EFFECT OF THE DAY OF THE WEEK ON STOCK PRICES OF LISTED AGRICULTURAL FIRMS AT THE NAIROBI SECURITIES EXCHANGE

BY

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DECLARATION

I, Stephen Weru, declare that this research project is my original work and has not been presented for a degree in any other university.

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

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DEDICATION

This work is dedicated to my family.

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LIST OF ABBREVIATIONS AND ACRONYMS

APT   Arbitrage pricing theory

CAPM   Capital asset pricing model

CBK   Central Bank of Kenya

CMA   Capital Markets Authority

DSE   Dhaka stock exchange

DOTW   Day of the Week

EGARCH   Exponential Generalized Autoregressive 5Conditional Heteroskedasticity

EMT   Efficient Market Theory

GARCH   Generalized Autoregressive Conditional Heteroskedasticity

IPO   Initial Public Offer

JSE   Johannesburg Stock Exchange

K-S   Kolmogorov-Smirnov

KSE   Karachi Stock Exchange

Ltd   Limited

LRM   Linear Regression Model

NSE   Nairobi Securities Exchange

OLS   Ordinary Least Squares

SPSS   Statistical Package for the Social Sciences

TGARCH   Threshold Generalized Autoregressive Conditional Heteroskedasticity

USA   United States of America

VIF   Variance Inflation Factor

ABSTRACT

The agricultural establishments registered at the NSE have been experiencing variation in stock prices at the NSE. Despite majority of the listed firms in the agricultural sector displaying very high stock prices, the firms have showed falling stock prices in the last five years compared to firms from other sectors. The evidence of the effects of days in a week anomaly in the stock markets with the effect being empirically inconclusive. This investigation sought to determine the day of the week (DOTW) influence on stock prices of listed agriculture firms in Kenya. This investigation utilized descriptive research design. The target population was seven agricultural establishments registered at the NSE in the year 2019. Secondary data for the daily stock prices from 1st January 2019 to 31st December 2019 for each of the 5 days of the week was used. Average monthly data was utilized in this investigation. The data was sourced by a data collection schedule. Descriptive statistics and linear regression were utilized for analysis. The research employed dummy variable regression to establish the DOTW effect. The significance of the investigation was tested with F-test. The investigation found that Monday had the lowest stock prices among the listed agricultural firms in Kenya for the period between January and December 2019. Wednesday showed the highest stock price of listed firms in Kenya. Thursday was the most volatile day for agricultural stock prices at the NSE. The investigation recommends that the investors to avoid basing their investment on the DOTW. Nairobi security exchange ought to undertake an investigation to ascertain why Monday had the lowest stock price compared to other days. It ought to similarly establish why Thursday had the greatest volatility of the market. Though the Wednesday stock price effect is not significant, investors can consider selling their shares on the day to maximize returns through high prices. The investigation was limited by the size of the population where agricultural firms are few. Monthly data was used to increase the data points. secondary data are also general and tends to be historical. Most current data were used (2019). This investigation recommends a similar investigation using other listed firms like manufacturing firms to establish whether there is a DOTW effect on the share prices of quoted establishments.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Seasonal patterns have been discovered in the stock markets across the globe. Seasonal patterns, such as what month or what weekday it is, tend to affect the stock prices on the stock market. These seasonal patterns are called market anomalies. One of the anomalies is the DOTW effect on share prices (Ajayi, Mehdian & Perry, 2014). The DOTW effect points out that the market's average daily price of the market is different for all the days of the week, as would be expected with respect to the efficient market theory (EMT) (Bahadur & Joshi, 2005). Gibbons and Hess (1981) stated that in the first days of trading stock price is lower as compared to other trading days. Muindi (2015) found that the average stock prices for Monday, Tuesday and Wednesday was equal or higher than for Thursday and Friday.

There are various theories that explain the DOWT effect on share prices. They include capital asset pricing model by Sharpe (1964), arbitrage price theory (APT) by Ross (1976) and random walk theory (RWT) by Malkiel (2003). Capital asset pricing model (CAPM) postulates a direct linear correlation between price on asset and its non-diversifiable risk above the zero risk rates (Fama & French, 2004). Arbitrage pricing theory assumes that all days of the week assets of capital never changed and that prices in the equilibrium are calculated in such a way that investors make a rational choice to influence their trading patterns (Connor & Korajczyk, 1985). Price behaviour is unpredictable as it doesn't act on any predictive fundamental or technical pointers is referred to as the random walk theory (Malkiel, 2003).

The securities market in Kenya has seen a rise in the number of agricultural establishments registered at the NSE (NSE, 2019). The agricultural establishments registered at the NSE have experienced price anomalies within the stock market despite the firms performing better than other sectors. Given that the agricultural firms are affected by weather and other conditions beyond the firm, they are expected to be influenced more by the stock market anomalies. This investigation examines whether the anomaly (DOTW) has bearing on Kenyan stock market using the more recent material.

1.1.1 Day of the Week Effect

Poshakwale (1996) defined DOTW effect as the presence of a seasonal trend on the part of share prices in which these prices are connected to a certain DOTW. This trend is shown by the stocks' tendency to show very huge prices on the last trading day (Friday) relative to the remaining week days. Philpot and Peterson (2011) noted DOTW effect as the systematic stock price differences amongst weekdays. These disparities are shown by difference in stock prices across the week days where the first days show lower prices relative to other week days. DOTW effect is an empirical unevenness in common stocks. It is the divergent distribution of prices of stock that differ across days in a week having some days with low prices and others having the highest prices (Bailey, Alexander & Sharpe, 2011).

Cross (2013) pointed out a difference in stock prices and yields for Monday and Friday. Khanna (2014) in Indian stock market reported a negative Friday effect in Germany and Austria stock market prices. Islam and Sultana (2015) undertook an in-depth investigation on the Chittagong stock exchange and found Thursday and Mondays having the lowest stock prices. An investigation by Sifuna (2012) showed no effect of the week day on prices on securities in NSE. However, Tuesday showed higher prices with Wednesday having the lowest prices. Jaffe and Westerfield

(2015) found a DOTW effect in stock markets in Canada, Australia, Japan, and UK however the high/low days are not often Monday/Friday. Onyuma, (2014) found out that the investor's mind can contribute to the irregularities in the market. For example, a big number of investors regard Monday as having the worst outcome because it's the day that starts the week for work and are so pessimistic about the day, therefore purchasing the stocks. The investors are optimistic about Friday since it closes the jobs week and are therefore very hopeful and apply this feeling on sales.

DOTW effect is measured in terms of the difference in daily stock prices based on the closing price of the last trading day (Friday) of the previous week (Cross, 2013). According to Onoh and Ndu-Okereke (2016), the DOTW effect is measured by the percentage change in stock prices and returns in a stock market.

1.1.2 Stock Price

A stock price is defined as the price of one stock among a number of commercially viable stocks of a firm. A stock cost or price at a particular time represents the balance that buyers and sellers strike among themselves. The price reflects the collective knowledge and wisdom concerning the market (Sharma, 2011). On the other hand, the alteration of a stock price determines the price on investment on that particular stock. Thus, the stock price among the most important factors that influence investment decisions made by investors (Zakir & Khanna, 2012).

Specialists can hotspot at stock costs from the stock market exchange. The stock cost of a particular organization is plainly detectible from the stock trade, a portion of the capital market's security fragment (Seitz, 2010). The most well-known securities are alternatives, bonds, and stocks. Securities market permit demanders and providers of assets to carry out exchanges. They likewise permit less demanding and quicker exchanges at sensible costs (Feldstein & Green, 2013).

Stock market indicators are used to predict prospective economic growth. According to Mun, Siong and Thing (2008) huge drops in share prices mirror impending recession, and surging stock prices are key pointers of prospective economic growth. Haroon and Shah (2013) noted that a good performance of a stock market is a solid pointer of strong economy and thus traders of stock attentively look at any single stock index movement which could influence their prospective yields or aid them in their portfolios' assessment.

1.1.3 Day of the Week and Stock Prices

Harvey and Huang (2011) documented that it's always prudent to find out if changes in stock price volatility in any DOTW trend really exist. According to Mehdian and Perry (2011) stock prices tend to fall and increase on Monday and Friday respectively as a result of the rise in supply on Monday and a rise in demand on Friday. They further regarded Monday as being the most discouraging since the day starts the week for work and are so investors feel pessimistic about it.

Cross (2013) ascertained the price changes' distribution and the link between changes on Mondays and Fridays. The findings showed that the link between price changes on Monday and those on Friday is substantially different from the link between changes in price on other subsequent trading days. Ajayi, Mehdian and Perry (2014) found fall in Monday prices in six of the eleven stock markets in which five of them were significant and rise in Monday prices in the remaining five in which only two were significant. Rahman (2009) examined the presence of DOTW effect and ascertained that Sunday and Monday price changes were adverse and price changes for all other days are positive. Further findings indicated that the average daily prices between two successive days substantially different for the pairs Monday-Tuesday, Wednesday-Thursday and Thursday-Sunday. For the other pair of days prices are not substantially different.

Onoh and Ndu-Okereke (2016) in their research in Nigeria found out that stock prices in the 1st and/or the 2nd day of trading in certain countries is lower as compared to other trading days. This is because according to them, weekends tend to have the worst outcomes. Such news scare investors and will therefore end up selling on the next 1st trading day. The outcomes are necessary in coming up with conclusions about the irregularities in the stock market and this explains the divergence from EMT. A similar research conducted by Dicle and Levendis (2014) found that investors feel uncertain on Mondays as they refer it as the day of the week with the lowest prices, since it is the first trading day of the week, and certain on Fridays.

1.1.4 Agricultural Firms Listed at the Nairobi Securities Exchange

The Nairobi Securities Exchange (NSE) being the main bourse in Kenya with an automatic dais for listing and trading Capital Markets Authority (CMA of numerous securities, was instituted in 1954 as Nairobi Stock Exchange, it was instituted as a volunteer alliance for stockbrokers in the European Congregation (NSE, 2016).) regulates the NSE. In 1999 the CMA issued guidelines on constitution of audit committees in a bid to uphold sound corporate governance practices by listed companies.

