



IMPACT OF MACROECONOMIC FACTORS ON BANKING INDEX IN INDIA

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1.0 INTRODUCTION

Capital markets play an imperative role in transferring the long term funds from savers to borrowers. Therefore the progress of the economy is based upon efficient stock market. Moreover Globalization has brought integrity among international stock markets. Such integrity is very useful for economic development globally. Integration among financial markets and momentous financial advancement along with a collection of positive economic conditions has attained significant economic growth. Until recently, India has also enjoyed the rapid economic growth accompanied by the historical performance by the stock market. But the international financial crisis that has emerged during the last year 2007 is currently knocking the door of our economy which has already started tumbling. Macroeconomic indicators are already exhibiting signs of deterioration as Rupee is depreciating against dollar, inflation is mounting, interest rates are increasing and industrial production is started to decline.

1.1 Background of the Study

People invest in stock market to get return which is based on various factors. The precise number of these factors is not identified so far. There is a long history about the determinants of stock returns in the empirical capital market research literature. The literature suggests that different variables are potentially important in explaining the variations in stock returns beyond a single market factor. Two notable theories are very common in predicting the relationship between stock return and economic factors, one is known as Capital Asset Pricing Model (CAPM) and the other is called as Arbitrage Pricing Theory (ATP). Besides the customary equilibrium based Capital Asset Pricing Model, a number of multi factor asset pricing models have been constructed e.g., arbitrage-based model

under Arbitrage Pricing Theory. According to Opfer and Bessler (2004) these models have been developed on the basis that the stock returns are caused by a specific number of economic variables. In recent years, the capital asset pricing model (CAPM) has increasingly been criticized due to its incapability to explain the pricing of risky assets. While much of the literature has provided ample evidence, there exist some narrower investigations which focus on specific economic conditions. One such case is that of the mining sector by Ball and Brown (1980) who find that mining stocks in the Australian equity market exhibit anomalous stock return behavior. Specifically, they find that mining companies are considerably riskier than industrial companies without earning a corresponding risk premium. One way of further investigating this phenomenon is to take an industry- based perspective, that is, to examine separately key industries within the economic sector. As, Faff and Chan (1998) apply a multifactor model consisted of the market factor, gold prices, interest rates and exchange rates on stock returns of Australian gold industry over the period of 1979 to 1992. They find that market factor and gold prices are the variables that explain significant variations in stock returns. A multifactor model can be either from an arbitrage pricing theory (APT) or from a multi-beta CAPM perspective. These models attempt to answer the questions whether the market return is the only factor that explains stock return variations and the question then is: what extra-market factors should be considered as promising candidates when investigating stock returns volatility? The APT assumes that various market and industry related factors contribute towards returns on stocks. These multi factor models have been developed with the assumption that stock returns are based upon several economic factors which include market return as well as other factors, and can be grouped into industry wide and macroeconomic forces. The industry related variables can vary with the nature of industry and economic conditions. The exact number of industry related variables is not identified so far. The frequently used macroeconomic and industry variables in existing literature are interest rate, exchange rate, money supply, consumer price index, risk free rate, industrial production, balance of trade, dividend announcements, and unexpected events in national and international markets.

Recently there is realization about the importance of using conditional means and variance in financial data in econometric analysis of financial markets. Since risk-averse investors need to forecast asset returns and their volatility over the period of investment. Merton (1980) states that researchers should consider heteroskedasticity while forecasting expected returns. Literature reveals that the class of Generalized Auto Regressive Conditional Heteroskedasticity (GARCH) models (Bollerslev, 1986, 1990) effectively explains stock returns and volatility by allowing the means of stock returns to base on their time-varying variance in addition to other contributory factors.

