THE WEEKEND EFFECT:
EVIDENCE FROM THE NAIROBI SECURITIES EXCHANGE

BY

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D61/70702/2009

A RESEARCH PROJECT PRESENTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF MASTER OF BUSINESS ADMINISTRATION DEGREE, SCHOOL OF BUSINESS OF THE UNIVERSITY OF NAIROBI

NOVEMBER, 2012

DECLARATION

I hereby declare that this project is my own work and effort and that it has not been submitted anywhere for any award.

Signature: ..... Date: ...8/11/2012...

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Approval

This research project has been presented for examination with my approval as the university supervisor.

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DEDICATION

For God, whom I prayed to all the time during the project period and for my loving mother, Mary Wambui and my brother Anthony Maina for their inspirational and presence in my life and during the time I worked on this project.

ACKNOWLEDGEMENT

I am heavily indebted to various people and organizations without whose material and non material support this research would not have come to success. I, therefore take this opportunity to express my sincere thanks to each of these people and organizations.

The staff of the Jomo Kenyatta Library of the University of Nairobi provided the opportunity to use their facilities especially in the MBA and the Electronic Library section. From these facilities I was able to access not only research reports from earlier MBA research findings but I was also able to access scholarly publications from the wider sphere of academics beyond the University.

In earnest, much of the direction on what to do at each of the stages of this research was provided by my supervisor Dr. Aduda Josiah. This was done right from the generation of the research idea, to its conceptualization, to the drafting of the research proposal, to the analysis of samples and preparation of the report

The data of analysis was got from the Nairobi Stock Exchange. It would not have been possible to conduct an analysis and extract out the relevant finding if the data was not available in the first place. It is for this reason that I acknowledge them for the key role they played

The literature review is reliant upon a lot of scholarly publications. Some of the literature is from earlier MBA students' project. I have used scholarly papers from the wider academia. These are works without which I could not have had a scholarly insight into this research. I wish to acknowledge their critical bearing on this research.

Finally, but of no less importance, I would wish to thank my mum, Mary, and my highly valued friend Hilary. The support the two provided to me during the duration of this project cannot be matched.

ABSTRACT

The Monday or weekend effect is the belief that securities market returns on Mondays are consistently less than the other days of the week, and are often negative. Many studies have documented it since the nineteen-twenties, though, no theory has adequately explained the reasons it exists. Studies conducted have suggested the existence of a Monday effect for a diverse range of securities, from equities to debt to commodities.

This study was a confirmatory quest to establish whether this phenomenon is prevalent among the securities traded on the Nairobi Securities Exchange. Further it sought to establish the nature of the manifestation of this weekend effect if it exists. This was to be investigated b finding how the weekend returns relate to the weekly return average. The period of study spanned the five years beginning January 2007 to December 2011 and covering all the listed firms during that period.

This study used the regression analysis model that utilized the weekly average returns as the dependent variable and the Monday returns as the independent variable. The regression intercept of the relation was found to be zero. The values of the returns showed that 56.4% of the weekends had negative returns which meant that during such weekends Monday stock prices were less that the Friday prices of stock. The returns that were positive and could not round to zero were 20%. This means some weeks experienced the weekend effect that produced negative returns irrespective of the average of the week while in other weeks the weekend effect manifested by having returns higher that the weeks average.

The coefficient of the variation between the Monday returns and the weekly average returns was less than one. This meaning that there was weekend effect among the firms on the Nairobi Securities Exchange. However, the weekend effect was manifested in such a manner that the Monday results were higher than the weekly average. This was contrary to the normal assertion that they are less.

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LIST OF ABBREVIATIONS

ARCH	AutoRegressive Conditional Heteroskedasticity
ASE	Athens Stock Exchange
ASEAN	Association of Southeast Asian Nations
BOVESPA	Bolsa de Valores, Mercadorias & Futuros de São Paulo
CAPM	Capital Asset Pricing Model
CMA	Capital Market Authority
EMH	Efficient Market Hypothesis
FTSE	Financial Times and Stock Exchange
GARCH	Generalized Autoregressive Conditional Heteroskedasticity
IPC	Índice de Precios y Cotizaciones
IPSA	Indice de Precios Selectivo de Acciones.
MBA	Master of Business Administration
MERVAL	MERcado de VALores
NSE	Nairobi Securities Exchange
RTSI	Russian Trading System Index
S&P	Standard & Poor
T-Bill	Treasury Bill
US	United States

CHAPTER ONE

INTRODUCTION

1.1 Background of the study

Finance academicians and practitioners have for decades been interested in the implications of the day-of-the-week effects, one of which is the weekend effect. One of the explanations for the weekend effect is short positions. The intuition is that the inability to trade over the weekend causes short sellers to close their speculative positions on Fridays and re-establish new short positions on Mondays, causing stock prices to rise on Fridays and fall on the following Mondays. However, the empirical evidence is inconclusive and, still, a matter of debate (Gao, Haoy, Kalchevaz, & Ma, 2011).

This financial phenomenon of the weekend effect caught attention as a result of the need to provide an explanation as to why some financial behavior was inconsistent with the widely used Capital Asset Pricing Model and the Efficient Market hypothesis although there's evidence that research on this anomaly was done since as early as 1931 by Fields. The Efficient Market Hypothesis (EMH) postulates that the prices of stocks on the stock market reflect the available information about the said stocks (Fama, 1965) resulting in purely random distribution of stock returns. The Capital Asset Pricing Model (CAPM) is the method that provides the empirical gear for capturing the returns expected from stocks given the set of information at a time T (Sharpe, 1964) in an efficient market.

Much of the analysis of the stock market is based on returns. Return is the ratio (or percentage) of money gained or lost (whether realized or unrealized) on an investment relative to the amount of money invested. In stocks, return can be arithmetically modeled as the price change expressed as a percentage of the stock price before the change (Miller & Modigliani, 1961).

Volatility is synonymous with risk. It is simply put as the variation in return. During the empirical analysis of the stock markets return was operationalized by calculation of the

standard deviation of the set of return in question (Markowitz, 1952). This empirically measured volatility is a key part of the CAPM.

Anomalies are viewed as anomalies in line with the empirical EMH and the CAPM. Other than being held as criticisms against the CAPM and the EMH they indicate financial phenomenon well out of the normal prediction (assuming normal is within the EMH context). Among many other anomalies concerning return on the stock exchange there are seasonality, day-of-the-week effect, Monday Effect (weekend effect). All these are summed up as Calendar Effects (Kenourgios & Samitas, 2008).

Seasonality is the antithesis of the Random Walk model. Whereas the Random Walk model postulates that the variation in stock returns is purely random and Gaussian, the Seasonality Model observes that stock returns are reactive to seasons. For instance, Rozef & Kinsey (1976) observed that in the US stock returns for January were significantly larger than the return for the remaining eleven months and this cycle repeated every year making it cyclic.

The deeper research in the seasonality phenomenon uncovered seasonality trends in the days of the week and the phenomena were recurrent. This led to the term "the-day-of-the-week effect" in stock prices. Day-of-the-week-effect in stock returns in the US Market has been documented by a large number of studies. For instance, in the US stock market the mean Monday stock return has been found to be negative or significantly lower than the non-Monday returns. Many studies have shown that in addition, mean stock return on Fridays is significantly high relative to other days. "The-day-of-the-week effect" argues that there is a cyclic pattern of stock returns pegged upon the day of the week (Keim & Stambough, 1984).

Researchers have found day of the week effect in a variety of forms in different markets. In most of the developed markets, empirical studies found negative Monday returns and positive Friday returns such as Cross (1973). 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 Fridays. 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. Some other studies found day of the week effect in different forms specifically negative returns on Tuesday such as Gardeazabal & Regulez (2002).

The Monday (Weekend) effect is the belief that securities market returns on Mondays are consistently less than the other days of the week, and are often negative on average. Studies have documented it since the nineteen-twenties, but no theory has adequately explained the reasons it exists. Studies have suggested the existence of a Monday effect for a diverse range of securities, from equities to debt to commodities. However, since the mid nineteen-seventies large firm securities seem to have exhibited what might be called a 'reverse Monday effect,' in which differences between Mondays trading and the rest of the week are not statistically significant (Cho, Linton, & Whang, 2006).

According to the researches done on the-day-of–the-week effect there is a linear relationship between the weekly average return on a stock market and each of the days of the week with the intercept term expected to be zero. Since the test for the Monday effect is about whether the weekly average return is equal to the Monday return then it is important to note what the expected regression coefficient of the Monday returns is one (if there is no Monday effect) but different from on if there is a Monday effect (Gakhovich, 2011).

The weekend effect is one of the phenomena that provide ammunition to the Behavioural Finance criticism against the empirical approach to finance. Behavioural finance was crystallized by the works of Kahneman and Tversky out of the need to explain the anomalies that riddle the EMH, the CAPM and the whole empirical approach to finance in general and stock pricing in particular. The paper they published opened the door to other publications that boldly provided alternative explanations to anomalies on the stock markets. This research wishes to contribute to the discussion on behavioural approach to finance by investigating whether this phenomenon is rife on the NSE. It goes further to investigate whether the phenomenon affects the stocks of firms generally or whether each firm has its own experience of the weekend effect (Kahneman & Tversky, 1979).

The arguments above are assumed to hold in a financial market that is liberal. Financial liberalization refers to the deregulation of domestic financial markets and the liberalization of the capital account. It refers to measures directed at diluting or dismantling regulatory control over the institutional structures, instruments and activities of agents in different segments of the financial sector. These measures can relate to internal or external regulations. In one view, it strengthens financial development and contributes to higher long-run growth. In another view, it induces excessive risk-taking, increases macroeconomic volatility and leads to more frequent crises (Chandrasekhar, 2004).