As at December (2019) there were seven listed agricultural firms which compete with firms from other industries in the NSE. They include Eaagads Ltd., Kapchorua Tea Co. Ltd., Kakuzi, Limuru Tea Co. Ltd., Rea Vipingo Plantations Ltd., Sasini Ltd. and Williamson Tea Kenya Ltd. These firms face price fluctuations through the trading period. The agricultural sector has shone in the NSE with the firms experiencing price gains in 2019 (NSE, 2019). For example, Williamson Tea, Kapchorua and Kakuzi experienced increase in price by 188%, 38% and 37% respectively. The agricultural firms have experienced the highest fluctuation in the annual average stock prices in the last five years (CMA, 2019). The question is how are the average prices changing across the

week days. The agricultural firms, due to the high fluctuation in prices, will form the best population to measure the DOTW effect on the stock market prices.

1.2 Research Problem

The price of a security adapts quickly to information that comes in to the market. However, in behavioural finance, such kind of efficient market cannot adequately establish any exploratory anomalies (Onoh & Ndu-Okereke, 2016). Numerous investigations have been undertaken on various markets' anomalies (Harvey & Huang, 2011; Mehdian & Perry, 2011; Cross, 2013; Ajayi, Mehdian & Perry, 2014; Khanna, 2014; Islam & Sultana, 2015). The evidence of the effects of days in a week anomaly in the stock markets with the effect being empirically inconclusive. The results are different for the majority of the stock markets. For example, Khanna (2014) reported a negative Friday effect on the Indian stock market prices but a positive change in prices in the Austria market. Islam and Sultana (2015) found negative effect on Mondays and Thursdays in Chittagong stock market.

The agricultural establishments registered at the NSE have been experiencing variation in stock prices at the NSE. Despite majority of the listed firms in the agricultural sector like Limuru tea, and Kakuzi displaying very high stock prices, the firms have showed falling stock prices in the last five years compared to firms from other sectors. For example, Kakuzi has experienced a low of 320.00 per stock with a 5.88% reduction. However, some firms like Sasini Tea have displayed increasing prices in the last three months (NSE, 2020). The question is: are the prices relate to the day of the week? This investigation aims at filling this knowledge gap by undertaking a research on DOTW effect on stock prices of agricultural establishments registered at the NSE.

Various investigations have been done on stock price globally. Haroon and Shah (2013) investigated DOTW effect in stock yields in Karachi stock exchange (KSE) in Pakistan. The

research showed that daily stock prices varied within the week. Du Toit, Hall and Pradhan (2018) studied the DOTW effect in South African stock market indices. The findings show that the investigations effect is present in share prices with highest and lowest prices seen on Monday and Friday in that order. Onoh and Ndu-Okereke (2016) studied the DOTW effect from the Nigerian stock exchange. It was ascertained that DOTW effect existed in share prices.

Locally, Muindi (2015) found that the average stock prices for Monday, Tuesday and Wednesday was equal or higher than for Thursday and Friday. Ruto (2014) for the period 2008-2013 used descriptive statistics as a preliminary analysis of the stock price behaviour during week days. He confirmed the Monday effect at the NSE in which Monday prices were observed to be substantially different from other week days. Dubois and Louvet (2016) found that Tuesday experienced reduced prices on securities. The investigation is therefore guided by the following research question: What is the day of the week effect on stock prices of agricultural establishments registered at NSE?

1.3 Research Objective

To ascertain the DOTW effect on stock prices of listed agricultural establishments registered at the NSE.

1.4 Value of the Study

The investigation forms a basis for more research. Scholars uses the findings as an educational reference specially to do with areas of stock prices in days in a week. The investigation underlines areas that require future investigations and consequently form a basis for imminent investigators to formulate their investigation problems.

The investigation forms a basis for literature review for researchers interested in the same field. They utilize the outcomes to improve on the investigation gaps. Academicians uses the findings as an educational reference specially to do with areas of stock prices in days in a week. The investigation highlights areas that require future investigations at the end consequently forms a foundation for future researchers to formulate their research problems.

Policy makers are able to realize and work on the information by formulating policies that are released to the various stakeholders. Better understanding of days in a week effects on stock prices aids the government on making structural and viable economic decisions on monetary and fiscal policies. The investigation also guides brokers and agents for fundamental research and analysis through giving adequate information to clients and firms in determining a fair issue price. This assists them in making concrete investment decisions to their clients.

A rational investor considers various parameters before making an investment decision. After the investigation, the investor is interested in results on stock prices in relation to the days of the week effect. Given that investors are able to specify a particular trend's liability to change rapidly, it is very simple to figure out decisions on investing considering its price and as well the risks and uncertainties of the same.

CHAPTER TWO:

LITERATURE REVIEW

2.1 Introduction

The chapter will look at both the theoretical and empirical literature on the DOTW effect on the stock prices of listed firms. The determinants of stock prices will also be discussed. The conceptualization of the variables will also be done in this chapter.

2.2 Theoretical Literature Review

This part will discuss theoretical review of the investigation. It will have its findings arrived at from already existing theories. Being theories from the past, they will have no practical application. However, they will inform the direction of the investigation.

2.2.1 Efficient Market Hypothesis

This hypothesis was discovered by Famain (1965). It explains that the price of stock mirrors all the information available in the market and that efficient market of stock follows a random walk. This means that prices in the past are not a determinant of prices in the present meaning they cannot be predicted. Fama (1970) classified the efficiency on markets in three classes these are: Weak, Semi-strong and Strong category.

For the strong category it means that the prices on securities show all the information available inclusive of the private. Semi-strong category suggests that prices on securities are a reflection of information of both the past and the present and no investor is to achieve mote portfolio results. That is, the information which is available to the public. Lastly, according to Keane (1983), Ross et al. (1990) and Van Horne (1992) the weak category suggests that it is not possible to use prices

of stock in the past to make predictions on what prices of stock will be there in the future. Bepari and Mollik (2009) found that when investors benchmark a trading strategy on past information, they automatically earn abnormal price. This theory fits the investigation in that it shows that stock prices change with time and may not be predictable. This means that they may differ with the DOTW which shows the DOTW effect.

2.2.2 Capital Asset Pricing Model

It is broadly employed because of its simplicity. CAPM postulates a direct linear correlation between price on asset and its non-diversifiable risk above the zero risk rates. CAPM put forth by Sharpe (1964) formed the Markowitz model. The model relies on the balances achieved on risk and also return and added some assumptions on this. One was the zero risk or the risk-free rate on borrowing and also lending. Second, the investors possess similar expectations that end up in predicting the similar probability for the price in future (t- to t). Even if CAPM is broadly applied since it calculates rate expected on price on a security and calculates what risk is expected on the security, empirically it is discovered that it is the worst in that it is not capable of proving the errors occurring when it is applied, Fama and French (2004). According to Fama and French (1992) CAPM is commonly used for decision making process which is critical for calculating stock price.

Lintner (1965) and Mossin (1966) argue that CAPM is the mostly relied upon model in calculating stock price, in addition it gave rise to the asset pricing theory. Fama and French (2004) argued that CAPM provides significantly reliable and admirable speculations on the way to assess risk and the relationship with expected yield. They also argued that in a market where CAPM remain constant then actual price should be in line with equilibrium price. Reinganum (1981) and Ball (1978) found anomalies in the application and practicality of CAPM model which could be due to its

misspecification rather than market. However, Fama (1970) argued the anomaly could be due to inefficiencies that normally prevail in the market.

Markowitz (1959) documented that an investor who buys a riskless security at the start of a trading period knows the exact return that security will generate by the close of the trading period. Mayers (1972) and Merton (1973), argued that CAPM also works under the assumption that stock trading took place frequently over a period of time and secondly, that share price is realized in all days of the week. According to Pike and Neale (1996) CAPM shows the relationship between risk and price. This theory relates to the investigation in that estimated stock prices will help investors the exact day of the week when to purchase or sell the stock. This will be based on the movement of prices within the days of the week.

2.2.3 Arbitrage Pricing Theory

Ross came up with this theory in 1976. Connor and Korajczyk (1985) note that the theory assumed that all days of the week assets of capital never changed and that prices in the equilibrium are calculated in such a way that investors make a rational choice to influence their trading patterns. Sharpe (1985) and Blume (1993) found that investors are only concerned with risk and return trade off that influence their investment decisions. Connor and Korajczyk (1985) assumed that all days of the week assets of capital never changed and that prices in the equilibrium are calculated in such a way that investors make a rational choice to influence their trading patterns.

Arbitrage pricing theory should be used to calculate the cost of acquiring capital since it is also an asset pricing model. More trials in application of APT to calculate the expense of acquiring capital is the work of Bower and Logue (1984) and Goldenberg and Robin in (1991). Weston and Copeland (1992) APT deploy a variety of factors, for instance days of the week, changes and interest rates, to formulate stock price.

Sharpe, Alexander and Bailey (2001) APT argues that each investor, when given a chance to rise the expected stock price can do so provided the risk is held constant and the process requires the use of arbitrage portfolio. Jones (1998) documented that by identifying factors which influence stock price, for instance DOTW effect investors should design their portfolios in order to optimize their investment objectives. This theory is relevant in that the share prices are impinged on by the DOTW which will guide the investment decisions in the stock market in Kenya. The investors will make a sale in the day when the stock price is low and sell when the price is high to maximize returns.

2.2.4 Random Walk Theory

The belief that price behavior is unpredictable as it doesn't act on any predictive fundamental or technical pointers is referred to as the random walk theory. Its proponents follow the idea stocks chart a random and unpredictable path. They assert that for an investor to outperform the market he has to assume an additional risk proportionate with the abnormal gains. Malkiel (2003) stated that since new material is uneven and prices are rationally based, prices variations are anticipated to be unsystematic also not predictable. Therefore, stock prices follow a random walk. Reasoning behind the RWT is, if the movement of information is not impeded and it is immediately replicated in stock prices, thus price difference in any day other that today replicate only in news for that day and therefore the autonomy of today changes in price (Ajayi et al, 2004).

