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Stock Market Anomalies: A Study of Seasonal Effects on Average Returns of Nairobi Securities Exchange

Allan Muchemi Kuria (Corresponding author)
allankuria@hotmail.com
Dr. George Kamau Riro (Co- author)
rirogk@gmail.com
School of Business, Dedan Kimathi University of Technology
P.o. Box 657-10100, Nyeri, Kenya.

Abstract
This paper examines the presence of day of the week effect anomaly in Nairobi Securities Exchange (NSE). Several hypotheses have been formulated; t-test, F-test and the ANOVA analysis model were used in the study. The study examined three types of anomalies namely, day of the week effect, weekend effect and monthly effect. The analysis provides evidence about the presence of the seasonal effect in the NSE. Thus it was established that the stock markets in Kenya are not yet free from seasonal anomalies despite increased use of information technology and numerous regulatory developments.
Keywords: Seasonal anomalies, Day of the week effect, Weekend effect, Monthly effect

1. Introduction

Seasonal variations in production and sales are a well known fact in business. Seasonality refers to regular and repetitive fluctuation in a time series which occurs periodically over a span of less than a year. Among the causes of seasonal variations in time series data include, but is not limited to, changes in climate, investor perceptions, tax-loss-selling and information hypothesis. For example, sales of woolen clothes generally increase in winter season. Besides this, customs and tradition also affect economic variables for instance sales of gold increase during marriage seasons. Similarly, stock returns exhibits systematic patterns at certain times of the day, week or month (Aly *et al.,* 2004). The most common of these are monthly patterns; certain months provide better returns as compared to others i.e. the month of the year effect. Similarly, some days of the week provides lower returns as compared to other trading days i.e. days of the week effect (Hossain, 2004).

The existence of seasonality in stock returns however violates an important hypothesis in finance that is efficient market hypothesis. The efficient market hypothesis is a central paradigm in finance. The EMH relates to how quickly and accurately the market reacts to new information (William, 2002). New data are constantly entering the market place via economic reports, company announcements, political statements, or public surveys. If the market is informationally efficient then security prices adjust rapidly and accurately to new information. According to this hypothesis, security prices reflect fully all the information that is available in the market. Since all the information is already incorporated in prices, a trader is not able to make any excess returns. Thus, EMH proposes that it is not possible to outperform the market through market timing or stock selection (Mokua, 2003). However, in the context of financial markets and particularly in the case of equity market seasonal component have been recorded. They are called calendar anomalies (effects) in literature (Board, 1988).

The presence of seasonality in stock returns violates the weak form of market efficiency because equity prices are no longer random and can be predicted based on past pattern. This facilitates market participants to devise trading strategy which could fetch abnormal returns on the basis of past pattern. For instance, if there are evidences of 'day of the week effect', investors may devise a trading strategy of selling securities on Fridays and buying on Mondays in order to make excess profits. Aggarwal and Tandon (1994) and Pandey (2002) pointed out that mean stock returns were unusually high on Fridays and low on Mondays. One of the explanations put forward for the existence of seasonality in stock returns is the 'tax-loss-selling hypothesis. In the USA, December is the tax month. Thus, the financial houses sell shares whose values have fallen to book losses to reduce their taxes. As of result of this selling, stock prices decline. However, as soon as December ends, people start acquiring shares and as a result stock prices bounce back. This leads to higher returns in the beginning of the year known as the 'January effect' (Balaban, 1995).

Market efficiency is an important hallmark of a sophisticated market. For this reason, markets in developed countries have been able to attract greater attention from global investors. Considering the current level of interest and importance investors place on market efficiency, African stock markets have to prove that they are becoming more efficient in order to increase their share of global investment funds (Agathee, 2008). Capital markets are normally assumed to be efficient in relation to the instantaneous incorporation of all known and newly arriving information into prices of securities. The scope of this study is restricted to days-of- the week effect, weekend effect and monthly effect in stock returns of (NSE) in Kenya.