Financial liberalization in Kenya is much more recent for ceilings on bank lending rates were not removed until July 1991. The central bank continued to announce guidelines for the sectoral composition of bank credit expansion, although these were not strictly enforced after interest rate liberalization. International financial liberalization is even more recent. Offshore borrowing by domestic residents has been permitted only since early 1994, and portfolio capital inflows from abroad were restricted until January 1995. Supporting structural and institutional reforms have yet to be fully implemented. Many banks remain publicly owned and competition among them is limited (Pill & Pradhan, 1997).

This study will be conducted based on firms quoted on the Nairobi Stock Exchange (NSE). The NSE was registered under the Societies Act originally as a voluntary association of stockbrokers in 1954. It was exclusively for the Kenyan white community until after the attainment of independence in 1963. In 1988 the first privatization through the NSE was realized, as the successful sale of a 20% government stake in Kenya Commercial Bank was done (NSE, 2012). February 18, 1994 recorded the highest 20-Share Index in NSE history (NSE, 2012). More improvements have been taking place on the NSE and now there is a computerized delivery and settlement system (DASS).

According to the NSE (2012), securities are divided into Agricultural investments market Segment made up of firms in the Agricultural sector, Commercial and Services sector, the Telecommunication and Technology Segment, Automobiles and Accessories,

Banking, Insurance, Investment, Manufacturing and Allied, Construction and Allied, and Energy and Petroleum Segments. The other segment (not relevant to this study) deals with Fixed Income Securities like bonds (NSE, 2012). The NSE is subordinate to the Capital Market Authority (CMA). Among other things the Capital Market Authority is charged with the role of protecting investor interests (NSE, 2012). Trading on the NSE is done on a five-day basis with Saturday, Sunday and the holidays making the non-trading days

1.2 Statement of the Problem

Since the documentation of unusual weekend stock returns by French, many other studies have confirmed the existence of the weekend effect, the Monday effect, and the day-of-the-week effect, for different time periods and different stock return indexes. According to the researches, the mean market returns on Mondays will be abnormally low and, in general, negative. This anomalous Monday return pattern exists not only in the US stock market, but also in international stock markets and holds true for many different types of securities (Flannery & Protopapadakis, 1988).

For almost two decades now, financial liberalization in developing countries has been cited as a necessary and significant part of an economic policy. Typically, financial sector liberalization in developing countries has been associated with measures that are designed to freeing interest rates and allowing financial innovation, and reduce directed and subsidized credit, as well as allow greater freedom in capital flow in its various forms. The NSE falls under such liberalization and therefore can be viewed within the EMH context (Ghosh, 2005)

Dickinson & Muragu (1994) found evidence consistent with the EMH in their study of the Nairobi Stock Exchange an indication that the NSE was an efficient market. Dickinson & Muragu (1994) studied the weekly stock price behaviour of 30 listed companies on the Nairobi Stock Exchange from 1979 to 1988. Kosgey (2008) conducted a time series study on the behaviour of the NSE 20-share index and found evidence of the weekend effect present.

Most of the researches on the weekend effect use the stock indexes like the Dow Jones Industrial Index and Standard and Poor's Composite Index (Keim & Stambough, 1984, French, 1980), Amex and Nasdaq (Chan, Leung, & Wang, 2004), the NSE 20 Share Index (Dickinson & Muragu, 1994, and Kosgey, 2008), Karachi Stock Exchange-100 (Hussain, Hamid, Akash & Khan, 2011) . What is not clear from all these researches is whether returns of stocks of companies listed on the NSE have the weekend effect. In fact, Chotigeat & Lee (1993) found no evidence of the weekend effect on individual firms listed on the Thai Stock Exchange). With historical data from the NSE this knowledge gap will be filled by answering the question: Does the weekend effect exist in the NSE?

1.3 Objective of the study

The objective of the study is to examine the extent of weekend effect in the Nairobi Securities Exchange.

1.4 Significance of the Study

This study is significant to the following parties in the identified ways. The investor will benefit from the findings of this research depending on whether the findings will show whether the weekend effect exists or not. In case the weekend effect phenomenon is present, then investors can benefit by buying and selling stocks in a beneficial manner. For instance, an investor interested in making some profit through selling stocks that are likely to suffer lower returns on Friday and buying those that will generate higher returns while reversing the process on Monday. Otherwise the investors will confidently know the weekend effect will not be a serious consideration when dealing stocks on Monday and on Friday.

Some of the reasons behind the weekend effect are Settlement procedures, bid-ask spread biases, dividend patterns, negative information release, thin trading, measurement errors,

specialists' behaviour, and the concentration of certain investment decisions at the weekend. The management of both the firms and the NSE will take the necessary steps required to reduce the prevalence of the weekend effect (if not wipe it out altogether) by putting in place real time settlement mechanisms and randomizing announcement of news about companies.

The findings of this research have a scholarly utility. Being a behavioural issue, the weekend effect is not a universal phenomenon (across time markets and regions) and its causes, too, vary. This paper will provide a unique perspective to this continuing discussion by investigating the weekend effect phenomenon in stocks on the NSE. Future researchers will therefore find the results useful in their discourses on relevant topics.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter discusses the literature related to the study of the weekend effect at the global, national and individual stocks level. The main theories that provide the theoretical framework for this study are: the Efficient Market hypothesis by Fama which postulates that in efficient markets, like the stock markets, stock prices reflect the information available about the said stocks; the Behavioural Finance theory by Kahneman and Tversky which provides an explanation of the behaviour of stock investors based on behavioural expositions; and the Weekend Effect theory by Keim & Stambaugh (1984) which provides that the behaviour of investors is predictable basing on the occurrence of the weekend.

Both the empirical and the general literature are reviewed. The empirical literature review discusses the researches that were done on the weekend effect within stocks of various stock markets in the world. Researches that have been done on the NSE are also discussed. The general literature review provides a trace of the nature of publications right from the works of Fields in 1931 to the EMH and eventually the weekend effect.

2.2 Review of theories

2.2.1 The Efficient Market Hypothesis

The Efficient Market Hypothesis (EMH) is based on the random walk theory that suggests stock prices are randomly decided upon on the stock market and it's therefore not possible to predict tomorrow's prices Random walk theorists usually start from the premise that the major security exchanges are good examples of efficient markets. An "efficient" market is a market where there are large numbers of rational, profit-maximizers actively competing, with each trying to predict future market values of individual securities, and where important current information is almost freely available

to all participants. In an efficient market, competition among the many intelligent participants leads to a situation where actual prices of individual securities is an embodiment of past, present and future information. In other words, in an efficient market at any point in time the actual price of a security will be a good estimate of its intrinsic value .The EMH suggest that if the market were efficient then the weekend effect would not be existing. (Fama, 1965).

2.2.2 Behavioural Finance Theory

Kahneman & Tversky (1979) presented a critique of expected utility theory put forth by Bernoulli in 1738 and von Neumann and Morgenstern in 1944 (Sewell, 2007) as a descriptive model of decision making under risk and developed an alternative model, which they call prospect theory. Kahneman and Tversky found empirically that people underweight outcomes that are merely probable in comparison with outcomes that are obtained with certainty. They also found that people generally discard components that are shared by all prospects under consideration. Under prospect theory, value is assigned to gains and losses rather than to final assets; also probabilities are replaced by decision weights.

The value function is defined on deviations from a reference point and is normally concave for gains (implying risk aversion), commonly convex for losses (risk seeking) and is generally steeper for losses than for gains (loss aversion). Decision weights are generally lower than the corresponding probabilities, except in the range of low probabilities. The theory-which they confirmed by experiment-predicts a distinctive fourfold pattern of risk attitudes: risk aversion for gains of moderate to high probability and losses of low probability, and risk seeking for gains of low probability and losses of moderate to high probability (Kahneman & Tversky, 1979).

Earlier, Tversky & Kahneman (1974) had described three heuristics that are employed when making judgments under uncertainty. These were representativeness, availability, anchoring and adjustment. Other heuristics are overconfidence and the gamblers fallacy. The prospect theory provided states of mind that can affect decision making as loss aversion, regret aversion, mental accounting, and self control.

The publication of this outlook to investor behaviour emboldened research into the phenomena that seemed to be anomalous within the rational scientific approach with their explanation tending towards being rooted in human behaviour. This, in effect, providing demonstration that human behaviour is not rational, and that the EMH does not properly explain stocks' returns in the real world (Kahneman & Tversky, 1979).

2.2.3 The Weekend Effect

Keim & Stambaugh (1984) and Campbell (1987) found that stock and bond returns are predictable from a common set of stock market and term structure variables. These predictable patterns were called Calendar anomalies for they were out of the postulations of the EMH. Calendar anomalies include weekend effect, day of the week effect, month of the year effect. The day of the week effect phenomenon explains that average daily returns have a predictable pattern of occurrence dependent upon the day of the week. Keim & Stambugh (1984) are some of the researchers who showed the day of the week effect.

The researchers including Cross (1973) have documented that the average return on Friday is abnormally high and the average return on Monday is abnormally low though the reasons for such anomalies have not been agreed upon. The weekend effect is a simple theory that weekend returns on stocks are generally lower than those of the rest of the week.

2.2.4 Financial Liberalization

Financial liberalization refers to measures that dilute or break down internal and external regulatory control over the institutions, instruments and activities of agents in the different segments of the financial sector. Internal liberalization involves: the reduction or removal of controls on the interest rates or rates of return charged by financial agents; the withdrawal of the state from the activity of financial intermediation; the easing of conditions for the participation of both firms and investors in the stock market by diluting or doing away with listing conditions, by providing freedom in pricing of new issues, by permitting greater freedoms to intermediaries, such as brokers, and by relaxing conditions with regard to borrowing against shares and investing borrowed funds in the market,

reduction in controls over the investments that can be undertaken by financial agents, the liberalization of the rules governing the kinds of financial instruments that can be issued and acquired in the system. This transforms the traditional role of the banking system's being the principal intermediary bearing risks in the system (Chandrasekhar, 2004).

