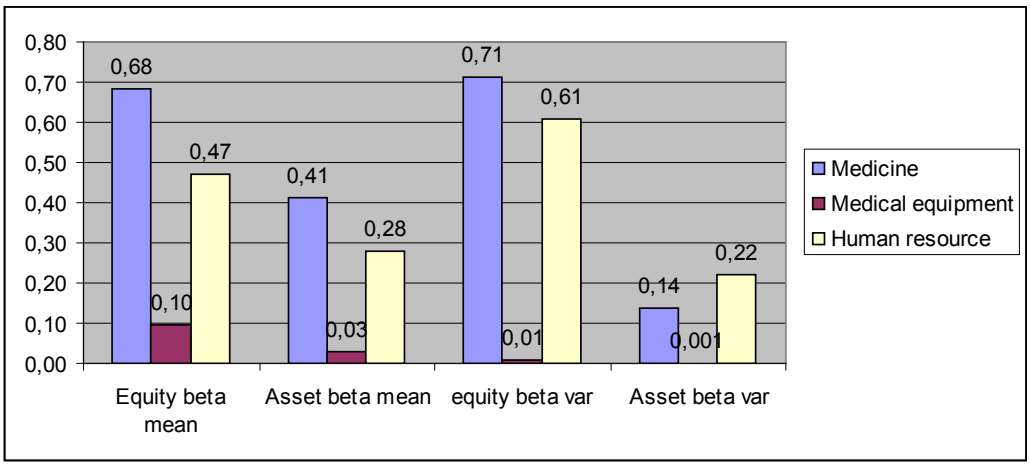
Next, we can recognize from the chart that, the risk in the medicine industries higher than those in the other 2 industries. So, it rejects our 1st hypothesis.

Last but not least, from the calculated results, variance values of asset /equity beta in the medical equipment group are lowest. In number, equity beta var is from 0,01 - 0,71 and asset beta var is from 0,001-0,22 which is not big. This also rejects our 2nd hypothesis.

Finally, if we compare beta values of three (3) above industries to those of computer and electrical group companies, we see the asset beta mean values in the medical equipment, medicine and human resource industries are a little bit lower (see exhibit 4).

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Chart 1 : Statistical results of three (3) groups of 14 listed VN medical equipment, medicine and human resource firms during/after the crisis period 2007-2011



VIII. Risk Analysis

The crisis seems having no effects on medical industry because of population growth. Firms in the industry have to face risks from competition as there are more and more similar provided services and products for consumers and patients. These risks can affect the performance and net cash flow of these companies. And prices of medical material and public utilities could increase over years. However, the medical services are vital for most of people despite of increasing medical service prices. And the medical policies are also good in term of building more hospitals and providing more high quality medical services.

IX. Conclusion and Policy Suggestion

a) Medical Equipment Industry

Even though beta mean values are fine, this is the industry which has both the lowest equity/asset beta mean values and the lowest asset /equity beta var (see chart 1). During the crisis, this industry has lower market risk and beta values of firms in the group are less fluctuated.

After difficulties in the crisis (see exhibit 1), financial services industries, the government and central banks have certain efforts and policies to support businesses and internal investors, and stabilize inflation.

b) Medicine Industry

Generally speaking, this is the industry which has the highest values of equity/asset beta mean and equity beta varies, among 3 groups (0, 68, 0, 41 and 0, 71). The using of financial leverage can be a reason to reduce market risk. The market is well established.

c) Human Resource Industry

Through our comparative analysis on asset beta values, this is the industry which has the lower market risk exposure than that of the medicine industry when we consider values of asset beta var. Also the beta variance shows a small dispersion and smaller than, esp., medicine firms, under leverage impacts.

In general, our empirical findings state that they are not in favor of our 1st and 2nd and 3rd hypotheses or research issues.

In short, although Viet Nam is an emerging market with imperfect financial system, the beta values estimated are at acceptable level with 57% firms in the research sample while just a few companies' beta values are risky (about 21% firms).

Additionally, it indicates the higher the using of financial leverage, the lower the beta values. In reality, there are 57% of VN medical equipment, medicine and human resource firms (8 among 14 firms) which has 0< equity beta<1 and 71% of total firms (10 among 14 firms) with 0<asset beta < 1 in this research sample. If used effectively, using leverage can be good for risk management.

Moreover, comparing these data and values to those of construction and real estate firms, and to those of computer and electrical companies in our previous research (see exhibit 3 and 4), the research results show that in here, the asset beta mean can be a little bit lower while the impacts from the crisis happens on the overall market. So, the leverage becomes more meaningful and the crisis might have less influence on the firms in the above research.

Finally, this paper suggests implications for further research and policy suggestion for the Viet Nam government and relevant organizations, economists and investors from current market conditions.

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Exhibit

Exhibit 1 : Interest rates, Inflation, GDP growth and macroeconomics factors

Year	Basic rates	Lending rates	Deposit rates	Inflation	GDP	USD/VND rate
2012	n/a	12% - 15%	9%	6,81%	5,03%	20.828
2011	9%	18%-22%	13%-14%	18%	5,89%	20.670
2010	8%-9%	19%-20%	13%-14%	11,75% (Estimated at Dec 2010)	6,5% (expected)	19.495
2009	7%	9%-12%	9%-10%	6,88%	5,2%	17.000
2008	8,75%-14%	19%-21%	15%-16,5%	22%	6,23%	17.700
2007	8,25%	12%-15%	9%-11%	12,63%	8,44%	16.132
2006	8,25%			6,6%	8,17%	
2005	7,8%			8,4%		
Note	Approximately (2007: required reserves ratio at SBV is changed from 5% to 10%) (2009: special supporting interest rate is 4%)					

Exhibit 2 : Estimating beta results for Viet Nam Listed Human Resource Companies (as of Dec 2012)

Order No.	Company stock code	Equity beta	Asset beta (assume debt beta = 0)	Note	Financial leverage
1	CMS	-0,063	-0,016	VCM as comparable	74,4%
2	ILC	0,635	0,226	SDA as comparable	64,5%
3	SDA	1,502	0,958		36,2%
4	VCM	-0,199	-0,058		71,1%

(Source: Viet Nam stock exchange data).

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Exhibit 3 : Statistical results of four (4) groups of 64 listed VN computer and electrical firms during/after the crisis period 2007-2011

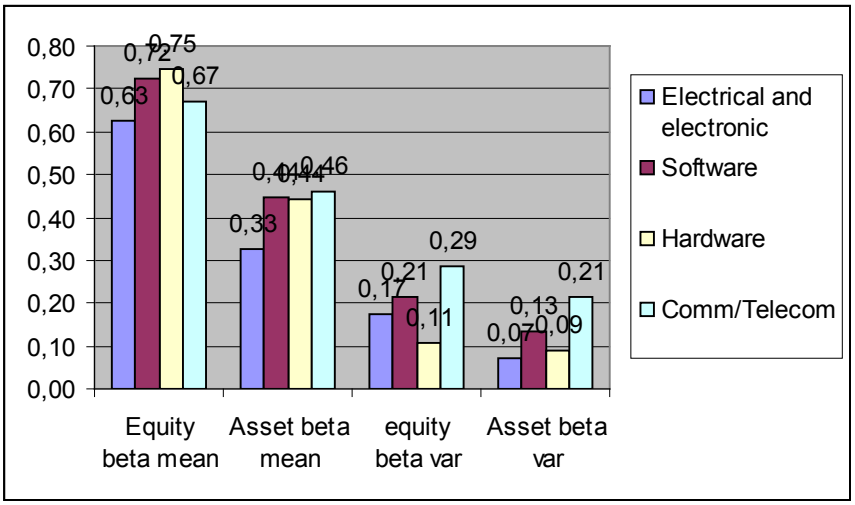


Exhibit 4 : Statistical results of three (3) groups of 103 listed construction firms during crisis period

