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An Analysis of the Reverse Weekend Anomaly at the Nairobi Securities Exchange in Kenya

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Abstract
The objective of this study is to investigate whether the Nairobi Securities Exchange (NSE) exhibits the reverse weekend anomaly. The reverse weekend anomaly exists when Monday returns are significantly positive and larger than those on other days of the week. The data used in this study consisted of daily stock returns of 32 sampled companies listed continuously at the NSE from 1 January 2001 to 31st December 2005. Since the reverse weekend effect tends to be associated with stocks of large firms, the data set was split into two sub-samples for large and small companies. Then weekly stock returns were regressed on the daily stock returns for the two sub-samples and the full sample. The sign, magnitude and significance of Monday returns in relation to those of other days of the week were examined. The results show that Monday returns are highly significant but their coefficient is not positive. Hence there is no reverse weekend anomaly at the Nairobi Securities Exchange. This finding is attributed to the increasing efficiency of the Nairobi Securities Exchange. The findings of this study are consistent with the findings of Leuthold (1991) but contradict those of Brusa, Liu & Schulman (2005).
Keywords: Weekend Anomaly, Reverse Weekend Anomaly, Efficient Market Hypothesis, Nairobi Securities Exchange, Kenya

1.1 Introduction

Security prices and their behavior, over the years, has been a concern to many financial analysts as well as other stakeholders in the economy. There has been intensive research, especially in the field of finance towards determining the behavior of stock markets (Roll, 1977; Kendall, 1953; Mandelbrot, 1963; Roberts, 1959, 1967; Black, et al., 1972; Cootner, 1964; Fama, 1965) and share prices in particular (Dimson, 1988; Thaler, 1992; Ziemba, 1988, 1994a). Major reviews of this literature are Fama (1991), Blume & Siegel (1992), Hawawini & Keim (1994), and Ziemba (1994b). Investors attach a lot of importance to stock prices hence knowledge of information about stock prices enable them make informed decisions on when to buy, dispose or hold shares all for the purpose of making capital gains.

The extent to which information is reliable depends on the efficiency of the stock market. The Efficient Market Hypothesis (EMH) states that at any given time, security prices fully reflect all available information, implying that individuals who buy and sell securities do so with the assumption that the securities they are buying are worth more than the price they are paying , while those they are selling are worth less than the selling price. But if markets are efficient and current prices fully reflect all information, then buying and selling securities in an attempt to outperform the market will effectively be a game of chance rather than skill.

The contributions of scholars such as Fama (1970) on Efficient Market Hypothesis (1970), also asserts that if a market is efficient , no information or analysis can be expected to result in out performance of an appropriate benchmark. The random walk theory however asserts that price movements cannot follow any patterns or trends and that past price movements cannot be used to predict future price movements. The debate about efficient market hypothesis has resulted in numerous empirical studies attempting to determine whether specific markets are in fact efficient and if so, to what degree. Researchers have however documented some technical anomalies that seem to contradict the efficient market hypothesis (French, 1980, Galai, and Kedar-Levy, 2005). The anomalies which have been cited tend to work against the efficiency of the stock market. Such anomalies include the January effect, small firm and weekend effects (Brusa, Liu & Schulman, 2005). Findings from research on these anomalies show that stock market may not be efficient, especially in the weak form.

The weekend effect is a situation where stock returns on Monday are significantly negative and are lower than returns on other days of the week. The weekend effect and its reverse are some of the anomalies that have been uncovered to be posing a challenge to the efficient market hypothesis especially in the weak form. Some of the researchers who have studied the calendar anomaly known as the Monday or weekend effect are for example Cross (1973) and more recently Schwert (1990). Results of these studies show that stock returns on Monday are significantly negative and are lower than returns on other days of the week.

Furthermore, studies of Brusa, Liu and Schulman (2003, 2005) suggest that the weekend effect has reversed, whereby Monday returns are significantly positive and larger than those on other days of the week. In addition, there is also evidence that the weekend effect and the reverse weekend effect depends on the size of firms as well

as stock ownership composition in the market (Brusa, Liu & Schulman, 2003). The focus of this study is on the reverse weekend effect. The aim is to establish whether or not the reverse weekend effect is experienced at the NSE.

1.2 Statement of the Problem

The predictability of stock returns is a feature of inefficient stock markets. Research has uncovered stock market anomalies that seem to contradict the efficient market hypothesis (French, 1980). Such anomalies include the weekend effect and reverse weekend effect (Brusa, Liu & Schulman, 2005). Studies done in the seventies, eighties and early nineties by Cross (1973), French (1980) and Schwert (1990), Abraham & Ikenberry (1994) confirmed the existence of a weekend effect. This means that Monday returns are significantly lower than on other days of the week.

However, Kamara (1997) reports that the weekend effect has diminished significantly in the U.S. since the introduction of the S & P 500 futures contract in 1982. Furthermore, studies of Brusa, Liu and Schulman (2000) suggest that the weekend effect has reversed so that Monday returns arc significantly positive and larger than those on other days of the week. These studies also found that the weekend effect and the reverse weekend effect are as a result of such factors as firm size, share ownership composition and the previous Friday returns.

Studies investigating stock market anomalies in Kenya include Rasugu (2005) entitled "The Existence of the Holiday Effect at the NSE" and Mokua (2003) entitled "Weekend Effect on stock returns at the Nairobi Securities Exchange". Rasugu's study sought to establish whether the Nairobi Securities Exchange exhibits the weekend effect. His sample consisted of 44 companies that traded continuously in the NSE for 5 years from 1" January 1998 to 31st December 2002. The study involved the use of secondary data obtained from NSE daily stock prices (bids) and dividends collected from 1 January 1998 to 31' December 2002. He used regression analysis models and tests to determine the significance of stock returns on before the holidays, post holiday period and other days. A comparison of the mean returns of pre holiday and post holiday days showed no significant differences between the means. His findings depict the absence of holiday effect on the NSE.

Mokua (2003) sampled 43 companies listed in the NSE continuously for 5 years from 1 April 1996 to 31st March, 2001. Secondary data was obtained for daily transaction prices extracted from NSE records and bid prices were used as an approximation of the transaction prices. The data were analyzed using linear regression and comparison of means done under independent sample Nest. His study concluded that Monday returns are not significantly lower than the other days nor are Friday returns significantly higher than the other days of the trading week. His findings also depict the absence to the weekend effect on the NSE. The absence of the weekend anomaly let to the examination of the possibility of the reverse weekend anomaly.