The RWT implies that stock prices are not seasonal since they are completely unsystematic and fairly unpredictable. The presence of seasonality eliminates the randomness of stock prices and market participants can fetch abnormal profits as investors are able to spot predictable patterns of stock prices based on historic information. This paradigm is pertinent to this investigation as it will

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guide the investigator in understanding how the stock varies with the week days. The DOTW effect on the stock prices will be guided by this theory as they fluctuate within the week.

2.3 Determinants of Stock Prices

The investigation aimed at establishing the determinants of stock prices in the relationship between the DOTW and stock prices. This investigation used firm size, dividends and liquidity as the main determinants of stock prices alongside the day of the week. The determinants are explained in the following subsections;

2.3.1 Day of the Week

Onyuma (2017) states that a big number of investors regard Monday as having the lowest prices because it's the day that starts the week for work and are so pessimistic about the day, therefore purchasing the stocks. The investors are optimistic about Friday since it closes the jobs week and are therefore very hopeful and expect the prices to be higher. Gibbons and Hess (2011) states that in the 1st and/or the 2nd day of trading in certain countries is either lower or negative as compared to other trading days. This is because according to them, weekends tend to have the worst outcomes. Such news scare investors and will therefore end up selling on the next 1st trading day.

Chusanachoti and Kamath (2012) undertook an in-depth analysis on the Thailand stock market and found Thursdays having negative returns. Fernando and Pathirawasam (2016) using ordinary least square for the time from 1985 to 2004 found absence specific ĎOTW effect on stock yields in Colombo stock exchange. A local investigation conducted by Sifuna (2012) found that ĎOTW effect has no bearing on stock market returns at NSE.

2.3.2 Firm Size

Price fluctuation in stock market can be explained by change in various factors with fir size being a key factor. Abdullahi, Lawal and Muhtar (2011) argued that investment in big firm does not necessarily ensure higher stock prices return all time. This shows that the firm size effect on stock prices may be negative as the size of the firm increases. Hendriksen (2000) define firm size as the whole of the assets owned by a company. Firm size is measured in form of assets, production capacity, number of employees or market stock (Dang, Li & Yang, 2018). In this investigation, the total assets will be utilized as the determinant of firm size.

Christina and Robiyanto (2018) in their investigation established that establishment's size positively impinged on the stock prices of firms registered in Indonesia. This fails to support the expected theoretical relationship. On the other hand, Goff (2014) in a comparative investigation in USA, found that firm size negatively influenced stock prices where large firms experienced low prices compared to small firms. Zivney and Thompson (2017) found that firm size had an insignificant effect on stock prices.

2.3.3 Dividends

Dividend is the finance of shareholder's stock as profit: establishment's profits paid proportionally to shareholders, as either cash or more shares (Brav, et al., 2015). Dividends are not only the way of giving out net returns, and that any change in dividend payout ratio (DPR) may influence share prices; an establishment should hence try to establish a suitable policy that will increase the wealth of shareholders. Issuance of dividend is such key factor in the establishment's performance as it influences on the price of its shares and has caused much controversy. Share price ought to equal the present value of all future projected stock dividends.

DPR is the proportion of the net returns that an establishment pays out to its shareholders as dividends. Dividends will be measured in terms of DPR. Ghosh, Ghosh and Prakash (2016) established that dividends pay out had a positive influence on share prices. Iftikhar, Raja and Sehran (2017); and Olawale and Ilo (2018) supported this finding where they established that positive dividend policies showed positive effects on stock prices. However, Haque, Jahiruddin and Mishu (2019) found an inverse effect of dividend yield on stock price changes for listed firms.

2.3.4 Liquidity

Chang, Chen and Zolotoy (2017) posits that liquid establishments are highly likely to increase selling of shares by temporary investors, but not major stock holders. Hence a firm with high level of liquidity makes managers to keep bad information to the investors, which consequently lead to selling of stocks by major stock holders. This in turn influence the stock prices negatively. Liquidity is measured using the quick ratio, current assets less inventory dividend by current liabilities.

Empirically, Khidmat and Rehman (2014) found a that liquidity had a positive influence on the share prices. Ehiedu (2014) found no link between firm liquidity and stock prices. Briggeman, Langemeier and Russell (2013) indicated that liquidity had a substantial influence on share prices. They established an adverse link between liquidity and share prices. Cai and Zhang (2011) found liquidity had an adverse bearing on share prices.

2.4 Empirical Literature Review

Gbeda and Peprah (2018) studied DOTW effect and stock market volatility in Ghana Stock Exchange (GSE) and NSE. The investigation examined DOTW effect anomaly and volatility in prices on GSE and NSE with daily closing price indices from 2005 to 2014. Ordinary Least Square

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(OLS) regression with autoregressive term, TGARCH, GARCH and EGARCH were utilized. There is no evidence of DOTW effect in GSE however Friday effect exists in NSE. This investigation despite looking at the DOTW effect was a comparative investigation while the current investigation is not comparative. The investigation focused on volatility of stock market in terms of stock returns while the current investigation focusses on stock prices. The data was collected for the period between 2005 and 2014 which is expected to have different economic conditions from the current period of investigation between January and December 2019.

Masum (2014) analyzed the dividend policy and its bearing on share price – an investigation on commercial banks registered in Dhaka stock exchange (DSE). This paper empirically estimates excess stock market returns for all the thirty banks listed in DSE between the years 2007 and 2011. The investigation utilized panel data approach in explaining link between dividends and share prices with control the variables like Return on Equity, Earnings per share. Retention Ratio has a positive link with share prices and substantially describes the changes in the shares' market prices, whereas the Dividend Yield and Profit after Tax have an adverse, unsubstantial link with share prices. Overall outcomes of this investigation show that Dividend Policy has substantial positive bearing on share prices. This investigation focused on dividends which is one of the variables in this investigation. The investigation focused on commercial banks which is different from the focus of the current investigation -agricultural firms. The investigation used stock returns as the dependent variable while the current investigation is based on stock prices.

Du Toit, Hall and Pradhan (2018) studied the DOTW effect in South African stock market indices. The investigation examines the presence of a DOTW effect on the Johannesburg Stock Exchange (JSE) indices for the period March 1995-2016, using a GARCH model. The outcomes show that the DOTW is present in share prices. The highest and lowest prices are observed on Monday and

Friday, respectively. The investigation focused on the DOTW effect similar to this investigation. However, the investigation used the GARCH model while the current investigation used the multiple linear regression model (LRM). The investigation was based on the period between 1995 and 2016 while the current investigation was done for the year 2019.

Haroon and Shah (2013) investigated DOTW effect in stock returns in KSE in Pakistan. The investigation employed OLS regression approach. Data comprises of daily closing prices of KSE-100 Index from January 01, 2004 to December 30, 2011. A traditional approach of determining DOTW Effect has been consisted of just a single regression equation. Different from this reasonable approach, this investigation suggests five distinct models to statistically establish substantial bearing on each trading DOTW. Non-parametric Kolmogorov-Smirnov (K-S) test ascertains variation in stock yields within the week as measured by dividends and stock prices. This investigation used the DOTW effect as the independent variable, similar to this investigation. However, the investigation was based on stock returns other than stock prices as the dependent variable. The investigation was done for the period between 2004 and 2011 while the current was done for 2019. Non-parametric Kolmogorov-Smirnov (K-S) test was used for analysis while this investigation use multiple regression analysis.

Onoh and Ndu-Okereke (2016) studied the DOTW effect from the Nigerian stock exchange. The OLS approach was utilized to examine the trend of stock returns from 2nd January 2009 to 31st December 2015. Outcomes from the investigation indicate that Friday yields is substantially greater than those of other days of the week. This outcome validates the presence of the DOTW effect in the NSE daily share prices. OLS approach was utilized with the current investigation using linear regression. The period of investigation is also different.

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Ndako (2013) studied the DOTW effect on stock market yields and price volatility based on evidence from Nigeria and South Africa. The investigation utilizes EGARCH model to ascertain the DOTW effect on share prices. The post-liberalisation period for the Nigerian equity market shows DOTW effect on Fridays yields. There is evidence of DOTW effect on Tuesday's and Thursday's share prices. In South Africa, there exists a substantial evidence of the DOTW effect on Mondays and Fridays during the pre-liberalization period. During the post-liberalisation period, there exists evidence of DOTW effect on Thursdays in stock yields and just Fridays for share prices. The investigation was based on DOTW effect and price volatility similar to the current investigation. But, this investigation was a comparative investigation in Nigeria and South Africa while the current investigation is based in Kenya. EGARCH model was used while in the current investigation LRM was utilized.

Makokha (2012) did a investigation on the DOTW effect on stock yields at the NSE. Daily market capitalization is employed to determine the stock yields and perform multiple regression between January 2008 and December 2011. The days did not include public holidays falling between Monday and Friday. The outcomes indicate that Tuesday has the greatest positive yield and Wednesday has the greatest adverse yield. Volatility of share price is greatest on Tuesday and lowest on Friday. The investigation determines that there exists no DOTW effect at the NSE. The investigation, in spite of being undertaken in Kenya, it was based on market returns other than stock prices. The investigation was based on the period between 2008 and 2011 while the current investigation was done for the period between January 2019 to December 2019.

Njogu (2017) did an investigation on factors impinging on share prices for establishments registered at NSE after IPOs in Kenya. The investigation targeted nine companies that had IPO during the period 2006 to 2015. A correlation research design was undertaken in the investigation

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and secondary data sourced from annual reports of the nine establishments for the period of investigation. The investigation established that in view of significance at 0.05, the investigation found that the main significant predictors of stock prices after IPO for listed firms are dividend per stock (p=0.022) and interest rate (p=0.000) which were all less than 0.05. This investigation was carried out in the NSE similar to the current investigation. This investigation focused on the factors influencing stock prices but did not cover the anomalies like DOTW effect in the stock market. The investigation was undertaken the years between 2006 and 2015 while the current investigation was undertaken for the year 2019 where the economic conditions are different.