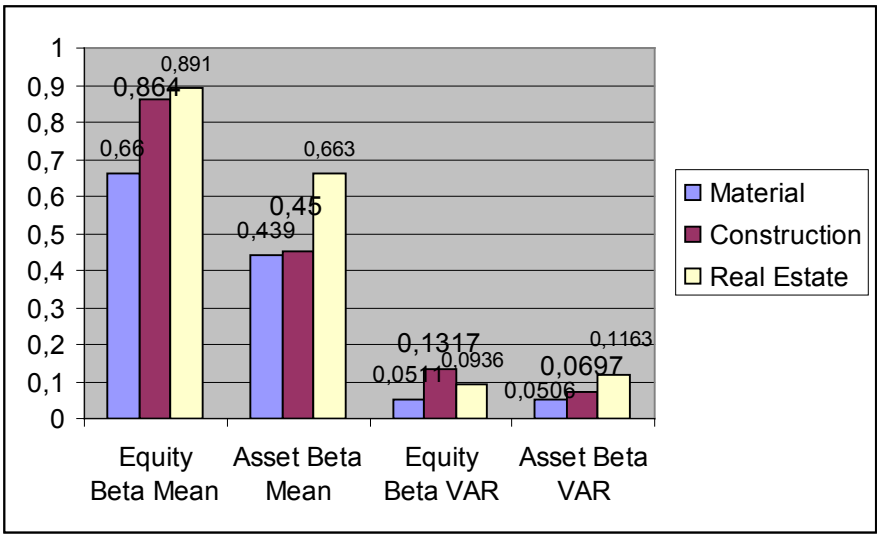
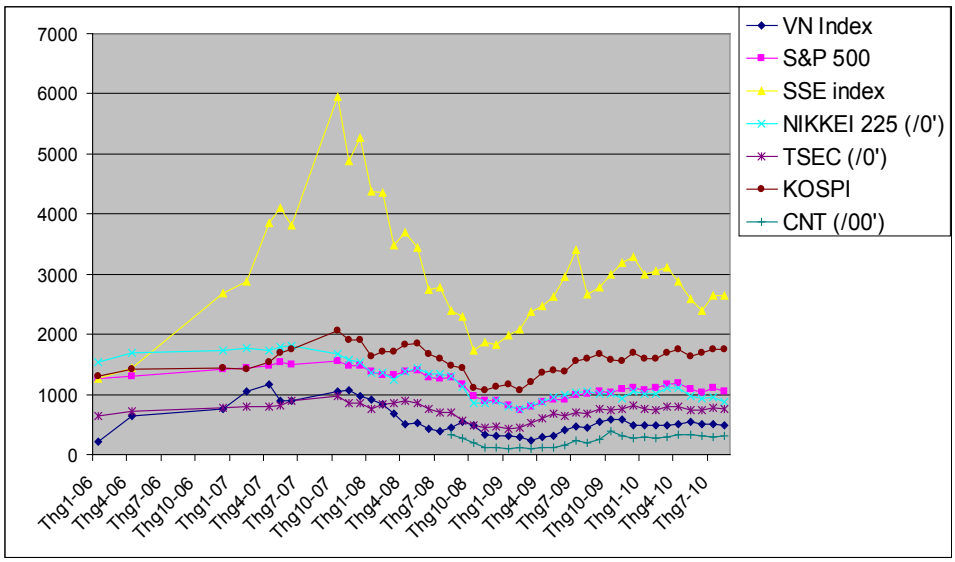


Exhibit 5 : VNI Index and other stock market index during crisis 2006-2010



Author note: My sincere thanks are for the editorial office and Lecturers/Doctors at Banking University.

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Barrons Best CEOs: How Did their Firms Fare?

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Abstract - The Barron's World's Best CEO list has been published each year since 2005. While there are numerous studies concerning the post-announcement share price reaction to firms included on the list, this is a definitive study that looks at the issue of CEO replacement following the announcement of the CEO to the list. This study determines that firms that do not change CEOs perform better; firms with CEOs with shorter tenures have lower returns than those with CEOs with a longer tenure; the reason for the replacement matters in terms of future performance with negative reasons such as performance and mergers yielding lower returns; inside successors produce higher returns than outside successors; and CEOs who appear on the list five or more times show significantly higher results.

Keywords : *barron's, firm performance, event analysis.*

GJMBR-C Classification : *JEL Code: G32, H32*



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Barrons Best CEOs: How Did their Firms Fare?

Greg Filbeck [α], Diane H. Parente [σ] & Xin Zhao [ρ]

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Keywords : barron's, firm performance, event analysis.

I. Introduction

The Barron's World's Best CEO list has been published each year since 2005. While there are numerous studies concerning the post-announcement share price reaction to firms included on the list, this is a definitive study that looks at the issue of CEO replacement following the announcement of the CEO to the list. This study determines that firms that do not change CEOs perform better; firms with CEOs with shorter tenures have lower returns than those with CEOs with a longer tenure; the reason for the replacement matters in terms of future performance with negative reasons such as performance and mergers yielding lower returns; inside successors produce higher returns than outside successors; and CEOs who appear on the list five or more times show significantly higher results. This is an extension of the Filbeck et al (2012) study.

II. Statement of the Problem

While the event analysis is important and interesting, the question answered by the Filbeck et al study (2012) only considers the announcement effect. However, from a management perspective, we are interested in what happens next. How do the firms perform after the announcement? Do the CEOs stay in place? Is there a difference between those firms in which the CEO stays on or not? What if the CEO is replaced within a short period, is there a difference in the performance vs. a longer term CEO replacement? Does the reason for replacement matter? Does the firm perform better or worse if the new leader is an internal candidate? If a CEO is frequently on the Barron's Best CEO list, does the firm perform better?

III. Research Questions

a) Leadership and Leadership Change

Meindl and Ehrlich in their seminal work on leadership claimed that the concept had taken on a "larger than life" quality (1987, p. 91). They identified, as early as 1987 that an annual rate of 250 scholarly articles appeared annually from 1972-1983. Additionally, they reported that Fortune highlighted the U.S. Business Hall of Fame while Forbes and other publications also created lists of excellence. Meindl et al (1985) discussed the Romance of Leadership as a strong belief or faith in the notion of leadership and its influence on the function or dysfunction of an organization.

If a leader being named to the Barron's List is an indicator of a high performing firm, then we might assume that if the firm changes their CEO, that the firm would experience lower performance.

H1. Companies that replace the CEO following appointment to the Barron's List, experience lower returns.

b) CEO Tenure

CEOs with shorter career horizons, as indicated by age, will tend to be more risk averse. This, in turn, will negatively affect firm performance (McClelland, Barker, & Oh, 2012). In a study by Brauer, he discusses the effects of short and long-term management behavior on financial performance (2013). One issue in his study is that CEOs may have different objectives depending on whether they may be in the job for a long or short period. He notes decreasing CEO tenure does not give incentives to the CEO to perform in a manner that is good for the firm. We may conclude that the longer the firm operates with a "good" CEO, the more the benefits accrue to the firm since they should be operating with a longer term perspective.

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H2. Companies that replace the CEO within a short period following appointment to the Barron's List experience lower returns.

c) CEO Replacement Rationale

The critical role of a CEO in innovation performance is confirmed even if the firm experiences the sudden death of that CEO (Bearskin & Hsu, 2013). CEO turnover, when it is a result of an unplanned event, will not necessarily be perceived as negative (Koch & Fenili, 2013). Even tragic circumstances may result in a positive effect and impressions by investors.

CEO compensation is one measure of success. CEOs that have more international diversification, higher accounting earnings performance, and larger firm size among other criteria are considered successful (Wang, Venezia, & Lou, 2013). One would presume that if a CEO was successful in those terms that they would not be replaced. Further, the success should continue. However, if the CEO is replaced due to poor performance, then it is likely the poor performance will continue.

H3 Companies that replace the CEO for perceived negative reasons experience lower returns than those who were replaced for non-negative reasons.

d) Internal vs. External Successors

Mobbs and Raheja conducted a study that compares firms that use successor-incentive (single executive) and tournament-incentive among inside managers (2012). Successor-incentives are more likely in firms where human capital is more important and where external CEO replacement is limited. These firms have lower CEO turnover sensitivity due to firm performance.

In another study, Bereskin and Hsu (2013) determined that new internal successors have more innovation than new external CEOs. They also found that innovation quantity and quality are positively associated with option compensation. Finally, innovation performance was identified as a critical role of CEOs. Therefore, we hypothesize that:

H4 Companies that replace the CEO who was named to the Barron's List with an internal successor will experience higher returns than those who replace the CEO with an external successor.

e) Repeated Recognition

Barron's author, Andrew Bary, in a cover article for the magazine stated that there was a higher bar for keeping people on the list (Barry, 2013). Thus, the more times a CEO appears on the list, the more likely it is that the firm will have higher performance.

H5 If a CEO is named to the Barron's List multiple times, the firm will experience higher returns than those firms who are CEOs were named fewer times.

IV. Sample and Methodology

a) Sample

We use Barron's annual "World's Best CEOs" listing as the basis for this study. Barron's annual "World's Best CEOs" was first published in the March 27, 2005 issue. Barron's made the selection of the top 30 leaders based on a number of criteria including earnings growth, stock performance, leadership strength and industry stature, competitive challenges faced in their respective businesses, and job tenure of at least three years. The criteria for the Barron's list like many others are subjective. Barron's notes that the criteria used exhibit a bias toward firms with good earnings growth and stock market performance toward long-standing CEOs. The initial survey featured 22 US-based and 8 foreign firms, with the subsequent surveys in 2006 and 2007 containing 20 US-based and 10 foreign firms (Filbeck et al., 2012).

b) Data Collection and Analysis

To test how these best CEOs perform after being listed in Barron's list and whether the performance after the announcement leads to future CEO replacement, we search the news from Lexis/Nexis on these CEOs until the end of 2012. If the CEO was replaced before the end of 2012, we also search the reason for the replacement (illness/death, poor performance, voluntary resignation, merger/acquisition), and whether the successor is from inside or outside the company. Then, for each stock in our Barron's list, we calculate the average monthly returns for the stock starting from the announcement month of Barron's list until the month the CEO was replaced. If the CEO remains in place until the end of 2012, we calculate the average monthly returns for the stock starting until the end of 2012.

There were 146 different firms in the Barron's list from 2005 – 2012. Of these, 78 (53%) changed their CEO during the post-announcement period until 2012. We were not able to discern the reason for the change and whether the successor was internal or external in five of those CEO changes. The sample is described in Table 1.

