An empirical analysis of kse

The fact that the market is efficient is important for the public economy when it comes to the distribution of scarce resources as it acts as an Intermediary of capital distribution from savers o investors through the mechanism of price. In Pakistan, securities market has a special significance due to its sensitivity to political turmoil, expectations, prospects of stocks and Insider's Information. With such Indicators, It only seems logical to test the efficiency of the stock market in light of the existence of random walk phenomena.

In this study, historical stock prices on a monthly and daily basis have been used from a sample period of July 1996 to June 2006 of SEEKS 100 Index Companies. A time line of 10 years has been chosen to test the efficiency of the Pakistani Stock market. Thus, the total umber of observations is 121 for monthly data and 2218 for daily data. Consequently, NOVA method has been used to quantify the data. The results conclude that the Random-walk hypothesis can be accepted for both monthly and daily returns.

There is no " day of the week effect" or the 'month effect'. Thus, the random walk theory Is valid for the SEEKS which can be termed as an efficient market. OF 20 Efficient Market, Information, intrinsic Value, Stock Price, Random-walk Hypothesis 1. Introduction Capital markets play a vital role in monopolizing indigenous resources and channel them effectively for enhanced economic productivity. Hence, the development of capital markets is the prime determinant of a country's economic growth (Basher, 2002).

Market efficiency is of pivotal importance in any public economy when considering the distribution of scarce resources, as it performs an

intermediary function of capital circulation from savers to investors through price mechanism. When it comes to the allocation of capital to an unrestricted economy, the stock prices should confer the correct signal, I. E. Containment of the complete set of significant information. Hence, the public economy requires the market to be efficient (Cleanses, 1987). Historically, many of the statisticians and economists have argued about the random walk theory in stock-market prices.

The followers of Random-walk theory usually begin from the argument that the world's established stock exchanges are good models of " efficient" markets. In an efficient market, the actions of the many competing participants, leads to actual prices already reflecting the effects of current information and the actual price of a security to wander randomly about its intrinsic value. Thus, a market where successive price changes in individual securities are independent is, by definition, a random-walk arrest (Fame, 1995).

The random walk theory describes that current stock prices is the reflection of all information, so, this can be stated that a marginal time is required to incorporate the new information in prices, which provides a little time to the market participant to make the most from this new information in realizing abnormal profits. Due to existence of homogeneity in information system, the market participants are likely to be the above-normal profit factor of any new information to nominal average returns offered by the market.

Fame (1970), determined that an efficient market is where stock prices be a sign of the information in its entirety. So, the prices following a random walk

have no possibility of producing consistent abnormal returns (Bradley & Myers, 2000). 2. Literature Review Louis Bachelor in his study " The Theory of Speculation" has developed the linkage between random walk process and the economic processes. He determined the unpredictability of the changes of prices of French government papers. He also concluded that " The calculated anticipation of the investor is of no value" .

Holbrook (1934), has found that the subsequent changes in stock prices are not dependent on each other and are also uncorrelated and he concluded that they are random. Later, many of the researchers [Kendall (1953), Osborne (1959), Fame supported the findings of Holbrook. These studies used the statistical techniques to test the independence of stock price. The Efficient Market Hypothesis was established by many researchers in the past over the time p of more than thirty years [Raucous & Siegel (1998), Fame & French (1996), Macaque, et. L, (1996), Snobbery, et. AlГ? 1995), Malice (1995), Brown & Guatemalan (1995), Guatemalan & Boots (1994), Jadedness & Titian (1993), Elton, et. Al,(1993), Copra, et. Al,(1992), Seep' 1992), Lee, et. Al,(1991), Bernard & Thomas (1990), Harris (1989), Polite (1989), Shovels et. AlГ? 1984), Charges (1978), Moore (1964)]. It cannot be denied that several researches in the past have not supported the random walk hypothesis, I. E. They found the signal of predictable elements in stock returns.

Most of this work was done on the largest stock markets markets, developed economies in European and Japanese stock markets as studied by (Potherb & Summers, 1988) and (Lo and Macmillan, 1988). More recently, mixed evidence on the random-walk hypothesis were established for emerging

markets in Latin America (Ritual, 995); (Grief & Rexes, 1999) and in Asia (Dyad & pun, 1994); (Hung, 1995); (Change & Ting, 2000). 3. Purpose of the Study In the context of Pakistan, securities market has a special significance due to its sensitivity to political turmoil, expectations, prospects of stocks and insider's information.

Thus, the Pakistani authorities are progressively realizing the significance of improving the efficiency of the Karachi Stock exchange in particular, and its relation to the development of private sector and economic progress (Basher, 2002). Despite this, the international magazine for the successive three years acknowledged SEEKS as one f the Top Performing Markets - (" Business Week" and the US newspaper, USA Today. (SEEKS 2004). With such progressive indicators, it only seems logical to test the efficiency of the stock market in light of the existence of random walk phenomena.

This study, thus, wants to analyze the phenomena of random walk theory in Karachi Stock Exchange-whether stock price fluctuations in the past trail a movement or not, hence they may or may not be helpful as predictor of their prospective movement. Findings of our study are intended to confirm or abrogate the discernment that prices of stocks in SEEKS do observe the random walk theory. According to Canker (2004), recurring studies with different time ps can establish the fact of the Pakistani stock market efficiency.