External liberalization on the other hand involves: measures that allow foreign residents to hold domestic financial assets, either in the form of debt or equity, measures which allow domestic residents to hold foreign financial assets, and measures that allow foreign currency assets to be freely held and traded within the domestic economy (Chandrasekhar, 2004).

2.2.5 Common Stocks

Stock comes in two types: common and preferred. When investors buy common stock, they become part owner of a company. Common stock owners elect directors, who hire the people that manage the company on a day-to-day basis. Owners vote on issues at a stockholders meeting. When a company makes money, the board of directors determines what is done with the profit. They can reinvest the profit back into the company or share the profit with the owners via dividends. Common stocks are exposed to various risks. These include market risk, business risk, and financial risk. Stock prices change every day as a result of market forces of supply and demand. If more people want to buy a stock (demand) than sell it (supply), then the price moves up. Conversely, if more people wanted to sell a stock than buy it, there would be greater supply than demand, and the price would fall which contributes to return variation (Mears, 2001).

Common stocks are grouped according to size, investment objective, and type of company. Different sizes of companies, different types of investment objectives, and different sectors provide opportunity of diversification thus reducing risks. Investors also need to match their investment objective with the appropriate investment. Companies are grouped according to size i.e. small capitalization, medium capitalization, and large capitalization. The assets listed on the financial statement determine the size of the company. Small companies over time have more growth potential but also have the

largest potential risk of loss. Large companies tend to pay more in dividends than small companies and their stock prices do not tend to fluctuate as much (Mears, 2001).

Preferred stocks represent some degree of ownership in a company but usually do not come with the same voting rights (This may vary depending on the company). With preferred shares, investors are usually guaranteed a fixed dividend forever. This is different from common stocks, which have variable dividends that are never guaranteed (Mears, 2001).

2.3 Empirical Literature Review

The weekend effect in the stock market is a phenomenon that is believed to be behaviourally directed though there are various other explanations of why such a phenomenon occurs. Just as it is difficult to point out the cause of the anomaly where and when it is evident, findings of its presence have not been consistent. Some studies have found the weekend effect present in some markets; others found the weekend effect not present in other markets. In some other studies the findings of the day-of–the–week effect was present but not in the same pattern as those revealed by studies on the US market, for example a study on the Russian Stock Market. This could provide an indication that the manifestation of the weekend effect is time and market specific (McGowan & Ibrihim, 2009).

The interest in the weekend effect was fuelled by the fact that the behaviour of stock returns was not in agreement with the Random Walk hypothesis. In the Random Walk hypothesis the distribution of the returns of stock is purely random. The Random Walk was based in the belief that the market is informationally efficient and, given that new information is properly interpreted by the investors, its random nature results in the random nature of the prices and therefore returns in response to the information (Fama, 1965).

There is evidence that research on this anomaly has been done since as early as 1931 by Fields. This was before Marwkowitz's Portfolio Theory that provided an empirical approach to risk and return on the stock market measured by variance and mean. In this hypothesis the returns were purely random. The environment within which the Mean-

Variance approach would work was properly conceptualized by Fama in the Efficient Market Hypothesis (EMH). The Efficient Market Hypothesis explained why the Mean-Variance model would work. Within the EMH prices were a simple embodiment of the information that is publicly available to the investor be the information past, public or complete and including inside information. It is not clear at this point whether the weekend effect is evidence of the EMH or an anomaly given that many organizations release information on Friday and the clearance of the deals is delayed for few more days (Ulussever, Yumusak & Kar, 2011).

Keim & Stambough acknowledge that some of the most puzzling empirical findings reported over the years indicated that the distribution of common stock returns varies by day of the week. Most notably, the average return for Monday (close Friday to close Monday) was significantly negative in the Monday returns of the Standard & Poor's Composite Index. Gibbons and Hess (1981) found negative Monday returns for the 30 individual stocks of the Dow Jones Industrial Index. This negative Monday return has yet to be explained. This study by Keim and Stambough undertook a further investigation of the weekend effect in stock returns. They examined additional time periods, extending the total period covered to 55 years. They further examined additional stocks, such as those of small (low-capitalization) firms and those traded over the counter. In all cases, the data exhibited a weekend effect that was at least as strong as that reported in studies before. The study also addressed potential explanations for the effect, such as measurement error, but concluded that none of these explanations was satisfactory (Keim & Stambough, 1984).

Lakonishok & Maberly (1990) suggested that there exists a day-of-the-week effect in the trading pattern of individual investors that is related to the day-of-the-week effect for stock prices. They found empirical evidence of strong selling pressure on Mondays, providing at least a partial explanation of the weekend effect. Other studies also showed that individual investors are more active sellers of stocks on Mondays, particularly following bad news in the market. Chan, Leung, and Wang (2004) also supported the belief that the Monday seasonal effect may be related to the trading activities of less sophisticated individual investors.

As research became more and more intense other studies were done to investigate the universality of the weekend effect. Chukwuogor (2011) examined the daily returns and volatilities of such returns of 40 developed and emerging global stock markets. The results were substantiated by parametric and non-parametric tests. The daily returns were tested for normality using the Shapiro-Wilk test. Since the result of the normality test indicated that the distributions of the returns were mostly non normal, the study used the non-parametric test, the Kruskal-Wallis to check the results for equality of mean returns. To test for the equality of variance across the days of the week, the study employed the Levene's (1960) test was employed.

The study found that more stock markets in developed economies in relation to their proportion in the sample displayed the day-of-of-the-week effect. Only a few stock markets tested significant to the Levene's test of equality of variance of daily returns. According to the proportion of the developed and emerging stock markets in the sample under analysis, the number of developed and emerging stock markets that tested significant at the 5 percent for the equality of variance Levene's test, showed least and highest standard deviations of returns during the 1997-2004 seemed representative of each category in the sample. This can conclude to the presence of the weekend effect on global stock market indicators (Chukwuogor, 2011).

Researches done at country level produced mixed results. The study by Keim & Stambough (1984) and French (1980) found the presence of the weekend effect in the S&P index in the US. The same results were found in the Athenian stock market. However, studies done by other researchers did not find the weekend effect significantly present for example on the Russian stock market (Kenourgios & Samitas, 2008 and McGowan & Ibrihim, 2009).

Some other studies went deeper into the study of the weekend effect financial phenomenon by straying away from the then conventional use of indexes and delved deeper into the study of how the individual stock returns behaved over the weekend. One such study was conducted by Chotigeat and Lee in 1993 on the Thai Stock Exchange. Liu & Lee (2010) also conducted a similar study on fifty top stocks on the Australian stocks. Chotigeat & Lee (1993) found that all stocks did not have similar response to the

weekend for as much as some stock revealed the weekend effect, others did not. Liu & Lee (2010) studied weekday seasonality using stock return data of individual companies using the daily data for the period of January 2001 through June 2010. They found that weekday anomalies were mixed across companies and industries. They also found that the largest mean weekday returns occurred on Monday for 15 companies, most of which were the materials and energy companies. Further tests indicated that returns on Monday were significantly larger than the other four days for six companies. The mixed results made it hard to generalize straightforwardly whether the weekend effect is manifest in the stocks of all companies on a stock exchange. There was therefore need for further research.

Connolly (1991) conducted a study on the S&P 500 stock index for a period spanning 1963 to 1983 with the aim of establishing whether the weekend effect was evident in the daily distribution of this index. The analysis was done for each year separately. Through regression Connolly showed that for each year the returns of the days of the week were different and that Monday returns were generally negative. This study therefore affirmed the presence of the weekend effect in the S&P 500 index from 1963 to 1983.

A similar study had been conducted by Keim & Stambough (1984) that covered the period 1928 to 1982 a period of fifty-five years. The analysis was done on the basis of five years at a time. The average return for each day for the segment in consideration were calculated and the findings showed that most Monday returns were negative. Regression analysis found Friday returns to be abnormally high while those of Mondays abnormally low. A study conducted by French (1980) with a similar methodology but covering a period of 1953 to 1977 (divided into five-year period) showed the manifestation of the weekend effect on the S&P 500.

A study by Chotigeat & Lee (1993) sought to establish whether the day-of-the week-effect is also manifest on the returns of individual stocks on the Thai Stock Exchange. The study was conducted on twenty-nine listed firms with daily returns data from September I, 1989 to January 4, 1991. The simple daily means per firm showed the Wednesday to Friday returns of the 29 stocks were negative, and the returns for the other two days positive. In terms of ranking from highest to lowest rates of return, they were

Monday and Tuesday, respectively. The results did not seem to follow the pattern of high and positive returns on the last trading day and the first trading day of the week, contrary to the pattern found in other studies of stock markets in Hong Kong, Singapore, Malaysia, the Philippines, South Korea, Japan, and the U.S (Chotigeat & Lee, 1993). The tests did not show any evidence of the weekend effect.

In a study by McGowan, Jr. & Ibrihim (2009) on the Russian Stock Market found that the lowest returns were for Wednesday and were negative but not statistically significant. The highest returns were for Friday and were positive but not statistically significant. Returns for Monday, Tuesday, and Thursday were all similar, approximately 0.001, but not statistically significant.

However, using standard ARCH/GARCH analysis to determine if a day-of-the-week effect exists in the RTS (Russian Trading System) Index, McGowan, Jr. & Ibrihim (2009) found that a day-of-the-week effect existed but is not consistent with the US stock market Monday/Friday ("weekend"), day-of-the-week effect. Wednesday provided the lowest rate of return and Thursday, Friday, and Monday provide positive returns that were statistically significant. This study was conducted on the RTSI for the period 9th April 1995 to 8th November 2003.