In the real world, it is unlikely that one would find an efficient market where there is availability of

information, homogenous expectations and zero transaction cost i.e. where no investor can outperform the other and arbitrary profits are eliminated. There are market imperfections and these lead to stock return seasonalities. It is therefore important to understand stock market seasonalities to be able to take advantage of them. One of the main concerns of investment analysts is the predictability of stock returns. The more predictable the returns are, the lower the risk. This concern gives value to the study of stock market behavior (Choudhry, 2000). Knowledge of stock market anomalies is vital to investors. Through this knowledge investors will apply the principle of buy low and sell high to make high profits, in perfectly efficient markets; however these arbitrage profits are not possible. Despite strong evidence that stock market is highly efficient there have been scores of studies that have documented long term historical anomalies in the stock market that seem to contradict the EMH. Studies carried out in the developed stock markets show that most stock markets are either efficient in their weak or semi-strong form and hence the existence of market anomalies. Despite the study carried out by Mokua, 2003 which showed no weekend anomalies, the study appreciates that stock markets may have inefficiencies (anomalies). Presences of inefficiencies also contradict with the Efficient Market Hypothesis. The study looks at an expansive range of data than previously studied by making a comprehensive analysis of the seasonal effects on NSE and their effect on stock returns.

The contribution of this paper is firstly to examine days of the week effect in the returns of NSE, secondly is to investigate the weekend effect in NSE average returns and lastly to explore the seasonality in monthly returns of NSE.

2. 0: Literature Review

2.1 Effect of seasonal variations on stock markets

Seasonality or calendar anomalies such as month of the year and day of the week effects on stock markets has remained a topic of interest for research for a long time in developed as well as developing countries. Watchel (1942) reported seasonality in stock returns for the first time. Rozeff and Kinney (1976) documented the January effect in NYSE for the period 1904 to 1974. They found that average return for the month of January was higher than other months implying pattern in stock returns. Keim (1983) along with seasonality also studied size effects in stock returns. He found that returns of small firms were significantly higher than large firms in January month and attributed this finding to tax-loss-selling and information hypothesis. Although, a similar conclusion was found by Reinganum (1983); he however, was of the view that the entire seasonality in stock returns cannot be explained by tax-loss-selling hypothesis. Gultekin and Gultekin (1983) examined the presence of stock market seasonality in sixteen industrial countries. Their evidence shows strong seasonalities in the stock market due to January returns, which was exceptionally large in fifteen of sixteen countries. Brown *et al.* (1985) studied the Australian stock market seasonality and found the evidence of December-January and July- August seasonal effects, with the latter due to a June-July tax year. However, Raj and Thurston (1994) found that the January and April effects are not statistically significant in the New Zealand stock market. Mill and Coutts (1995) studied calendar effect in FTSE 100, Mid 250 and 350 indices for the period 1986 and 1992. They found calendar effect in FTSE 100. Ramcharan (1997), however, didn't find seasonal effect in stock returns of Jamaica. Choudhary (2001) reported January effect on the UK and US returns but not in German returns. Fountas and Segredakis (2002) studied 18 markets and reported seasonal patterns in returns.

The reasons for the January effect in stock returns in most of the developed countries such as US, and UK is attributed to the tax loss selling hypothesis, settlement procedures, and insider trading information. Another effect is window dressing which is related to institutional trading. To avoid reporting losses in their portfolios at the end of year, institutional investors tend to sell losers in December. They then buy these stocks after the reporting date in January to hold their desired portfolio structure again. Researchers have also reported half- month effect in literature. Various studies have reported that daily stock returns in first half of month are relatively higher than last half of the month. Ariel (1987) conducted a study using US market indices from 1963 to 1981 to show this effect. Aggarwal and Tandon (1994) also found in their study such effect in other international markets.

Ziemba (1991) found that returns were consistently higher on first and last four days of the month. The holiday effect refers to higher returns around holidays, mainly in the pre-holiday period as compared to returns of the normal trading days. Lakonishok and Smidt (1988) studied Dow Jones Industrial Average and reported that half of the positive returns occur during the 10 preholiday trading days in each year. Ariel (1990) showed using US stock market that more than one-third positive returns each year registered in the 8 trading days prior to a market-closed holiday. Similar conclusions were brought by Cadsby and Ratner (1992) which documented significant pre-holiday effects for a number of stock markets. However, he didn't find such effect in the European stock markets. Husain (1998) studied Ramadhan effect in Pakistan stock market. He found significant decline in stock returns volatility in this month although the mean return indicates no significant change. There

are also evidences of day of the week effect in stock market returns. The Monday effect was identified as early as the 1920s. Kelly (1930) based on three year data of the US market found Monday to be the worse day to buy stocks. Hirsch (1968) reported negative returns in his study. Cross (1973) found the mean returns of the S&P 500 for the period 1953 and 1970 on Friday was higher than mean return on Monday.