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Table 1 : Sample Description

	Number of Firms	%
Total Sample	146	100
Change in CEO	78	53
No Change in CEO	68	47
# of years until CEO Change		
<1	7	9.0
1	16	20.5
2	20	25.6
3	17	21.8
4	8	10.3
5	4	5.1
6	3	3.8
7	3	3.8
Change in CEO Rationale		
Illness/death	6	8.2
Voluntary resignation	30	41.1
Poor Performance	30	41.1
Merger/acquisition	7	9.6
Internal vs. External Successor		
Internal	53	72.6
External	20	27.4
# Years on Barron's List		
1	23	15.8
2	31	21.2
3	31	21.2
4	32	21.9
5	5	3.4
6	24	16.4

We performed a t-test using the average monthly returns from announcement date for each of the categories in Table 2. The level of statistical significance of the difference between the announcement date and the occurrence noted in the leftmost column and the direction is shown in the column entitled t-stat. The average monthly returns are shown in the middle column.

We also calculated several regression models to support or disprove our hypotheses. These are shown in Table 3.

Table 2 : Results for Announcement to Change or End of Period

	Number of firms	Average monthly returns (%)	t-stat
H1. Change of CEOs vs. No change of CEOs			
Change of CEOs	78	0.369	1.22
No change of CEOs	68	0.890	9.04***
H2. Number of years until change of CEOs			
< 1 year	7	1.525	1.54
1 year	16	-0.244	-0.24
2 years	20	-0.081	-0.13
3 years	17	0.238	0.56
4 years	8	0.861	1.49

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5 years	4	1.507	1.98
6 years	3	1.673	1.89
7 years	3	0.562	1.93
H3. Different reasons for change of CEOs			
Illness/death	6	3.737	12.10***
Poor performance	30	0.136	0.27
Voluntary resignation	30	0.641	3.14***
Merger/acquisition	7	-2.639	-1.40
H4. Inside or outside successor			
Inside successor	53	1.240	4.62***
Outside successor	20	-1.922	-2.61**
H5. Number of years listed in Barron's list			
1 year	23	0.750	1.99*
2 years	31	0.874	5.89***
3 years	31	-1.201	-2.25**
4 years	32	0.802	5.09***
5 years	5	3.236	4.12***
6 years	24	1.682	6.12***

***, **, * indicate statistical significance at 0.01, 0.05 and 0.10 level, respectively.

Table 2 reports post -announcement CEO changes and average monthly returns. We calculate the monthly returns starting from the announcement month of Barron's list until the month the CEO is replaced (or until the end of 2012 if there is no change of CEO).

V. Results and Discussion

Each of the hypotheses are restated and discussed in this section.

a) Leadership and Leadership Change

H1. Companies that replace the CEO following appointment to the Barron's List, experience lower returns.

As shown in Table 2, firms that experienced a change of CEO had average monthly returns of 0.369% while those that had no change of CEO had average monthly returns of 0.890%. If a leader being named to the Barron's List is a measure of a high performing firm, then a leader who is not on the list would be in a firm with lower performance. The t-stat of the firms with a change of CEO is 1.22 which is not statistically different from announcement to change. Also firms that had no CEO change from the initial announcement to end of the study had statistically higher returns (t=9.04***).

We could assume that once a CEO is announced to the list, that s/he is doing a good job. If performance is good enough to be placed on the list, we would then presume that they would not be replaced by a new CEO.

Therefore, H1 is supported.

b) CEO Tenure

H2. Companies that replace the CEO within a short period following appointment to the Barron's List experience lower returns.

Table 2 shows that in general companies with CEOs replaced within 2 years have lower average returns compared with companies with CEOs replaced after more than 4 years. We may presume that the longer the firm operates with a "good" CEO, the more the benefits accrue to the firm.

Therefore, H2 is supported. Companies who replace CEOs within 2 years have lower returns than those who replaced CEOs after more than 4 years.

c) CEO Replacement Rationale

H3 Companies that replace the CEO for perceived negative reasons experience lower returns than those who were replaced for non-negative reasons.

Given the sample size for various reasons for replacement, by inspection, we grouped illness/death with voluntary resignations and then poor performance with merger/acquisition. The rationale is that firms often will engage in mergers or acquisitions due to less than ideal financial performance or inadequate strategic alignment. Firms whose CEO either resigns voluntarily or due to illness or death are more likely to be performing better. Table 2 shows that if a company replaces its CEO due to performance or merger-/acquisitions, on average, the company will experience lower monthly returns (0.14% and -2.64%, respectively). Further, Table 3 illustrates the regression models developed for these hypotheses. Acquisition ($p<.01$) and performance ($p<.001$) both have negative and significant coefficients which means that these reasons for CEO change lead to lower performance.

Therefore, H3 is supported. Companies who replace the CEO for poor performance or merger and acquisition, both of which may be perceived as negative

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reasons, experience lower returns than firms whose CEO is replaced for non-negative reasons.

d) Internal vs. External Successors

H4 Companies that replace the CEO who was named to the Barron's List with an internal successor will experience higher returns than those who replace the CEO with an external successor.

As shown in Table 3, replacement with an inside successor (Model I) has a significant ($p<.001$) and positive coefficient of 0.986. The firms with an internal successor thus have higher returns than those with an external successor.

Therefore, H4 is supported. Companies with CEOs replaced by internal successors produce statistically higher returns than those companies with CEOs replaced by external successors.

e) Repeated Recognition

H5 If a CEO is named to the Barron's List multiple times; the firm will experience higher returns.

According to Barron's, the requirements for remaining on the list are much higher than the requirements for initial recognition. Table 3 shows that the number of times that a CEO is listed is a significant and positive contributor to firm performance. ($\beta=.249$; $p<.05$) Table 2 also shows that the number of years significantly impacts the monthly returns and the direction and magnitude changes at the five-year mark.

Therefore, H5 is supported. Firms whose CEOs appear on the list more than five times experience higher returns.

Table 3 : Post-Announcement Regression

	Model I	Model II	Model III	Model IV	Model V	Model VI
Intercept	0.254	1.014	0.850	0.850	-0.197	0.550
	(1.23)	(6.41***)	(4.09***)	(4.02***)	(-0.53)	(1.47)
Inside successor	0.986		0.390			2.520
	(2.88***)		(1.22)			(4.40***)
Outside successor		-2.936	-2.772			
		(-6.87***)	(-6.19***)			
Death/Illness				2.887		0.130
				(3.76***)		(0.14)
Performance				-0.714		-2.260
				(-1.82*)		(-4.33***)
Resignation				-0.208		-2.514
				(-0.53)		(-3.84***)
Acquisition				-3.489		-3.509
				(-4.88***)		(-5.23***)
Nlistings					0.249	0.090
					(2.42**)	(0.95)

***, **, * indicate statistical significance at 0.01, 0.05 and 0.10 level, respectively.

Table 3 reports the regression results of post-announcement average monthly returns on CEO changes. We calculate the monthly returns as the average monthly returns starting from the announcement month of Barron's list until the month the CEO is replaced (or until the end of 2012 if there is no change of CEO). Inside successor (outside successor) is a dummy variable which is equal to 1 if the company's successor is from inside (outside) the company when it replaces its CEO, and equal to 0 otherwise; Death/Illness, Performance, Resignation, Acquisition are all dummy variables which are equal to 1 if the company replaces its CEO because of death/illness, poor performance, voluntary resignation, and merger/acquisitions reason, respectively. Nlistings is number of years this company is in Barron's list before the end of 2012.

VI. Conclusion

Since 2005, Barron's has published its "World's Best CEOs" list. This study is the first to investigate the impact of CEO replacement following inclusion on the list. This study determines that firms produce higher returns if a selected CEO remains in place. In addition, higher returns are experienced with CEOs who have longer tenures than those with shorter tenures. Differential responses exist based on the announced rationale for the CEO replacement as those firms offering performance-based reasons or reasons associated with mergers/acquisitions experience lower returns. Those firms who promote a CEO based on inside succession outperform firms that select an outside successor. Finally, longevity matters as CEOs who appear on the list five or more times show significantly higher results than those firms whose CEOs do not attain that status.

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Skill Levels in Risk Management: Trainiing in Credit Risk - A Comparitive Study of Indian Banks and Foreign Banks

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Abstract - Risk management is a cornerstone of prudent Banking practice. Undoubtedly all Banks in the present-day volatile environment are facing a large number of risks such as credit risk, liquidity risk, foreign exchange risk, market risk and interest rate risk, among others – risks which may threaten a Bank's survival and success. Banking is a business of risk. For this reason, efficient Risk Management is absolutely required. With a view to strengthen the Risk Management in the Banks across the Globe, Basel Frameworks have made concerted efforts to address all the issues relating to Financial Risks like Credit, Market Risk and Operational Risk and some other non-Financial Risks as well. The impact of the non-Financial Risks is all pervasive and can be severe enough that they can lead to total collapse of the Banks. This research paper briefs about the training inputs of the Banking personnel in the Credit Risk in the select sample Banks.

Keywords : *risk management, bank, banking, basel, credit risk, risk managers.*

GJMBR-C Classification : *JEL Code: G21, H81, G32*



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Keywords : risk management, bank, banking, basel, credit risk, risk managers.