In a study conducted by Lim & Chia (2010) on the ASEAN – 5 stock markets for the period June 10, 2002 through August 21, 2009 it was found that day-of-the-week effect existed in Malaysia and Thailand stock markets. In addition, Monday had significantly lower returns compared to Thursday and Friday returns in Malaysian stock market. On the other hand, Friday was found to have the highest returns in a week and significantly different compared with other days in Thailand stock market. Further there was evidence on the twist-of-the-Monday effect, where returns on Mondays are influenced by the previous week's returns in Indonesia, Malaysia and the Philippines stock markets. The Kruskal-Wallis and the Wilcoxon Rank Sum Test were used for analysis.

The major stock indexes on the Athens Stock Exchange (ASE) showed that the day of the week effect in both the return and volatility equations is present the period 1995- 2000 according to a study by Kenourgios & Samitas (2008). The data consisted of closing

values of the general index of the Athens Stock Exchange as well as the values of three sector indexes (banks, insurance and miscellaneous indexes), and the FTSE-20 and FTSE-40 indexes, covering an eleven-year period of 1995-2005. There were daily observations between 2 January 1995 and 31 December 2000 for the general, bank, insurance and miscellaneous indexes, and 4 January 2001 and 31 December 2005 for the general, bank, FTSE-20 and FTSE-40 indexes (excluding holidays). The regression model with Monday, Tuesday, Thursday and Friday were used as independent dummy variables ignoring Wednesdays and an examined index as the dependent variable. They also used GARCH (1, 1) model to conduct the analysis.

It emerged from the findings that the day of the week effect was present in mean returns for the ASE over the period 1995-2000; there was strong evidence for the day of the week effect in both return and volatility equations during the period; and it seemed that the stock market anomaly had weakened in both return and volatility during the period 2001-2005.

The main findings of the research by (Durán, 2010) indicated that the day-of-the-week seasonality is present in three out of four of Latin American stock markets studied. For Chile the anomaly was present on stock returns, for Mexico a clear Monday-effect was observed on stock return volatility, and for Brazil on both. A clear weekend-effect was observed for Chile and Brazil while Friday represented the day with the lowest volatility for Brazil and Mexico. As for Argentina, the same volatility pattern was observed however; the estimated coefficients were statistically insignificant.

The research investigated the existence of the called day-of-the-week effect on four of the major stock markets in Latin America, namely Argentina, Brazil, Chile, and Mexico using the main index of each country, that is, MERVAL, BOVESPA, IPSA, and IPC respectively. The daily closing values for the indices from March 1998 to March 2010 were used.

2.4 Conclusions

Research on the weekend effect has been done for decades based on various stock indexes across different spans of time-some long others short. Earlier studies dwelt on

studying the stock indexes for periods covering decades. The results were mixed for while the American indexes showed the presence of the weekend effect other stocks like the Russian and Argentina did not show its significant presence. Cross-sectional time series studies on stocks on global scale showed the presence of the weekend effect. More particular studies on individual stocks have provided inconclusive results. The picture emanating is that the presence of the weekend effect is likely to be both stock-specific and stock-market-specific and therefore not generalizeable.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter outlines the general methodology that was used to conduct the study. It specifies the research design, target population, data collection method and how analysis of the data will be done. The research was basically a regression analysis of how the Monday returns relate to the average returns of the week with the aim of establishing whether the weekend effect is manifest among the firms trading on the Nairobi Securities Exchange.

3.2 Research design

This research was a descriptive design .A descriptive design is a research design used to investigate characteristics of interest in a given population (Sewell, M. 2007). A regression analysis was done on the returns of firms listed on the NSE. The design was the most appropriate because not only is it similarly used by Chotigeat & Lee (1993) to study the weekend-effect phenomenon on the Thai stock market, but that it required the observation of patterns across some reasonable time length for plausible conclusions to be drawn. Further most of the researches on the Calendar Effect have been conducted across time irrespective of whether the variables are the returns estimated using stock indexes or using individual firm stocks (Durán, 2010).

3.3 Target Population

The target population consisted all the firms listed on the NSE .As at December 31, 2011 there were 58 firms.

3.4 Sample

This research covered the period starting January 1, 2007 and ending December 31, 2011, a period covering a total of 60 months. Daily stock prices and the stock volumes for each firm were collected for the period of study. After getting the list of the firms that have

been trading on the NSE for the relevant period, the number of companies to be studied was determined by the model:

_____ (i)

$$S = \frac{n}{1 + (\frac{n}{N})}$$

where, _____(ii)

$$n = \frac{Z^2(p[1-p])}{D^2}$$

and,

S = sample size

N = the population size (consistently trading firms)

Z = the standard score at 95 % (or 0.95) confidence level (1.96)

p = 0.5 (because the prevalence of the features of the population in the sample is unknown).

D = the interval of accuracy 0.05 (found by 1 – 0.95)

Once the sample size had been determined, the number of firms to be studied from each of the cluster (see the appendix) was proportionally shared by the model:

$$X = \frac{S}{N} \times C_i$$ _____(iii)

Where C_i was the number of companies in the cluster i (a cluster refers to each of the groupings of companies as shown in the appendix). The allocation was followed by pure random sampling to decide the exact company shares to be studied.

3.5 Data collection

The raw secondary data for this research was collected from the electronic database of the NSE. All the average day's stock prices of shares of the 58 companies listed on the NSE during the period January 1, 2007 and ending December 31, 2011 were considered. The numbers of shares sold were also collected from the NSE. The capture and analysis of data was done using MS EXCEL 07 software.

3.6 Data analysis

The raw data that were collected were used to generate the weekly average return R_t which is the dependent variable with the Monday returns as the independent variable. The daily return for each firm was found by the model below

_____(iv)

$$R_t = Ln\left(\frac{P_t}{P_{t-1}}\right) \times 100$$

Where R_t was the return on a day t $(t = 1, 2, 3, \dots\dots)$, P_t the stock price on the day t, while P_{t-1} was the stock price on the day before day t.

The weekly general weighted average return for all the firms was found by the model: ,

_____(v)

$$R_a = \frac{1}{5}\sum_{d=1}^{5}\left(\sum_{k=1}^{s} w_{ad_k} \times R_{ad_k}\right)$$

Where R_a was the average return in week a $(a = 1, 2, 3, \dots\dots\dots, 60)$, d was the day of the week with $d = 1, 2, 3, 4, 5$ (standing for Monday, Tuesday, Wednesday, Thursday and Friday respectively). $k = 1, 2, 3, \dots\dots\dots s$ i.e. company $1, 2, 3 \dots\dots$ for the S companies making up the sample. w_{ad_k} stood for the weight of the number of shares of company k

on day d during week a. the weight was a proportion of all the stocks sold in a given day. R_{ad_k} stood for the return of company k on day d during week a.

The regression model was of the form

$$R_a = \beta R_M + e \qquad \text{(vi)}$$

Where R_a referred to the weekly returns, β was the coefficient of regression, while R_M was the return for Monday for the week. The $t - test$ was used to determine whether the coefficient β was significantly different from 1 and the $F - test$ used to determine the significance of the regression. If $\beta \neq 1$ then the weekend effect would be present, if $\beta = 1$ then the weekend effect would be non-existent.

CHAPTER FOUR

DATA PRESENTATION AND ANALYSIS OF FINDINGS

4.1 Introduction

This chapter discusses the findings of the research. The objective of this research was to find out whether or not the weekend effect affects trading of stocks on the NSE through the use of a regression analysis with the weekly average returns as the dependent variable and the Monday returns as the independent. The chapter therefore discusses how the two variables were operationalized and it provides a statistical description of the distribution of the data on the variables and how the variables correlated. Further, the regression analysis findings are presented. An interpretation of the results is presented in the last subtitle of this chapter.

4.2 Analysis of Data and Presentation of Findings

4.2.1 Average Weekly Returns

The weekly average returns were generated from the prices and the corresponding traded stocks of the analysed listed firm. After sorting the data on the basis of the listed firms, the rates for a trading day per company were calculated. The average return rate per trading day was the simple weighted average return of the day in question. The week's average was the simple arithmetic average of the calculated daily averages. This resulted into 259 observations for the dependent variable.

4.2.2 Monday Returns

The independent variable which was the Monday return were calculated in the same manner as the weekly average returns only that the raw data used were the Friday prices, Monday prices and Monday stocks dealt. The Monday stocks were the basis for calculating the weighted averages of the returns. The result was 259 observations to be used as the independent variables in the regression analysis.

4.2.3 Descriptive Analysis.

Descriptive statistics of the two variables were calculated to provide an insight into their nature. Specifically standard deviation, skewness, kurtosis, maximum and minimum values of each of the variables were calculated and the findings tabulated below.

TABLE 1: DESCRIPTIVE STATISTICS

	Weekly Average Returns	Monday Returns
Maximum	0.379529	0.068571
Minimum	-0.14807	-2.1405
Kurtosis	10.27	80.084
Skewness	1.6776	-7.7419
Std. Deviation	0.053194	0.176928
Mean	0.003463	-0.04837

(Source: Prepared by researcher)

The highest level of weekly average return was 0.3795 in the 03rd to 07th November week while the lowest weekly average return was -0.14807 in the 05th to 09th November week. The highest Monday return was 0.068571 recorded on18th January 2010 with the lowest being -2.1405 on 29th may 2006.

The weekly average returns recorded a positive skewness of 1.6776 an indication that these returns tended towards the negative and a kurtosis of 10.28. The test for goodness of fit to the normal distribution gave the result of 0.000 which was less than 0.05 (alpha= 0.05) showing the distribution was not normal. The Monday returns were negatively skewed with a skewness value of -7.7419 and a kurtosis of 80.084. The test for goodness of fit to the normal distribution gave the result of 0.000 (alpha=0.05) showing the distribution was not normal. The two variables were weekly positively correlated for the Pearson correlation between the two variables was 0.08417 (8.417 %) which is weak.