2. Literature Review

2.1 Efficient Market Hypothesis (EMH)

Efficient market hypothesis is an investment theory which states that it is impossible to "beat the market" because stock market efficiency causes existing share prices to always incorporate and reflect all relevant information (Fama, Fisher, Jensen & Roll, 1969). According to the EMH, this means that stocks always trade at their fair value on stock exchanges, and thus it is impossible for investors to either purchase undervalued stocks or sell stocks for inflated prices. Thus, the crux of the EMH is that it should be impossible to outperform the overall market through expert stock selection or market timing, and that the only way an investor can possibly obtain higher returns is by purchasing riskier investments (Harvey, 1991). This theory has met a lot of opposition, especially from the technical analysts (Lakonishok and Marberlv, 1990). Their argument against the efficient market theory is that many investors base their expectations on past prices, past earnings, track records and other indicators. Because stock prices are largely based on investor expectation many believe it only makes sense to believe that past prices influence future prices (Haugen & Baker, 1996; Hirshleifer, 2001).

The nature of information does not have to be limited to financial news and research alone indeed information about political, economic and social events, combined with how investors perceive such information, whether true or rumored, will be reflected in the stock price (Hirshleifer, 2001). According to EMH, as prices respond only to information available in the market, and, because all market participants are privy to the same information, no one will have the ability to out-perform the market.

In efficient markets, prices are random, so no investment pattern can be discerned (Leuthold, 1098). planned approach to Investment, therefore, cannot be successful. This "random walk" of prices, commonly spoken about in the EMH school of thought, results in the failure of any investment strategy that aims to beat the market consistently. In fact, the EMH suggests that given the transaction costs involved in portfolio management, it would be more profitable for an investor to put his or her money into an index fund (Lee, Shleifer & Thaler, 1990).

Fama's 1970 review (revisited in 1991) divides work on market efficiency into three categories: Weak form, Semi-strong form, and Strong form of market efficiency. The strong form suggests that securities prices reflect all available information, even private information. Seyhun (1986) provides sufficient evidence that insiders

profit from trading on information not already incorporated into prices. Hence the strong form does not hold in a world with an uneven playing field. The semi-strong form of EMH asserts that security prices reflect all publicly available information. There are no undervalued or overvalued securities and thus, trading rules are incapable of producing superior returns. When new information is released, it is fully incorporated into the price rather speedily. The availability of intraday data enabled tests which offer evidence of public information impacting stock prices within minutes (Patell & Wolfson, 1984, Gosnell, Keown & Pinkerton, 1996). The weak form of the hypothesis suggests that past prices or returns reflect future prices or returns. The inconsistent performance of technical analysts suggests this form holds. However, Fama (1991) expanded the concept of the weak form to include predicting future returns with the use of accounting or macroeconomic variables. 1-lowever, the evidence of predictability of returns provides an argument against the weak form (Shiller, 1998).

The EMH has provided the theoretical basis for much of the financial market research during the seventies and the eighties. In the past, most of the evidence seems to have been consistent with the EMH (Seyhun, 1968). Prices were seen to follow a random walk model and the predictable variations in equity returns, if any, were found to be statistically insignificant. While most of the studies in the seventies focused on predicting prices from past prices (Malkiel,1977), studies in the eighties also looked at the possibility of forecasting based on variables such as dividend yield (Fama & French, 1988), P/E ratios (Campbell and Shiller ,1988) and term structure variables (Harvey , 1991). Studies in the nineties looked at inadequacies of current asset pricing models (La Porta, Lakonishok, Shleifer & Vishny, 1997).

The maintained hypothesis of EMH also stimulated a plethora of studies that looked, among other things, at the reaction of the stock market to the announcement of various events such as earnings (Ball & Brown ,l968), stock splits (Fama, Fisher, Jensen & Roll ,1969), capital expenditure (McConnell & Muscarella, 1985), divestitures (Klein 1986) and takeovers (Jensen & Ruback , 1983). The usefulness or relevance of the information was judged based on the market activity associated with a particular event. In general, the typical results from event studies showed that security prices seemed to adjust to new information within a day of the event announcement, an inference that is consistent with the EMH (Patell & Wolfson, 1984). Even though there is considerable evidence regarding the existence of efficient markets(Shiller, 1995, Grossman & Stiglitz, l980), one has to bear in mind that there are no universally accepted definitions of crucial terms such as abnormal returns, economic value, and even the null hypothesis of market efficiency. To this list of caveats, one could add the limitations of econometric procedures on which the empirical tests are based (Reiganum, 1981).

Fama's second review (1991) on Efficient Market Hypothesis reiterates that any investigation of market efficiency has at least two problems: ihe first is information and transaction costs and the other is the joint-hypothesis problem. Unlike the 1970 paper which he used the terms Weak-form, Semi-Strong form and Strong form, Fama (1991) focuses on three areas: tests for return predictability, event studies and tests of private information.

When looking at return predictability, Fama (1991) points out the change in focus in this area. Formerly it was just testing short-run return predictability from past returns. Now it includes other variables such as dividend yields (D/P), Earnings/Price (E/P), term - structure variables, as well as for longer horizons. He borrows the contributions of French & Roll (1986) who report that stock prices are more variable when the market is open. This has been interpreted by some as noise and an indication of market inefficiency (Basu, 1997). However, the size of the autocorrelations is small for short-run autocorrelations.

For longer-term horizons, Shiller (1984) and Summers (1986) present a view that stock prices take large slowly decaying swings away from fundamental values, but short-horizons have small autocorrelations. Tests of this model have been largely fruitless. There has been some evidence of negative autocorrelations in the 3-5 year horizons but as Fama & French (1988) show these largely disappear when the 1926-1940 period is dropped from the data.

Still on return predictability, Fama (1991) points our that any test of asset pricing models runs into the joint-hypothesis problem, where he emphasizes the fact if at one can never know whether the market is inefficient or the model is wrong and that the choice of model mar influence the findings. His conclusion on predictability is the absence of a pricing model. Not surprisingly multi-factor models work better (not surprising because researcher can look until they find something). Moreover, it is possible that all of the models are capturing the same risk factor but we do not recognize it yet.