2.5 Conceptual Framework

This investigation focuses on the effects of the DOTW on stock prices of listed agricultural firms. The link between the variables is illustrated in form of a conceptual framework. The output variable is share prices, the predictor variable is DOTW. The conceptual framework is indicated in figure 2.1.

Independent variable   Dependent variable

| Day of the week
   • Day in a week variation | Stock prices
   • Opening price
   • Closing price |
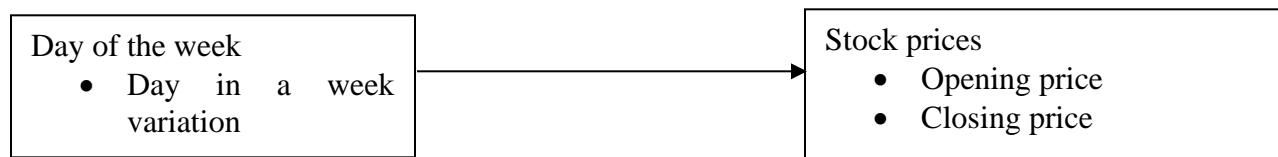
Figure 2.1: Conceptual Model

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Research Methodology

This chapter will give the research design and also explain the reasons why the design was chosen. It also defined the population, sample size and the sampling frame. It also eco-pass data collection and the methods utilized in the process and an analysis of the obtained data.

3.2. Research Design

This investigation utilized a descriptive research design. A descriptive research design describes the relationship between two or more variables in an empirical investigation. A descriptive design enables an investigation that utilizes numerical data to show the link between two or more variables (Groves, 2014).

Descriptive research design describes the cause effect relationship between two or more variables under investigation. This investigation seeks to describe the cause-effect relationship between the DOTW and stock prices. This made the design fit for the investigation.

This design enabled the researcher to use data collected from the agricultural establishments registered at the NSE to ascertain the DOTW effect on share prices. This design was successfully used by Ndako (2013) and Makokha (2012) to show the link between the variables.

3.3 Population

The target population was the agricultural establishments registered at the NSE. The investigation involved all the agricultural establishments registered at the NSE across the year of 2019. According to NSE (2019) there were seven agricultural establishments registered at the NSE in

2019 (Appendix I). Agricultural firms involved as they had displayed a high level of stock price volatility in the recent years.

3.4 Data Collection

Secondary data was collected for the investigation. Secondary data for the daily stock prices from 1st January 2019 to 31st December 2019 for each of the 5 days of the week was used. The data sourced linked to DOTW closing stock price, and opening stock price. The data was sourced from the NSE website. The investigation covered a period of 52 weeks from 1st January 2019 to December 2019. Average monthly data was used for the investigation. Data on holidays within the year was excluded for the investigation. The data was sourced with a data collection schedule (Appendix II).

3.5 Data Analysis

The secondary data gathered was entered in Statistical Package for Social Sciences (SPSS) version 22. The investigation explored the DOTW effect on share prices of agricultural establishments registered at NSE from 1st January 2019 to 31st December 2019. Descriptive statistics were used for data analysis. This involved maximum, minimum, mean and standard deviation (SD).

Linear regression was done to ascertain the cause effect link between DOTW and stock prices. Daily stock price was calculated based on the average stock prices $(P_t- P_{t-1}/P_{t-1})$ x100. At first, the research employed dummy variable regression to establish the day-of-the-week effect. A linear regression is run where all days are represented using dummy variables equal to one if the share price is for the day and same to zero if the price is for another day.

$Pd = DMP + DTP + DWP + DHP + DFP + t$ (2)

Where, the D represent dummy variables for each day, Monday (M), Tuesday (T), Wednesday (W), Thursday (H), and Friday (F) and the P represent the stock price for each day. This model assumes that the error conditions and variances are persistent across time. The research used five dummy variables as predictor variables and the stock prices as a output variable.

3.5.1 Diagnostic Tests

Diagnostic tests were performed to ascertain whether the model is substantial. The test that were done comprised normality, heteroskedasticity and multicollinearity. The Shapiro–Wilk test will be utilized to test for the normality. Heteroskedasticity test was performed by Breusch–Pagan test. Multicollinearity was determined using the variance inflation factor (VIF). Autocorrelation was also be tested. This was done through Durbin Watson statistic.

3.5.2 Test of Significance

A test of significance is a formal process used to compare observed data with a claim, the truth of which is being evaluated. The F-test was utilized to ascertain if the model is substantial for DOTW effect on share prices across the five days of the week. The F-test of overall significance points out whether the LRM gives a better fit to the data compared to a model that has no predictor variables. If the p-value is below the significance level, the sample data give enough proof to determine that the regression model fits the data better than the model with no predictor variables.

CHAPTER FOUR

DATA ANALYSIS AND PRESENTATION OF FINDINGS

4.1 Introduction

Data analysis is undertaken in this chapter. The findings are also presented in this chapter. Discussions on the findings are similarly encompassed.

4.2 Descriptive Statistics

This section defines the data in form of mean, minimum, maximum and SD.

Table 4.1: Descriptive Statistics

	N	Minimum	Maximum	Mean	SD
Monday	151	10.38	550.00	90.512	95.5080
Tuesday	164	10.10	583.67	93.625	110.3967
Wednesday	151	11.00	550.00	104.243	114.2512
Thursday	163	10.30	600.00	98.585	117.4297
Friday	174	10.43	580.00	97.902	109.6254
All Days	803	10.10	600.00	96.970	109.6499

At the NSE, Monday is the first trading DOTW. A total of 151 Mondays for the year 2019 were evaluated. Monday had an average stock price of 90.512 shillings for the year 2019. Monday showed a stock volatility of 95.5 shillings. This day showed the lowest volatility among the five days of the week in 2019. This day showed a maximum price of 550 shillings and a minimum of 10.1 shillings. This was the day with the lowest average stock price in 2019.

Tuesday is the second trading day. It had a mean stock price of 93.625 shillings for the entire period of investigation. A total of 164 observations were made. For the investigation period; Tuesday showed stock price volatility of 110.397 shillings. The maximum price for Tuesday was 583.67 shillings and a minimum of 10.1. This day showed the lowest price in 2019 compared to the other days.

There were 151 observations for Wednesday which is the third trading day. The price over the 12-month period of 2019 was 104.243 shillings with a stock price volatility of 114.251 shillings. This is the day that would yield highest returns for the stock investors as it has the highest average price. Volatility on Wednesday is higher than the first two trading days of the week. Despite this day having the highest average stock price in the first three days, it is an unpredictable day due to high price volatility after Thursday. The day showed a price high of 550 shillings and a low of 11 shillings.

Thursday is the fourth trading day at the Nairobi Securities Exchange. For this day, 163 observations were made for the year 2019. Thursday showed an average stock price of 98.585 shillings with a stock volatility of 117.429 shillings. This is the most volatile DOTW as long as stock price is concerned. It is the most volatile day after Tuesday meaning that it is the most unpredictable DOTW for investors.

Friday is the last trading DOTW at the NSE. Friday showed an average stock price of 97.902 shillings. This was derived from a total of 174 observations for the year 2019. This day had the highest number of observations in 2019. For the whole of 2019, Friday showed a volatility of 109.625 shillings which was the second lowest after Monday. This day showed a maximum price of 580 shillings and a low of 10.43 shillings.

Combined, the weekdays of 2019 showed an average stock price of 96.97 shillings and a volatility of 109.6499 shillings. Except for Monday and Friday, all the other days showed stock price volatility above average. This indicates that Tuesday, Wednesday, and Thursday were very unpredictable days in 2019 for investors in stocks at the NSE.

4.3 Trend of Stock Prices in 2019
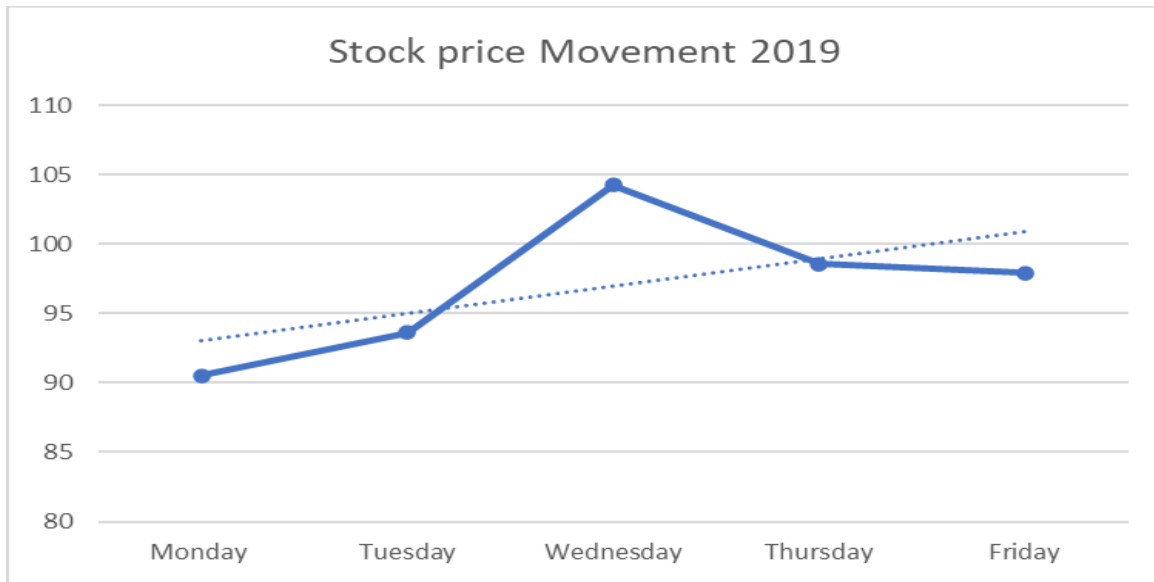
Figure 4.2: Trends of Stock Prices

From figure 4.2, the stock prices have showed a marginal increase from Monday to Tuesday and a gradual increase to Wednesday. However, a gradual decrease in stock price is seen through to Thursday with marginal decrease to Friday. Wednesday showed the highest prices for 2019 with Monday having the lowest stock prices followed by Tuesday. From the trendline, the price generally increases from Monday through to Friday.