1.3 Objectives of study

The specific objectives of the study are

- To investigate the impact of macroeconomic factors on Banking Index
- To demonstrate the relationship between the macroeconomic forces and banking index
- To know the intensity of relationship between macroeconomic variables on banking index.
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1.4 Literature Review

The theories in the literature are the most important mean in explaining the relationship between returns and economic forces at macro level. The empirical evidence in the literature provides mechanism for explaining the validity of relationship between macroeconomic forces and stock returns. Therefore the study of both theoretical and empirical literature is essential in investigating the relationship between macroeconomic forces and stock returns. The theoretical and empirical literature review is essential for the researcher to know the work done by

the other researchers relevant to the topic. Moreover it also enables the researcher to identify the macro economic factors that can potentially influence the returns of stock.

There are different stock markets with different economic conditions. A considerable literature is available on them to analyze the relationship between macroeconomic forces and stock market behavior. Fundamentals and speculations both play a significant role in determining the returns of stocks. Internal or External conditions both are involved in measuring the sensitivity of returns of stocks.

Industrial Production, money Supply Foreign exchange Rate, Interest rate and prices in the world economy are involved in external conditions whereas dividend policy, earning per share etc is the contributors of internal factors. Numerous studies have been conducted in order to analyze the relationship between macroeconomic forces and internal or external factors.

Adam and Tweneboath (2007) employed APT model to analyze the relationship between macroeconomic forces and returns of Ghana stock exchange in short and long run by using

Johansen's multivariate co integration test and innovation accounting techniques. They indicated that negative relationship existed between inflation, exchange rate, Treasury bill or interest rate on Ghana stock market and foreign direct investment had a positive impact on Ghana stock market.

Gay and Robert (2008) investigated the impact of macroeconomic factors on the returns of four emerging markets. The emerging stock markets included were India, Brazil, China and Russia. Their multifactor model comprised of exchange rate and oil prices. By employing ARIMA model on monthly data of March 1999 to July 2006, they concluded that these two macroeconomic variables had no significant relationship with the returns of emerging markets. Hassan and Nasir (2008) also investigated the relationship between equity prices and macroeconomic forces in long run by using monthly data of June 1998 to June 2008. To analyze the causal relationship among macroeconomic forces and stock prices ARDL approach had been used. Results of ARDL concluded the macroeconomic factors that had the main contribution in determining the equity prices in the long run were interest rates, exchange rates and money supply whereas Industrial production, oil prices and inflation had been no significant relationship in the determination of prices of stock.

Lucey, Najadmalayeri and Singh (2008) employed the APT model in their study to investigate the relationship between macroeconomic surprises and returns of stock exchanges in developed countries. Stock Exchanges of Canada, France, Germany, Hong Kong, Italy, Singapore and UK had been chosen to know the impact of the unforeseen news relating to macroeconomic factors on the returns of developed stock markets. GARCH model had been employed on the monthly data of 1999 -2007 and their findings showed the unexpected news of macroeconomic factors had significant impact on the returns of Stock Exchanges of Canada, France, Germany, Hong Kong, Italy, Singapore and UK

Zaheer, Rehman, Assam and Safwan (2009) used seven macroeconomic risk factors to know their impact on the returns of Textile and Banking sector. Returns of Textile and Banking sectors had been calculated by using monthly data of 1998-2008. GARCH applied on Firm as well as Industry level. Their observation showed that market index, CPI, free rate of return, exchange rate, industrial production index, money supply and individual industrial production played an important role in measuring the returns of industry as compared to firm

Karam and Mittal (2009) observed the relationship of macroeconomic factors with the returns of Indian Stock Exchange. They had selected four risk factors to investigate the relationship among the variables. OLS had been applied on quarterly data of interest rate, inflation rate, exchange rate and Gross Domestic Saving covering the period of 1995-2008. The results of Regression indicated that there existed long term relationship between risk factors and returns of Indian Stock Exchange

Ramos and Veiga (2009), investigated whether oil price a global factor and contributed to the literature by studying the exposure of the oil and gas industry to a set of factors {The world market excess return on a risk free rate at time t ($WORLD_t$), The excess returns of the local market i at time t ($LOCAL_{i,t}$), The return of an oil price index at time t (OIL_t), The currency rate variations of country I at time t ($CURRENCY_{i,t}$)} with in APT framework Their findings had shown that the market returns of the oil and gas industry around the world affected by macroeconomic factors significantly

Akhter (2009) appraised allocative efficiency of telecom sector in India through some of the macroeconomic variables and Policy variables. Results of his study revealed that the openness of telecom sector to foreign firms and the existing size of population had led to an improvement in efficiency of both fixed and cellular networks. However findings on the impact of real per capita GDP and the existence of separate regulator remain mixed.