The data was further divided into two sets: one having the weeks with the Monday return more than the week's average as presented in Table 6 and the other with the Monday return less than the week's average as presented in Table 5. Each of them were analysed to determine their nature and the statistics were summarized in the table below.

DESCRIPTIVE STATISTICS AFTER SEPARATION

	NEGATIVE		POSITIVE	
	Week's Average	Monday Return	Week's Average	Monday Return
KURT	14.7988	48.79	0.7670	3.1806
SKEW	2.5052	-6.060	-0.70696	0.6568
MAX	0.3795	0.054	0.0450756	0.06857
MEAN	0.02737	-0.0833	-0.0311	0.00121
MEDIAN	0.01682	-0.01273	-0.02477	0.0000281
STDEV	0.05183	0.2243	0.03284	0.017103

(Source: Prepared by researcher)

The negative side of the table above represents the data for the weeks in which Monday return minus week's average was negative while for the positive side the difference was a positive value. The weeks yielding a negative difference had the week's returns having kurtosis of 14.7988 with a skewness of 2.5052 which was not normal. The same can be said about the Monday returns which recorded a kurtosis of 48.79 though negatively skewed at -6.060. On the contrary the weeks yielding positives had low values of kurtosis and skewness. It notable that the weeks yielding negative values had positively skewed returns, while those yielding positive values had negatively skewed returns.

4.2.4 Regression analysis

The regression analysis was first done by pairing up the Monday Returns with their corresponding weekly average for the 259 weeks. This resulted in Table 1 in the appendix. On carrying out the regression analysis, the intercept value was found to be 0.0047 which is actually 0.47%. The coefficient value was found to be 0.0253. For each of these regression results, the intercept had a t-value of 1.3699 with a p-value of 0.1719, the t-critical at 0.95 confidence level is 1.895. The intercept term had a t-value of 1.3542 with a p-value of 0.1769. These values are presented in the table below.

TABLE 2: REGRESSION ANALYSIS RESULTS

Variable	Regression values	Std. Error	t-Value	p-Value	t-critical
Coefficient	0.0253	0.003	1.3699	0.1719	1.895
Intercept	0.0047	0.019	1.3542	0.1769	1.895

(Source: Prepared by the researcher)

The model relating weekly average returns and the Monday returns was therefore found to be:

$$R_a = 0.0047 + 0.0253R_M + e$$

The significance of the regression was measure by an F-value of 471.3 whose p-value was 0.000. The critical F-value is 3.84. The R^2 value for the regression was 0.0071 which indicated the 0.71% of the variation in weekly average returns is explained by the variation in the Monday returns. These values are summarized in the table below.

TABLE 3: REGRESSION STATISTICS

F Value	471.30
Probability of F	0.0000
R^2	0.0071
Adjusted R^2	0.0032

(Source: Prepared by researcher)

4.3 Summary and Interpretation of Findings

The Monday (Weekend) effect is the belief that securities market returns on Mondays are consistently less than the other days of the week, and are often negative on average. This study concurs with the findings that the Monday returns are usually negative. In this study, 146 weeks recorded Monday returns that were less than 0, no week had a zero return, 61 of the remaining 113 positive returns could be rounded off to zero while the remaining 52 weeks had returns considerable as non-negative.

According to the researches done on the-day-of–the-week effect there is a linear relationship between the weekly average return on a stock market and each of the days of the week with the intercept term expected to be zero. This research was done with the

expectation that similar findings will emerge. The regression analysis does not at all suggest that the Monday returns have a causal effect on the average returns of the week. Rather this model was used to show how the two behave with respect to each other or how one could be written in terms of the other. As such if the two were to be equal then the coefficient of the regression would be one. If the Monday returns are generally les that the weekly average then the coefficient would be less than one. Otherwise, the coefficient would be more than one.

The equality between the weekend returns and the weekly averages would mean that the differences between the two variables are just as a result of the random nature of their occurrence. This therefore would mean the only way the weekend return can be written in terms of the week's average or vice versa is by multiplying by a factor of one. On the contrary if the weekend effect is present then the coefficient should not be one. If the effect of the weekend is such that the market is upbeat about stocks on Monday, then the returns should be significantly higher than the weekly average. This would make the model used for this analysis have the coefficient of regression being less than one.

If however the market is not upbeat about stocks on Monday to the extent of wanting to dispose of the stocks one holds, then the prices will be lower than the preceding Friday prices leading to lower or negative returns. This would make the Monday returns significantly lower than the weekly average. In the model of analysis of this study, the coefficient term would then be higher than one. Meaning the weekend effect manifests in the manner similar to the finding of the 1980s.

The constant of regression or the intercept term was 0.0047. This value is, not only approximate to zero, but it is not a significant value according to the t-test. This therefore confirms the expectation that the intercept term is zero. The interpretation is that it is possible to express the weekly average returns in terms of the Monday results by multiplying these Monday returns by a factor without serious concern about the constant term.

However, the correlation between the residuals and the dependent variable was 0.996 which was almost 100% while the coefficient of determination was 0.0071. The adjusted

coefficient of determination was 0.0032. This is an indication that the relationship may not be linear though the linear model was used for analysis. The relationship, though, is positive, and in which the coefficient term may or may not be one.

The value of the coefficient term was 0.0253(p=0.1719) which was not significantly different from zero. This means the weekend effect is present. If it was more than one it would mean the returns of Monday are less than the average returns of the week. The anomaly would be that return rates fall on Monday as a result of Monday stock prices being significantly higher so as to cause the higher returns, while Friday prices are lower. This would not be true for the weekend effect means that Friday prices are usually low as a result of investors wanting to get funding for weekend activities. When they come back to trade on Monday they would want to hold more on to their stocks awaiting a possible higher price later in the week, therefore, only willing to sell at a higher price. Those who sell on Monday would do so at a poorer price.

If the value of the coefficient was one it would mean there is no difference between the selling and buying activities of the weekend and those of the rest of the week. So that the average price of the week is not different from the average of the weekend. In effect this would be meaning that the weekend does not affect selling and buying activities on the Nairobi Securities Exchange (NSE). It would then mean the weekend effect does not affect trading on the NSE.

The value of 0.0253 shows that the weekly average returns can be expressed as multiples of the Monday returns. However, the Monday returns are higher than those of the weekly average making this coefficient fractional. Why are the returns this way? This is because the Friday prices will tend to be lower due to the looming weekend. The same investors will sell their stocks on Monday at a higher price. This is the weekend effect. When calculating the returns, the numerator is larger due to the higher Monday prices, while the denominator will tend to be lower as a result of the lower Friday prices.

This study is similar to a study done by Chotigeat & Lee (1993) in that in both studies the issue was to show that the coefficient of regression is either equal or not equal to one.This study analysed the whole market unlike Chotigeat & Lee (1993) who was

studying presence of weekend effect on individual firms listed on the Thai Stock Exchange.

The value of the coefficient term was 0.0253, it provided an indication that the weekend effect existed but in a manner where Monday returns seemed higher than the week's averages. Cross (1973) in his research found that average Friday returns are abnormally high than the Monday returns which were lower.

CHAPTER FIVE

SUMMARY CONCLUSIONS AND RECOMMENDATIONS

5.1 Summary

This research was intended at finding out whether the weekend effect was existent on the NSE. It was to be done by investigating how the Monday returns compare to the returns of the week. The weekend effect is the assertion that the returns of the week are significantly different from the returns on Monday. The weekend effect is one of the many behavioural anomalies found countering the scientific view that stock markets are efficient and prices (and therefore return variations) are mere random occurrences in line with the Random Walk hypothesis.

The research was done with the companies listed on the Nairobi Securities Exchange making up the population of study. The sample was the firms trading during the period spanning January 2007 to December 2011. The firms must have been consistently trading. The required data of the daily average prices and their corresponding stock volumes were collected from the database of the Nairobi Securities Exchange. The return values per firm per trading day were generated and weighted based on the stock volumes to fin the daily average return. The weekly average returns were found by taking the equally-weighted average of the trading days in a week. The weekly averages were regressed with the Monday returns as the independent variable.

The regression was found to be weak as the coefficients of determination, both the adjusted and the unadjusted were very low showing that the relationship was either not linear or the two variables were independent. The regression results showed that the intercept term was significantly closer to zero as was expected from the findings of other studies. The coefficient term was less than one but positive. The value of the coefficient term was 0.0253, it provided an indication that the weekend effect existed but in a manner where Monday returns seemed higher than the week's averages.

5.2 Conclusions

Several conclusions can be made from this research. First of all, the regression intercept of the relation between Monday returns and the weekly average returns is zero. This means that there is no part of the weekend return that can be taken for granted as being part of the weekly averages. The variation is total.

Secondly, the coefficient of the variation between the Monday returns and the weekly average returns is less than one. This means that there is weekend effect among the firms on the Nairobi Securities Exchange. However, the weekend effect manifests in such a manner that the Monday results are higher than those of the weekly average unlike the normal assertion that they are less.

The correlation coefficient was 0.083 which is 8.3%. This is a weak correlation. Further there was a 0.996 correlation between the dependent variable and the residual. In addition the coefficient of determination was 0.0071. These findings do, not only show that the relationship between Monday returns and week's averages is not linear, but that the two are independent. There is low correlation between these variables showing high degree of independence, while the linearity statistics show low level of linear relationship.

The values of the returns, however, showed that 56.4% of the weekends had negative returns which meant that during such weekends Monday stock prices were less that the Friday prices of stock. The returns that were positive and could not round to zero were 20%. This means to some extend some weeks experienced the weekend effect that produced negative returns irrespective of the average of the week while in other weeks the weekend effect manifested by having returns higher that the weeks average.