4.4 Diagnostic Tests

Yihua (2010) suggests that diagnostic testing allows the investigator to verify the nature of the data and to specify the investigation's model to so that the regression outcomes are, efficient,

consistent and not biased. Diagnostics tests for this investigation entailed heteroskedasticity, normality and multicollinearity.

Table 4.2: Heteroskedasticity

	LM	Sig
BP	2.726	0.099

From the outcomes on table 4.2, the significance of Breusch–Pagan was more than 0.05 implying that the regression did not violate the assumption of homoscedasticity. Therefore, it is assumed that heteroskedasticity is absent in the data.

Table 4.3: Normality Test

| | Shapiro-Wilk | | |
	Statistic	df	Sig.
Monday	.763	151	.000
Tuesday	.720	164	.000
Wednesday	.751	151	.000
Thursday	.713	163	.000
Friday	.749	174	.000
Average	.739		

From the normality testing, stock prices and the dependent variables (Monday effect, Tuesday effect, Wednesday effect, Thursday effect and Friday effect) showed Shapiro-Wilk statistics with p-values below 0.05. Hence, we overrule the null hypothesis and presume that the data values for the variables adopted in this investigation were not normally distributed.

Table 4.4: Multicollinearity

Model		Collinearity Statistics	
		Tolerance	VIF
1	Tuesday	.602	1.660
	Wednesday	.616	1.624
	Thursday	.603	1.657
	Friday	.593	1.686

a. Dependent Variable: Stock Prices

Multicollinearity was tested for the investigation's data. This was performed by the VIF which quantifies the level of inflated variance. The outcomes point out that the VIF values were below 2 implying that the variance of the variables was inflated at an extremely low level. Therefore model data has no multicollinearity problems.

4.5 Regression Analysis

Table 4.5: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.042[a]	.002	.000	109.82914	.002	.346	4	798	.847

a. Predictors: (Constant), Friday, Wednesday, Monday, Thursday
b. Output Variable: Stock Prices

The model summary presents the R^2 and the F-test statistic for the listed firms in NSE for 2019.

R^2 is 0.002 which is relatively low and F-statistic points out that the model's overall fit is poor.

From the model summary, the F-test is not significant. This is shown by the F change (0.847) being

lower than the significant F of 2.383. This implies that the DOTW has not impinged on the share prices of listed agricultural firms in Kenya for 2019.

Table 4.6: Regression Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	93.625	8.576		10.917	.000
	Monday	-3.113	12.387	-.011	-.251	.802
	Wednesday	10.618	12.387	.038	.857	.392
	Thursday	4.960	12.147	.018	.408	.683
	Friday	4.277	11.953	.016	.358	.721

a. Dependent Variable: Stock Prices

The analysis aimed at establishing whether a substantial difference amongst the five days of the week existed. The outcomes are indicated by the regression coefficients below. As per the investigation outcomes, the mean share prices of all the five days of the week are unsubstantial at 95% confidence interval.

4.6 Discussion of Findings

From the outcomes, Monday displayed the lowest stock prices among the five days of trading in a week while Wednesday displayed the highest price in 2019. The findings differ with Du Toit, Hall and Pradhan (2018) who found that Monday displayed the highest stick prices with Friday displaying the lowest prices. Onoh and Ndu-Okereke (2016) found that Friday yields was

substantially greater compared to those of other days of the week as measured by the changes in stock prices. Makokha (2012) found that Tuesday had the highest prices and Wednesday had the lowest.

From the descriptive statistics, Thursday showed the highest stock volatility followed by Wednesday. Monday showed the lowest volatility among stock prices. The findings differed with those of Makokha (2012) who found that stock price volatility is highest on Tuesday and lowest on Friday. The investigation concurs with the investigation of Ndako (2013) who found that there was evidence of high volatility for Tuesday's and Thursday's stock prices.

From the regression analysis the findings indicated that there was no DOTW effect on stock prices for agricultural establishments registered at the NSE. The outcomes are as per those of Gbeda and Peprah (2018) who established no evidence of DOTW effect in the stock returns as measured by stock prices at GSE. However, the findings differed with those of Du Toit, Hall and Pradhan (2018) who found that the DOTW effect is present in stock prices. Haroon and Shah (2013) established that there was variation in stock returns within the week as measured by stock prices. Gbeda and Peprah (2018), found that there existed Friday effect in NSE.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

The chapter was based on the objective of the investigation. The conclusions and recommendation together with a summary of the findings were given. The summary is based on the descriptive and regression statistical findings. The limitations to the investigation are also described in this chapter. In this chapter, the recommendations for further research are given.

5.2 Summary of Findings

From the descriptive statistics, a total of 803 observations were made. Monday had 151, Tuesday had 164, Wednesday had 151, Thursday had 163 and Friday had 174 observations. Monday showed an average price of 90.512 shillings for the year 2019 with a price volatility 95.5 shillings. This day showed the lowest volatility among the five days of the week in 2019. Tuesday had an average stock price of 93.625 shillings and price volatility of 110.397 shillings. Wednesday which is the third trading day showed an average price of 104.243 shillings with a stock price volatility of 114.251 shillings. This is the day that would yield highest returns for the stock investors as it has the highest average price.

Thursday showed an average stock price of 98.585 shillings with a stock volatility of 117.429 shillings. This is the most volatile DOTW as long as stock price is concerned. It is the most volatile day after Tuesday meaning that it is the most unpredictable DOTW for investors. Friday is the last trading DOTW at the NSE. Friday showed an average stock price of 97.902 shillings and a volatility of 109.625 shillings. Combined, the weekdays of 2019 showed an average stock price of 96.97 shillings and a volatility of 109.6499 shillings. Except for Monday and Friday, all the other

days showed stock price volatility above average. This indicates that Tuesday, Wednesday, and Thursday were very unpredictable days in 2019 for investors in stocks at the NSE.

From the regression, R^2 and F-statistic were very low indicating that the DOTW had no effect on the stock prices of quoted agricultural establishments in Kenya for 2019. The outcomes from the coefficients showed that the mean stock prices of all the five days of the week were unsubstantial at 95% confidence interval. This revealed that DOTW has no influence on the share prices of quoted agricultural firms in Kenya.

5.3 Conclusions and Policy Recommendations

From the outcomes, the researcher sought to make conclusions and give recommendations that would guide company and government policy. The investigation sought to ascertain the DOTW influence on share prices of listed agriculture firms in Kenya based on monthly data of 2019.

5.3.1 Conclusions

The investigation determines that Monday has the lowest stock prices among the listed agricultural firms in Kenya for the period between January and December 2019. Wednesday has the highest stock price of listed firms in Kenya for the period between January and December 2019. Thursday is the most volatile day for agricultural stock prices at the NSE.

Monday is the least volatile for agricultural establishments in Kenya hence most predictable. The first and last days of the week indicated a price volatility above average for agricultural establishments registered at the NSE. The investigation concludes that DOTW has no effect on the stock prices of quoted agricultural establishments in Kenya. This is shown by the insignificant coefficients of the Monday- Friday effect.

5.3.2 Policy Recommendations

The investigation recommends that investors ought not to put into consideration the DOTW in their trading transactions at the NSE. Investors ought to perform important and thorough analysis of the market analysis to point out major factors that impinge on share prices at the NSE.

Though the Wednesday stock price effect is unsubstantial, investors can consider selling their shares on the day to maximize returns through high prices. NSE ought to undertake investigation to ascertain why Monday had the lowest stock price compared to other days. It ought to similarly establish why Thursday had the highest market volatility. This will lead to investors having more confidence and further development of the Kenyan capital market.

5.4 Limitations of the Study

The main limitation with this investigation is the size of the investigation population. In Kenya, agricultural establishments registered in NSE were few making the size of study population small. However, the investigation utilized daily data to enhance the quality and quantity of the data available for analysis. The investigation was also limited to the variables of investigation. It was based on DOTW and stock prices (opening and closing price). Different results may be found if different variables were used.

The credibility of the data was a key limitation for the investigation. It was not easy to validate whether the data was credible in spite of the data coming from the financial reports of the establishments. The investigation was limited by the period of investigation (January-December 2019). This implies that the outcomes done on a different period may not be the same.

Secondary data are also general and tends to be historical. The secondary data that may not adequately capture aspects of DOTW effect and stock prices in the firm. Some aspects of DOTW effect could not be determined sufficiently. Secondary data are also general and tends to be

historical. The investigation used the most current information to minimise the problem of information being out dated. The investigation used the latest material (2019) to minimize the problem of information being out dated.

5.5 Recommendations for Future Studies

The investigation analyzed the effect of the DOTW on the stock prices of quoted agriculture establishments in Kenya. The findings showed no effect of the DOTW on stock prices of quoted agriculture establishments in Kenya. This investigation recommends a similar investigation using other listed firms like manufacturing firms to establish whether there is a DOTW effect on the stock prices of quoted establishments.