Gibbons and Hess (1981) also studied the day of the week effect in US stock returns of S&P 500 and CRSP indices using a sample from 1962 to 1978. Gibbons and Hess reported negative returns on Monday and higher returns on Friday. Smirlock and Starks (1986) reported similar results. Jaffe and Westerfield (1989) studied day of the week effect on four international stock markets viz. U.K., Japan, Canada and Australia. They found that lowest returns occurred on Monday in the UK and Canada. However, in Japanese and Australian market, they found lowest return occurred on Tuesday. Brooks and Persand (2001) studied the five Southeast Asian stock markets namely Taiwan, South Korea, The Philippines, Malaysia and Thailand. The sample period was from 1989 to 1996. They found that neither South Korea nor the Philippines has significant calendar effects. However, Malaysia and Thailand showed significant positive return on Monday and significant negative return on Tuesday. Ajayi *et al.* (2004) examined eleven major stock market indices on Eastern Europe using data from 1990 to 2002. They found negative return on Monday in six stock markets and positive return on Monday in rest of them. Pandey (2002) reported the existence of seasonal effect in monthly stock returns of BSE Sensex in India and confirmed the January effect. Market efficiency is an important hallmark of a sophisticated market. For this reason, markets in developed countries have been able to attract greater attention from global investors. In order for African stock markets to attract serious global investment funds, there is need to prove that they are becoming more efficient. Capital markets are normally assumed to be efficient in relation to the instantaneous incorporation of all known and new arriving information into prices of securities.

2.2 Stock market anomalies

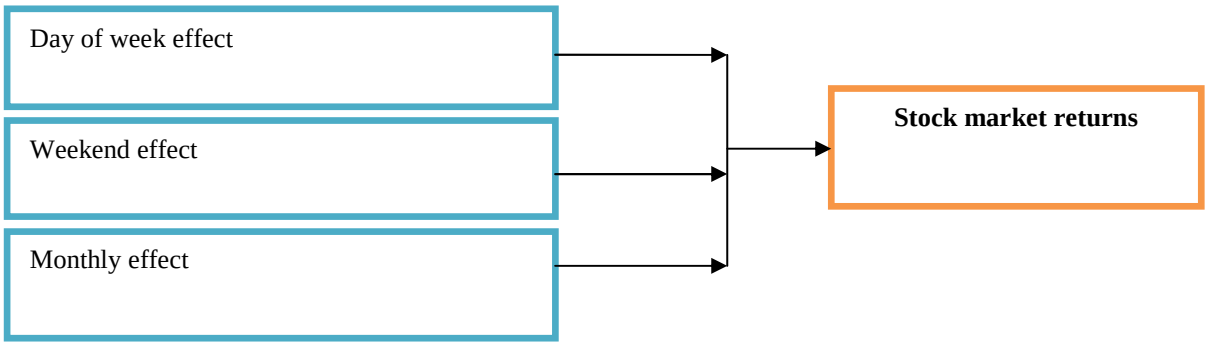
The famous (EMH) was introduced by Fama (1965) which claims that in an efficient market stock prices always fully reflect available information. If the stock markets are efficient, stock prices are supposed to follow random walk. The random walk hypothesis states that future prices are not predictable on the basis of past prices, that is, stock price changes are unpredictable. The information contained in the past prices is fully and instantaneously reflected in current prices in an efficient market as argued by Fama (1965). Subsequent to the study by Fama (1965) a good number of researches have been conducted to examine the randomness of stock price behavior to conclude about the efficiency of a capital market. More recently one of the popular areas of research in finance literature is finding out a particular seasonality or pattern in stock returns which demonstrate the inefficiency of the market. Since the introduction of EMH by Fama (1965) which states that the expected return on a financial asset should be uniformly distributed across different units of time, researchers have documented several calendar anomalies in the stock returns such as January effect, Turn of the month effect and Day of the week effect or Monday effect, Holiday effect and so on.