I. Introduction

Risk is all pervasive and is prevalent in every activity, be it a manufacturing or trading or service related. Human beings always attempt to manage the Risks faced by them in their day-to-day activities of life. Keeping inflammable material away from fire, saving for possible future needs, creation of a legal protection etc. are some of the attempts at managing the Risks.

Managing Risk is nothing but managing the Risk before the Risk manages. Every Industry strives to arrest the Risks with a view to minimize its losses and make optimum revenue. Banking Industry, primarily dealing with financial services can be no exception and thus encounters with many related Risks. It is imperative that Banks have to identify and measure various Risks faced by them and initiate suitable remedial measures to mitigate them.

In the recent past Financial Institutions have faced serious Banking issues that are caused by the relaxation of credit standards to the borrowers and counterparties, unable to manage or mitigate risk in a portfolio, unable to cope up with the dynamic economic requirements or any other situation that leads to the deterioration in the credit standing of a counter party. Thus, Credit Risk Management should be a robust mechanism which enables Banks and Financial Institutions to actively manage their portfolios in order to minimize losses and earn a return over and above expected average return.

Credit Risk Management is a structured approach to managing uncertainties through risk assessment, developing strategies to manage it and mitigation of risk using managerial resources (Nnanna, 2004). The objective of risk management is to reduce the effects of different kinds of risks.

a) Statement of the Problem

The very nature of the Banking business is so sensitive because more than 85% of their liability is deposits from depositors (Saunders, Cornett, 2005). Banks use deposits to generate credit for their borrowers, which is in fact a revenue generating activity for most of the Banks. The aforesaid credit creation process exposes the Banks to high default risk which might lead to financial distress including Bankruptcy. Another issue is the customer's defaulting during their credit repayment which in turn causes a great deal of reduction in the Bank's revenue generating capacity, thereby leading the Banks to reduce the amount of credit grants to their prospective loan applicants. To generate earnings, to grow and to survive the tough competition, the Bank has to create the demand for credit in their existing clients as well as the new ones.

b) Objectives of the Study

The main objective of the study is to examine the credit risk management on the performance of

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banks in India. More specifically, the study aimed at achieving the following objectives:

1. To understand the impact of training in credit risk management of the Banking personnel in the select sample Banks.
2. To analyze whether the Operating personnel are adequately trained on Credit Risk across different types of Banks.
3. To suggest best measures for effective training on credit risk.

c) Research Hypotheses

Ho : There is no significant difference in the trainings received on Credit Risk across different Types of Banks.

d) Significance of the Study

The study enables the Banker to understand the importance of their lending and control mechanism given the fact that the Banks are expected to lend under stiff monetary conditions and economic regulations. This study further attempt to assist the credit risk managers and regulatory bodies in ensuring to create a safe and hassle-free Banking environment thereby enhancing the country's economy which is dependent on the performance of various Banks and financial institutions operating in the economy.

e) Scope of the Study

The study is limited to only the Indian Banks and Foreign Banks operating in India and covers a period of ten (10) years from 2002-2013. A structured questionnaire has been designed and administered to the Operating Personnel handling Risk Management in the select sample Banks.

II. Literature Review

There have been a large number of conceptual frameworks published about Risk Management in general. However, the number of the empirical studies on Risk Management strategies and practices with particular reference to Credit Risk Management in Banks and Financial Institutions was found to be relatively very small.

a) Credit Risk

As stated by Reserve Bank of India (RBI, 2005), Credit Risk is the major component of Risk Management system and this should receive special attention of the Top Management of a Bank. Credit Risk is considered as the major risk inherent in a Bank's banking activities.

Any mismanaging of this risk may lead a Bank into great trouble or even Bankruptcy, which is evident from various Bank failure scenarios. Managing Credit Risk in Banks is a herculean task as robust Risk Management strategies and practices are needed for identifying, measuring, controlling and minimizing the impact of Credit Risk.

Culp and Naves (1998) have considered default risk and resale risk to be the two types of credit risk. Harsher (2005) views that there are six types of Credit Risk, including default risk, counterparty pre-settlement risk, counterparty settlement risk, legal risk, country or sovereign risk and concentration risk.

b) Factors Responsible for Credit Risk

According to Taxman, (2006) the factors that cause Credit Risk which in turn has an adverse impact of the Bank's credit standards and Bank's profitability are: Discrepancies occurring during the loan proposal appraisal, inconsistency during the assessment of financial stability of borrowers or counter-party to gauge their creditworthiness, lacking clarity in lending policies and procedures, following liberal standards during the sanction of loan, no sufficient background check being done on the borrowers or counter-party, insufficient value of the collaterals pledged to the Banks to obtain the loan facilities, high exposure limits sanctioned for individuals at par with the business community, insufficient knowledge and skills of the Operating Personnel during the process of loan proposals, insufficient knowledge on the current market scenario and economy's performance, no proper coordination between the different department in the Bank which are in-charge of the activities relating to Credit Risk, organization structure with respect to responsibility and authority have not been clearly defined, no good system to rate Credit Risk and no reliable data is available to manage Credit Risk.

c) Credit Risk Management Strategies

Banks should strive towards having a robust credit policy manual that should be updated on a timely basis to meet the dynamic nature of business. Apart from that Banks should establish an appropriate environment, streamline a sound credit granting process, manage and maintain appropriate credit identification, credit measurement and credit monitoring process thereby ensuring adequate control over the Credit Risk.

d) Risk Based Audit System

RBI has advised Banks to adopt a risk-based internal audit system so as to ensure an effective Credit Risk Management control systems that ensure Banks to achieve high quality standards and also adhere to all the regulatory compliances. To ensure an efficient risk-based credit audit, Banks have to formulate an risk based audit policy, a proper set-up needs to be established which clearly demarcates the roles and responsibilities of the Operating Personnel handling Credit Risk areas, strong internal communication across the various departments in the Bank which facilitate the operating personnel and management to have control over the happenings in the Bank.

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e) Measuring Credit Risk

i. Probability of default (PD): Probability of default refers to the probability/risk/chance of a borrower defaulting on the payment of the credit obligations.
ii. Exposure at Default (EAD): Exposure at Default refers to the amount that is exposed to the default risk.
iii. Loss Given Default (LGD): Loss Given Default refers to the loss suffered in the event of a default of an exposure.

f) Managing Credit Risk

Credit Risk can be measured using structural models like Merton model or using Ratings-based model or using Actuarial Models or using Macro-economic Models or using Credit Risk Models.

g) Credit Risk Models

Saunders and Cornett (2007) stated that credit scoring models use data on observed borrower characteristics either to calculate the probability of default or to borrowers into different default risk classes. The most prominent credit scoring models is the Altman's Z-Score model.

Altman's Z-Score: The Z-score formula for predicting Bankruptcy of Dr. Edward Altman (1968) is a multivariate formula for measurement of the financial health of a company and a powerful diagnostic tool that forecast the probability of a company entering Bankruptcy within a two year period with a proven accuracy of 75-80%.

The Altman's credit scoring model takes the following form:

$$Z = 1.2X21 + 1.4X2 + 3.3X3 + 0.6X4 + 1.0X5 \quad (1)$$

Where, X1 = Working capital/ Total assets ratio,

X2 = Retained earnings/ Total assets ratio,

X3 = Earnings before interest and taxes/ Total assets ratio,

X4 = Market value of equity/ Book value of long term debt ratio and

X5 = Sales/ Total assets ratio.

The higher the value of Z, the lower the borrower's default risk classification. According to Altman's credit scoring model, any firm with a Z-Score less than 1.81 should be considered a high default risk, between 1.81-2.99 an indeterminate default risk, and greater than 2.99 a low default risk.

Because of the above factors depicted in the literature review it is essential that all the risk managers should be trained on Credit Risk.

III. Methodology

The research work employed is an experimental design. Primary data has been collected through a survey method using a structured questionnaire which was administered to the Operating Personnel working in the Risk Management capacity in general and Credit Risk in particular. Interview method was also used for the study. Secondary data sources like annual reports, annual accounts, bank's prospectus, Central Bank's (RBI's) guidelines and BIS (Bank for International Settlements) guidelines have been used as references. The population size is around 1500 (One Thousand Five Hundred) and the sample size is 360 (Three Hundred and Sixty). The sampling unit was mainly the Operating Personnel in the capacity of Credit Risk Managers, Senior Credit Risk Managers and General Managers and above. The sampling technique used was a purposive sampling or judgmental sampling. Three Public Sector Banks, three Private Sector Banks and three Foreign Banks have been chosen. A 5-point Liker Scale has been used to carry out the research work with regard to the frequency of training activities ranging from: 1 being 'not at all', 2 being '1-2 times',3 being '3-4 times',4 being '5-6 times' and 5 being 'more than 6 times'.

IV. Data analysis and Statistical Techniques

Data Analysis:

Frequency Count

		Training on Credit Risk					Total
		Not at all	1-2 times	3-4 times	5-6 times	More than 6 times	
BanK	PSU	13	80	19	2	6	120
	PSB	0	81	39	0	0	120
Type	FB	0	40	67	0	13	120
Total		13	201	125	2	9	360

Note : In the above table of Frequency Count, PSU refers to Public Sector Banks,
PSB = Private Sector Banks and
FB= Foreign Banks.