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APPENDICES

Appendix I: Listed Agricultural firms in Kenya

1. Eaagads Ltd

2. Kakuzi

3. Kapchorua Tea Co. Ltd

4. Limuru Tea Co. Ltd

5. Rea Vipingo Plantations Ltd

6. Sasini Ltd

7. Williamson Tea Kenya Ltd

Appendix II: Data Collection Sheet

S. No.	Day of the week	Date	Opening Stock Price	Closing Stock Price	Average Stock price
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					

Appendix III: Data

DATE_TRADE	ISSUER_CODE	OPENING_PRICE	AVG PRICE
02/01/2019	KAPC	74.50	74.50
02/01/2019	SASN	19.90	19.94
02/01/2019	WTK	150.00	150.00
03/01/2019	KAPC	75.00	75.00
03/01/2019	SASN	21.00	20.73
03/01/2019	WTK	150.00	150.00
04/01/2019	EGAD	14.50	14.50
04/01/2019	KAPC	74.50	74.50
04/01/2019	SASN	19.85	20.18
04/01/2019	WTK	149.00	151.11
07/01/2019	EGAD	14.00	14.00
07/01/2019	KAPC	70.50	70.25
07/01/2019	SASN	20.75	20.06
07/01/2019	WTK	149.00	149.00
08/01/2019	WTK	148.00	148.50
09/01/2019	KAPC	67.50	68.17
09/01/2019	LIMT	500.00	500.00
09/01/2019	SASN	20.30	19.78
09/01/2019	WTK	147.00	147.50
10/01/2019	KAPC	74.00	72.00
10/01/2019	SASN	19.05	19.05
11/01/2019	EGAD	14.00	14.80
11/01/2019	WTK	149.00	147.50
14/01/2019	EGAD	15.30	15.30
14/01/2019	KAPC	67.75	70.56
14/01/2019	KUKZ	310.00	310.00
14/01/2019	LIMT	550.00	550.00
14/01/2019	SASN	19.80	19.70
14/01/2019	WTK	148.00	148.00
15/01/2019	EGAD	15.10	15.10
15/01/2019	SASN	20.00	19.69
16/01/2019	EGAD	16.00	16.00
16/01/2019	KAPC	74.00	72.00
16/01/2019	KUKZ	315.00	311.00
16/01/2019	SASN	19.80	19.38
16/01/2019	WTK	147.00	147.00
17/01/2019	KAPC	71.00	73.31
17/01/2019	LIMT	545.00	550.00
17/01/2019	SASN	19.50	19.50
17/01/2019	WTK	145.00	144.50
18/01/2019	EGAD	16.00	16.00
18/01/2019	KAPC	71.00	76.60
18/01/2019	KUKZ	310.00	310.00
18/01/2019	SASN	19.50	19.53
21/01/2019	KAPC	71.00	74.50
21/01/2019	SASN	19.50	19.28

21/01/2019	WTK	147.00	147.00
22/01/2019	KAPC	71.00	74.50
22/01/2019	KUKZ	310.00	325.00
22/01/2019	SASN	19.60	19.16
22/01/2019	WTK	146.00	144.50
23/01/2019	KUKZ	310.00	310.00
23/01/2019	SASN	19.60	19.36
23/01/2019	WTK	147.00	147.00
24/01/2019	SASN	19.65	19.83
24/01/2019	WTK	147.00	148.33
25/01/2019	SASN	19.75	19.17
28/01/2019	SASN	19.50	19.36
28/01/2019	WTK	148.00	155.38
29/01/2019	EGAD	16.00	16.00
29/01/2019	KAPC	72.00	73.20
29/01/2019	SASN	20.00	19.40
29/01/2019	WTK	145.00	145.00
30/01/2019	KAPC	72.00	74.33
30/01/2019	SASN	20.00	19.66
30/01/2019	WTK	147.00	147.33
31/01/2019	EGAD	17.60	17.60
31/01/2019	SASN	19.00	19.39
31/01/2019	WTK	147.00	146.60
01/02/2019	KAPC	71.25	74.25
01/02/2019	KUKZ	310.00	310.00
01/02/2019	SASN	20.00	20.00
01/02/2019	WTK	146.00	146.00
04/02/2019	EGAD	17.30	17.30
04/02/2019	SASN	19.65	19.16
04/02/2019	WTK	147.00	146.50
05/02/2019	KAPC	73.00	77.17
05/02/2019	SASN	20.00	20.13
06/02/2019	KAPC	74.50	77.25
06/02/2019	SASN	20.00	20.64
06/02/2019	WTK	146.00	146.00
07/02/2019	EGAD	16.00	16.00
07/02/2019	KAPC	78.00	78.00
07/02/2019	SASN	20.95	20.95
08/02/2019	EGAD	16.00	16.00
08/02/2019	SASN	21.00	19.51
08/02/2019	WTK	142.00	140.36
11/02/2019	EGAD	16.00	16.00
11/02/2019	SASN	20.95	20.32
11/02/2019	WTK	145.00	146.30
12/02/2019	EGAD	16.00	16.00
12/02/2019	KAPC	79.50	81.50
12/02/2019	SASN	20.95	20.59
12/02/2019	WTK	146.00	147.00
13/02/2019	EGAD	16.00	16.00
13/02/2019	SASN	20.50	20.50

13/02/2019	WTK	160.00	160.00
14/02/2019	SASN	20.50	20.11
14/02/2019	WTK	148.00	148.00
15/02/2019	EGAD	16.00	16.00
15/02/2019	KAPC	79.75	79.63
15/02/2019	SASN	20.65	21.05
15/02/2019	WTK	156.00	149.85
18/02/2019	EGAD	16.00	16.00
18/02/2019	KAPC	79.50	79.50
18/02/2019	KUKZ	320.00	320.00
18/02/2019	SASN	19.75	21.68
18/02/2019	WTK	156.00	152.75
19/02/2019	EGAD	16.00	16.00
19/02/2019	KAPC	79.50	79.50
19/02/2019	KUKZ	320.00	320.00
19/02/2019	SASN	19.00	19.00
19/02/2019	WTK	155.00	155.00
20/02/2019	EGAD	16.00	15.95
20/02/2019	KAPC	79.50	79.50
20/02/2019	SASN	20.80	19.20
20/02/2019	WTK	155.00	155.00
21/02/2019	EGAD	15.95	15.90
21/02/2019	KAPC	79.50	79.50
21/02/2019	LIMT	550.00	550.00
21/02/2019	SASN	20.00	19.39
21/02/2019	WTK	155.00	155.00
22/02/2019	EGAD	15.90	15.90
22/02/2019	KUKZ	320.00	320.00
22/02/2019	SASN	20.50	19.42
22/02/2019	WTK	146.00	146.00
25/02/2019	EGAD	15.90	15.90
25/02/2019	KUKZ	320.00	320.00
25/02/2019	SASN	19.00	19.11
26/02/2019	KAPC	79.50	78.69
26/02/2019	KUKZ	320.00	320.00
26/02/2019	LIMT	580.00	580.00
26/02/2019	SASN	18.50	19.50
26/02/2019	WTK	150.00	150.00
27/02/2019	SASN	19.00	18.51
27/02/2019	WTK	155.50	155.50
28/02/2019	KAPC	80.00	80.00
28/02/2019	LIMT	600.00	600.00
28/02/2019	SASN	19.00	18.50
28/02/2019	WTK	155.00	152.50
01/03/2019	EGAD	15.90	15.90
01/03/2019	SASN	17.95	17.57
01/03/2019	WTK	150.00	150.67
04/03/2019	SASN	17.00	17.40
04/03/2019	WTK	152.00	156.00
05/03/2019	KAPC	79.00	79.00

05/03/2019	LIMT	551.00	583.67
05/03/2019	SASN	17.55	17.50
05/03/2019	WTK	152.00	151.33
06/03/2019	SASN	17.40	17.40
07/03/2019	KAPC	79.50	79.50
07/03/2019	KUKZ	310.00	310.00
07/03/2019	SASN	17.50	17.48
07/03/2019	WTK	146.00	148.00
08/03/2019	KAPC	79.50	79.50
08/03/2019	KUKZ	310.00	310.00
08/03/2019	SASN	17.00	17.01
08/03/2019	WTK	148.00	148.67
11/03/2019	EGAD	15.00	15.00
11/03/2019	KAPC	79.50	79.25
11/03/2019	SASN	17.25	17.07
11/03/2019	WTK	150.00	149.33
12/03/2019	KAPC	79.00	79.00
12/03/2019	WTK	146.00	146.00
13/03/2019	SASN	18.50	18.50
13/03/2019	WTK	149.75	147.39
14/03/2019	KAPC	78.00	77.00
14/03/2019	SASN	18.45	18.13
14/03/2019	WTK	150.00	149.05
15/03/2019	EGAD	15.90	15.90
15/03/2019	KUKZ	310.00	310.00
15/03/2019	SASN	17.75	18.28
15/03/2019	WTK	150.00	150.00
18/03/2019	KAPC	68.00	68.00
18/03/2019	SASN	18.00	18.00
18/03/2019	WTK	150.00	150.00
19/03/2019	EGAD	15.00	15.00
19/03/2019	KUKZ	310.00	310.00
19/03/2019	SASN	18.10	18.05
20/03/2019	KAPC	74.50	74.50
20/03/2019	KUKZ	300.00	307.50
20/03/2019	SASN	16.50	16.73
21/03/2019	EGAD	15.00	14.97
21/03/2019	KAPC	70.00	69.75
21/03/2019	SASN	17.00	17.38
21/03/2019	WTK	150.00	150.00
22/03/2019	EGAD	14.50	14.33
22/03/2019	KAPC	70.00	68.85
22/03/2019	LIMT	580.00	580.00
22/03/2019	SASN	17.90	17.08
22/03/2019	WTK	150.00	149.50
25/03/2019	SASN	16.50	16.25
25/03/2019	WTK	149.00	147.50
26/03/2019	SASN	15.80	15.30
26/03/2019	WTK	146.50	147.21
27/03/2019	EGAD	14.30	14.30