On tests for private information, Fama (1991) suggests several different ways of investigating this. Insider trading: insiders do beat the market (Gaffe, 1974; Seyhun 1986). Insider trading is where insiders profit from trading on information not already incorporated into prices. Security Analysts: Value Line and other anomalies suggest that analysts do provide some information. This is inconsistent with Efficient Markets if one assumes the absence of information costs, but is perfectly consistent if information is costly to obtain (Grossman & Stiglitz, 1980). Professional portfolio management: Results are largely consistent with the idea that on average people do not beat the market. There are some conflicting theories (Gaffe, 1974), but other researchers for example Fama & French (1995) agree with this conclusion.

Overall it appears the market is quite efficient but not perfectly so. There appears to be some predictability and some mean reversion in long-run returns, but not so much in the short-run tests. The early euphoric research of the seventies was followed by a more cautioned and critical approach to the EMH in the eighties and nineties. Researchers repeatedly challenged the studies based on EMH by raising critical questions such as: Can the movement in prices be fully attributed to the announcement of events (Patell & Wolfson, 1984)? Do public announcements affect prices at all (Bernard, 1993)? And what could be some of the other factors affecting price movements (Cutler, Porteba & Summers, 1989)? For example, Roll (1988) argues that most price movements for individual stocks cannot be traced to public announcements. In their analysis of the aggregate stock market, Cutler, Poterba & Summers (1989) reach similar conclusions. They report that there is little, if any, correlation between the greatest aggregate market movement and public release of important information. More recently, Haugen & Baker (1996) in their analysis of determinants of returns in five countries conclude that none of the factors related to sensitivities to macroeconomic variables seem to be important determinants of expected stock returns.

2.2 The Challenge to Efficient Market Hypothesis

The accumulating evidence suggests that stock prices can be predicted with a fair degree of reliability (Fama, 1970). Two competing explanations have been offered for such behavior. Proponents of EMH (Fama and French, 1995) maintain that such predictability results from time-varying equilibrium expected returns generated by rational pricing in an efficient market that compensates for the level of risk undertaken. Critics of EMH (La Porta, Lakonishok, Shleifer, & Vishny, 1997) argue that the predictability of stock returns reflects the psychological factors, social movements, noise trading, and fashions or 'fads" of irrational investors in a speculative market. The question about whether predictability of returns represents rational variations in expected returns or arises due to irrational speculative deviations from theoretical values has provided the impetus for fervent intellectual inquiries in the recent years.

The hitherto dominant paradigm in financial market research, the Efficient Market Hypothesis (EMH), has been put on trial recently and subjected to critical re-examination (Porteba & Samwick, 1995). The preliminary evidence indicates that the initial confidence in the Efficient Market Hypothesis might have been misplaced (Reiganum, 1981). It is observed that financial equilibrium models based on EMH fail to depict trading operations in the real world (Haugen & Baker, 1996). Various anomalies and inconsistent results call for refinement of the existing paradigm (Haugen & Baker, 1996).

In the real world of investment, however, there are obvious arguments against the EMH, There are investors who have beaten the market. Warren Buffet, whose investment strategy focuses on undervalued stocks, made millions and set an example for numerous followers Dechow, Hutton, Meulberek & Sloan, 2000). There are portfolio managers that have better track records than others, and there are investment houses with more renowned research analysis than others (Gompers & Metrick, 2001). So how can performance be random when people are clearly profiting from and beating the market?

Studies in behavioral finance, which look into the effects of investor psychology on stock prices, also reveal that there are some predictable patterns in the stock market (Hirshleifer & Shumwav, 2001). Investors tend to buy undervalued stocks and sell overvalued stocks, and, in a market of many participants, the result can be anything but efficient (Klein, 1986).

Patel, Zeckhauser & Hendricks (1991) argue that for most economists it is an article of faith that financial markets reach rational aggregate outcomes, despite the irrational behavior of some participants, since sophisticated players stand ready to capitalize on the mistakes of the naive. Yet financial markets have been subject to speculative fads that are hard to interpret as rational (Hirshleifer, 2001). Shiller (1998) reiterates that recent literature in empirical finance is surveyed in its relation to underlying behavioral principles, principles which come primarily from psychology, sociology and anthropology. The behavioral principles discussed are: prospect theory, regret and cognitive dissonance, anchoring, mental accounting, overconfidence, over and under reaction, gambling behavior and speculation, attention anomalies and global culture.

Barber & Odean (1999) argue that the field of modern financial economics assumes that people behave with extreme rationality, but they do not. They point out that people's deviations from rationality are often systematic. Behavioral finance relaxes the traditional assumptions of financial economics by incorporating these observable, systematic and very human departures from rationality into standard models of financial markets. They highlight two common mistakes investors make: excessive trading and the tendency to disproportionately hold on to losing investments while selling winners. They further argue that systematic biases have their origins in human psychology. That the tendency for human beings to be overconfident causes the first bias in investors, and the human desire to avoid regret prompts the second.

Hirshleifer (2001) also makes his contribution that the basic paradigm of asset pricing is in vibrant flux. The purely rational approach is being subsumed by a broader approach based upon the psychology of investors. In this approach, security expected returns are determined by both risk and misevaluation. Hirshleifer's broader observation is that investor behavior in natural and experimental markets report evidence consistent with a

disposition effect, a greater readiness to realize gains than losses. Certain groups of investors change their behaviors in parallel, in some cases engaging in momentum trading that result in gain.

2.4 Empirical Studies on the Reverse Weekend Anomaly

The reverse weekend effect anomaly purports that Monday returns are significantly positive and larger than those on other days of the week. Previous studies in the financial literature have documented the existence of significantly negative Monday returns in stock markets (Schwert, 1990; Keim, 1987). For instances, Schwert (1990i examines the U.S., tock indexes from 1802 to 1987 and reports the existence of a weekend effect during this period. Keim (1987), who studies the U.S. indexes during the 1963- 1985 period, also reports the existence of a weekend effect. Kamara (1997) reports that the effect, while still exists, has diminished significantly since the introduction of the S&P 500 futures contract in 1982.