The existence of the calendar anomalies is a denial of the weak form of efficient market hypothesis which states that stock returns are time invariant which means that there is no short-term seasonal pattern in the stock returns. The existence of seasonal pattern in the stock return infers that a market is inefficient and investors should be able to earn abnormal return. That's why finance researchers have been interested to find out the existence of the calendar anomalies or seasonality in the stock returns in different markets. Among the calendar anomalies day of the week effect is most widely documented anomaly and has been comprehensively investigated by the finance researchers in different markets of different countries considering different securities and indices and different institutional framework. Empirical studies have shown that day of the week anomaly not only present in the financial markets of the developed counties [for example, Gibbons and Hess (1981), Keim and Stambaugh (1984) Jaffe and Westerfield (1985) Lakonishok and Smidt (1988)] but also in the developing markets [for example, Aggarwal and Rivoli (1989), Islam and Gomes (1999), Choudhry (2000), Aly, *et al.* (2004), Nath and Dalvi (2004), Hossain (2007), Agathee (2008)].

2.3 Development of conceptual framework

The scope of this study is restricted to days-of- the week effect, weekend effect and monthly effect in stock returns of Nairobi stock Exchange (NSE) in Kenya. Therefore the conceptual framework is a composition of the three seasonal effects that the researcher sought to find out. This has been shown in the figure below:

Fig 2.1 The Conceptual Frame work



Source: Researcher (2012)

3.0 Testable hypothesis, Data and Methodology

To study whether seasonal effect anomaly is experimental in Nairobi Securities Exchange or not, the following hypotheses were formulated.

3.1 Testable Hypotheses

3.1.1 Hypothesis 1

H0: The average return of NSE of every working day of the week is not statistically different.
H1: The average return of NSE of every working day of the week is statistically different.

3.1.2 Hypothesis 2

H0: The average return of NSE is statistically not high on weekends.
H1: The average return of NSE is statistically high on weekends.

3.1.3 Hypothesis 3

H0: The average returns of NSE in all of the year's months are not equal.
H1: The average returns of NSE in all of the year's months are equal.

3.2 Sources of Data

Data used in the study included daily closing prices of NSE indices such as NSE all share prices index (NSI), NSE general index (NGEN) and NSE 20 index (NSE 20) for a period of 12 years. All the data collected for this study was secondary information.

3.3. Methodology

The main aim of this research was to empirically determine the presence of stock anomalies and their effects on the average returns of NSE. The research used secondary data from the stock market. The significance of the difference between average returns was verified with the help of t-test and F-test with greater look being directed at formulated hypothesis. For the purpose of this research, the authors conducted simple descriptive analysis using simple regression model analysis of the respective variables and results captured in mean returns, co-efficient of variation and standard deviation. This study uses ANOVA model where the dependent variable is quantitative in nature and all the independent variables are categorical in nature. In order to measure the relationship between depended and independent variables, the researchers conducted developed an intercept α (Alpha) to act as a benchmark for both days of week effect and monthly returns effect. Friday, being the basis of the weekend was taken to be the benchmark for the day of week effect while the month of May, which has the least variance from the mean returns, was used as a benchmark for the monthly returns effect.

4.0 Empirical Results and Findings

4.1 Day of the week effect

Table 1represent daily mean returns standard deviation of returns and coefficient of variation. To test the first hypothesis, the tables also represent t-values and their corresponding p-values for NSE-20. From the table the mean returns for Monday is negative and for all other days mean returns are positive. It is also evident that only positive returns on Thursdays are statistically significant at 1% significance level for the NSE-20

indices thus our testable first hypothesis H_0 is rejected. So we can say that significant day of the week effect observed in NSE stock returns. We thus accept the alternative hypothesis, which stated that the average return of NSE of every working day of the week is statistically different.

Table 1: Day of the week effect

Day	Mean Return (%)	Standard Deviation (%)	Coefficient Of Variation	t-value	p-value
Monday	-0.20223	1.145441	566	**-2.13****	0.0352
Tuesday	0.092911	1.052477	1133	1.06	0.2896
Wednesday	0.076727	1.015188	1323	0.92	0.3610
Thursday	0.369396	1.006851	273	**4.39*****	0.0001

*** denotes significant at 1% significance level and ** denotes significant at 5% significance level

Table 2 further seeks to indicate the level of daily mean returns with regard to day of the week effect through the ANOVA analysis table for NSE-20. It is obvious from the tables that for all the three indices calculated F-values are greater than critical F-values thus our first hypothesis is rejected for stock returns. So we can infer that the average daily return of every working day of the week is not statistically equal which supports the existence of day of the week effect in NSE. This further leads us to accept the alternative hypothesis.