It can also be concluded that the results indicate a need to study if the distribution of the returns has any bearing on the type of information available about trading firm and whether such information is released on Mondays as suggested by the pioneer researchers on the weekend effect.

5.3 Policy Recommendations

This study utilized the regression model to study the relationship between weekend returns and the weekly average returns of stocks of listed firms. This study established that the relationship is not linear and even the correlation is weak. It could be argued that the weekend does not have such a serious impact on the pricing of the traded stocks on the NSE.

There is need to investigate to find out why the weekend effect does not seem to take effect on the NSE. It could be that the Kenyan traders own small portfolios of shares that may dilute the effect of the weekend effect. Or the subsistence nature of the Kenyan investors has made them insensitive to the emotive nature of the weekend to the extent of reducing their response to the weekend. The other theory has been that there is a tendency of good news about firms to be released on Mondays making downward slides in Monday stock prices which consequently make returns negative. If the announcement of the news about firms is not patterned to Mondays or any other days, then this should be maintained.

Investors that arbitrage and feast upon the weekend effect will find this research should sound a strong warning that the NSE may not be having the weekend effect as predicted by the originators of the weekend behavioural anomalies in stock trading. The originators of the weekend effect blame the bad nature of the news about stock that are usually aired on Mondays causing a herding effect among traders who want to offload the stocks of the firms with the bad news. This pushes the prices down. Arbitrageurs usually may want to go against the herd by selling on Friday and buying on Monday. These finding provide that the herding effect defined as such may not always be present every week on the NSE. In fact only 146 of the 259 weeks recorded negative returns.

5.4 Limitations of the Study

The strength of this research lies in its time limit. The scope of this research was for the five years ending and including the year 2011. It is not known whether the results would hold if a longer period would have been researched upon. Further it is not possible to tell whether the same findings will hold for the period after 2011.

The findings of the research provide more like one more piece of evidence that there is a market in the name of the NSE where during a certain period the weekend effect existed. This, however, does not provide enough evidence that can be used to make universal the existence of the weekend effect. Therefore, it still will hold that some of these behavioural phenomena like the weekend effect will still be dependent upon the features of the market being analysed.

The quality of the data may be a weakness of this study. It is not possible to tell from this research whether the market is efficient enough to enable a clean capture of the behaviour of the traders through the prices they settle the deals on the NSE. Actually the use of the data from the NSE is based on the assumption that the prices accurately capture the sentiments of the market accurately. This research does not confirm that the NSE has achieved such a level of efficiency.

5.5 Suggestions for Further Research

There is a need to answer the question of whether the findings of this research can be made universal across time on the NSE. The NSE has been trading since pre-independence to date, yet the period of study is only a short five years. This may make the finding not to be assumed universal, but, a research can be done to determine the nature of the weekend effect for longer periods of time.

There are very many stock markets in the world and all of them are still developing though at different levels. This study has covered only one market. A research can be conducted to consolidate and reconcile all the findings on the weekend effect on the various markets of the world in order to tell what the situation is.

There is need to determine whether actually the stock market prices on the NSE are an accurate measure of the market sentiment in general and whether they capture the weekend effect. If prices are to be found not able to capture the sentiment, then there is need to find methods that can be used to accurately capture the sentiment in order to make the findings highly believable and irrefutable.

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APPENDICES

TABLE 1: DESCRIPTIVE STATISTICS

	Weekly Average Returns	Monday Returns
Maximum	0.379529	0.068571
Minimum	-0.14807	-2.1405
Kurtosis	10.27	80.084
Skewness	1.6776	-7.7419
Std. Deviation	0.053194	0.176928
Mean	0.003463	-0.04837
Weeks	259	259

TABLE 2: REGRESSION ANALYSIS RESULTS

Variable	Regression values	Std. Error	t-Value	p-Value	t-critical
Coefficient	0.0253	0.003	1.3699	0.1719	1.895
Intercept	0.0047	0.019	1.3542	0.1769	1.895

TABLE 3: REGRESSION STATISTICS

F Value	471.30
Probability of F	0.0000
R^2	0.0071
Adjusted R^2	0.0032

TABLE 4: SEPARATED RETURNS DESCRIPTIVE STATISTICS

	NEGATIVE		POSITIVE	
	Week's Average	Monday Return	Week's Average	Monday Return
KURT	14.7988	48.79	0.7670	3.1806
SKEW	2.5052	-6.060	-0.70696	0.6568
MAX	0.3795	0.054	0.0450756	0.06857
MEAN	0.02737	-0.0833	-0.0311	0.00121
MEDIAN	0.01682	-0.01273	-0.02477	0.0000281
STDEV	0.05183	0.2243	0.03284	0.017103

STABLE 5: WEEKS WITH MONDAY RETURNS LESS THAN WEEK'S RETURN

WEEK	WEEK AVERAGE	MONDAY RETURN	DIFFERENCE
1	0.0473404	0.0000000	-0.0473404
2	0.0179089	0.0083578	-0.0095511
5	0.0072069	-0.0053794	-0.0125863
10	0.0486391	-0.0223046	-0.0709438
11	0.0221422	0.0028271	-0.0193151
12	0.0406368	0.0050983	-0.0355385
14	-0.0095818	-0.0118292	-0.0022474
15	0.0214187	-0.0116459	-0.0330646
16	0.0515251	0.0000000	-0.0515251
17	0.1089632	0.0000000	-0.1089632
18	0.1325964	0.0109144	-0.1216820
19	0.0447372	0.0385229	-0.0062143
21	0.0144775	0.0043361	-0.0101415
22	-0.0470491	-2.1404684	-2.0934194
23	0.1005992	-0.0631213	-0.1637206
25	0.0454364	-0.0028293	-0.0482657
30	0.0325775	-0.0156559	-0.0482334
31	0.0128238	0.0046467	-0.0081771
33	0.0026774	-0.0010002	-0.0036776
34	0.1259515	0.0209670	-0.1049845
36	0.1015555	0.0482942	-0.0532613
38	0.0561236	0.0028959	-0.0532276
40	0.0379532	-0.0144335	-0.0523867
42	0.0236201	-0.0043166	-0.0279366
43	0.0252630	0.0000298	-0.0252332
44	0.2065622	0.0061904	-0.2003718
46	0.0170020	-0.0203870	-0.0373890
47	0.0163023	-0.0091600	-0.0254623
50	0.0091934	-0.0105928	-0.0197863
51	0.0130660	-0.0008272	-0.0138932
52	0.0300625	0.0000000	-0.0300625
58	0.0105789	-0.0129605	-0.0235394
59	-0.0088845	-0.0197948	-0.0109103
64	0.0123412	-0.0229117	-0.0352529
65	0.1325253	0.0247274	-0.1077979
68	0.1282135	-0.0127436	-0.1409571
71	0.0464891	-0.0263452	-0.0728343
72	0.0064377	0.0038716	-0.0025661
74	0.0596111	0.0063102	-0.0533009
75	-0.0056409	-0.0322296	-0.0265887
76	-0.0093470	-0.0315674	-0.0222204
78	0.0600294	-0.0707549	-0.1307843
80	0.0306852	-0.0014560	-0.0321413
81	0.0201383	-0.0002417	-0.0203799
82	0.0396941	0.0026987	-0.0369954

WEEK	WEEK AVERAGE	MONDAY RETURN	DIFFERENCE
84	-0.0014225	-0.0145942	-0.0131716
86	0.0372022	-0.0031474	-0.0403496
87	0.1452420	0.0014273	-0.1438148
88	0.0158658	0.0036104	-0.0122553
93	0.0012531	-0.0149345	-0.0161875
97	-0.1480701	-0.2423989	-0.0943288
98	0.0064053	0.0023222	-0.0040831
99	0.0309638	0.0046304	-0.0263333
101	0.0319084	0.0014292	-0.0304792
103	0.0000000	-0.0405442	-0.0405442
107	-0.0318312	-0.0326594	-0.0008282
109	-0.0408639	-0.0487012	-0.0078373
111	0.0907305	0.0397892	-0.0509413
114	0.0897865	0.0163561	-0.0734304
117	0.0090719	0.0000000	-0.0090719
118	-0.0017081	-0.0034066	-0.0016985
119	0.0390463	-0.0787082	-0.1177545
120	0.0319941	-0.0329850	-0.0649791
121	0.0286773	-0.0880248	-0.1167021
122	0.0744536	-0.0397864	-0.1142399
123	0.0086596	-0.0055694	-0.0142290
126	0.0144820	-0.0071699	-0.0216518
127	0.0725538	0.0000000	-0.0725538
129	0.1096510	0.0526898	-0.0569612
138	0.1084867	0.0105408	-0.0979459
143	0.0408028	0.0203623	-0.0204406
144	0.0007445	-0.0007982	-0.0015427
145	0.0000000	-0.0008388	-0.0008388
149	0.3795286	0.0542943	-0.3252343
152	0.0070781	-0.0142154	-0.0212934
154	0.0118020	-0.0313109	-0.0431129
155	0.0410440	0.0000000	-0.0410440
156	0.0399082	-0.0230475	-0.0629556
157	0.0224889	0.0000000	-0.0224889
163	0.0136546	0.0001407	-0.0135138
167	0.0419463	-0.0363994	-0.0783457
168	0.1367043	0.0241042	-0.1126002
171	-0.0208645	-0.3401058	-0.3192414
173	0.0060232	-0.3433045	-0.3493277
174	0.0187159	-0.5100711	-0.5287870
176	0.0094687	-0.1862289	-0.1956975
177	0.0379518	-0.2019444	-0.2398962
178	-0.0430775	-0.1491569	-0.1060794
179	0.0320423	0.0000000	-0.0320423
180	0.0197884	-0.3651147	-0.3849031