Sohail and Hussain (2009) examined short term and long term relationship between risk factors and Lahore Stock Exchange in India. VECM employed on monthly data of 2002 to 2008. Their result revealed that the returns of LSE affected by inflation rate significantly while money supply, exchange rate and industrial production contributed in bringing positive variations in. returns of LSE.

Khalid, Shakil and Ali (2010) revealed Post liberalization effect of macroeconomic risk forces on the returns of stock market and investigated this relationship within APT framework. This study used monthly data of KSE all share index to measure the stock return volatility through EGARCH approach. Result showed that financial market liberalization had a positive impact on the economy of a country, increase in interest rate, currency depreciation; rise in inflation all negatively affected the performance of KSE in terms of share index. Furthermore increase in per capita income of people increased the returns of KSE and increase in political competition also increased an investment activity in KSE and boosted the returns of stock market.

Gabriel (2010) measured the impact of macroeconomic indicators on the leasing industry. Macroeconomic variables included GDP, unemployment rates, credit data (claims on private sector), interest rates, and exchange rates. The countries chosen for this study were Canada, France, Germany, and Italy, Spain, Sweden, UK and US. Their result indicated that GDP generally had a positive relationship in all significant cases (which was expected), Deviation showed generally positive (expected) and both unemployment and interest rate typically had a negative impact (expected). Credit-GDP ratio had only significant in two countries.

Buyuksalvarci (2010) investigated the relationship of seven macroeconomic factors and ISE index returns in the APT framework by using multiple regression model. His study, another contribution in the literature of risk returns relationship. The results of this study indicated that some macroeconomic factors had a great contribution in raising the index of ISE and some macroeconomic forces played no role in determining the returns of ISE. The factors which contributed in determining the prices of stock were interest rate, oil price, foreign exchange rate and industrial production. Inflation rate and gold price did not show any significant impact on the returns of ISE.

Karan (2010) in his paper checked out the importance of macroeconomic factors in measuring the returns of stocks in America. Autoregressive model employed to measure risk return relationship. Results of model indicated that a high proportion of return dependent upon risk factors.

Chinzara (2011) analyzed how the time varying conditional macroeconomic risk associated with industrial production, inflation, oil prices, gold prices, interest rates, money supply and exchange rates related to time-varying conditional volatility, as well as testing whether the relationship between the two bidirectional in the South African stock market. The stock market data used in this analysis comprise monthly stock market indices for the aggregate market (ALSI) 1 and for each of the four main sectors (*i.e.* the financials (FIN), industrials (IND), mining (MIN) and general retailers (RET) sectors) and macro economic variables over a period August 1995 to June 2009. How systematic risk emanating from the macro economy transmitted into stock market volatility measured by using augmented autoregressive Generalized Autoregressive Conditional Heteroscedastic (AR-GARCH) and vector auto regression (VAR) models. The findings indicated that there existed positive volatility spillovers from the Treasury bill rate, the exchange rate and the gold price, and negative volatility spillovers from inflation. It also found that volatility transmission between the stock market and most of the macroeconomic variables and the stock market bidirectional, especially the Treasury bill rate and exchange rate.

Mushtaq, Ghafoor, Abedullah and Ahmed (2011) evaluated the impact of monetary and macro-economic factors on real wheat prices in India for the period 1976 to 2010 using Johansen's co integration approach. Their result showed that real money supply openness of economy and the real exchange rate had a significant impact on real wheat prices in the long run. Their findings indicated that there existed long term relationship among these variables.