Table 2: ANOVA analysis for the day of week effect

ANOVA						
Source of Variation	***SS***	***Df.***	***MS***	***F***	***P-value***	***F crit. value***
Between Groups	25.28322	4	6.320804	4.989042	0.00057***	2.38439
Within Groups	905.8602	715	1.266937			
Total	931.1434	719				

4.2 Weekend effect

We estimated the days of the week effects in daily NSE returns. The results for NSE are reported in Table 3. The benchmark day in the analysis is Friday represented by the intercept which provided a return of 0.08 percent on an average of the sampled period.

Table 3: Weekend effect on NSE returns

Variables	Coefficients	t-statistic	P-Value
Intercept	0.0836	0.624	0.53
Monday	-0.0875	-0.46	0.64
Tuesday	0.0405	0.21	0.83
Wednesday	0.0432	0.22	0.82
Thursday	0.0784	0.41	0.68
R2 =0.0002 F Statistic = 0.06(0.99) Level of significance is 5% *Note: Figures in () are p-values*			

Returns of Monday, Tuesday, Wednesday and Thursday can be found out by deducting the coefficients of these days from the benchmark day, that is, Friday which were 0.1711, 0.1241, 0.1268 and 0.162 respectively. The coefficient of Monday is not significant at 5 percent level which indicates that there is no *weekend effect* in NSE returns. R2 is 0.0002 which is very low, and F-statistic indicates that the overall fit of the model is poor and hence weekend effect is insignificant in NSE returns.

4.3 Measuring existence of day of the week effect on NSE

Table 4 represent regression results for NSE-20 index. It is clear from the tables that only Thursdays have positive and statistically significant coefficients for the NSE-20 index which is consistent with our previous results. Sundays and Mondays have statistically significant and negative coefficients which are also consistent with our previous result. Thus we can further conclude that significant day of the week effect are present in NSE stock returns

Table 4: Regression results for day of the week effect on NSE returns

Variable	**Coefficient.**	**Std. Error**	**t-statistic**	**Prob.**
Intercept	0.369396	0.094126	3.924489	0.0001
Monday	**-0.57162**	0.132654	-4.30912***	1.87E-05
Tuesday	-0.27649	0.132654	-2.08425	0.037492
Wednesday	0.29267	0.132206	-2.21375	0.027161
Thursday	**0.387251**	0.105393	3.67436***	0.000256
R-squared	0.027153	Sum squared residue		905.8602
Adjusted R-squared	0.02171	F-statistic		4.989042
Standard Error	1.125583	Prob (F-statistic)		0.00057

***denotes significant at 1% significance level

4.4 Seasonality in monthly returns

The researcher also examined seasonality of NSE return using monthly data. The results for NSE are reported in Table 5. The benchmark month in the analysis is May represented by the intercept which provided negative return of -0.7132 percent on an average over the sample period. None of the coefficients are significant except December month which indicate the presence of December effect in NSE monthly returns. The results as reported in the table 5 which shows the presence of seasonality in monthly returns of NSE. The coefficients of July, September and January are statistically significant at 5 percent level. The coefficient of December month is statistically highly significant at 1 percent level of significance. The augmented analysis has R-square of 0.22 which shows that 22 percent of the variations are explained by these months. F-statistic is 2.62 with significant p-value of 0.002 implying that the null hypothesis of all slope coefficients is rejected at 1 percent level of significance. The results have been represented in tables 5 and 6 below respectively

Table 5: **Table 9: Regression Results**

Variables	**Coefficients**	**t- statistic**	**P-Value**
Intercept	-1.6045	-1.03	0.30
June	-0.13	-0.06	0.94
July	4.3899	1.97	0.05
August	2.2566	0.91	0.36
September	3.9858	1.86	0.06
October	-0.0504	-0.02	0.98
November	3.1714	1.54	0.12
December	3.8317	2.52	0.01
January	5.8644	2.08	0.03
February	2.5038	1.07	0.28
March	0.1636	0.07	0.94
April	0.7953	0.39	0.69
R^2 =0.22 (0.42) F Statistic = 2.62(0.002)			
Note: Figures in () are p-values			

Table 6: Month Effect in NSE Stock Exchange (Total Period Data)

Month Jan.	Mean	S.D.	Variance	F-Test	Df	P-Value
Feb.	0.68776	0.31488	0.000991			
Mar	0.09731	0.27763	0.00077			
Apr	-0.05709	0.381647	0.001457			
May	-0.0563	0.301233	0.000907			
Jun	-0.03521	0.475107	0.002257			
Jul	0.15140	0.32779	0.00107			
Aug	0.054912	0.311304	0.000969			
Sep	0.137932	0.294545	0.000868	1.026	11	0.429
Oct	0.081667	0.430736	0.001855			
Nov	0.00170	0.40598	0.00164			
Dec	0.250448	0.262024	0.000687			
	0.0270688	0.227564	0.000518			

