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Factor Influencing KSE 100 Index / Share Pricing

Muzaffar Asad[1] and M. Ali Farooq[2]

Abstract

All over the world, the regulatory bodies work to achieve the maximum efficiency in the financial markets. Only in the presence of efficiency and feasible economic conditions, a stock market can perform efficiently and will reflect the real picture. It had been being commonly observed that stock market in Pakistan has shown a good picture when other economic indicators were in undesirable zone, and vice versa. The objective of this paper is to evaluate the critical factors that have the major impact on KSE-100 Index and market capitalization. To inculcate confidence among the investors, and to promote the capital market, evaluate the investors' investment decisions leading to market capitalization the research paper addresses those critical factors that have the major impact over the KSE Index. The dependent variable is KSE 100 Index and independent variables are rate of interest, exchange rates, foreign direct investments and the inflation rate. It includes yearly data of the dependent variable and independent variables for last 14 years. The data is analyzed using regression analysis

Introduction

[1] The author is presently working a s a Research and Development Coordinator & Lecturer of Management and Finance in University of Central Punjab
[2] The author has recently completed his Masters in Commerce in Accounting & Finance and doing a job in a private firm as Assistant Manager Sales & Customer Relations

The stock markets all over the world have become essential market playing a vital role in economic prosperity fostering capital formation and sustaining economic growth. Stock markets are more than a place to trade securities; they operate as a facilitator and the middle man between the investor and the users of capital. Stock markets are essential for economic growth as they insure the flow of resources to the most productive investment opportunities. There is no perfect system that indicates the exact direction of stock prices. However, the factors behind increases or decreases in the demand and/or supply of a particular stock could include company fundamentals, external factors, and market behavior. The basic purpose of this paper is to check the factors that have major influence on the stock and ultimately the stock index. Company fundamental factors influencing stock prices might include performance of the company, a change in board of directors, appointment of new management, and the creation of new assets, dividends, earnings, etc but in this article only the external factors are accounted for. Moreover, the behavior of market participants could be an important influencing factor of stock price.

The stock markets all over the world are affected by factors like interest rates, inflation rates, foreign direct investment, political conditions, economic conditions etc. All the stocks in stock market are affected by stock index.

The objective of this research is to evaluate the critical factors that have the most impact on the KSE-100 Index that are rate of interest, nominal exchange rates, foreign direct investments as they show political stability and stability in inflation rates.

Factors affecting stock prices have been studied from different points of view. Several researchers examined the relationships between stock prices and selected factors which could be either internal or external.

The market analyst may foresee next quarter's performance, or even for the entire year. But it is statistically not possible for them to foretell stock movement correctly quarter after quarter or year after year. "The right prediction is the stepping-stone for any stock trading enthusiast it makes or breaks a stock trader. However, you have many tested options to gather the required predictions. If you are a long- term investor in stock trading, then it is advisable that you seek predictions from the experts. You can find prediction experts on the internet, television, making predictions of the stock market for different span of time ranging from a week to a year. On the other hand, the general trend for short-term investors is to engage in other prediction tools that cater to their personal needs in stock trading" (Hayles).

Working of Karachi Stock Exchange

The Karachi Stock Exchange (KSE) is the main and for the most part liquid exchange in Pakistan. The equity market is benchmarked through the KSE-100 index. The Karachi Stock Exchange broke a series of records to turn out to be the sixth best performer among the budding markets in the calendar year 2007. As of March 31, 2008, 652 companies were listed having paid-up capital of Rs. 690.1 billion.

The market portrays the sharp volatility showed by the KSE-100 index during July-May 2007-2008 and identifies major political and economic events that have played a significant role in setting the sentiments of investors-both positive and negative-in the local bourses.