Many others have used the same data in different time lines leading to different results on the efficiency of the Pakistani stock market. So, this study would also to be considered as the market efficiency. 4. Method 4. 1.

Data In this research, historical stock prices on a monthly and daily basis have been used from a sample period of July 1996 to June 2006 of SEEKS 100 Index Companies. A time line of 10 years has been chosen to test the efficiency of the Pakistani Stock market. Thus, the total number of observations is 121 for monthly data and 2218 for daily data. Consequently, a quantitative method has been used.

Stocks have been picked up on the basis of weighted market capitalization in percentage, to minimize biasness. High market capitalization group consists of companies with a weighted market capitalization of at least 1 (one and above) and the low market capitalization group consists of companies with a market capitalization of lower than one. The 8 companies are- Negro Chemicals, Fuji Fertilizer, Sue Northern Gas, Sue Southern Gas and Dammed Insurance, Indus motors, Icily and Pakistan State Oil. The reliability of data was confirmed as professional analysts use such data in stock valuation.

Additionally, all the data used in this research is also available publicly. If some other researcher need to study the same trend using the same time period as in this research, the results attained would be the same as which we follow. 4. 2. Source of Data The data used in this research has principally been secondary. The capitalization data for the SEEKS 100 Index Companies were taken from the site www. Finance. Yahoo. Com. The selection was then made from this list for stocks to be included. Stock prices on daily and monthly Asia were gathered from SEEKS database which is accessible from its website.

Splits and issues are also considered for adjustment of these stock prices. After data collection, it was treated and the statistical tool- NOVA was applied. First, as the data available from the site, only specified the dates, the day effect needed each day specified too. Subsequent to this the daily and monthly return was calculated by taking the log values of the difference between two subsequent daily or monthly stock prices respectively, which yield continuously compounded returns The formula used for calculation is : where, Len = Logarithm

Opt= Stock prices in time period t P(t-l) = Stock price in time period t-1 . Testing of the hypotheses was done by " One Way -? Analysis of Variance (NOVA)", with a 5% significance level. Null hypothesis would be rejected on the basis of no significant difference found between the mean returns on all the weekdays and months from each other. And would be accepted if mean returns on at least one day of the week and in at least one month are found to be significantly different from each other. Values were applied to the days (I. E. Moon-? I, Due= 2... And to the months Non= l , Feb.= 2...). Returns of each of the 8 companies ere chosen in the dependent list and the days or months, respectively, chosen as the factors, and the test conducted. 5. Results and Discussion Here, the results are discussed that have been obtained from the investigation. First, one way NOVA illustrates significant difference of mean returns of days and months during 1994-2004. Finally, these results are analyzed and interpreted to draw logical conclusions after analysis. In NOVA, the significance column has given us the probability of F test.

Since all the P values are highly insignificant, as they are all above 0. 05, this indicates that there is insignificant he companies included in the sample. Returns on all days of the week and in all months are equal (there is no day of the week effect or month of the year effect). It is concluded that NOVA test accepts the random walk hypothesis for the Karachi Stock Exchange. Table 1 and Table 2 shows that the difference in means of daily returns and monthly returns respectively are insignificant for each of the 8 companies.

Note that difference in the daily returns of Pakistan State Oil is the most insignificant and that of monthly returns is most insignificant of ICC. Also noted is that the value of significance in monthly returns for Sue Northern is 0. 055 which is very close to the level of significance, which is 0. 05. 6. Conclusions The results above lead us to the conclusion that the Random-walk hypothesis can be accepted for both monthly and daily returns. There is no " day of the week effect" or the 'month effect'.

Thus, the random walk theory is valid for the SEEKS which can be termed as an efficient market. This is compatible with Fame's conclusion of existence of random walk phenomena. The results specify the independence of the daily stock market returns and we cannot make use of these results to forecast the stock returns of the of next trading session. So the market prices quoted at SEEKS at any defined time, are representing good approximation of fundamental or inherent values and are reflecting the Judgments of the market participants on stock potential.

Therefore, the stock returns in SEEKS are independent and they cannot be used to predict future returns and the subsequent period's returns must be

somewhere near it was the last time found. This conclusion is consistent with modern efficient walk hypothesis in SEEKS can present important challenges to the opponents. Empirical evidence provided so far supports the random walk hypothesis in the SEEKS so the critiques would eave to show consistently that they can use past patterns to predict future prices. Debate in Pakistan over its existence in SEEKS. Extensive study can be done using data since the time that SEEKS has been into existence.

Portfolio analysis can also be done comparing returns of the portfolio in question against those of randomly selected securities. The NOVA test that this research has applied can be further used as adiagnostictest for checking the efficiency of stock markets. 7. Recommendations From this research, recommendations for investors and portfolio managers are that, as stock prices are following a random walk behavior in each of these 8 companies and these firms are a fair representation of the population of listed companies at SEEKS, then any of them can be randomly selected for inclusion in the portfolio.

Specifically, they should bear in mind that the findings assert that for Negro, Fuji Fret, Adam]e, SO, Indus, ICC, Smothering and Sue-Southern, there will be no significant difference in their mean returns, daily and monthly and thus no 'day effect' or 'month effect' will be encountered (which is a common misconception in the stock market).