WEEK	WEEK AVERAGE	MONDAY RETURN	DIFFERENCE
181	0.0631351	-0.0995715	-0.1627066
182	0.0220230	0.0068458	-0.0151772
183	0.0314711	-0.5954378	-0.6269089
184	0.0774505	-0.0748386	-0.1522891
185	-0.0082379	-0.2227743	-0.2145365
186	0.0278895	-0.1437573	-0.1716468
187	-0.0135430	-0.1466820	-0.1331390
188	0.0014333	-0.5245101	-0.5259435
189	0.0363670	-0.2464901	-0.2828571
190	-0.0367511	-0.4235448	-0.3867937
191	-0.0356070	-0.2354411	-0.1998342
192	0.0279556	-0.1757068	-0.2036624
193	-0.0195808	-0.0737713	-0.0541905
194	0.0122204	-0.0271671	-0.0393875
196	-0.0210060	-0.2147680	-0.1937621
198	0.0216544	-0.0483348	-0.0699892
199	0.0274403	-0.0004471	-0.0278873
200	0.0212602	-0.0299598	-0.0512200
201	0.0068968	-0.0206795	-0.0275763
202	0.0099527	-0.0055274	-0.0154801
203	0.0268977	-0.0525965	-0.0794941
204	0.1242669	0.0493908	-0.0748761
205	0.0007769	0.0000000	-0.0007769
206	0.0000000	-0.0127159	-0.0127159
207	0.0087750	-0.1503098	-0.1590849
208	0.0007573	-0.0389542	-0.0397114
210	0.0229865	0.0000000	-0.0229865
211	0.0896568	-0.0080244	-0.0976812
213	-0.0236107	-1.0451951	-1.0215844
215	0.0096034	0.0000000	-0.0096034
216	-0.0444588	-0.1084677	-0.0640089

WEEK	WEEK AVERAGE	MONDAY RETURN	DIFFERENCE
217	0.0252146	-0.0275290	-0.0527436
218	0.0051122	-0.0357998	-0.0409119
219	0.0286934	-0.2413762	-0.2700696
220	0.0012304	-0.1141842	-0.1154146
222	0.0085072	-0.1095120	-0.1180192
223	0.0019687	0.0000000	-0.0019687
224	0.0262910	-0.0548071	-0.0810981
225	0.0107934	-0.1619852	-0.1727785
226	0.0264046	-0.1550454	-0.1814500
227	0.0077788	-0.0824816	-0.0902604
228	-0.0375219	-0.0767665	-0.0392446
229	0.0066223	-0.0275715	-0.0341938
230	-0.0202791	-0.2321338	-0.2118547
231	0.0263096	0.0000000	-0.0263096
232	-0.0023267	-0.3952609	-0.3929342
233	0.0330367	-0.5427593	-0.5757960
234	-0.0011553	-0.0623199	-0.0611646
235	0.0016742	-0.5601275	-0.5618017
237	0.0115999	0.0000000	-0.0115999
241	0.0000000	-0.0050512	-0.0050512
242	0.0000981	0.0000000	-0.0000981
243	0.0000000	-0.0349702	-0.0349702
245	0.0090166	-0.0034101	-0.0124267
247	0.0025249	0.0000000	-0.0025249
249	0.0557057	0.0104669	-0.0452388
250	0.0166376	0.0008739	-0.0157637
251	0.0002541	-0.0566692	-0.0569233
252	0.0000000	-0.0152188	-0.0152188
256	0.0275378	0.0041587	-0.0233791
258	0.0051582	-0.0080382	-0.0131964
259	0.0159709	0.0000000	-0.0159709

TABLE 6: WEEKS WITH MONDAY RETURN GREATER THAN WEEK'S AVERAGE

WEEK	WEEK AVERAGE	MONDAY RETURN	DIFFERENCE
3	-0.0074493	0.0005945	0.0080438
4	-0.0174572	-0.0009037	0.0165535
6	-0.0018260	0.0008718	0.0026978
7	0.0096740	0.0101227	0.0004486
8	-0.0036096	0.0046579	0.0082675
9	-0.0655067	-0.0168132	0.0486935
13	-0.0305873	0.0082872	0.0388745
20	-0.0046010	0.0190876	0.0236886
24	0.0135168	0.0208407	0.0073240
26	0.0070614	0.0115739	0.0045125
27	-0.0187295	-0.0003975	0.0183320
28	-0.0264181	-0.0060940	0.0203241
29	-0.0146643	0.0009250	0.0155892
32	-0.0455583	0.0231550	0.0687134
35	-0.0416343	0.0034350	0.0450693
37	0.0047690	0.0150597	0.0102906
39	-0.0179783	-0.0123927	0.0055856
41	-0.0182465	-0.0013734	0.0168731
45	-0.1154996	0.0283615	0.1438611
48	-0.0749682	0.0117989	0.0867671
49	-0.0158441	-0.0048456	0.0109985
53	0.0091250	0.0144765	0.0053515
54	-0.0223929	-0.0086120	0.0137809
55	-0.0242389	-0.0168855	0.0073534
56	-0.0624599	-0.0025503	0.0599096
57	-0.0193704	-0.0143661	0.0050044
60	-0.1122663	0.0133721	0.1256384
61	-0.0286916	-0.0111255	0.0175661
62	-0.0761707	-0.0008529	0.0753178
63	-0.0685936	-0.0075119	0.0610817
66	-0.0245907	0.0164230	0.0410138
67	-0.0670123	0.0000281	0.0670405
69	-0.0103262	0.0144411	0.0247673
70	-0.0423840	0.0252224	0.0676063
73	0.0006917	0.0021827	0.0014910
77	-0.0160275	0.0039373	0.0199648
79	-0.0043373	0.0023301	0.0066674
83	-0.0624036	0.0088611	0.0712648
85	0.0119473	0.0123903	0.0004430
89	-0.0341596	0.0041466	0.0383063
90	-0.0341596	0.0021189	0.0362785
91	-0.0408326	-0.0132323	0.0276004
92	-0.0107009	0.0065964	0.0172973
94	0.0000000	0.0195324	0.0195324
95	-0.0394898	-0.0101152	0.0293747
96	0.0022731	0.0084713	0.0061982
100	-0.0175204	0.0014087	0.0189291
102	0.0012949	0.0023324	0.0010375
104	0.0018938	0.0345773	0.0326836
106	0.0436596	0.0591964	0.0155368
108	-0.0525865	-0.0115829	0.0410036
110	-0.0499836	-0.0141957	0.0357879
112	-0.0138801	-0.0084750	0.0054051
113	-0.0145120	0.0039542	0.0184662
115	-0.0469988	-0.0119636	0.0350352
116	-0.0676754	-0.0195831	0.0480923
124	-0.0900544	0.0014303	0.0914847
125	-0.0098981	0.0025500	0.0124481
128	-0.0051662	-0.0001704	0.0049958
130	-0.0313072	-0.0012918	0.0300154
131	-0.0368404	0.0195063	0.0563467
132	-0.0591391	-0.0067998	0.0523393
133	-0.0113314	-0.0049503	0.0063811
134	-0.0362318	0.0129676	0.0491994
135	-0.0701566	-0.0106804	0.0594762
136	-0.0321743	0.0089586	0.0411329
137	-0.0808298	-0.0166852	0.0641446
139	-0.0411117	-0.0108568	0.0302549
140	-0.0291888	-0.0113230	0.0178659
141	-0.0248075	0.0073311	0.0321386
142	-0.0830353	-0.0254887	0.0575467
146	-0.0157109	0.0000000	0.0157109
147	-0.1066478	0.0000000	0.1066478
148	-0.1379506	-0.0158226	0.1221280
150	-0.0792074	0.0012686	0.0804760
151	-0.0516304	-0.0159174	0.0357131
153	-0.0970016	-0.0486758	0.0483258
158	-0.0201455	0.0030722	0.0232178
159	-0.0347129	-0.0280216	0.0066913
160	-0.0627306	-0.0093678	0.0533628
161	0.0191028	0.0234723	0.0043696
162	-0.0632905	-0.0275499	0.0357406

WEEK	WEEK AVERAGE	MONDAY RETURN	DIFFERENCE
164	-0.0560594	-0.0377955	0.0182639
165	-0.0833519	-0.0383343	0.0450177
166	-0.0411788	0.0139386	0.0551174
169	-0.0157089	0.0107987	0.0265076
170	-0.0216694	-0.0193859	0.0022835
172	-0.0273508	0.0000000	0.0273508
175	-0.0110370	0.0000000	0.0110370
195	-0.0112704	0.0000000	0.0112704
197	-0.0147289	-0.0089221	0.0058068
212	0.0450756	0.0685712	0.0234957
214	-0.0302026	0.0428896	0.0730922
221	0.0071077	0.0226936	0.0155859
236	-0.0123914	-0.0026398	0.0097516
238	-0.0247666	-0.0024072	0.0223593
239	0.0000672	0.0046548	0.0045876
240	0.0001300	0.0138406	0.0137106
244	-0.0632193	0.0000000	0.0632193
246	-0.0336335	-0.0058103	0.0278231
248	-0.0248156	-0.0014978	0.0233177
253	-0.0125398	0.0087789	0.0213186
254	-0.0180125	0.0017258	0.0197383
255	-0.0184773	-0.0083953	0.0100821
257	-0.0252125	-0.0034898	0.0217227