1.5 Theoretical Frame work

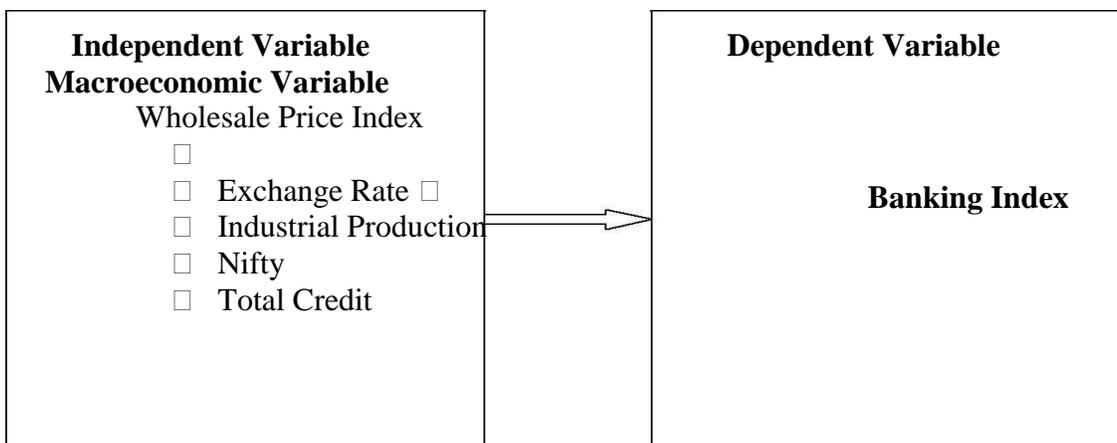
Literature has revealed that risk return relationship is measured by single beta and multi beta model. Single beta model (CAPM) has faced a strong criticism by economists on the fact of measuring return on the basis of single risk factor. The multi beta model has considered various macroeconomic factors in predicting risk and return relationship. Therefore the explanatory power of APT model in determining the impact of macroeconomic factors on the returns of stock is greater. The assumptions and the description of APT model are narrated below

Assumptions of APT Model

- Total risk is a combination of systematic and unsystematic risk. Systematic risk is also termed as market risk and it cannot be eliminated. Therefore expected return of the asset is dependent upon the systematic risk. Systematic risk includes macro-economic factors which are not diversifiable. □
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- Unsystematic risk includes firm specific factors which can be diversified. Therefore expected returns of the assets are not based on risky factors specific to firm □

Description of APT Model

The APT was developed by Stephen Ross in 1976; In APT model there is no need of any market portfolio which is essential in CAPM. Only those risk factors matter in measuring the returns of stocks which are non-diversifiable. It is a common observation that changes in macroeconomic factors are not diversified therefore macroeconomic factors is considered risky factors in measuring the risk return relationship. In APT model the number and identity of risk factors are not known. The identification and no of non-diversifiable risk forces for measuring the risk return relationship is based upon the researcher. In APT model there must be linear relationship between risk loading and returns of stock. Usually the identification of risk factors that can potentially affect the returns of asset is taken from the literature. The diagrammatic relationship between independent and dependent variables is given below:



1.6 Hypotheses

On the basis of research theory following Hypotheses has been developed.

H0: Macroeconomic variable have no significant impact on Banking Index
H1: Macroeconomic variables have significant impact on Banking Index

Monthly data of macroeconomic variables such as WPI, Exchange Rate, Industrial Production, Total Credit and Nifty has been used in the paper for measuring the impact of macroeconomic variables on banking index. This study is based upon secondary data. The banking index has been calculated by equally weighted method. Web sites of business recorder and stock exchange has been consulted for the data of each bank listed in National Stock Exchange for the period of ten years starting from April 2004- January 2015. Data of macroeconomic risk factors such as Nifty, Exchange rate, WPI, Total Credit, and industrial production has been taken from Reserve Bank of India; Federal bureau of statistics and various editions of economic survey of India This study include macroeconomic variables as independent variables and banking index as dependent variables.