Chi Square Test

Figure 1 : The above table shows the responses of the sample respondents of the select sample Banks when asked about the "number of times you have been trained in Credit/Risk Management

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Data Analysis:

Chi Square Test

	Value	df	Sig. (2-ided)
Pearson Chi-Square	87.601[a]	8	.000
N of Valid Cases	360		

Figure 2 : a. 6 cells (40.0%) have expected count less than 5. The minimum expected count is .67.

One Way ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	7.021	2	3.510	21.459	.000
Within Groups	58.403	357	.164		
Total	65.424	359			

Figure 3 : Note: In the above table of One Way ANOVA, BG refers to Between Groups and WG= Within Groups

a) Statistical Techniques

1. Cross Tab Analysis is used and Chi Square test is performed between Observed as well as expected frequencies.
2. Nominal Data of the survey is transformed to Scale Data using Optimal Scaling (Categorical Principal Component Analysis) and a One Way ANOVA is also performed on the Transformed Data.

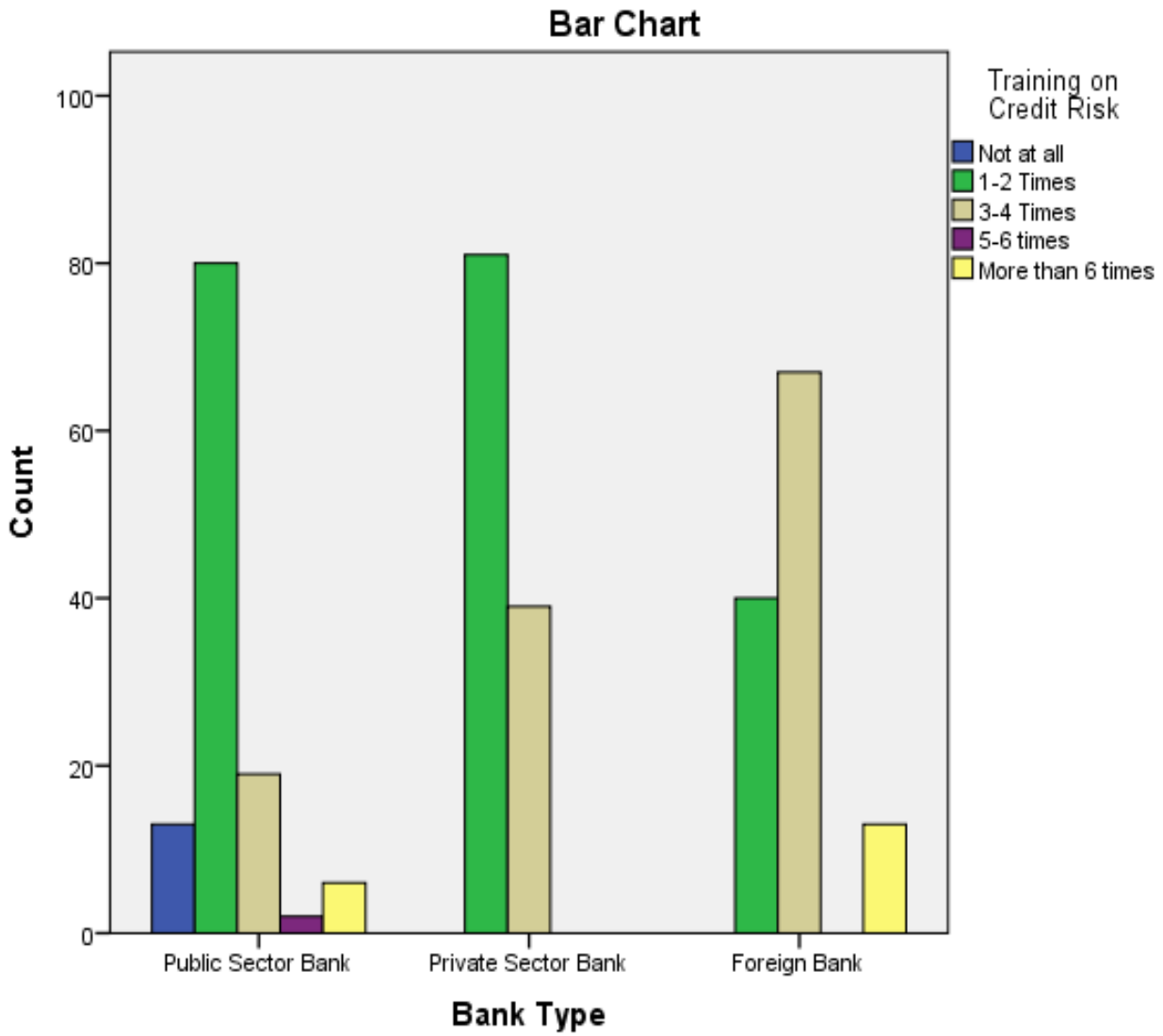


Figure 4 : The above clustered bar chart depicts the frequency of training on credit risk

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V. Conclusions

1. More than 10% of the Operating personnel in Indian Public Sector Banks did not receive training at all on Credit Risk whereas every employee was trained at least once in Indian Private Sector and Foreign Banks.
2. More than 10% of the total Operating Personnel received very frequent trainings on Risk Management in Foreign Banks whereas this was not the case with Indian Public and Private Sector Banks.
3. Majority of the participants have received Training 1-4 times.
4. Chi Square Test value of 87.601 for 8 degrees of freedom clearly indicates the Significance Level (Alpha = 0.000 < 5%) and hence null hypothesis can be rejected at 95% Confidence Level. Hence it can be concluded that "There is a clear difference among different types of Banks with respect to training received on Risk Management".
5. Significance Level from ANOVA Analysis is 0.0 which is less than 5% which also rejects the null hypothesis. Hence using both Cross Tab analysis as well as ANOVA analysis, it can be concluded that there is a significant difference in the training on Credit Risk Management across different types of Banks.
6. Operating Personnel in Indian Public Sector Banks are receiving less training compared to Operating Personnel in Indian Private Sector Banks, whereas, Operating Personnel in Foreign Banks are receiving training on Credit Risk Management more frequently compared to Operating Personnel in Indian Private Banks as well as Public Sector Banks.

VI. Suggestions

1. Policies to measure, monitor and manage Credit Risk have to be reviewed on a timely basis to check whether the policy is inherently consistent.
2. Establishment of credit policies and credit standards that adhere to regulatory requirements and thereby enhancing the Bank's overall profi-tability objectives which further reduce the level of Credit Risk exposure.
3. The Bank should strive to maintain the aggregate Credit Risk to be within the Bank's risk tolerance.
4. Develop a sound Credit Approval Process that ensures definite appraisal of only credit worthy facilities.
5. Granting the decision-making and approval authority only to qualified and experienced Operating Personnel so as to ensure a sound banking environment.
6. Continuously monitoring the Credit Risk training programs across all the Banks to ensure sound Credit Risk Management practices.
7. Continuous assessment of counterparty and portfolio to identify a non-performing asset or a loan.
8. Borrowers should be duly informed of the regulatory procedures involved in obtaining a loan and as well as the penalties in case of a default.

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Effect of Dividend Policy on Share Holder's Wealth: "A Study of Sugar Industry in Pakistan"

By Mohammad Salman Sarwar
University of Gujrat, Pakistan

Abstract - The present paper focuses on the impact of dividend policy on shareholder's wealth in sugar industries of Pakistan. For this study we have selected the sample of 33 listed companies of sugar industry out of 36 at Karachi Stock Exchange from the food and producers sector. The data is collected for the period of 6 years from the year 2006 to 2011. For this study descriptive statistics and multiple regression analysis is used by taking dividend per share (DPS), earnings per share(EPS), Lagged Market Price Ratio (LMPR), Lagged Price Earnings Ratio (LPER) Price Earnings Ratio (PER) Retained Earnings Ratio (RER) as independent variables and market price per share (MPS) as dependent variable. The R2 shows that 99% variations in MPS are due to the explanatory variables. The p value of the f statistic shows that all the regressors have jointly significant relationship with dependent variable (MPS).

Keywords : *dividend policy, shareholder's wealth, dividend per share (DPS), market price per share (MPS), price earnings ratio (PER), pakistan.*

GJMBR-C Classification : *JEL Code: L16, F65*



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I. Introduction

In the modern and complex environment, globalization and privatization have brought deep competition in every field of activity. It is very difficult for the companies to compete in the markets of stunning nature. To cope with this competitiveness and to add value to the companies, today's the finance managers have to make critical financial decisions. These decisions will lead these companies to long-run objective of maximizing the shareholders' wealth. Shareholders' wealth is shown in the market price of the company's common stock.

Management of a company want to maximize shareholders' wealth. This is possible when the price of the company's common stock is maximum. Shareholders like cash dividends and they also like the growth in earning per share that result from investing the earning of business back into it.

The best dividend policy is the one that maximizes the company's stock price which leads to maximization of shareholders' wealth and also ensures more quick economic growth. The present study is aimed to study how far the dividend payout has impact on shareholders' wealth in general and in particular to study that market value of common stock has strong relationship with cash dividend paid or with the growth in earning per share. And to study that how much importance the shareholders give to the lagged market price of a stock when taking decision to buy a stock.

Managements' primary goal is shareholders' wealth maximization and this can be achieved by giving the shareholders payment on their investments. However, the effect of firm's dividend policy on shareholders wealth is still unresolved. Dividend policy is one of the most complex aspects in finance.