Sources (Research Data, 2013)

5.0 Discussions and implication of the research

In this paper the researcher examined the presence of seasonal variations in NSE average returns. The researcher formulated several hypotheses and used one-sample t-test, F-test and ANOVA to test those hypotheses. The result of the day of the week effect indicate that the mean returns for Sunday and Monday are negative and for all other days mean returns are positive. It is also evident that only positive returns on Thursdays are statistically significant. We can conclude from all the results that statistically significant negative returns occur on Sundays and Mondays where as high and statistically significant positive return occur on Thursdays which reveals that significant day of the week effect present in NSE for all the three indices for the period examined. One possible explanation for such day of the week effect anomaly may be that most of the positive economic news comes at the week end and investors show affirmative and hopeful investment behaviour which result in a positive return on Thursdays. On the other hand, most of the negative economic news comes at the beginning of the week and investors try to sell their investment which result in a negative return on Mondays.

When the return in any of the month is higher than the return in other months, this anomaly is called as month effect (Poterba *et al.*, 2001). It is evidenced from the analysis that monthly effect exists in NSE. In this market, the return in December month is generally lower and in January month higher, as compared to return for other months. The reason being December is a tax month. And investors tend to sell the loss making shares towards the end of the year, so as to reduce their tax burden. This behaviour of the investors exerts downward pressure on the stock prices. In January, they again start buying the shares. This puts upward pressure on stock prices and it results in higher return in January month.

The results have important practical implications to different capital market participants such as investors, managers and regulatory authorities. Investors can formulate their investment strategies and timing on the basis of this result and can earn some abnormal return by predicting future prices. As we conclude negative Monday returns and positive returns on Thursday are significantly important so investors can buy the shares on Monday and can sell the share on Thursday. By following this trading strategy investors are expected to earn some abnormal return. One weakness of the study is that it does not consider individual share price rather it considers market index. So investment strategy on the basis of the finding of this study in case of individual share may not provide expected result.

If the size of the portfolio is large and closely represent the market then investment strategy on basis of the finding of this study is expected to provide some abnormal return to the investors. As the presence of the day of the week and monthly anomalies indicate inefficiency of the market, it informs the regulators and policy makers that appropriate measures should be taken to bring informational and operational efficiency in the market. It is argued by Islam and Gomes (1999) that a combination of factors like inadequate financial information, thin and discontinuous trading, reliance on price momentum as a basis for trading and manipulation by the market makers creates the conditions that lead to the positive weekend effect. Thus the regulators should take appropriate steps to remove such anomaly to bring the efficiency of the market.

5.1 Research Limitations

This research was carried out following a Kenyan perspective and only applicable to its culture and way of life of her citizens. Therefore a major limitation is that it may not be applicable to other countries due to cultural differences and background. Another weakness of the study is that it does not consider individual share price rather it considers market index. So investment strategy on the basis of the finding of this study in case of individual share may not provide expected result.

5.2 Conclusion

From the findings, it is obvious that some kind of seasonal anomalies are persistent in the markets of both advance and emerging countries for instance Kenya. Hence, despite the use of sophisticated information technology and after introducing many reforms, the securities are not fully efficient. The presence of anomalies indicate, stock market inefficiency and therefore, NSE as a regulator of Kenya's Securities market need to take steps in order to increase the informational efficiency of the stock market operation. This will enable investors to reap fully benefits of investing at NSE.