Dependent variables

Following formula is used for calculating the returns of sectors

$$R_t = \ln (P_t / P_{t-1})$$

R_t = Return of stock for the time period t.

P_t = Closing prices of the stock for the time period t

P_{t-1} = Closing prices of the stock for the time period t-1

Banking Index

Banking Index includes listed banks in National Stock Exchange for the period of April 2005 – Jan 2015. It is calculated by taking the average returns of twenty10 listed banks for the same period.

1.7 Methodology

The Methodology framework is comprised of four steps. Chronological properties of data have been analyzed through descriptive statistics. In order to test the multicollinearity among independent variables correlation matrix has been created. Augmented Dickey Fuller (ADF) test has been employed to check the stationarity of data. In the last Ordinary least square (OLS) has been applied to know the impact of macroeconomic variables on banking index. Regression Equation has been developed with in APT framework is as follows

$$R_i = \lambda_0 + b_1 \lambda_1 + b_2 \lambda_2 + b_3 \lambda_3 + b_4 \lambda_4 + b_5 \lambda_5 + \mu_t$$

R_i = Return of security

λ_0 = Risk free rate

λ_1 = Change in WPI

λ_2 = Change in Exchange Rate

λ_3 = Change in Industrial Production λ_4 =

Change in Total Credit

λ_5 = Change in Nifty μ_t =error term

bi_1 =sensitivity of share price due to change in risk factor (WPI) bi_2 =sensitivity of share price due to change in risk factor (Exchange rate)

bi_3 =sensitivity of share price due to change in risk factor (Industrial Production)

bi_4 =sensitivity of share price due to change in risk factor (Total Credit) bi_5 =sensitivity of share price due to change in risk factor (Nifty).

1.8 Empirical Results

1.8.1 Descriptive statistics.

The temporal properties of data Mean, standard deviation, skewness and Kurtosis of each independent and dependent variables has been analyzed through descriptive statistics.

Variable	Mean	Std Dev	Skewness	Kurtosis
IIP	0.005505	0.059367	-0.347084	3.601403
WPI	0.004715	0.007244	-0.289525	4.239973
Nifty	0.013099	0.073015	-0.795298	6.138621
ExRate	0.003013	0.021326	0.581533	3.821603
Δ Industry Specific-Total Credit	0.014788	0.016728	0.92101	4.520897
Δ CNX Bank Index	0.014743	0.083261	-0.260243	4.112165

1.8.1 shows the descriptive statistics of macroeconomic variables used in the study. The values of skewness

and kurtosis in the table indicate that only Δ ExRate is positively skewed whereas Δ IIP , Δ WPI, Δ Nifty are negatively skewed. The results show that the values of skewness for all series are not significantly different from zero hence data series are not seriously departing from normality. The kurtosis value for all macro variable is higher than normal kurtosis.

1.8 Unit Root Test

Augmented Dickey Fuller Test (ADF) has been employed on macroeconomic variables and banking index to know the stationarity of data. ADF test has a null hypothesis that there is unit root in data series and an alternate hypothesis with no unit root i.e. series is stationary. The results of ADF of all data series including macroeconomic variables and banking index are described below.

Variable	T-Static	1% CV	5 %CV	10% CV	Co-efficient	p-value
Δ ExRate	-9.95559	-3.48966	-2.88743	-2.58065	-2.63125	0.0000
Δ IIP	-9.28609	-3.49438	-2.88947	-2.58174	-15.0562	0.0000
Δ WPI	-11.8671	-3.48859	-2.88696	-2.58040	-1.78619	0.0000
Δ Nifty	-11.7539	-3.48912	-2.88719	-2.58053	-2.70342	0.000
Δ Industry Specific-Total Credit	-8.83248	-3.48966	-2.88743	-2.58065	-9.27568	0.0000
Δ CNX Bank Index	-10.515	-3.48966	-2.88743	-2.58065	-2.12121	0.0000

Table 1.8.2 describes the results of ADF test applied on macroeconomic variables. It is evident from the results that all data series are stationary at their first difference, hence rejecting the null hypothesis of unit root.