Dividend policy is mainly of two types:

a) Managed dividend policy
b) Residual dividend policy

In residual dividend policy the amount of dividend is simply the cash that is left after the firm makes investment decisions. In this case the amount of dividend is usually very variable and it may be zero most of the times. If the manager believes dividend policy is important to their investors and it has positive effect on share price value, they will adopt managed dividend policy. The best dividend policy is one that increases the company's stock price which leads to maximization of shareholders' wealth.

The dividend decisions can donate to the value of firm or not it is a controversial issue. Firms generally take up dividend policies that suit the stage of life cycle they are in. High- growth firms with big cash flows and fewer projects have a propensity to pay more of their earnings out as dividends. The dividend policies of firms may pursue several interesting patterns adding further to the complexity of such decisions. Dividends are dependent on earnings that are, increases in earnings increases the dividend and decreases in earnings sometimes by dividend cuts. Firms are usually hesitant to change dividends. Especially firms avoid cutting dividends even when earnings drop. There are distinct differences in dividend policy over the life cycle of a firm, ensuing from changes in growth rates, cash flows, and plan funds in hand.

a) Statement of the Problem

Net earnings are divided into two parts. One is retained earnings and the other is dividends. The retained earnings of the business may be reinvested in business and used for the growth of the business. The dividend is distributed to the shareholders in order to meet their expectation of being made better off financially. So the problem is to take decision that how much earning should be given in the form of dividend payout and how much earning should be kept as retained earnings. Therefore, the present study mainly analyses how far the level of dividend payout affects the

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shareholders' wealth and how much importance is given to company growth particularly in Cement Industry of Pakistan. It also analyses that lagged market price of share have any relation with shareholders wealth or not.

b) Literature Review

Many researchers have conducted research on this topic and it is the vast area to research on. Linter has conducted research in 1956 about dividend policy and raised questions which are important in this field of study. Linter (1956) what are the choices of management that influence the firm size, shape, and timing of dividend policy? After the Linter's contribution in determining dividend policy decisions Miller and Modigliani (1961) conducted research in dividend policy decisions and presented the theory of dividend irrelevance which showed that the dividend policy does not affect the stock prices.

Many researchers evidenced the dividend irelevance theory through their studies like Black & Scholes (1974), Chen, Firth, & Gao (2002), Adefila, Oladipo & Adeoti (2004), Uddin & Chowdhury (2005), Denis & Osobov (2008) and Adesola & Okwong (2009).

On the other hand many researchers support dividend relevance theory. They said dividend policy do affect the firm's value and market price of the shares. Gordon (1963) presented his view by supporting the dividend relevance theory. Studies conducted by Travlos, Trigeorgis, & Vafeas (2001), Baker, Powell & Veit (2002), Myers & Frank (2004), Dong, Robinson & Veld (2005) and Maditinos, Sevic, Theriou, & Tsinani (2007) support dividend relevance theory.

Gul, et al (2012) investigated relationship between dividend policy & shareholder wealth in Pakistan. For this purpose they used sample of 75 listed companies & data collected from State Bank of Pakistan & Karachi Stock Exchange 100 index for period of 2005 to 2010.Shareholder Wealth dependent variable measured by market price per share & dividend policy independent variable measured by dividend per share & multiple regression & stepwise regression model used in this research for data analysis. The result of this study that significant influence of dividend policy on shareholder wealth as far as dividend paying companies are concerned & also find difference in average market value relative to book value of equity is high between dividend paying companies & non dividend paying companies.

Okafor & Mgbame (2011) conducted a study to analyses dividend policy & share price volatility in Nigeria by taking sample of 4 banks & 2 firms each firm food & beverage, petroleum & brewing sectors. Stock & financial related data of these firms are collected over 8 year period from 1998-2005. Major sources of data collection annual fact book of Nigerian stock exchange. Dependent variable price volatility & independent variable dividend yield, payout ratio, assets growth & earning volatility. The relationship between ordinary stock price volatility & dividend policy has been analyzed utilizing multivariate least square regression. The result of their study show that general effect of dividend yield on price volatility observed at higher significant levels, leads to acceptance of null hypothesis, which states that measure of dividend policy vary inversely with ordinary share price volatility over time.

Azhagaiah & Priya (2008) conducted study on the impact of dividend policy on shareholder wealth in South India. Secondary data used which collected from center for monitoring India economy. Sample of 28 companies in chemical industry has been chosen from 114 listed companies in Bombay stock exchange using multi stage random sampling techniques for period of 1997 to 2006. Multiple regression & stepwise regression model used for data analyzing. Dividend per share, retained earnings per share, lagged price earnings ratio & lagged market price independent variables & market price per share dependent variable. There is a significant impact of dividend policy on shareholder wealth in organic chemical companies while shareholders wealth not influence by dividend payout as for as inorganic chemical companies.

Habib et al, (2012) conducted study dividend policy & share price volatility evidence from Pakistan. To draw & establish relationship between dividend policy & shareholder volatility with focused on Pakistani stock exchange. Dividend yield, payout ratio, size, debt, earning & growth independent variable & share price volatility dependent variable. Cross sectional regression use to analyze relationship of share price with dividend yield & payout ratio. The result of this study show that dividend yield & share price positive relate but payout ratio is negative related.

Hashemijoo et all (2012) conducted the study of dividend policy on share price volatility in stock market of Malaysia. The aim of this study was found that the relationship between dividend policy and share price volatility on consumer product company in Malaysian stock market. They have taken a sample of 84 listed companies from the period of six years in 2005 to 2010. In this study the share price volatility is the dependent variable and dividend yield or payout ratio is the independent variables. Multiple Regression model are used in this study to analyze the results. The results of this study show that the dividend yield or dividend payout has negative effect in share price volatility.

Zulkifli et all (2012) explains that the impact of dividend policy in share price volatility in construction and material companies of Malaysia. The basic purpose of this study to check the relationship between dividend policy and market price of share. The sample of 106 construction and material companies and final select the sample of 77 construction and material companies for the period of six years in 2005 to 2010. Share price volatility as the dependent variable and dividend yield,

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dividend payout ratio, leverage, growth, size and earnings volatility are the independent variables. Least square regression model are used to interpret the results of this study. The result shows that the positive effect on the dividend yields in share price volatility.

Pani (2008) introduced the dividend policy and stock price behavior in corporate sector of India. The aim of this study is to check the relationship between the dividend and stock return volatility. They used the sample of 500 listed companies for the period in 1996 to 2006 and the sample is taken for six different sectors i.e. electricity, food and beverage, non metallic, mining, textile and service sector. Fixed effect model and pooled OLS model are used to elaborate the results. In this study market value of the firm is the dependent variable and the size of the firm, dividend to retained earnings ratio and debt to equity ratio are the independent variable. The study explores that the dividend paying companies are large, profitable and growth rate of the firm does not seems to deter the dividend payment. Net profit and Dividend and Retention Ratio remain significant in other services, textile and mining industries.

Khan (2012) conducted research on the dividend effects on stock prices. The purpose of the study is to improve the dividend policy decisions adopted by the companies. This study helps to explain the effect of dividend policy impacts on shareholders wealth by taking the data from two important sectors chemical and pharmaceutical industry of Pakistan. A data sample of twenty nine companies has been taken from the period 2001 to 2010. Price volatility is taken as dependent variable which is calculated by using Parkinson (1980) method of extreme values while earnings per Share, Profit after Tax and Return on Equity are taken as independent variables. Fixed and random effect models are applied on panel data to conclude the results. The experimental estimation based on the fixed and random effect model shows the significant positive relation between stock dividends, earnings per share and profit after tax to stock market prices while return on equity and retention ratio have negative and statistically insignificant relationship to stock market prices.

Nazir at all (2010) explains the determinants of stock price volatility in Karachi stock exchange. This paper investigates the role of corporate dividend policy in determining stock prices. The sample of 73 firms is taken from the KSE 100 index companies of different sectors from the year 2003 to 2008. The data is collected from the balance sheet analysis published by state bank of Pakistan and annual reports of the companies. Price volatility is taken as dependent variable and dividend yield and payout ratio is taken as independent variables. They used descriptive and correlation matrix to find the results. The results showed that the dividend measures both dividend payout and dividend yield has significant effect on stock price volatility and in overall period the size and leverage has negative and non-significant impact on share price volatility.

Rashid and Rahman (2006) introduced the dividend policy and stock price volatility in the context of Bangladesh. The aim of the study is to investigate the relationship between dividend policy and share price volatility. For this purpose they consider the data for the period of 1999-2006. They selected the sample of 104 non financial firms of different sectors listed in Dhaka stock exchange. Price volatility is taken as dependent variable and dividend payout, dividend yield and earning volatility are independent variables. The authors used descriptive statistics and cross sectional regression analysis to conclude the results. The Pearson's correlation showed that there is negative significant correlation between payout and price volatility.

Profilet and Bacon (2013) conducted the research on dividend policy and stock price volatility in the U.S equity capital market. The purpose of the study is to identify the impact of certain financial variables on the stock price volatility. A sample of 500 publicly traded firms has been taken to explain the results. Price volatility is taken as dependent variable and dividend yield and payout ratio is taken as dependent variable. The ordinary least square multiple regression is used to find the results. Leverage and growth both have negative relationship with stock price volatility and there is positive relationship observed between the payout ratio and the stock price volatility.