Other studies on the weekend effect include those by Cross (1973), French (1980), and more recently, Schwert (1990), Lakonishok & Maberiv (1990), Abraham & Ikenberry (1994), and Wang, Li, & Erickson (1997). The results in these studies conclude that stock returns on Monday are significantly negative and they are lower than returns on other days of the week. However, Connolly (1989) points out that the weekend effect is not stable over time. It appears in some periods, disappears in certain periods, and reappears in others. In addition, Kamara (1997) reports that the effect has diminished significantly since the introduction of the S&P 500 futures contract in 1982.

Recent evidence from the stock markets of the United States indicates that the traditional weekend effect has reversed with Monday returns being significantly positive, (Brusa, Liu & Schulman, 2005) .This study examined the daily returns from U.S S & P 500 index and the Canadian S & P /TSX Composition index over the period 1988-2003.Consistent with findings of other empirical studies, the researchers find that there is indeed a reversal of the weekend effect in the U.S market. While there is a weak evidence based on non-parametric tests of this effect in the Canadian market, this is not supported by t-tests and the regression used by French (1980).

Studies by Brusa, Liu, & Schulman (2000, 2005) suggest that the weekend effect has reversed recently in the early nineties. Their study was done over an extended period of eleven years (1988 to 1998) with the aim of investigating Monday returns for four major stock market indexes: the Dow Jones Industrial Average (DJIA), the Standard and Poor's 500 indexes (S&P 500), the CRSP value-weighted index, and the NASDAQ stock index. They find that while Monday returns tend to be negative during the pre-1988 period, this weekend effect is reversed during the post-1988 period. The degree of the reverse weekend effect is related to firm size. While small firms still show diminishing weekend effect, large firms have strong reverse weekend effect. Their results indicate that the reverse weekend effect is not only a temporary phenomenon. Instead, it is a sustained anomaly that exists over an extended period in the recent market. They also examined whether the appearance of the reverse weekend effect can be attributed to the change in the stock ownership composition in the market. Previous studies of the weekend effect conclude that the trading activities of individual investors contribute to the existence of the "traditional" weekend effect Lakonishok & Maberlv, 1990; Abraham & Ikenberry, 1994). Furthermore, the study of Abraham and Ikenberrv (1994) also reports that the trading behavior of individual investors is one of the factors contributing to the positive autocorrelation between Friday returns and the following Monday returns — i.e. positive (negative) returns on Friday tend to be followed by positive (negative) returns on the following Monday and this positive Friday-Monday autocorrelation is stronger for small and medium size companies than large companies.

The composition of the stock ownership in the U.S., however, has steadily shifted from individuals to institutions in the past few decades as noted by Poterba and Samwick (1995), and Gompers and Metrick (2001). For instance, the stock ownership by individuals has declined significantly from nearly 90 percent in the 1950s to less than 50 percent in the mid 1990s, while the stock ownership by institutions (pension funds, mutual funds, and insurance companies) has increased considerably from less than 8 percent to more than 40 percent during the same period (Poterba & Samwick, 1995 p.3l3). Moreover, by December 1996 large institutional investors — institutions having at least $ 100 millions under management held control over more than half of the U.S. equity market (Gompers & Metrick (2001).

Since institutional investors behave differently from individual investors in many aspects, the documentation of the shift in stock ownership composition from individuals to institutions raises an interesting question: Could the shift in stock ownership-composition explain, at least in part, the existence of the reverse weekend effect? For instance, if the trading activity of individual investors is one of the contributing factors to the existence of the traditional weekend effect as documented by Lakonishok & Maberly (1990) and Abraham & Ikenberrv, (1994), could the trading activity of institutional investors be related to the reverse weekend effect?

The conjecture of the association between the shift in stock ownership-composition and the reversal of the weekend effect becomes more plausible if we take into account the findings in the literature that the "reversed" weekend effect is documented mostly in stocks of larger and more liquid firms (Brusa, Liu & Schulrnan, 2005), which are also more favored by institutional investors (Gompers & Metrick, 2001), because these stocks cost less in trading for institutional investors (Katnara, 1997), and investing in these stocks is considered more

"prudent" than investing in stocks of small firms (Del Guercio (1996)). Furthermore, the studies in the literature also report that the trading behavior of individual investors is one of the factors contributing to the positive autocorrelation between Friday returns and the returns on the following Monday (Abraham & Ikenberrv, 1994). If the stock ownership composition has shifted from individuals toward institutions, and institutions tend to invest in stocks of larger firms, then we may expect the Friday-Monday return autocorrelation for larger firms to be changed.

Brusa, et al., (2005) hypothesize that the trading of institutional investors in stocks of large firms contributes to the existence of the reverse weekend effect. They test this hypothesis and the results in show that the trading activities of institutional investors are positively related to the positive Monday returns documented in the post-I 988 period while the trading activities of individual investors are negatively related to Monday returns.

Finally, they examine the association between Monday returns and the previous Friday returns for stocks of large and small firms. They find significant differences in the Friday- Monday return autocorrelation between stocks of large and small firms. During the period in which the reverse weekend effect is detected (1988-1998), small stocks exhibit a positive autocorrelation between Friday and Monday returns — i.e. positive Friday returns tend to be followed by positive Monday returns, and negative Friday returns tend to be followed by negative Monday returns. However, the positive correlation between Friday and Monday returns does not exist for stocks of larger firms during the post-l988 period. While positive Friday returns still tend to be followed by positive returns on the following Monday, negative Friday returns are not followed by negative Monday returns.

Brusa's study entailed secondary data obtained from New York Stock Exchange where he used daily indices. He used the following regression model:

$$R_t = \beta_0 + \beta_1 MON_t + E_t \qquad (1)$$

Where: R_t is the return on day t, β_o is the intercept, β_1 is the coefficient en a dummy variable MON_t, that equals one on Monday and zero otherwise, and E_t, is the error term, He used t-statistics to test the null hypothesis that $\beta_1 = 0$ (that is, the difference between average Monday returns and average returns throughout the week is zero).

In Kenya, Mokua (2003) examined the existence of the Weekend Effect on the NSE. He used a sample of 43 companies listed continuously in the NSE for 5 years from 1 April 1996 to 31st March 2001. Secondary data was obtained from the NSF, daily transaction prices were extracted from NSE records and bid prices were used as an approximation of the transaction prices. The data collected were analyzed using linear regression and comparison of means done under independent sample 7-test. F-statistic test was done to determine the equality of means across all the 5 days from Monday through Friday. His study concluded that Monday returns arc not significantly lower than the other days nor are Friday returns significantly higher than the other days of the trading week. His findings also depict the absence of the weekend effect on the NSE. This study aimed at inquiring into the existence of the reverse weekend effect at the NSE.