References

1. Agathee, U. S. (2008). Day of the week effect: Evidence from the stock exchange of Mauritius (SEM). *International Research Journal of Finance and Economics*, 17, 7-14.
2. Aggarwal, R., & Rivoli, P. (1989). On the relationship between the United States' and four Asian equity markets. *Asean Economic Bulletin*, 6, 110- 117.
3. Agrawal, A., & Tandon, K. (1994). Anomalies or illusions? Evidence from stock markets in eighteen countries. *Journal of International Money and Finance*, 13, 83- 106.
4. Aly, H., Mehdian, S., & Perry, M. J. (2004). An analysis of the day-of-the-week effects in the Egyptian stock market. *International journal of business*, 9(3), 113-137.
5. Athanassakos, G., & Robinson, M. J. (1994). The day of the week anomaly: The Toronto Stock Exchange experience. *Journal of Business Finance & Accounting*, 21, 833-856.
6. Aybar, C. (1992). Descriptive analysis of stock return behavior in an emerging market: The case of Turkey. *Ph.D. Dissertation*, Ohio State University.
7. Balaban, E. (1995). Day - of- the- week effects: new evidence from an merging stock market. *Applied Economics Letters*, 2, 139- 143.
8. Board, J.L., & Sutcliffe, C.M. (1988). The weekend effect in UK stock market returns. *Journal of Business, Finance & Accounting*, 15, 199- 213.
9. Choudhry, T. (2000). Day of the week effect in emerging Asian stock markets: evidence from the GRACH model. *Applied Financial Economics*, 10, 235-242.
10. Cross, F. (1973). The behavior of stock prices on Fridays and Mondays. *Financial Analysts Journal*, November/December, 67- 69.
11. Dubois, M., & Louvet, P. (1996). The day- of- the- week effect: International evidence. *Journal of Banking and Finance*, 20, 1463- 1484.
12. Fama, E. F. (1965). Behavior of stock market prices. *Journal of Business*, 38, 34-105.
13. French, K. R. (1980). Stock returns and the weekend effect. *Journal of Financial Economics*, 7, 579-596.

14. Gardeazabal, J., & Regulez, M. (2002). The weekend-dividend effect in the Spanish market. *Presentation at the 2002 European Finance Management Association*, Annual Conference, London, UK.
15. Gibbons, M., & Hess, P. (1981). Day of the week effects and asset returns. *Journal of Business*, October, 579- 596.
16. Harris, L. (1986). A transaction data study of weekly and intradaily patterns in stock returns. *The Journal of Financial Economics*, 16, 99-117.
17. Ho, Y.K. (1990). Stock return seasonalities in Asia Pacific markets. *Journal of International Financial Management and Accounting*, 2, 44-77.
18. Hossain, F. (2004). Day of the week effect in Dhaka Stock Exchange: Evidence from small portfolios of banking sector. *Jahangirnagar Review, Part II: Social Science*, 18, 73-82.
19. Islam, M. M., & Gomes J. L. (1999). The day-of –the-week effects in less-developed countries' markets: The case of Bangladesh. *International Advances in Economic Research*, 5(3), 397.
20. Jaffe J., Westerfield, R., & Christopher, M.A. A twist on the Monday effect in stock prices. *Journal of Banking and Finance*, 13, 641-650.
21. Lakonishok J., & Levy, M. (1982). The weekend effects on stock returns", *Journal of Finance*, June, 883-889.
22. Lakonishok J., & Maberly, E. (1990). The weekend effect: Trading patterns of individual and institutional investors. *Journal of Finance*, March, 231-243.
23. Lakonishok. J., & Smidt, S. (1998). Are seasonal anomalies real? A ninety Years perspective. *Review of Financial Studies*, 1(4), 403-425.
24. Poterba, J., M. and Scott J. W., (2001), "Capital Gains Tax Rules, Tax-Loss
25. Trading, and Turn of the Year Returns, *The Journal of Finance*, Vol. 56, no. 1, pp. 353-368.
26. Raj, M., and Thurston, D. (1994), "January or April? Tests of the turn-of-the-year effect in the New Zealand stock market", *Applied Economic Letters*, Vol. 1, pp.81-93.
27. Reinganum, M., R.,(1983) "The Anomalous Stock Market Behavior of Small Firms in January Empirical Test for Year-End Tax Effect," *Journal of Financial Economics*, Vol. 12, pp.89-104.
28. Schwert, G. William (2002), "Anomalies and Market Efficiency", *Handbook of the Economics of Finance*, pp. 937-972.
29. Pandey, I., M., (2002). "Is There Seasonality in the Sensex Monthly Returns," IIMA Working Paper, IIM Ahmadabad.
30. Li L., Ong, & Jason, D., M., (2006), "Seasonalities in China's Stock Markets: Cultural or Structural?" IMF Working Paper, IMF.
31. Elima, K., (2006), The existence of Reverse weekend effect; The case of NSE.
32. Fama, E (1997) Market efficiency, long-term returns and behavioural finance, *Journal of Financial* economics, 49 283-306
33. Kibuthu, G. W. 2005. Capital markets in emerging economies: A case study of the Nairobi Stock Exchange. A Thesis, Tufts University.