Asghar at all (2011) conducted research on effect of dividend policy on stock price risk in Pakistan. The purpose of the study is to check the relationship between dividend policy and stock prices. The data is taken for the five important sectors i.e., chemical, cement, sugar, engineering, synthetic & fiber for the period 2005-2009 from the published resources of state bank of Pakistan and Karachi stock exchange. Price volatility is taken as dependent variable while dividend yield, dividend payout price ratio, earning volatility and growth in assets taken as independent variables. Regression model based on Baskin (1989) documentation was used to conclude the results. The results of this study prescribes that Price volatility has strong positive correlation with dividend yield but PV is highly negatively correlated with growth in assets.

Joshi (2011) examines the impact of dividend on stock prices in Nepal. The aim of the study is to examine the relationship of dividend and the stock prices in the context of Nepal. The data for this study is taken as 210 listed companies taken for the year 2010/11. Out of 210, 163 companies were selected for the study on the basis of accessibility of data which includes 163 from banking and 46 from non-banking sector. In this study the dependent variable is current market stock price and four other variables are taken as independent namely dividend per share, lagged price

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earnings ratio, lagged market price per share and retained earnings per share,. The descriptive statistics and regression analysis is used to conclude the results. The result of this study showed that dividend per share is a motivating factor and has strong effect on market price per share of the banking and non banking firms. It is also analyzed that dividend per share has greater effect on stock prices than retained earnings per share. Finally the study shows that both dividend and retained earnings per share effect stock prices of banking and non banking sector.

Mokaya. S; Nyang'ara. D and James. L (2013) explains how dividend policy effect market share price in banking industry of Kenya. This study covered the sample of 100 respondents represented a population of 47000 general public shareholders questioners were used to collect the data. Market share value is the dependent variable and dividend policy is the independent variable. Descriptive and inferential statistics were used to determine and explain variable's relationships. The study concluded that National Bank of Kenya had a dividend policy and this dividend policy is the major factor driving NBK share value. It has been seen that an increase in dividend payout may result an increase in share price.

Khan. A ; Khan.K (2011) conducted research on dividend payout policy and its effect on stock prices. The purpose of the study is to determine the factors of dividend payout policy that affect the stock prices. The sample in this study is 131 companies listed at Karachi Stock Exchange for a period of 10 years from 2001 to 2010. Panel data approach is used to measure the relation between dividend policy and stock prices. In this study price volatility is taken as dependent variable which is calculated by using Parkinson method of extreme values. Retention ratio, stock dividend per share, earning per share, net profit after tax and return on equity are used as independent variables to study the effect of stock prices. The results of this study showed that the stock dividend, earnings per share, profit after tax, and return on equity has positive effect on stock prices and retention ratio has negative effect on stock prices. Overall it is concluded in this study that dividend policy has significant positive effect on stock prices.

c) Objectives of the Study

- To check the relationship between dividend payout and shareholders wealth.
- To check the effect of Earning per Share on shareholders wealth.
- To estimate the impact of retained earnings and past performance of the company on shareholders wealth.

d) Needs & Significance of Study

It is very important for the corporations to formulate a dividend policy which enhances the value of the business. Due to the globalization and privatization of the firms, they face very difficulties in making the profits. So the financial managers have to take this area very deep and to think about it that how firms compete in such type of modernized framework of businesses.

e) Variables

Based on our problem statement of the study we define the following variables.

i. *Dependent Variable*

Shareholder's wealth is dependent variable which is measured with market price per share.

ii. *Independent Variable*

Dividend policy is taken as independent variable which is measured with the help of six ratios namely price earnings ratio, earnings per share, dividend per share, retained earnings ratio, lagged price earnings ratio, lagged market price ratio.

f) Equation used for Analysis

In this study panel data approach is used to analyze the relationship between dividend policy on shareholder's wealth. Descriptive statistics and multiple regression analysis is used to analyze the results. Following regression model is used to show the relationship between dividend policy and shareholder's wealth.

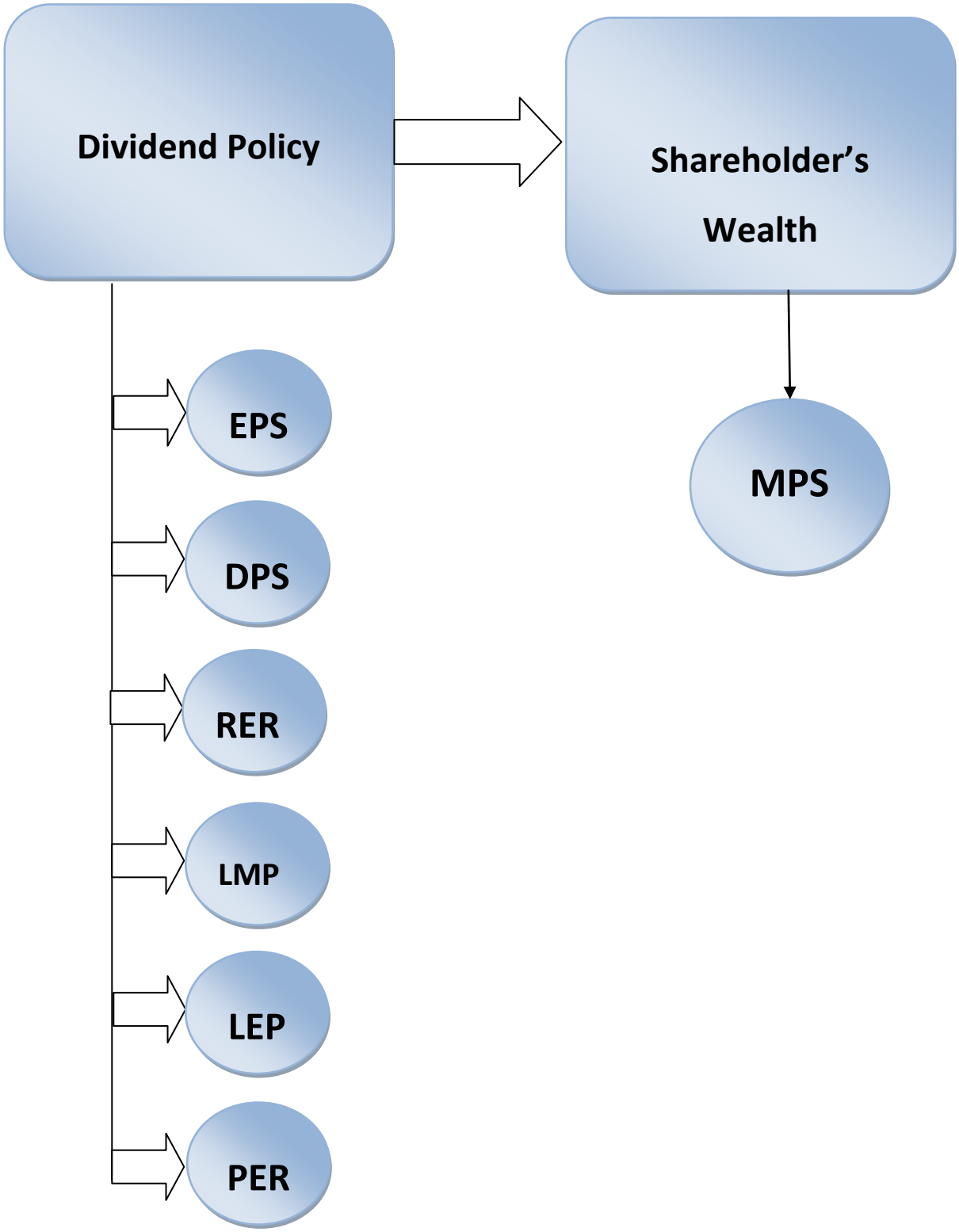
$$\mathbf{MPS = b_0 + b_1DPS + b_2EPS + b_3LMPR + b_4LPER + b_5PER + b_6RER + e}$$

Where

MPS: Market price per Share
DPS: Dividend per Share
EPS: Earnings per Share
LMPR: Lagged Market Price Ratio
LPER: Lagged Price Earnings Ratio
PER: Price Earnings Ratio
RER: Retained Earnings Ratio

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II. Conceptual Framework



a) Hypothesis

H1: There is a significant positive relationship between market price per share and dividend per share.

H2: There is a significant positive relationship between market price per share and earnings per share.

H3: There is a significant positive relationship between market price per share and lagged market price ratio.

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H4: There is a significant positive relationship between market price per share and lagged price earnings ratio.

H5: There is a significant negative relationship between market price per share and price earnings ratio

H6: There is a significant negative relationship between market price per share and retained earnings ratio.

III. Research Methodology

a) Sources of Data

This study used the secondary data which is collected from the listed company's data of Karachi stock exchange and annual reports published at State bank of Pakistan. Secondary data is the data which is already used in some other research work. The data is collected from the period of 2006-2011.

b) Sampling Design

The sample of the study is taken from the food and producers sector and choose 33 companies out of 36 companies of sugar industry. The data is collected for the period of 6 years from 2006 to 2011. Rest of the companies from the sector is excluded from the study.

c) Statistical Techniques

We use multiple regression and descriptive statistics to check the behaviour of the variables and to check the impact of dividend policy on shareholder's wealth.