3. Research Methodology

This section presents the research design, the population and sample of the study, the data and the data analysis methods.

3.1 Research Design

This study was based on a causal research design. This research design aims at examining the cause and effect between two variables of interest to the researcher. Causal research design also enables the researcher to examine the predictive ability of one variable vis-a-vis another. In this study the objective was to analyze the causal relationship between interest rates and exchange rates in Kenya. The focus was on the predictive ability of interest rates against exchange rates. Therefore, the causal research design was the most appropriate for carrying out this particular study.

3.2 Population of the Study

The population of the study consisted of all the companies quoted at the Nairobi Securities Exchange as at 31st December 2005.Only those companies that trade in equity stocks were included since the study sought to investigate equity stock market behavior. The population of listed firms whose shares were traded at the NSE as at 31st December 2005 stood at 54.

3.3 Sampling Frame

The sample included companies listed continuously for 5 years from 1 January 2001 to 3l' December 2005 and for which data on stock returns was available. Thirty two (32) companies satisfied the sampling criteria. The sample was further subdivided into two; large and small companies. A subjective judgment was done where a company was considered large if its market capitalization was above Ksh 5 billion, otherwise it was considered small.

3.4 Data and Study Period

We used secondary data obtained from the Nairobi Securities Exchange and daily transaction prices extracted from the NSE records. Kiweu (1991) in his pilot study shows that the NSE hid prices are close to the transaction prices. In this study too, we used bid prices as an approximation of transaction prices. A duration of five years from 1 January 2001 to 31 December 2005 is used due the fact that reverse weekend effect is a recent phenomenon.

3.5 Data Analysis

The daily bid prices were then transformed into daily stock returns using the formula below

$$\alpha_j = \frac{\left(P_o - P_j\right)}{P_j}$$

Where: α_j is the daily stock return of stock *j*. Where P_0 is the daily closing price and P_j is the daily opening price.

To test for the significance and magnitude of the daily returns, independent samples tests were used in the evaluation of the null hypothesis, in which all Monday returns were compared with the rest of the days (that is Tuesday, Wednesday, Thursday and Friday). Regression analysis method was used where weekly returns were regressed against daily returns. The *t*-statistics and coefficients of the variables were compared.

The methodology developed by Connolly 1989) and later used in the literature (for example by Chang, Pinegar and Ravichandran, 1993) was applied to daily returns. The methodology was based on the following regression model:

$$R_t = \beta_{1t}\alpha_1 + \beta_{2t}\alpha_2 + \beta_{3t}\alpha_3 + \beta_{4t}\alpha_4 + \beta_{5t}\alpha_5 + E_t \quad (2)$$

Where R_t, is the weekly return; β_i (i = 1, 2, 3, 4 & 5) is the coefficient for each day of the week and E_t is the error term. Return for each day of the week. The hypothesis is: $H_0 : \beta_1 > 0$, a positive coefficient. $H_0 : \beta_1 < 0$, a negative coefficient. The regression model used is a slight modification from Brusa's because he used share indices while in our case we used share prices.

The significance of β_1 and the sign of the coefficient were examined to determine whether β_1 is larger than the rest of the coefficients. If β_1 is positive with a high *t*-statistic the result suggests that Monday mean returns are not only significantly positive but also significantly greater than other days of the week. The null hypothesis is therefore rejected and the results support the hypothesis for the existence of a reverse weekend anomaly at the NSE.

3.4.1 Autocorrelation Test

Auto—correlation test is a reliable measure for testing of either dependence or independence of random variables in a series. The serial correlation coefficient measures the relationship between the values of a random variable at time t and its value in the previous period, t-i. Autocorrelation test provides evidence whether the correlation coefficients () for lagged variables are significantly different from zero. The test is based on the following regression of equation (3):

$$\Delta R_t = R_{t-1} + \delta_1 \Delta R_{t-1} + \delta_2 \Delta R_{t-3} + \ldots + \delta_n \Delta R_{t-n} \quad (3)$$

Where $\delta =$ Coefficient of the error term; R_t = Residual from the regression; δ_1 = Coefficient of the lagged residuals; ΔR_t = $R_t - R_{t-1}$. We used the t-statistics to test the significance of the coefficients. Our null hypothesis was: There is no autocorrelation $\left(H_0 : \delta_1 = \delta_2 = \delta_3 = 0\right)$.

3.4.2 Test for Heteroscedasticity

The heteroscedasticity test was based on the ARCH model below:

$$\delta^2{}_t = \alpha_1 \mu^2_{t-1} + \alpha_2 \mu^2_{t-2} + \ldots + \alpha_n \mu^2_{t-n} \quad (4)$$

Where δ^2 = variance of the error term and μ^2 = squared lagged residuals. The null hypothesis was: There is no heteroscedasticity $\left(H_0 : \delta_1 = \delta_2 = \delta_3 = 0\right)$. A *t*-test was applied to determine the significance of the coefficients.

4. Results Data Analysis

4.1 Regression Analysis Results for Weekly Returns Vs Daily Returns

Table 1 is a summary of regression analysis in which weekly returns of all companies were regressed against daily returns for Monday, Tuesday, Wednesday, Thursday and Friday.

Table 1 Regression Analysis Results for All Sample Companies

	Coefficients	Standards Error	Statistics	P-value
Intercept	-0.0868	0.0101	-7.8923	0.0001
Monday	-0.6314	0.3000	-2.1066	0.0352
Tuesday	-1.0379	0.3175	-3.2690	0.0012
Wednesday	-0.5303	0.2673	-1.9840	0.0473
Thursday	-0.4402	0.2360	-1.8650	0.0622
Friday	-.0799	0.2208	0.3619	0.7175

Source: Authors computation

Total observations were 8,320. The null hypothesis was tested at 95% level of significance. The critical value at 95% level of significance is 1.96. As shown above, results indicate that Monday returns have a t-statistic of -2.1066 with a corresponding coefficient of -0.6314. Therefore Monday returns are significant since the t-statistic is higher than the critical value. The coefficient however is negative. These results contradict the theory of reverse weekend effect.