1.8.2 Regression Results

ADF test indicates that the data has no autocorrelation with respect to time. In other words data is random. Moreover there exists no multicollinearity among independent variables. In order to avoid spurious regression OLS has been applied on monthly data. Regression result of banking index has been illustrated below.

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Dependent Variable: DLOG(BANK_INDEX)

Method: Least Squares Date: 05/03/15 Time: 15:26 Sample (adjusted): 2005M06 2015M01

Included

observations: 116

after

adjustments Variable Coefficient Std. Error t-Statistic Prob.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.032531	0.008701	3.738680	0.0003
D(D(IIP))	0.000283	0.000393	0.719205	0.4735
D(WPI)	-0.009214	0.005697	-1.617309	0.1087
D(RS_USD)	-0.029744	0.006031	-4.932028	0.0000
DLOG(NIFTY)	0.444599	0.086297	5.151968	0.0000
DLOG(TOTAL_CR EDIT)	-0.824378	0.377845	-2.181791	0.0313

R-squared 0.493715

Adjusted R-squared 0.470702

S.E. of regression 0.060801

Sum squared resid 0.406650

Log likelihood 163.2999

F-statistic 21.45377

Prob(F-statistic) 0.000000

Mean dependent var 0.015008

S.D. dependent var 0.083573

Akaike info criterion -2.712068

Schwarz criterion -2.569640

Hannan-Quinn criter. -2.654250

Durbin-Watson stat 1.758044

1.9 Conclusion and Future Implications

The conclusion is illustrated below on the basis of results and discussions. The impact of macroeconomic factors on banking index is significant but the contribution of macroeconomic factors in variability of index is very small. The banking index is affected significantly by Exchange rate, Total credit and nifty index. The relationship of these two macroeconomic factors with banking index is negative and positive respectively as per just as hypothesized. Wholesale Price Index and Industrial Production have no significant impact on banking index. The relationship of WPI is negative and Industrial Production is positive on banking index.

The F-static value($p < 5\%$) and AIC as well as SIC value indicates fitness of this model to bank index.

The result is in accordance with the literature. Stock returns are greatly suppressed by increase in industrial production. This is due to the fact that investors withdraw money from the stock market and invest it in a real sector. It is also concluded that stock returns are adversely affected due to increase in exchange rate of Pak Rupees against the US. The negative impact of money supply on the returns of sectors is due to its contribution in increasing inflation in the economy. The results also confirm that although Short Term Interest Rate has a significant impact on stock returns of various sectors but the enclosure of other macroeconomic variables such as money supply, exchange rate, oil prices, and industrial production in APT model enhances the explanatory power of Model in predicting which macroeconomic variable has significant impact on the returns of which sector. That's why multi factor model is preferred over single factor model and this is the main reason of using APT model by researchers in their studies.

The study provides a new way for the researchers by testing the APT model on banking index. The researchers can extend this research by including all servicing sectors of the economy and compare these to find out which service sector are least or more sensitive to macroeconomic factors. The multifactor model comprises of five macroeconomic factors this list can be enhanced by including more economic variables to get extensive results in risk return relationship.

There are certain factors which are not priced but play a significant role in affecting the returns of sectors because they have an impact on the volatility of returns and provide mechanism to the managers to evaluate their portfolios. These non-pricing factors include good governance procedures, Shareholders right and activism, legal environment of the country etc.

The financial system of any country is based upon interest rate. Regression results of the study show that continuous increase in short term interest rate plays a main role in declining the returns of sector. This is not good for investors and the main reason of withdrawing money from stock markets. In order to encourage the investors to invest in stock market an appropriate interest rate should be maintained by the respective high authorities.