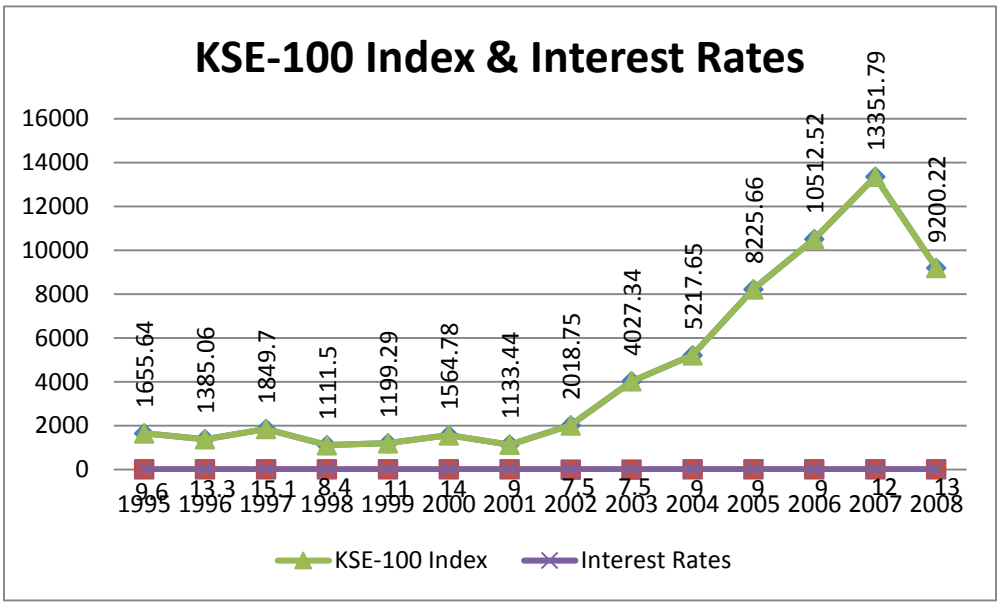
The fiscal year 2007-08 set in motion with the Red Mosque incident in the early part of July, followed by the de-positioning of Chief Justice of Pakistan and confusion of imposition of emergency rule in the country. The stock market witnessed positive sentiments to the broadcast of presidential

elections and then re-election of President Musharraf on October 6. On contrary, the market reacted against the incident of bomb blasts in the welcome procession of Ms. Benazir Bhutto on October 18.

Meanwhile, the recovery in the international markets against emergency steps taken by FED of reducing interest rates was a major factor that affected the stock exchange in a positive way. In addition, positive reports of foreign brokerage houses including Credit Suisse, JP Morgan and Merrill Lynch on Pakistan's capital markets gave a motion to the market.

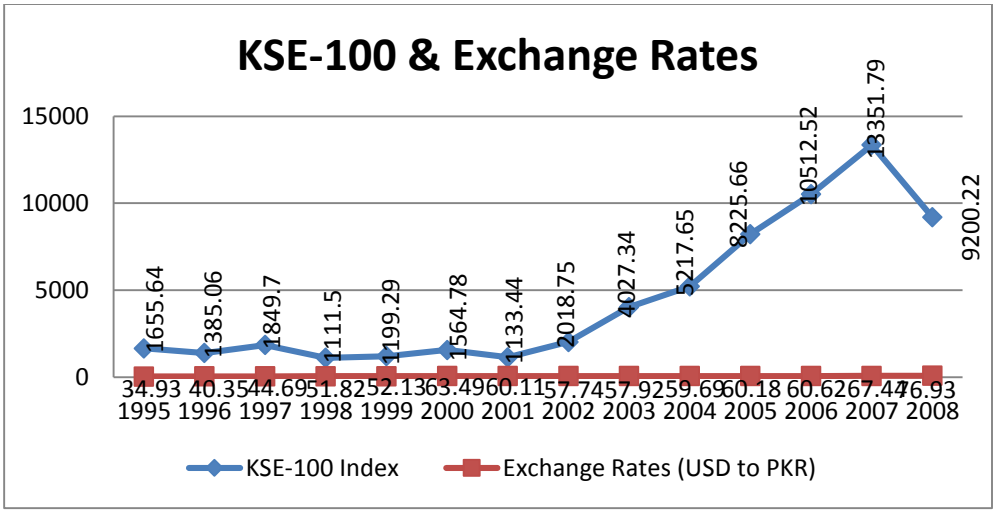
Country's stock market joined the euphoria of the winning political parties on their success in general elections held on February 18, 2008 when it rushed heavily on the back of expectations that a stable democratic indulgence will be in place with smooth transfer of power to the elected government. The index witnessed the biggest single day gain of 443 points, which was credited to the holding of free, fair and transparent polls without major occurrence of aggression and annoyance. Chief reason of forward march of the market to post-election rally was witnessed on support of an unabated cycle of buying enthusiasm in the wake of strong result announcement session.