As stated in section 3, the data was analyzed according to company sizes. According to Brusa Liu and Schulman (2005), stocks of large firms are associated with the reverse weekend effect. Large firms in our case are those that have a market capitalization of Ksh 5 billion and above, the rest are considered small. According to the criteria used, large companies in the sample are fifteen (15) and the small ones are seventeen (17. These companies have been listed in appendix 2.

Table 2 Regression Analysis Results for Large Companies

		Standards t-		
	Coefficients	Error	Statistics	P-value
Intercept	-0.0552	0.0160	-3.4535	0.0006
Monday	-1.3506	0.4851	-2.7844	0.0054
Tuesday	-1.7534	0.4464	-3.9282	0.0001
Wednesday	-0.1186	0.4691	-0.2528	0.8005
Thursday	-0.2970	0.4176	-0.7110	0.4771
Friday	0.2710	0.2629	1.0311	0.3026

Source: Authors computation

Table 2 shows the results of the regression analysis done for the fifteen companies, where weekly returns were regressed against daily returns. Total observations were 3,900. With a critical value of 1.96, Monday returns are statistically significant (-2.7844). The coefficient for Monday returns is however negative (-1.3506). In fact it is second the lowest after Tuesday (- 1.7534). Again the results do not depict the existence of reverse weekend effect, a contradiction to Brusa, Liu and Schulman's (2005) claim that reverse weekend effect is associated with stocks of large companies.

Table 3: Regression Analysis Results for Small Companies

		Standards t-		
	Coefficients	Error	Statistics	p-value
Intercept	-0.1110	0.0149	-7.4529	0.0930
Monday	-0.2045	0.3786	-0.5403	0.5891
Tuesday	-0.3795	0.4892	-0.7758	0.4379
Wednesday	-0.6911	0.3234	-2.1371	0.0326
Thursday	-0.4756	0.2848	-1.6701	0.0950
Friday	-0.3793	0.4090	-0.9276	0.3536

Source: Authors computation

The same regression analysis procedure was done for the small companies and the results are as shown in table 3. Total observations were 4,420. Monday returns are not significant since the t-statistic (-0.5403) is lower than the critical value (1.96) and the coefficient is also not positive. Even after segregating companies into large and small, Monday returns though significant (in the large sample) do not have a positive coefficient. The results from the analysis do not depict the existence of reverse weekend effect.

Results from the autocorrelation indicate that weekly returns lagged 1 and 2 times have coefficients of 1 except for lag 3 with a coefficient of 0. The *t*-statistics are large and exceed the critical value hence the null hypothesis that there is no autocorrelation is rejected. The p-values are also highly significant. The results from the heteroscedasticity test show that $a_2 = c_0$, hence the null hypothesis of no heteroscedasticity is rejected. Therefore heteroscedasticity is present in weekly returns.

4.3 Discussion

The findings of this study showed that Monday returns are not higher than for the other days of the week.

The results from this study have implications to both institutional and individual investors. Speculative investors will buy shares for short term gain, holding them for a short period then dispose at a gain. Institutional investors, on the other hand are mainly after dividends and capital gains over a long period of time. Where investors have long term motives, they are likely to wait until share prices stabilize. This study, therefore, made a contribution towards resolving the empirical issue as to whether Monday would be the best day to dispose stocks. Investors should in fact be warned that Monday is the worst day (after Tuesday) to dispose stocks. They should not rely on mere speculation that Monday returns are higher than for the other days. Furthermore, investing in the stocks of large firms does not guarantee higher returns. While making investment decisions, other factors (other than firm size) could be considered, for instance a firm's performance in terms of profitability and its performance in the stock market.

For the government, it is evident from the results of this study that stock market anomalies at the Nairobi Securities Exchange may not be existent. For instance, we do not find the existence of reverse weekend effect. This implies that government's regulations are improving the efficiency of the Nairobi Securities Exchange. The government should therefore put in place more regulations so that the stock market becomes a fair playing ground with minimal cases of exploitation. The government is in a better position to monitor the performance of the stock market and hence ensure the economic stability of the country.

Investors mostly rely on financial analysts to provide sound information that would enable them make informed investment decisions. From this study, it would be misleading for financial analysts to advice investors that disposing stocks on Monday guarantees higher returns. Financial analysts should device other ways in which investors can make higher returns. They can for example help investors assess the present value of future dividends; provide knowledge of future income flows and advice them to hold their investments until the stock prices are stable.

Fund managers identify opportunities in which to invest in viable projects. The absence of reverse weekend effect as indicated in this study implies that the stock market is fairly efficient. If the reverse weekend effect existed, fund managers could benefit from arbitraging by selling stocks on Monday and selling them on other days when prices are low. In this case therefore, there are minimal cases of price differentiation and no maximization of portfolio especially on Mondays since returns are significantly negative.

In general the findings from this study imply that Monday does not guarantee higher returns. Thus there no opportunities for investors to develop trading strategies to earn excess stock returns; earning higher than average profits will only be by chance. Therefore, the results of this study support the findings of Muragu (1997) that the Nairobi Securities Exchange is efficient.

5. Conclusion

On the basis of the regression analysis done on the weekly returns against daily returns, this study could not find evidence of the reverse weekend effect. Thus on the basis of the tests carried out, this study concluded that there is no reverse weekend anomaly at the Nairobi Securities Exchange. These results contradict those of Brusa, Liu and Schulman (2005) and are consistent with the study by Mokua (2003) on the lack of evidence on weekend effect on stock prices at the NSE.

References

Abraham, A. & D. Ikenberry (1994), "The Individual Investor and the Weekend Effect", *Journal of Financial and Quantitative Analysis,* 29 (2), 263-77.

Agrawal, A. & Tandon, K. (1994), "Anomalies or Illusions? Evidence from Stock Markets in Eighteen Countries", *Journal of International Money and Finance,* 13, 83 - 106.

Ariel, R.A. (1984), "High Stock returns before holidays", Sloan School of Management Working Paper.

Ariel, R.A. (1990), "High Stock Returns before Holidays: Existence of Evidence on Possible Causes", *Journal of Finance,* 45, 1611-1626.

Ball. R. & Brown, P. (1968), "An Empirical Evaluation of Accounting Income Numbers", *Journal of Accounting Research*, 6 (2), 159-178.

Banz, R. (1981), "The Relationship between Return and Market Value of Common Stocks", *Journal of Financial Economics,* 9, 3-18.