27/03/2019	LIMT	550.00	550.00
27/03/2019	SASN	16.00	15.68
27/03/2019	WTK	149.00	149.00
28/03/2019	KAPC	70.00	70.00
28/03/2019	SASN	16.00	16.00
28/03/2019	WTK	148.75	146.88
29/03/2019	KAPC	69.00	69.33
29/03/2019	WTK	145.00	145.00
01/04/2019	SASN	17.00	16.65
01/04/2019	WTK	145.00	145.00
02/04/2019	SASN	17.60	17.03
02/04/2019	WTK	144.00	144.00
03/04/2019	LIMT	500.00	500.00
03/04/2019	SASN	17.00	16.01
03/04/2019	WTK	144.00	142.00
04/04/2019	EGAD	14.30	14.30
04/04/2019	KAPC	69.75	69.75
04/04/2019	KUKZ	300.00	300.00
04/04/2019	SASN	15.70	15.39
04/04/2019	WTK	140.00	138.33
05/04/2019	EGAD	13.60	13.60
05/04/2019	KAPC	69.75	69.75
05/04/2019	SASN	15.30	15.43
05/04/2019	WTK	140.00	140.00
08/04/2019	KAPC	69.75	69.75
08/04/2019	SASN	15.45	15.23
08/04/2019	WTK	140.00	140.00
09/04/2019	EGAD	13.60	13.60
09/04/2019	KAPC	69.50	69.50
09/04/2019	SASN	14.50	14.82
09/04/2019	WTK	140.00	139.13
10/04/2019	SASN	15.45	15.45
10/04/2019	WTK	140.00	141.80
11/04/2019	EGAD	14.00	14.00
11/04/2019	KAPC	69.50	69.50
11/04/2019	KUKZ	300.00	293.33
11/04/2019	SASN	15.30	15.16
12/04/2019	KAPC	69.50	64.50
12/04/2019	SASN	15.20	15.18
12/04/2019	WTK	139.50	139.64
15/04/2019	SASN	15.20	15.13
16/04/2019	KAPC	64.00	64.70
16/04/2019	SASN	15.20	15.16
16/04/2019	WTK	145.00	145.00
17/04/2019	EGAD	14.00	14.00
17/04/2019	KAPC	61.00	60.50
17/04/2019	SASN	15.05	15.08
18/04/2019	EGAD	13.00	13.00
18/04/2019	LIMT	490.00	493.33
18/04/2019	SASN	15.20	15.27

Date	Code	Value 1	Value 2
18/04/2019	WTK	144.00	143.75
23/04/2019	KAPC	63.00	65.00
23/04/2019	SASN	15.15	15.66
23/04/2019	WTK	142.00	142.80
24/04/2019	EGAD	12.50	12.50
24/04/2019	KAPC	64.00	64.00
24/04/2019	LIMT	450.00	450.00
24/04/2019	SASN	15.20	15.67
24/04/2019	WTK	138.00	138.00
25/04/2019	EGAD	12.50	12.50
25/04/2019	SASN	15.50	15.87
25/04/2019	WTK	138.00	139.50
26/04/2019	EGAD	13.75	13.75
26/04/2019	KAPC	64.00	64.00
26/04/2019	SASN	15.60	15.88
26/04/2019	WTK	138.00	143.14
29/04/2019	KAPC	64.50	67.25
29/04/2019	SASN	15.75	15.58
29/04/2019	WTK	143.75	142.31
30/04/2019	EGAD	13.75	13.75
30/04/2019	KAPC	68.00	68.00
30/04/2019	SASN	15.50	15.50
30/04/2019	WTK	144.00	144.00
02/05/2019	EGAD	12.50	12.50
02/05/2019	KAPC	64.50	64.25
02/05/2019	SASN	16.00	16.00
02/05/2019	WTK	143.50	141.67
03/05/2019	EGAD	12.50	12.50
03/05/2019	WTK	142.75	142.75
06/05/2019	KAPC	63.00	63.65
06/05/2019	SASN	16.00	16.25
06/05/2019	WTK	142.50	141.21
07/05/2019	EGAD	12.50	12.50
07/05/2019	KAPC	63.00	63.00
07/05/2019	SASN	15.50	15.50
07/05/2019	WTK	142.75	140.92
08/05/2019	EGAD	13.00	13.00
08/05/2019	KAPC	63.00	60.38
08/05/2019	SASN	15.15	15.03
08/05/2019	WTK	140.50	140.50
09/05/2019	SASN	15.00	15.00
09/05/2019	WTK	140.00	140.00
10/05/2019	SASN	16.00	15.83
10/05/2019	WTK	140.00	140.00
13/05/2019	EGAD	12.75	12.75
13/05/2019	SASN	16.50	15.80
13/05/2019	WTK	140.00	140.00
14/05/2019	EGAD	12.50	12.50
14/05/2019	SASN	15.50	15.13
15/05/2019	SASN	15.50	15.10

15/05/2019	WTK	142.00	142.00
16/05/2019	KAPC	60.00	60.00
16/05/2019	SASN	15.00	14.64
17/05/2019	EGAD	11.30	11.30
17/05/2019	KAPC	60.00	60.00
17/05/2019	SASN	15.00	15.00
17/05/2019	WTK	140.00	140.00
20/05/2019	WTK	142.00	142.00
21/05/2019	KAPC	60.00	60.00
21/05/2019	LIMT	450.00	450.00
21/05/2019	SASN	14.50	14.50
21/05/2019	WTK	140.00	140.00
22/05/2019	SASN	15.00	14.42
22/05/2019	WTK	140.00	140.00
23/05/2019	EGAD	11.30	11.30
23/05/2019	SASN	14.00	14.07
23/05/2019	WTK	140.00	140.50
24/05/2019	EGAD	11.00	11.00
24/05/2019	KUKZ	310.00	304.29
24/05/2019	SASN	14.25	14.43
24/05/2019	WTK	141.00	140.40
27/05/2019	EGAD	11.00	10.38
27/05/2019	SASN	14.25	14.25
27/05/2019	WTK	138.00	138.67
28/05/2019	EGAD	11.00	11.00
28/05/2019	SASN	14.35	14.35
28/05/2019	WTK	140.00	140.00
29/05/2019	EGAD	11.00	11.00
29/05/2019	SASN	15.00	14.64
30/05/2019	EGAD	11.00	11.00
30/05/2019	SASN	14.35	14.25
30/05/2019	WTK	140.00	140.00
31/05/2019	EGAD	12.00	12.00
31/05/2019	SASN	14.20	14.33
31/05/2019	WTK	140.00	139.00
03/06/2019	SASN	15.00	15.00
03/06/2019	WTK	138.00	138.00
04/06/2019	SASN	15.00	15.00
04/06/2019	WTK	138.50	137.88
06/06/2019	SASN	15.00	14.82
06/06/2019	WTK	138.00	138.00
07/06/2019	SASN	14.95	14.98
07/06/2019	WTK	136.00	143.20
10/06/2019	SASN	15.05	15.22
10/06/2019	WTK	136.00	136.00
11/06/2019	EGAD	12.00	12.00
11/06/2019	SASN	16.25	16.48
12/06/2019	EGAD	12.00	12.00
12/06/2019	SASN	15.25	16.29
12/06/2019	WTK	138.00	138.00

13/06/2019	EGAD	12.00	12.00
13/06/2019	KAPC	62.00	62.00
13/06/2019	SASN	17.00	17.03
13/06/2019	WTK	138.00	138.67
14/06/2019	SASN	17.00	17.40
14/06/2019	WTK	140.00	139.94
17/06/2019	EGAD	12.00	12.00
17/06/2019	KAPC	67.00	67.00
17/06/2019	SASN	17.45	18.04
17/06/2019	WTK	140.00	140.00
18/06/2019	EGAD	12.00	12.00
18/06/2019	KAPC	67.00	67.00
18/06/2019	SASN	18.35	18.14
18/06/2019	WTK	140.00	138.80
19/06/2019	KUKZ	310.00	310.00
19/06/2019	SASN	18.15	17.88
19/06/2019	WTK	140.00	138.46
20/06/2019	EGAD	12.00	12.00
20/06/2019	KAPC	68.00	68.00
20/06/2019	SASN	17.40	17.62
20/06/2019	WTK	136.25	136.25
21/06/2019	EGAD	11.95	11.98
21/06/2019	SASN	17.70	17.84
21/06/2019	WTK	138.00	138.00
24/06/2019	KUKZ	341.00	341.00
24/06/2019	SASN	17.80	18.57
24/06/2019	WTK	138.00	137.50
25/06/2019	SASN	19.30	18.92
25/06/2019	WTK	136.00	136.00
26/06/2019	KAPC	74.50	74.33
26/06/2019	SASN	18.10	18.10
26/06/2019	WTK	140.00	140.00
27/06/2019	SASN	18.50	18.30
28/06/2019	EGAD	12.00	12.00
28/06/2019	KAPC	74.50	75.88
28/06/2019	SASN	18.70	18.22
28/06/2019	WTK	145.00	146.15
01/07/2019	KAPC	81.25	81.82
01/07/2019	KUKZ	310.00	310.00
01/07/2019	SASN	18.10	18.74
01/07/2019	WTK	151.00	151.63
02/07/2019	SASN	19.45	19.45
02/07/2019	WTK	151.00	154.06
03/07/2019	EGAD	12.00	12.00
03/07/2019	KAPC	81.50	81.83
03/07/2019	SASN	19.40	19.29
03/07/2019	WTK	155.00	155.00
04/07/2019	EGAD	13.00	13.00
04/07/2019	KAPC	82.00	84.60
04/07/2019	SASN	19.10	19.13

04/07/2019	WTK	154.25	154.46
05/07/2019	EGAD	13.00	13.00
05/07/2019	KAPC	88.00	87.50
05/07/2019	KUKZ	340.00	340.00
05/07/2019	WTK	155.00	155.00
08/07/2019	EGAD	13.00	13.00
08/07/2019	KAPC	88.00	87.83
08/07/2019	SASN	19.00	18.83
08/07/2019	WTK	154.00	154.50
09/07/2019	KAPC	86.00	87.00
09/07/2019	KUKZ	340.00	340.00
09/07/2019	SASN	19.00	18.78
09/07/2019	WTK	155.00	155.00
10/07/2019	KAPC	88.00	88.50
10/07/2019	SASN	19.00	19.00
10/07/2019	WTK	155.00	154.29
11/07/2019	EGAD	13.10	13.10
11/07/2019	KAPC	89.00	88.79
11/07/2019	SASN	19.00	19.00
11/07/2019	WTK	154.00	158.27
12/07/2019	KAPC	89.50	91.56
12/07/2019	SASN	19.50	19.06
12/07/2019	WTK	155.00	155.00
15/07/2019	EGAD	13.20	13.20
15/07/2019	KAPC	90.00	89.67
15/07/2019	SASN	18.50	18.50
15/07/2019	WTK	158.50	157.70
16/07/2019	EGAD	13.95	13.95
16/07/2019	KAPC	90.00	93.82
16/07/2019	SASN	19.60	19.55
16/07/2019	WTK	156.50	158.33
17/07/2019	KAPC	89.50	95.44
17/07/2019	SASN	19.00	19.50
17/07/2019	WTK	159.50	159.50
18/07/2019	KAPC	90.00	90.00
18/07/2019	LIMT	470.00	470.00
18/07/2019	SASN	18.60	18.74
18/07/2019	WTK	159.50	163.45
19/07/2019	KAPC	90.00	90.75
19/07/2019	SASN	19.00	19.00
19/07/2019	WTK	159.50	162.25
22/07/2019	KAPC	90.00	91.00
22/07/2019	KUKZ	340.00	340.00
22/07/2019	WTK	163.00	164.00
23/07/2019	EGAD	13.50	13.33
23/07/2019	KAPC	90.00	97.20
23/07/2019	KUKZ	340.00	340.00
23/07/2019	SASN	18.10	18.10
23/07/2019	WTK	165.00	165.00
24/07/2019	KAPC	90.00	91.00