The KSE took a technical rest after experiencing a stage of uninterrupted record breaking figures on April 21, 2007. Vagueness about the outcome of judges' reinstatement issue and pre-budget reservations were held responsible for this sluggish performance. Additionally, the ending up of



result season invited correction. Panic selling was witnessed by investors following the unveiling of SBP's decision to place curb on the flow of capital exit to support sagging rupee value. Moreover, the downgrading of credit rating of Pakistan by S&P's and Moody's broke investor sentiments. KSE-100 index sank by 615 points on May 23, the second highest single day turn down in the stock market history. Equities fell mainly due to an interest rate hike of 150 bps by SBP as well as a condition of minimum return on PLS accounts to 5 percent (Economic Survey of Pakistan, 2007-2008).

Source: State Bank of Pakistan for interest rates



Source: www.oanda.com for exchange rates till 22/09/2008

Discussion

Interest is the cost someone pays for the use of other's money. Usually when the dividend rate is higher than the interest rates offered by the bank the finance shifts towards stock market and vice versa.

"The interest rate, commonly bandied about by the media, has a wide and varied impact upon the economy. When it is raised, the general effect is to lessen the amount of money in circulation, which works to keep inflation low. It also makes borrowing money more expensive, which affects how consumers and businesses spend their money; increases expenses for companies, lowering earnings somewhat for those with debt to pay; and, finally, it tends to make the stock market a slightly less attractive place to investment." (Mueller)

Furthermore, investing in stocks can be viewed as too risky compared to other investments. When the State Bank of Pakistan raises the KIBOR rate,

newly offered government securities, such as treasury bills and bonds, are often viewed as the safest investments and will usually experience a corresponding increase in interest rates. In other words, the "risk-free" rate of return goes up, making these investments more desirable. When people invest in stocks, they need to be compensated for taking on the additional risk involved in such an investment, or a premium above the risk-free rate. The desired return for investing in stocks is the sum of the risk-free rate and the risk premium. Different people have different risk premiums, depending on their own tolerance for risk and the company they are buying. However, in general, as the risk-free rate goes up, the total return required for investing in stocks also increases. Therefore, if the required risk premium decreases while the potential return remains the same or becomes lower, investors might feel that stocks have become too risky, and will put their money elsewhere such as treasury bills and government bond.

Political situation is a very strong factor that can affect the individual behaviors and the businesses. As the businesses are affected by the behavior of individuals in terms of generating low revenues and low profits, so, a big factor is political situation. The stability in the political scene causes the businesses to prosper as the stable government can attract the foreign investments and can raise the living standards of people. People can have more disposable income and will be able to spend. On contrary, if the political situation gets drastic and un-stable, the above said will be reversed and the situation will be worse.

“High discount rate, law and order situation in the country, falling rupee value remained to be the key concerns.” (Times, 2008)

On Tuesday, August 26th, 2008 the Karachi Stock Exchange (KSE) 100-Index lost a substantial 180.15 points and closed at 9, 9813.66 points as compared with 9,993.81 points of the previous session. The KSE 30-share index decreased 303.45 points to close at 11,051.64 points. The market turnover declined 16.19 percent to 86.61 million shares as compared to 103.35 million shares traded in the previous session. The overall market capitalization lost 1.76 percent to Rs 3.061 trillion as against previous session's Rs 3.116 trillion. Out of 274 companies, 63 closed in positive zone, 200 in negative while 11 remained unchanged. The question is "Why such loss in points"? Analysts said that the market started on a depressing note, as a great majority of investors were just busy in an intra-day trading rather than long-term investment, which caused the market to be unstable. What would be the reason being not investing for long term and such uncertainty and volatility? Following are some of the references that should be quoted to find the reason behind this uncertainty and volatility.

High energy prices, rising unit labor costs and pressure on supplies of key resources such as steel and cement are lining up like some ill-fated stars to guarantee the Fed will continue raising short-term interest rates. High interest rates and companies raising prices don't add up to an investment profile most investors enjoy. However, stocks are still a good hedge against inflation because, in theory, a company's revenue and earnings should grow at the same rate as inflation over the time.