Barber, B.M. & Odean, T. (1999), "The Courage of Misguided Convictions", Working Paper, University of California.

Basu, S. (1997), "Investment Performance of Common stocks in Relation to their Price Earnings Ratios: A Test of the Efficient Market Hypothesis", *Journal of Finance,* 32, 663- 682.

Bernard, V. L. (1993), "Stock Price Reaction to Earnings Announcements: A summary of Recent Anomalous Evidence and Possible Explanations", *Advances in Behavioral Finance*, Russell Sage Foundation, 303-340.

Bhabra, H.S,, Dhilion U.S. & Ramirez, G. (1999), "A November Effect? Revision of the Tax-loss Selling Hypothesis", *Journal of Finance*, 32, 663-682.

Bhardwaj, R. & Brooks, L. (1992), "The January Anomaly: Effects of Low Share Price, Transaction Costs and Bid-Ask Bias", *Journal of Finance*, 47, 553-575.
Brickley, J.A. & Schallheirn, J. S. (1985), "Lifting the Lid on Closed-End investment Companies: A Case of Abnormal Returns", *Journal of Financial and Quantitative Analysis*, 20 (1), 107-117.
Brockman, P.E. & Michayluk, D. (1998), "The persistent holiday effect: additional evidence," *Applied Economics Letters*, 5(4), 205-209.
Brusa, J., Liu, P. & Schulman, C. (2000), "The Weekend Effect and Firm Size", *Journal of Business Finance & Accounting,* 12 (5), 555 – 574.
Brusa, J., Liu, P. & Schulman, C. (2003), "The Weekend and Reverse Weekend Effect; An Analysis by month of the Year, Week of the Month and Industry", *Journal of Business Finance & Accounting*, 30, (5 & 6), 863-90.
Brusa, J., Liu, P. & Schulman, C. (2005), "Weekend Effect, Reverse Weekend effect and Investor Trading Activities", *Journal of Business Finance & Accounting*, 32 (7 & 8), 1495–1517.
Cadsby, B. & Ratner, M. (1992), "Turn of the month and pre holiday effects on stock returns; Some international evidence", *Journal of Banking and Finance,* 6 (3), 497-509.
Campbell, J.Y. & Shiller R.J. (1987), "Co-integration and Tests of Present Value Models", *Journal of Political Economy,* 95, 1065-1088.
Chang, E., Pinegar, M. & Ravichandran, R. (1993), "International Evidence on the Robustness of the Day-of-the-Week Effect", *Journal of Financial and Quantitative Analysis*, 28 (4), 497-513.
Chang, E. and Pinegar, M. (1986), "Return Seasonality and Tax-loss Selling in the Market for Long Term Government Bonds", *Journal of Financial Economics,* 17, 391- 415.
Connolly, R. (1989), "An Examination of the Robustness of the Weekend Effect", *Journal of Financial and Quantitative Analysis*, 24 (2), 133- 169.
Cross. F. (1973), "The Behavior of Stock Prices on Fridays and Mondays", *Financial Analysts Journal,* 29 (6), 67- 69.
Cutler, D.M., Poterba, J.M. & Summers, L.H. (1989), "What Moves Stock Prices?", *Journal of Portfolio Management* , 1, 4-12.
DeBondt, W.F.M. & Thaler R.H. (1985), "Does the Stock Market Overreact?", *Journal of Finance,* 40, 793-805.
Dechow, P.M., Hutton, A.P., L. Mculbrek & Sloan, R.G. (2000), "Short-sellers, fundamental analysis and stock returns", *Journal of Financial Economics*, 61, 77-106.
Del Guercio, D. (1996), "The Distorting Effect of the Prudent Man Laws on Institutional Equity Investments", *Journal of Financial Economics*, XL, 31-62.
Elsewarapu, V.R. & Reinganum, M.R, (l993), "The Seasonal Behaviour of Liquidity Premium in Asset Pricing", *Journal of Financial Economics*, 34, 373 - 386.
Fama, E. (1970), "Efficient Capital Markets: A Review of Theory and Empirical Work", *Journal of Finance*, 25, 383-417.
Fama, E.F. (1991), "Efficient Capital Markets: II", *Journal of Finance,* 46, 1575 – 4617.
Fama E.F., Fisher, L, Jensen M.C., & Roll, R. (1969), "The Adjustment of Stock Prices to New Information", *International Economic Review*, 10 (1), 1-21.
Fama, E. F. & French, K. R. (1995), "Size and Book-to-Market Factors in Earnings and Returns", *Journal of Finance*, 50, 131-155.
Fama, E. F. & French, K, R. (1988), "Business Cycles and the Behaviour of Metals Prices", *Journal of Finance,* 43 (5), 1075-1093.
French, K. (1980), "Stock Returns and the Weekend Effect", *Journal of Financial Economics*, Vol. 8, 55-69.
Galai. I. D. & Kedar-Levv, H. (2005), "Day of the Week Effect", *Financial Market, Institutions & Instruments,* 14 (3), 169 – 186.
Gompers, P.A. & Metrick, A. (2001), "Institutional Investors and Equity Prices", *Quarterly Journal of Economics*, 116 (1), 229 – 259.
Gosnell, T. F., Keown, A. J. & Pinkerton, J. M. (1996), "The Intradav Speed of Stock Price Adjustment to Major Dividend Changes: Bid-Ask Bounce and Order Flow Imbalances", *Journal of Banking and Finance,* 20 (2), 247-266.
Grossman, S. J. & Stiglitz, J. R. (1980), "On the Possibility of Informationally Efficient Market", *American Economic Review*, 70(3), 393 - 408.
Gultekin, NB., & Gultekin, M.N. (1983), "Stock Market Returns and Inflation: Evidence from Other Countries", *Journal of Finance,* 38 (1), 49-65.
Harris, L. (1986), "A Transaction Data Study of Weekly and Intra-daily Patterns in Stock Returns", *Journal of Financial Economics*, 16, 99 – 117.
Harvey, C.R. (1991), "The World Price of Covariance Risk", *Journal of Finance*, 46 (1), 111-157.
Haugen, R.A., & Baker, N. L. (1996), "Commonality in the Determinants of Expected Stock Returns", *Journal of Finance,* 49, 1639.