IV. Results and Discussion

Table 1: Descriptive Statistics

Variable	Mean	Maximum	Minimum	Variance	Std. Dev.	Observations
MPS	0.150417	1.905378	-1.869676	0.809656236	0.899809	33
DPS	0.105389	0.640001	0	0.026178269	0.161797	33
EPS	0.627611	19.052	-22.20333	87.19499441	9.337826	33
LMPR	-0.022429	0.575503	-1.987883	0.168470023	0.410451	33
LPER	-0.342212	6.132	-20.062	17.91933033	4.233123	33
PER	-5.935447	23.86354	-200.8203	1286.270968	35.86462	33
RER	0.300204	10.82878	-6.926171	5.644572941	2.375831	33

Table 1 shows the maximum MPS is 1.90% and minimum is -1.8% with an industrial average of 0.15%. The variance from the mean point is 0.80% and standard deviation is 0.89%. The mean value of dividend per share is 0.10% and the maximum DPS value is 0.64% and the minimum value is 0. The deviation from the mean point is 0.26% and the dispersion in the series is 0.16%. The earning per share average value is 0.62%. The maximum value in the series 19% and the minimum value is -22%. The variance from the mean is 87 and the dispersion in the series is 9.33. In our model LMPR average is -0.02 and ranges from minimum -1.98 to the maximum of 0.57. The variance from the mean is 0.16 and the standard deviation is 0.41. The LPER minimum value ranges from -20 to maximum value 6.1 and averages -0.34. The dispersion in the series is 4.23 and the variance from the mean is 17.9. The PER has the highest standard deviation which is 35.8 and variance is 1286.27. The minimum value ranges from -200.8 to the maximum of 23.8 having an average of -5.93. The sixth independent variable is RER whose minimum value in the data is -6.92 and the maximum of 10.8 with an average of 33 observations is 0.30. The standard deviation is 2.37 and the variance from the mean is 5.64.

Table 2 : Multiple Regression

Dependent Variable: MPS
Method: Least Squares
Included observations: 33

Variable	Coefficient	Standard Error	t-Statistic	Probability
C	0.019101	0.024491	0.779916	0.4425
DPS	0.557187	0.144714	3.850258	0.0007

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EPS	0.09218	0.00258	35.73535	0
LMPR	0.981136	0.483297	2.030088	0.0527
LPER	-0.102139	0.047152	-2.166174	0.0396
PER	6.82E-05	0.000456	0.149488	0.8823
RER	0.007326	0.007041	1.040578	0.3077

R-squared 0.992013
Adjusted R-squared 0.99017
F-statistic 538.2206
Prob(F-statistic) 0

Table 2 shows the multiple regression test. MPS is taken as dependent variable and run the regression using six independent variables namely dividend per share, earning per share, lagged market price per share, lagged price earning ratio, price earning ratio and retained earning ratio. The relationship between MPS and DPS is significant level at 5% which shows that the DPS has strong positive relationship with MPS. The second independent variable EPS has a significant impact on MPS and has a maximum t-value which shows that the MPS has greatly influenced by the earning per share. The third independent variable is Lagged market price ratio which has a significant relationship with MPS at 5% level of significance. The lagged price earnings ratio also affects the stock price and it has a probability of 0.03 which is less than 5% level of significance. The price earnings ratio and the retained earnings ratio have probability values 0.88 and 0.30 respectively which shows that there is not of significant relationship of these two variables on the Market price per share of the sugar industries of Pakistan. The R2 shows that 99% variations in MPS are due to the explanatory variables. The p value of the f statistic shows that all the regressors have jointly significant relationship with dependent variable (MPS).

a) Hypothesis Testing

Hypothesis testing is used the check the relationship between dividend policy and shareholder's wealth. We use multiple regression analysis to check our hypothesis and the results are shown in the table.

No.	Hypothesis	Results	Tools
H1	There is a significant positive relationship between market price per share and dividend per share.	Accepted	Multiple Regression
H2	There is a significant positive relationship between market price per share and earnings per share.	Accepted	Multiple Regression
H3	There is a significant positive relationship between market price per share and lagged market price ratio.	Accepted	Multiple Regression
H4	There is a significant positive relationship between market price per share and lagged price earnings ratio.	Accepted	Multiple Regression
H5	There is a significant negative relationship between market price per share and price earnings ratio.	Rejected	Multiple Regression
H6	There is a significant negative relationship between market price per share and retained earnings ratio.	Rejected	Multiple Regression

V. Conclusion

We have conducted the research to examine the relationship between dividend policy on share-holder's wealth of the sugar industry. For this study we have selected the sample of 33 listed companies of sugar industry out of 36 at Karachi Stock Exchange from

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the food and producers sector. The data is collected for the period of 6 years from the year 2006 – 2011. The results are concluded by applying descriptive statistics and regression analysis between the dividend policy and shareholder's wealth. From the results we concluded that dividend per share, earnings per share, lagged market price ratio and lagged price earnings ratio has a significant positive relationship with shareholder's wealth while price earnings ratio and retained earnings ratio has not a significant relationship with market price per share which shows that price earnings ratio and retained earnings ratio does not strongly affect the shareholder's wealth.

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The principle of a results segment is to present and demonstrate your conclusion. Create this part a entirely objective details of the outcome, and save all understanding for the discussion.

The page length of this segment is set by the sum and types of data to be reported. Carry on to be to the point, by means of statistics and tables, if suitable, to present consequences most efficiently.You must obviously differentiate material that would usually be incorporated in a study editorial from any unprocessed data or additional appendix matter that would not be available. In fact, such matter should not be submitted at all except requested by the instructor.

Content

- Sum up your conclusion in text and demonstrate them, if suitable, with figures and tables.
- In manuscript, explain each of your consequences, point the reader to remarks that are most appropriate.
- Present a background, such as by describing the question that was addressed by creation an exacting study.
- Explain results of control experiments and comprise remarks that are not accessible in a prescribed figure or table, if appropriate.
- Examine your data, then prepare the analyzed (transformed) data in the form of a figure (graph), table, or in manuscript form.

What to stay away from

- Do not discuss or infer your outcome, report surroundings information, or try to explain anything.
- Not at all, take in raw data or intermediate calculations in a research manuscript.
- Do not present the similar data more than once.
- Manuscript should complement any figures or tables, not duplicate the identical information.
- Never confuse figures with tables - there is a difference.

Approach

- As forever, use past tense when you submit to your results, and put the whole thing in a reasonable order.
- Put figures and tables, appropriately numbered, in order at the end of the report
- If you desire, you may place your figures and tables properly within the text of your results part.

Figures and tables

- If you put figures and tables at the end of the details, make certain that they are visibly distinguished from any attach appendix materials, such as raw facts
- Despite of position, each figure must be numbered one after the other and complete with subtitle
- In spite of position, each table must be titled, numbered one after the other and complete with heading
- All figure and table must be adequately complete that it could situate on its own, divide from text

Discussion:

The Discussion is expected the trickiest segment to write and describe. A lot of papers submitted for journal are discarded based on problems with the Discussion. There is no head of state for how long a argument should be. Position your understanding of the outcome visibly to lead the reviewer through your conclusions, and then finish the paper with a summing up of the implication of the study. The purpose here is to offer an understanding of your results and hold up for all of your conclusions, using facts from your research and generally accepted information, if suitable. The implication of result should be visibly described. Infer your data in the conversation in suitable depth. This means that when you clarify an observable fact you must explain mechanisms that may account for the observation. If your results vary from your prospect, make clear why that may have happened. If your results agree, then explain the theory that the proof supported. It is never suitable to just state that the data approved with prospect, and let it drop at that.

- Make a decision if each premise is supported, discarded, or if you cannot make a conclusion with assurance. Do not just dismiss a study or part of a study as "uncertain."
- Research papers are not acknowledged if the work is imperfect. Draw what conclusions you can based upon the results that you have, and take care of the study as a finished work
- You may propose future guidelines, such as how the experiment might be personalized to accomplish a new idea.
- Give details all of your remarks as much as possible, focus on mechanisms.
- Make a decision if the tentative design sufficiently addressed the theory, and whether or not it was correctly restricted.
- Try to present substitute explanations if sensible alternatives be present.
- One research will not counter an overall question, so maintain the large picture in mind, where do you go next? The best studies unlock new avenues of study. What questions remain?
- Recommendations for detailed papers will offer supplementary suggestions.

Approach:

- When you refer to information, differentiate data generated by your own studies from available information
- Submit to work done by specific persons (including you) in past tense.
- Submit to generally acknowledged facts and main beliefs in present tense.



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Methods and Procedures	Clear and to the point with well arranged paragraph, precision and accuracy of facts and figures, well organized subheads	Difficult to comprehend with embarrassed text, too much explanation but completed	Incorrect and unorganized structure with hazy meaning
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Discussion	Well organized, meaningful specification, sound conclusion, logical and concise explanation, highly structured paragraph reference cited	Wordy, unclear conclusion, spurious	Conclusion is not cited, unorganized, difficult to comprehend
References	Complete and correct format, well organized	Beside the point, Incomplete	Wrong format and structuring

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