As per Jones, (2007, p.433), for technical analysis, "technicians widely uses moving average technique". A moving average of prices of stocks is a widely accepted technique for analyzing the individual stocks listed as well as overall market. It is basically used to detect the rate of change and the

direction. Closing prices of a number of days are taken into account to compute the moving averages. After the average of the prices are calculated initially, the latest value of moving average is computed and the earliest one is dropped and the latest is added in it. This practice is repeated even daily or weekly and monthly also. As a result of this process, the line is supposed to represent the basic trends of the stocks.

Three major decisions have to be made in developing a moving average. These are as follows:

1. The time period over which the average is calculated.
2. The price used.
3. The type of moving average used.

Jones, (2007, p.433), says: "The current market price to the moving average comparison produces a buy or a sell signal". The general buy signal is generated when actual prices rise through the moving average on high volume and the opposite condition points towards a sell signal. Some of the specific upper turning points (a sell signal) are the following:

1. Actual price is below the moving average, advance towards it. Does not penetrate the average, and starts to turn down again.
2. Following a rise, the moving average flattens out or declines, and the price of stock or index penetrates it from the top.
3. The stock price rises above the moving average line while the line is still falling.

A huge benefit of technical analysis over fundamental analysis is that it can be applied quite simply and economically to all sorts of securities prices. Only a little practice is desirable in recognizing the patterns and everybody can apply it. There are some complexity in technical trading techniques exist, but technical analysis can be made as easy or as difficult as the user likes. For example, Martin Pring (1997, p.3) notices: "Although computers make it more easy to come up with sophisticated trading rules, it is better to keep things as simple as possible".

Foreign Direct investment is related to political and economic stability of the country. All over the world stock exchanges are affected by the political conditions of the country and Pakistan has no exception to it.

Foreign Direct Investment (FDI) in developing economies has grown rapidly following financial and political transformations. The positive response of structural changes in attracting FDI and its consequence on their financial markets especially stock market is obvious. FDI to developing economies in West Africa for example increased from $1.9 billion in 1995 to about $15.8billion in 2006. The market capitalization of emerging market countries almost tripled from about $2 trillion to about $5 trillion over the same period. These foreign investors have emerged as major participants in emerging stock markets through purchase of existing equity or recovery of their investment by selling equity in capital markets, but the extent of their impact on emerging stock market development of developing countries has receive little attention.

The issue whether stock price and exchange rate are related or not has got considerable attention after the East Asian crises. During the crises the countries affected saw turmoil in both currency and stock markets. If stock

prices and exchange rates are related and the causation runs from exchange rates to stock prices then crises in the stock markets can be prevented by controlling the exchange rates. Moreover, developing countries can exploit such a link to attract/stimulate foreign portfolio investment in their own countries. Similarly, if the causation runs from stock prices to exchange rates then authorities can focus on domestic economic policies to stabilize the stock market. If the two markets/prices are related then investors can use this information to predict the behavior of one market using the information on other market. (Muhammad, 2005)

Regression Analysis

There should be a significant link between the dependent and the independent variables, which are the basis of a researcher's hypothesis and finally to the conclusion of the research work. This link is studied by running regression analysis. The regression basically analyzes the link of two or more variables. It shows the strength of the relation and how much they relate to each other.

Time	KSE-100 Index (Y)	Interest Rates (X_1)	Exchange Rates (USD to PKR) (X_2)	FDI US $ Millions	Inflation Rate
1995	1,655.64	9.6	34.93	722.60	13.02
1996	1,385.06	13.3	40.35	922.00	10.79
1997	1,849.70	15.1	44.69	716.30	11.80
1998	1,111.50	8.4	51.82	506.00	7.81
1999	11,99.29	11	52.13	532.00	5.74
2000	1,564.78	14	63.49	308.00	3.58
2001	1,133.44	9	60.11	383.00	4.41
2002	2,018.75	7.5	57.74	823.00	3.54
2003	4,027.34	7.5	57.92	534.00	3.10
2004	5,217.65	9	59.69	949.00	4.57
2005	8,225.66	9	60.18	1524.00	9.28
2006	10,512.52	9	50.62	3521.00	7.92
2007	13,351.79	12	67.44	5139.60	7.77
2008	9200.22	13	76.93	5152.00	22.52