Hirshicifer, D. (2001), "Investor Psychology and Asset Pricing", *Journal of Finance,* 56 (4), 1533-159.7
Hirshleifer, D. and Shurnway, T. (2003), "Good Day and Sunshine Stock Returns and the Weather", *Journal of Finance,* 58, 1009 - 1032.
Jaffe, J.F. (1974), "Special Information and Insider Trading", *Journal of Business*, 47(3), 410-428
Jensen, M. and Ruback, R. (1983), "The Market for Corporate Control; The Scientific Evidence", *Journal of Financial Economics*, 1, 5-50.
Kamara, A. (1997), "New Evidence on the Monday Seasonality in Stock Returns", *Journal of Business,* 70 (1), 63-84.
Keim, D. (1987), "Daily Returns and Size-related Premiums: One More Time", *The Journal of Portfolio Management,* 13, 41-47.
Kiweu, J. M. (1991), "The Behaviour of Share Prices in the Nairobi Securities Exchange: An Empirical Investigation", Unpublished MBA Project Report, University of Nairobi.
Klein, A. (1986), "Timing and Substance of Divestiture Announcements; Individual, Simultaneous and Cumulative Effects", *Journal of Finance,* 41(3), 685-696.
Kuhn, T.S. (1970), *The Structure of Scientific Revolutions*, University of Chicago Press.
Kunkel, R.A & Compton, W.S. (1998), "A Tax-free Exploitation of the Turn-of-the-Month Effect: C.R.E.F", *Financial Services Review*, 7 (1), 11-23
Lakonishok, J. & Maberly, E. (1990), "The Weekend Effect: Trading Patterns of Individual and Institutional Investors", *Journal of Finance,* 45 (1), 231-243.
Lakonishok, J. & Smidt, R. (1988), "Are Seasonal Anomalies Real: A Ninety-year Perspective", *Review of Financial Studies,* 1(4), 403-425.
La Porta R., Lakonishok, J., Shleifer, A. & Vishny, R. (1997), "Good News for Value Stock: Further Evidence on Market Efficiency", *Journal of Finance,* 52, 859-8745
Lee, M.C.C, Shleifer, A. and Thaler R.H. (1990), "Closed End Mutual Funds", *Journal of Economic Perspectives,* 4, 153-164.
Leuthold, R.M. (1998), "Random Walk and Price Trends; The Live Cattle Future Market", *Journal of Finance*, 53 (4), 879 - 90.
Malkiel, B. G. (1977), "The Valuation of Closed Investment Company Shares", *Journal of Finance,* 32, 847-859.
Maxwell, W. (1998), "An Evaluation of Contingent Claims Analysis as Applied in Credit Risk Modeling", Working Paper, George Washington University.
McConnell, J.J., & Muscarella C. (1995), "Do Taxes Affect Corporate Financing Decisions?", *Journal of Finance* 45:5, 147 1-1393
Mokua, M.E. (2003), "Weekend Effect on Stock Returns at the Nairobi Securities Exchange: An Empirical Study", Unpublished MBA Project, University of Nairobi.
Muragu, K. (1997), "Pricing Efficiency of Nairobi Securities Exchange", in *African Markets Contemporary Issues*. Edited by Sam Mensah, Rectors Press, 142-160
Ou, J.A., & Penman, S.H. (1989), "The Information Content of Accounting Earnings", *Journal of Accounting Research,* 27, 111-144.
Patel, J., Zeckhauser, R. & Hendricks, D. (1991), "The Rational Struggle; Illustrations from Financial Markets", *American Economic Review,* 81, 232-236.
Patell, J. & Wolfson, M. (1984), "The Intraday Speed of Adjustment of Stock Prices to Earnings and Dividend Announcements", *Journal of Financial Economics*, 13, 223-252.
Poterha, J. & A. Samwick (1995), "Stock Ownership Patterns, Stock Market Fluctuations and Consumption", *Brookings Papers on Economic Activity,* 2, 295-357.
Rasugu, N.C. (2005), "The Existence of the Holiday Effect at the NSE: An Empirical Investigation", Unpublished MBA Project, University of Nairobi.
Reiganum, R.M. (1981), "Misspecification of the Capital Asset Pricing: Empirical Anomalies Based on Earnings Yields and Market Values", *Journal of Financial Economics*, 112, 89-104.
Roll, R. (1988), "R-Squared", *Journal of Finance*, 43, 541-566.
Roll, R. (1984), "Orange Juice and Weather", *American Economic Review,* 174, 861-880.
Rozeff M.S. & Kinney W.R. (1976), "Capital Market Seasonalitv; The Case of Stock Returns", *Journal of Financial Economics,* 13, 379 – 402.
Saunders, E.M.J. (1993), "Stock Prices and Wall Street Weather", *American Economic Review*, 83, 1337-1345.
Schwert, G. (1990), "Indexes of U.S. Stock Prices from 1802 to 1987", *Journal of Business,* 63, 399-426.
Scyhun, H.N, (1986), "Insiders Profits, Costs of Trading and Market Efficiency", *Journal of Financial Economics*, 16, 189-212.
Shleifer, A. (1986), "Do Demand Curves for Stocks Slope Down", *Journal of Finance,* 41,579- 590.
Shiller, R. J. (1998), "Human Behaviour and the Efficiency of the Financial Market", *Journal of Finance,* 48, 65-91

Shiller, R. J. (1984), "Stock Prices and Social Dynamics", *Brooking Papers on Economic Activity*, 11, 457-498.
Steeley, J. (2001), "A Note on Information Seasonalitv and the Disappearance of the Weekend Effect in the UK Stock Market", *Journal of Banking and Finance,* 25, 1941-1956.
Stickel, S.E. (1985), "The Effect of Value Line Investment Survey Rank Changes on Common Stock Prices", *Journal of Financial Economics,* 14, 121-144.
Summers, L.H. (1986), "Does the stock market rationally reflect fundamental values?" *Journal of Finance,* 4 (3), 591-601.
Wang, K., Li, Y. & Erickson, J. (1997), "A New Look at the Monday Effect", *Journal of Finance,* 52 (5),2171-2186.
Zarowin, P. (1991), "Does the Stock Market Overreact to Corporate Earnings Information?", *Journal of Finance*, 46, 1385-1399.
Ziemba, W.T. (1991), "Japanese Security Market Regularities: Monthly, Turn-of-the-Month and Year, Holiday and Golden Week Effects", *Japan and World Economy,* .3, 110-1.

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