REFERENCES

- Akhter, H. (2009). "The impact of macroeconomic factors and policy issues on telecom sector performance in India: An Econometric analysis". *India Journal of Social Sciences*. 29 (2). 163-174. □
- Ali, B. (2011). "Impact of Micro and Macroeconomic Variables on Emerging Stock Market Return: A Case on Dhaka Stock Exchange", *Interdisciplinary Journal of research in Business*. 1(5) 8-16. □

- Ahmed, S. and Farooq, O. (2008),” The effect of 9/11 on the Stock Market Volatility Dynamics: Empirical Evidence from front line State”. *Research Journal of finance and Economics* Issue 16 □
- Bennett A. (2001). “Can Money Flows Predict Stock Returns?”. *Financial Analyst Journal*. 57(6). 64-77. □
- Butt, B.Z., Rehman, K.U., Khan, M.A., Safwan, N. (2010). “Do macroeconomic factors influence stock returns? A firm and industry level analysis”. *African Journal of Business Management* .4(5). 583-593 □
- Buyuksalvarei,A.(2010). “Effect of Macroeconomic variables on Stock Returns: Evidence from Turkey”.*European Journal of Social Sciences* 14(3).404-416. □
- Butt,Z.B., Rehman,K. and Ahmed, A.(2007) “An Empirical Analysis Of Market and Industry factors in stock Returns of India Banking Industry”. *South Asian Journal of Management* .14(4) 7-19. □
- Bennett A. (2001). “Can Money Flows Predict Stock Returns?”. *Financial Analyst Journal*. 57(6). 64-77. □
- Chen, N. (1983). “Some Empirical Tests of the Theory of Arbitrage Pricing”, *The Journal of Finance*. 38. 1393-1414. □
- Chen, N. F., Roll, R., & Ross, S. (1986). “Economic forces and the stock market”. □ *Journal of Business*. 59. 383-403. □
- Chancharoenchai, K., Dibbooglu, S.& Mathur, K.(2005). “Stock returns and the Macro economic environment prior to the Asian countries”. *Emerging Finance and Trade*. 41. ra ,Z. (2011). “Macro economic uncertainty and conditional stick market volatility in south Africa”. *South African Journal Of Economics*. 79(1). □
- Ewing. (2002). “Macro Economic News and the return of financial Companies “managerial and decision economics. 23. 439-446.
- Economic Survey of India various editions (2000-2010): *Ministry of Finance* □
- Flannery, M. J. & Protopapadakis, A. A. (2002). “Macroeconomic factors do influence aggregate stock returns”. *The Review of Financial Studies*. 15(3). 751-782. □
- Fama,E.F.(1970). “Efficient Capital Market:A Review of Theory and Empirical Work”, □ *Journal of Finance*. 71.545-565. □
- Fama , E.F., (1981). “Stock Returns Real Activity , Inflation and Money” , *American Economic Review* 71. 545-565. □
- Goswami, G.(1997),“Stock Market and Economic Forces: Evidence From Korea”, □ *Journal Of Finance*. 56. 500-757. □
- Gan, C .Lee, M.Yong, H.H.A. & Zhang, J. (2006) “Macroeconomic Variables and Stock Market Interactions: New Zealand Evidence”. *Investment and Financial Innovations*. 3 (4). 89-100 □
- Gabriel,M. (2010).” Measuring the Impact of Macroeconomic Indicators On the leasing □ *Industry. Economic Thesis* 1-65. □
- Gay & Robart. (2008). “Effect of Macroeconomic Factors on Stock Returns for four □ Emerging Economies Brazil Russia India & China. *International Business and Economics research Journal*. 7(3) .1-8. □
- Gunsel, N.& Cukur,S. (2007). “The Effects of Macroeconomic Factors on the London □ Stock Returns .A Sectoral Approach” *International Research Journal of Finance and Economics* 10.140-152. □