KSE website, Interest rates retrieved from SBP site Exchange rates retrieved from oanda .com FDI retrieved from global development finance and inflation rates retrieved from economic survey of Pakistan.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.936[a]	.876	.821	1757.12664

a. Predictors: (Constant), Inflation Rates, Exchange Rates, Interest Rates, Foreign Exchange Rates

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.967E8	4	4.918E7	15.928	.000[a]
	Residual	2.779E7	9	3087494.046		
	Total	2.245E8	13			

a. Predictors: (Constant), Inflation Rates, Exchange Rates, Interest Rates, Foreign Exchange Rates

b. Dependent Variable: KSE 100 Index

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients
		B	Std. Error	Beta
1	(Constant)	4834.948	3664.569	
	Interest Rates	-180.004	217.882	-.109
	Exchange Rates	-14.896	55.979	-.039
	Foreign Direct Investment	2.621	.428	1.085
	Inflation Rates	-207.770	130.274	-.260

a. Dependent Variable: KSE 100 Index

The Fitted Model

KSE-100 Index = 4834.948 – 180.004interest rates – 14.896 Exchange Rates + 2.621FDI – 207.770 Inflation Rates

The above fitted model shows that whatever the change will be in the interest rates exchange rates foreign direct investment and the inflation rate the stock market will also be affected and the index will minimum be dropped down to 6069.899 points. From the past statistics we can assume that stock market can touch a minimum index of 4800 points. As per the independent variables analyzed, the interest rate has a negative relation with the stock market and with the increase in the interest rate the stock index decreases. The variable exchange rate is again showing a negative trend and causes a decrease in stock index with the increase in foreign exchange rate. Then foreign direct investment has a very strong relation with stock market index it has two reason one that is mentioned above in the discussion of relationship between stock market index an the foreign direct investment. Secondly the foreign direct investment shows the political stability of the country which is far related to the stock market index. The value of R here is

.936 which shows that the fitted model is good and at the same time the R-square value is 0.876 which shows that 87.6% change in the KSE index is due to above mentioned variables.

Conclusion

From the literature surveyed and the facts of last 15 years it is concluded that interest rates, exchange rates foreign direct investment and the inflation rates are the main factors that affect KSE-100 Index as from analysis it is shown that there is a strong relationship between KSE-100 Index and exchange rates interest rates foreign direct investment and the inflation rates.

The literature shows that the exchange rates only affect the stock market in the long run and not in the short run. The major limitation was that there is no direct index for the political stability but the foreign direct investment was taken as a symbol of political conditions which shows major impact. Thus, the political stability is a dominating factor that has the potential to affect the stock market positively and negatively as well. The literature review shows that the political situation is a major cause of the investor's lack of confidence on the stock market. Investors are more curious about the demand and supply conditions and political situation of the country apart from the earning potential, profits and cash flow of the companies listed in Karachi, Lahore & Islamabad Stock Exchanges.

Bibliography

(2001). Monetary Policy . In B. Friedman, *International Encyclopedia of the Social & Behavioral Sciences.*

(2002). Fiscal Policy and its Objectives. In P. J. P.T.Heyne, *The Economic Way of Thinking (10th ed).* Prentice Hall.

(2007). Analyzing Sectors/Industries. In C. P. Jones, *Investments: Analysis & Management (9th edition)* (p. 374).

(2008). Assessing the Economy. In C. P. Jones, *Investments: Analysis & Management* (p. 344).

(n.d.). Retrieved July 15, 2008, from www.khistocks.com.

Achelis, S.B. (1995), Technical Analysis from A to Z, McGraw-Hill, New York.

Alpha, T. S. (n.d.). *Adventures in technical analysis jim cramer edition*. Retrieved September 13, 2008, from Seeking Alpha: www.seekingalpha.com

Bass, A.B. (1999), The Predictors: How a band of maverick physicists set out to beat Wall Street, Penguin Books Ltd, London.

Black's Law Dictionary. (2006). West Group.

Cheung, Y., Chinn, M.D. (1999), Macroeconomic Implications of the Beliefs and Behavior of Foreign Exchange Traders, NBER working paper 7417.