TABLE 7: WEEKLY AVERAGE AND MONDAY RETURNS

WEEK	WEEK AVERAGE	MONDAY RETURN
1	0.0473404	0.0000000
2	0.0179089	0.0083578
3	-0.0074493	0.0005945
4	-0.0174572	-0.0009037
5	0.0072069	-0.0053794
6	-0.0018260	0.0008718
7	0.0096740	0.0101227
8	-0.0036096	0.0046579
9	-0.0655067	-0.0168132
10	0.0486391	-0.0223046
11	0.0221422	0.0028271
12	0.0406368	0.0050983
13	-0.0305873	0.0082872
14	-0.0095818	-0.0118292
15	0.0214187	-0.0116459
16	0.0515251	0.0000000
17	0.1089632	0.0000000
18	0.1325964	0.0109144
19	0.0447372	0.0385229
20	-0.0046010	0.0190876
21	0.0144775	0.0043361
22	-0.0470491	-2.1404684
23	0.1005992	-0.0631213
24	0.0135168	0.0208407
25	0.0454364	-0.0028293
26	0.0070614	0.0115739
27	-0.0187295	-0.0003975
28	-0.0264181	-0.0060940
29	-0.0146643	0.0009250
30	0.0325775	-0.0156559
31	0.0128238	0.0046467
32	-0.0455583	0.0231550
33	0.0026774	-0.0010002
34	0.1259515	0.0209670
35	-0.0416343	0.0034350
36	0.1015555	0.0482942
37	0.0047690	0.0150597
38	0.0561236	0.0028959
39	-0.0179783	-0.0123927
40	0.0379532	-0.0144335
41	-0.0182465	-0.0013734
42	0.0236201	-0.0043166
43	0.0252630	0.0000298
44	0.2065622	0.0061904
45	-0.1154996	0.0283615
46	0.0170020	-0.0203870
47	0.0163023	-0.0091600
48	-0.0749682	0.0117989
49	-0.0158441	-0.0048456
50	0.0091934	-0.0105928
51	0.0130660	-0.0008272
52	0.0300625	0.0000000
53	0.0091250	0.0144765
54	-0.0223929	-0.0086120
55	-0.0242389	-0.0168855
56	-0.0624599	-0.0025503
57	-0.0193704	-0.0143661
58	0.0105789	-0.0129605
59	-0.0088845	-0.0197948
60	-0.1122663	0.0133721
61	-0.0286916	-0.0111255
62	-0.0761707	-0.0008529
63	-0.0685936	-0.0075119
64	0.0123412	-0.0229117
65	0.1325253	0.0247274
66	-0.0245907	0.0164230
67	-0.0670123	0.0000281
68	0.1282135	-0.0127436
69	-0.0103262	0.0144411
70	-0.0423840	0.0252224
71	0.0464891	-0.0263452
72	0.0064377	0.0038716
73	0.0006917	0.0021827
74	0.0596111	0.0063102
75	-0.0056409	-0.0322296
76	-0.0093470	-0.0315674
77	-0.0160275	0.0039373
78	0.0600294	-0.0707549
79	-0.0043373	0.0023301
80	0.0306852	-0.0014560
81	0.0201383	-0.0002417
82	0.0396941	0.0026987
83	-0.0624036	0.0088611
84	-0.0014225	-0.0145942

WEEK	WEEK AVERAGE	MONDAY RETURN
85	0.0119473	0.0123903
86	0.0372022	-0.0031474
87	0.1452420	0.0014273
88	0.0158658	0.0036104
89	-0.0341596	0.0041466
90	-0.0341596	0.0021189
91	-0.0408326	-0.0132323
92	-0.0107009	0.0065964
93	0.0012531	-0.0149345
94	0.0000000	0.0195324
95	-0.0394898	-0.0101152
96	0.0022731	0.0084713
97	-0.1480701	-0.2423989
98	0.0064053	0.0023222
99	0.0309638	0.0046304
100	-0.0175204	0.0014087
101	0.0319084	0.0014292
102	0.0012949	0.0023324
103	0.0000000	-0.0405442
104	0.0018938	0.0345773
105	0.0000000	0.0000000
106	0.0436596	0.0591964
107	-0.0318312	-0.0326594
108	-0.0525865	-0.0115829
109	-0.0408639	-0.0487012
110	-0.0499836	-0.0141957
111	0.0907305	0.0397892
112	-0.0138801	-0.0084750
113	-0.0145120	0.0039542
114	0.0897865	0.0163561
115	-0.0469988	-0.0119636
116	-0.0676754	-0.0195831
117	0.0090719	0.0000000
118	-0.0017081	-0.0034066
119	0.0390463	-0.0787082
120	0.0319941	-0.0329850
121	0.0286773	-0.0880248
122	0.0744536	-0.0397864
123	0.0086596	-0.0055694
124	-0.0900544	0.0014303
125	-0.0098981	0.0025500
126	0.0144820	-0.0071699

WEEK	WEEK AVERAGE	MONDAY RETURN
127	0.0725538	0.0000000
128	-0.0051662	-0.0001704
129	0.1096510	0.0526898
130	-0.0313072	-0.0012918
131	-0.0368404	0.0195063
132	-0.0591391	-0.0067998
133	-0.0113314	-0.0049503
134	-0.0362318	0.0129676
135	-0.0701566	-0.0106804
136	-0.0321743	0.0089586
137	-0.0808298	-0.0166852
138	0.1084867	0.0105408
139	-0.0411117	-0.0108568
140	-0.0291888	-0.0113230
141	-0.0248075	0.0073311
142	-0.0830353	-0.0254887
143	0.0408028	0.0203623
144	0.0007445	-0.0007982
145	0.0000000	-0.0008388
146	-0.0157109	0.0000000
147	-0.1066478	0.0000000
148	-0.1379506	-0.0158226
149	0.3795286	0.0542943
150	-0.0792074	0.0012686
151	-0.0516304	-0.0159174
152	0.0070781	-0.0142154
153	-0.0970016	-0.0486758
154	0.0118020	-0.0313109
155	0.0410440	0.0000000
156	0.0399082	-0.0230475
157	0.0224889	0.0000000
158	-0.0201455	0.0030722
159	-0.0347129	-0.0280216
160	-0.0627306	-0.0093678
161	0.0191028	0.0234723
162	-0.0632905	-0.0275499
163	0.0136546	0.0001407
164	-0.0560594	-0.0377955
165	-0.0833519	-0.0383343
166	-0.0411788	0.0139386
167	0.0419463	-0.0363994
168	0.1367043	0.0241042

WEEK	WEEK AVERAGE	MONDAY RETURN
169	-0.0157089	0.0107987
170	-0.0216694	-0.0193859
171	-0.0208645	-0.3401058
172	-0.0273508	0.0000000
173	0.0060232	-0.3433045
174	0.0187159	-0.5100711
175	-0.0110370	0.0000000
176	0.0094687	-0.1862289
177	0.0379518	-0.2019444
178	-0.0430775	-0.1491569
179	0.0320423	0 0000000
180	0.0197884	-0.3651147
181	0.0631351	-0.0995715
182	0.0220230	0.0068458
183	0.0314711	-0.5954378
184	0.0774505	-0.0748386
185	-0.0082379	-0.2227743
186	0.0278895	-0.1437573
187	-0.0135430	-0.1466820
188	0.0014333	-0.5245101
189	0.0363670	-0.2464901
190	-0.0367511	-0.4235448
191	-0.0356070	-0.2354411
192	0.0279556	-0.1757068
193	-0.0195808	-0.0737713
194	0.0122204	-0.0271671
195	-0.0112704	0.0000000
196	-0.0210060	-0.2147680
197	-0.0147289	-0.0089221
198	0.0216544	-0.0483348
199	0.0274403	-0.0004471
200	0.0212602	-0.0299598
201	0.0068968	-0.0206795
202	0.0099527	-0.0055274
203	0.0268977	-0.0525965
204	0.1242669	0.0493908
205	0.0007769	0.0000000
206	0.0000000	-0.0127159
207	0.0087750	-0.1503098
208	0.0007573	-0.0389542
209	0.0000000	0.0000000
210	0.0229865	0.0000000

WEEK	WEEK AVERAGE	MONDAY RETURN
211	0.0896568	-0.0080244
212	0.0450756	0.0685712
213	-0.0236107	-1.0451951
214	-0.0302026	0.0428896
215	0.0096034	0.0000000
216	-0.0444588	-0.1084677
217	0.0252146	-0.0275290
218	0.0051122	-0.0357998
219	0.0286934	-0 2413762
220	0.0012304	-0.1141842
221	0.0071077	0.0226936
222	0.0085072	-0.1095120
223	0 0019687	0.0000000
224	0.0262910	-0.0548071
225	0.0107934	-0.1619852
226	0.0264046	-0.1550454
227	0.0077788	-0.0824816
228	-0.0375219	-0.0767665
229	0.0066223	-0.0275715
230	-0.0202791	-0.2321338
231	0.0263096	0.0000000
232	-0.0023267	-0.3952609
233	0.0330367	-0.5427593
234	-0.0011553	-0 0623199
235	0.0016742	-0.5601275
236	-0.0123914	-0.0026398
237	0.0115999	0.0000000
238	-0.0247666	-0.0024072
239	0.0000672	0.0046548
240	0.0001300	0.0138406
241	0.0000000	-0.0050512
242	0.0000981	0.0000000
243	0.0000000	-0.0349702
244	-0.0632193	0.0000000
245	0.0090166	-0.0034101
246	-0.0336335	-0.0058103
247	0.0025249	0.0000000
248	-0.0248156	-0.0014978
249	0.0557057	0.0104669
250	0.0166376	0.0008739
251	0.0002541	-0.0566692
252	0.0000000	-0.0152188

WEEK	WEEK AVERAGE	MONDAY RETURN
253	-0.0125398	0.0087789
254	-0.0180125	0.0017258
255	-0.0184773	-0.0083953
256	0.0275378	0.0041587
257	-0.0252125	-0.0034898
258	0.0051582	-0.0080382
259	0.0159709	0.0000000