- Ibrahim, H. M., (1999). "Macroeconomic variables and Stock prices in Malaysia: An Empirical Analysis", *Asian Economic Journal* .13.219-231. □
- Ihsan, H. Ahmad, E. Ihsan, M. and Sadia, H.(2007). "Relationship of Economic and Financial Variables with behavior of stock returns". *Journal of Economic Cooperation* □ 28(2). 1-24. □
- Jeon, B.N., & B. Seo. (2003). "The Impact of the Asian Financial Crisis on Foreign Ex change Market Efficiency: The Case of East Asian Countries." *Pacific-Basin Finance*. □ 11. 509-525.
- Javed, & A.H (2005). "Arbitrage pricing theory: evidence from an emerging stock market". *The Lahore Journal of Economic*, 10. 123-139. □
- Khalid, M.B. Shakeel,A. & Ali S.M.M. (2010)" Post Liberalization Impact of Macroeconomic Factors on the Stock market Returns". *Interdisciplinary Journal of Contemporary Research in Business*.1(12).63-73. □
- Karan,M.(2010). "Autoregressive Multifactor APT Model for US Equity Markets." □ *MIPRA Paper* 16(47)1-45. □
- Khan, S. and Rizwan,F.(2008). "Trading Volume and Stock Returns: Evidence from India's Stock Market". *International Review of Business Research*. 4(12). 151-162. □
- L.M, .S., & Menike (2006)."Effect of Macroeconomic Variables on Stock Prices in Emerging Sri Lankan Stock Market". *Journal*. 6(1). 50-67 □
- Lucey, B. Najadmalayeri, A.& Singh,M.(2008) " Impact of Macroeconomic Surprises on Stock Market returns in developed Economies. *The Institute for International Integration Studies*240. □
- Mukherjee, T.K., & A. Naka. (1995). "Dynamic Relations Between Macroeconomic Variables and the Japanese Stock Market: An Application of a Vector Error Correction Model." *Journal of Financial Research*. 18. 223-237. □
- Maysami, R. C. Howe, L.C.& Hamzah, M.A. (2004). "Relationship between Macroeconomic Variables and Stock Market Indices: Cointegration Evidence from □ Stock Exchange of Singapore's All-S Sector Indices" *Journal of Pengurusan*. 24. 47- □
- Mushtaq, K., Ghafoor,A. Abdullah & Ahmad,F.(2011) " Impact of Monetry and Macroeconomic Factors On wheat Prices In India : Implication For food Security". □ *The Lahore Journal of Economics*. 16 (1) 95-110.
- Muneer,S. Zaheer,B. Rehman,K (2011) " A Multifactor Model of Banking Industry □ Stock Returns :An Emerging Market Perspective". *Information Management and Business Review* 2(6) 267-275. □
- Mehmood,S. Hussain,A. & Ali,A.(2009) " Impact of Macroeconomic Variables on Stock Prices : Empirical Evidence in case of KSE". *Euro Journal Inc*.103. □
- Nadeem & Zakir .(2009)."Long-Run and Short-Run Relationship between □ Macroeconomic Variables and Stock Prices in India". 47 .183. □
- Ramin, M, L.C., H, &Howe, M.A.H. (2009). "Relationship between Macroeconomic Variables and Stock Market Indices". *Journal Pengurusan* .47-77 □
- Rehman, K. and Saeedullah, M. (2005) "Empirical Analysis of Markets and Industry

- Factors in stock returns of India Cement Industry”. *Journal of Independent Studies and Research* .3(2) □
- Shahid A. (2008).” Aggregate Economic Variables and Stock Markets in India”. □ *International Research Journal of Finance and Economics* (14). □
 - Sulaiman, A.H., M.A & A.A. (2009). “Impact of Macroeconomics Variables on Stock Prices”. *Euro Journals*. 38. 96. □
 - Sohail , N., Hussain , Z . (2009). “ Long run and short run relationship between macroeconomic variables and stock prices in India the case of Lahore stock exchange” *.India Economic And Social Review* . 47 (2). 183-198 □
 - Tursory F& Gunsel (2008). “The APT and Istanbul Stock market”. *International Research Journal of Finance And Economics*. (22). □
 - Zaheer, B (2010). “Economic Forces and Stock Market Returns: A Cross Sectoral Study testing Multi Factor Model”. *World Applied Sciences* 9(3).922-982.