Competition. In C. P. Jones, *Investments: Analysis & Management* (pp. 376-377).

Cowles, A. (1933), Can Stock Market Forecasters Forecast?, Econometrica 1, 309-324.

Economic Survey of Pakistan. (2007-2008). Retrieved July 01, 2008, from Accountancy: www.accountancy.com.pk

Employment Rate. (2008, January 31). Retrieved July 15, 2008, from www.wikipedia.org.

Fama, E. F. (1995). The Behavior of Stock Market Prices. Journal of Business , 38 (1), 34-105.

Fiscal_policy. (n.d.). Retrieved July 18, 2008, from www.wikipedia.org.

Graham, B. (1949), The Intelligent Investor, Fourth revised edition (1973), Harper & Row, Publishers, Inc., New York.

Hamilton, W.P. (1922), The Stock Market Barometer, Harper & Brothers, New York. Reprint in 1998 by John Wiley & Sons, Inc., New York.

Hayles, B. (n.d.). *Stock Reviews*. Retrieved September 10, 2008, from The Financial Daily: www.thefinancialdaily.com

industry. (n.d.). Retrieved July 25, 2008, from www.dictionary.com.

Jones, C. P. (2007). Fundamental Analysis. In C. P. Jones, *Investment: Analysis & Management.*

Jones, C. P. (2007). Investments: Analysis & Management (9th Edition).

Jones, C. P. (2007). Technical Analysis. In C. P. Jones, *Investments: Analysis & Management* (pp. 424-444).

Keynes, J.M. (1936), The General Theory of Unemployment, Interest and Money, Harcourt Brace, London.

Kolundzic, Z. (2004, April). Why does technical analysis work? Retrieved September 10, 2008, from Emini Trading Course: www.eminitradingcourse.com

Little, K. (2006). What Stock Investors should know about inflation.

Lo, A.W., Mamaysky, H., Wang, J. (2000), Foundations of technical analysis: computational algorithms, statistical inference and empirical implementation, Journal of Finance 55, 1705-1722.

Malkiel, B.G. (1996), A Random Walk down Wall Street, W.W. Norton & Company, Inc, New York.

Meigs, M. &. (2006). *Advanced Financial Accounting.*

Menkhoff, L. (1998), The noise trading approach - questionnaire evidence from foreign exchange, Journal of International Money and Finance 17, 547-564.

Monetary_policy. (n.d.). Retrieved July 18, 2008, from www.wikipedia.org.

Mueller, J. (n.d.). Interest Affects Market. Retrieved October 5, 2008, from Investopedia: www.investopedia.com

Muhammad, N. (2005). Stock Prices and Exchange rates: Are they related? Evidance from south asian countries. *Applied Economics Research Center* .

Non-performing_loan. (n.d.). Retrieved July 18, 2008, from www.wikipedia.org.

Osler, C.L., Chang, P.H.K. (1995), Head and Shoulders: Not Just a Flaky Pattern, Staff Reports No. 4, Federal Reserve Bank of New York.

Pilkington, N. (n.d.). *Stock Reviews*. Retrieved September 10, 2008, from The Financial Daily: www.thefinancialdaily.com

PK, S. (2006, November 27). Retrieved September 9, 2008, from StockPK: www.stockpk.com

Poster. (2006, 12 27). Retrieved August 27, 2008, from Stock PK: www.stockpk.com

Pring, M. (1998), Introduction to Technical Analysis, Mc Graw-Hill, New York.

Rhea, R. (1932), The Dow Theory, Barron's, New York. Reprint in 1993 by Fraser Publishing Company, Burlington.

StockPK. (n.d.). Retrieved September 11, 2008, from Stock Pk: www.stockpk.com

Stock-Scouter. (2005, February). Retrieved from Shiaustreet.

Taylor, M.P., Allen, H. (1992), The use of technical analysis in the foreign exchange market, Journal of International Money and Finance 11, 304-314.

Team, C. F. (n.d.). *Technical Analysis*. Retrieved September 10, 2008, from Chart Filter: www.chartfilter.com

Times, D. (2008, August 26). Retrieved September 10, 2008, from Daily Times: www.dailytimes.com.pk