24/07/2019	SASN	18.10	18.47
24/07/2019	WTK	164.00	162.46
25/07/2019	KAPC	92.00	96.40
25/07/2019	KUKZ	340.00	340.00
25/07/2019	SASN	18.10	18.10
25/07/2019	WTK	165.00	163.00
26/07/2019	KAPC	90.00	93.52
26/07/2019	KUKZ	340.00	340.00
26/07/2019	SASN	18.10	18.23
26/07/2019	WTK	165.00	165.00
29/07/2019	EGAD	13.30	13.30
29/07/2019	KAPC	94.00	95.33
29/07/2019	SASN	18.10	18.57
29/07/2019	WTK	164.50	166.75
30/07/2019	EGAD	13.30	13.40
30/07/2019	KAPC	91.00	96.33
30/07/2019	SASN	18.00	18.00
30/07/2019	WTK	164.00	163.25
31/07/2019	SASN	18.00	18.00
31/07/2019	WTK	164.00	164.62
01/08/2019	EGAD	13.50	13.50
01/08/2019	KAPC	82.00	88.29
01/08/2019	SASN	18.00	18.00
01/08/2019	WTK	150.25	149.85
02/08/2019	KAPC	82.00	82.00
02/08/2019	SASN	18.00	18.00
02/08/2019	WTK	140.00	140.00
05/08/2019	SASN	18.00	18.00
05/08/2019	WTK	140.00	140.00
06/08/2019	SASN	19.00	18.67
06/08/2019	WTK	140.00	140.00
07/08/2019	EGAD	13.50	13.50
07/08/2019	KAPC	82.00	82.00
07/08/2019	SASN	18.00	18.00
07/08/2019	WTK	140.00	140.00
08/08/2019	KAPC	74.00	74.00
08/08/2019	KUKZ	340.00	340.00
08/08/2019	SASN	18.00	17.98
08/08/2019	WTK	145.00	145.00
09/08/2019	EGAD	13.50	13.50
09/08/2019	KAPC	74.50	74.50
09/08/2019	SASN	18.00	17.99
09/08/2019	WTK	140.00	140.00
13/08/2019	EGAD	14.00	14.00
13/08/2019	SASN	18.00	18.00
13/08/2019	WTK	140.00	140.00
14/08/2019	SASN	19.00	18.50
14/08/2019	WTK	140.00	140.00
15/08/2019	KAPC	70.00	71.00
15/08/2019	SASN	18.00	17.12

15/08/2019	WTK	140.00	140.00
16/08/2019	KAPC	73.00	73.00
16/08/2019	SASN	17.00	17.00
16/08/2019	WTK	138.00	132.00
19/08/2019	EGAD	14.00	13.38
19/08/2019	KAPC	72.00	72.00
19/08/2019	SASN	17.00	17.33
19/08/2019	WTK	130.00	127.50
20/08/2019	EGAD	12.75	12.73
20/08/2019	SASN	17.50	17.50
20/08/2019	WTK	135.00	135.00
21/08/2019	SASN	17.50	17.17
21/08/2019	WTK	135.00	135.00
22/08/2019	KAPC	72.00	72.00
22/08/2019	SASN	17.00	17.00
22/08/2019	WTK	135.00	132.50
23/08/2019	KAPC	70.00	70.00
23/08/2019	SASN	17.00	17.04
23/08/2019	WTK	135.00	134.43
26/08/2019	KAPC	72.00	72.00
26/08/2019	SASN	17.00	17.00
26/08/2019	WTK	135.00	135.00
27/08/2019	SASN	17.50	17.35
27/08/2019	WTK	135.00	135.00
28/08/2019	KAPC	70.00	70.00
28/08/2019	SASN	17.50	17.30
28/08/2019	WTK	135.00	135.00
29/08/2019	SASN	16.90	16.90
29/08/2019	WTK	135.00	135.00
30/08/2019	EGAD	12.50	12.50
30/08/2019	KAPC	73.00	74.00
30/08/2019	SASN	17.50	17.13
30/08/2019	WTK	135.00	135.00
02/09/2019	KAPC	73.00	71.60
02/09/2019	WTK	130.00	130.00
03/09/2019	EGAD	12.50	12.45
03/09/2019	SASN	17.50	17.50
03/09/2019	WTK	140.00	140.00
04/09/2019	EGAD	12.40	12.40
04/09/2019	SASN	17.50	17.20
04/09/2019	WTK	130.00	130.00
05/09/2019	EGAD	12.50	12.50
05/09/2019	KAPC	74.00	74.00
05/09/2019	SASN	17.50	17.44
05/09/2019	WTK	130.00	130.00
06/09/2019	EGAD	12.60	12.60
06/09/2019	KUKZ	350.00	350.00
06/09/2019	SASN	17.00	17.00
06/09/2019	WTK	130.00	130.00
09/09/2019	EGAD	12.60	12.60

09/09/2019	SASN	16.90	16.87
10/09/2019	EGAD	11.40	11.40
10/09/2019	SASN	16.80	16.90
11/09/2019	SASN	15.50	16.43
11/09/2019	WTK	142.00	142.00
12/09/2019	EGAD	11.40	11.40
12/09/2019	SASN	16.90	16.90
12/09/2019	WTK	140.00	140.00
13/09/2019	EGAD	11.40	11.38
13/09/2019	SASN	16.60	16.60
16/09/2019	SASN	16.50	16.50
16/09/2019	WTK	132.00	137.33
17/09/2019	EGAD	12.00	12.00
17/09/2019	KAPC	76.00	76.00
17/09/2019	SASN	16.00	15.71
17/09/2019	WTK	138.00	138.00
18/09/2019	EGAD	12.50	12.50
18/09/2019	KAPC	76.00	76.00
18/09/2019	KUKZ	385.00	385.00
18/09/2019	SASN	15.00	15.38
18/09/2019	WTK	138.00	138.00
19/09/2019	EGAD	13.75	13.65
19/09/2019	KAPC	70.00	70.00
19/09/2019	SASN	15.45	15.49
19/09/2019	WTK	138.00	136.50
20/09/2019	EGAD	13.60	13.56
20/09/2019	SASN	16.00	16.00
20/09/2019	WTK	135.00	135.00
23/09/2019	EGAD	13.60	13.60
23/09/2019	SASN	15.70	15.90
23/09/2019	WTK	135.50	137.75
24/09/2019	EGAD	13.75	13.75
24/09/2019	KAPC	74.00	74.67
24/09/2019	KUKZ	423.50	423.50
24/09/2019	SASN	17.25	17.25
24/09/2019	WTK	136.00	135.57
25/09/2019	EGAD	14.00	14.00
25/09/2019	SASN	17.00	17.00
25/09/2019	WTK	135.00	135.00
26/09/2019	EGAD	14.00	14.00
26/09/2019	KAPC	74.75	74.75
26/09/2019	KUKZ	423.50	423.50
26/09/2019	WTK	131.00	131.00
27/09/2019	EGAD	14.00	14.00
27/09/2019	KUKZ	420.00	422.50
27/09/2019	SASN	17.50	16.89
27/09/2019	WTK	135.00	135.50
30/09/2019	SASN	17.00	16.42
30/09/2019	WTK	140.00	139.00
01/10/2019	EGAD	13.95	13.99

01/10/2019	KAPC	76.00	76.33
01/10/2019	SASN	17.50	17.50
01/10/2019	WTK	138.00	147.00
02/10/2019	EGAD	14.00	13.65
02/10/2019	KAPC	79.00	79.00
02/10/2019	KUKZ	423.25	423.08
02/10/2019	SASN	17.50	17.50
02/10/2019	WTK	138.00	146.00
03/10/2019	KAPC	78.75	78.75
03/10/2019	WTK	135.00	136.20
04/10/2019	EGAD	12.50	12.50
04/10/2019	KAPC	79.00	78.88
04/10/2019	SASN	17.50	17.56
04/10/2019	WTK	137.00	137.00
07/10/2019	EGAD	11.30	12.31
07/10/2019	SASN	17.75	18.03
07/10/2019	WTK	137.00	136.00
08/10/2019	EGAD	11.30	11.34
08/10/2019	KAPC	78.25	78.38
08/10/2019	SASN	17.50	16.53
08/10/2019	WTK	137.00	136.40
09/10/2019	SASN	18.50	18.50
09/10/2019	WTK	136.00	140.47
11/10/2019	KAPC	81.00	79.75
11/10/2019	SASN	17.50	17.50
11/10/2019	WTK	135.00	135.00
14/10/2019	KAPC	78.50	78.50
14/10/2019	WTK	137.00	136.17
15/10/2019	SASN	18.20	17.80
15/10/2019	WTK	135.00	135.00
16/10/2019	KAPC	78.50	77.75
16/10/2019	SASN	17.90	16.98
16/10/2019	WTK	132.00	134.40
17/10/2019	KAPC	77.00	77.00
17/10/2019	SASN	16.15	16.66
17/10/2019	WTK	135.00	134.33
18/10/2019	EGAD	12.45	12.04
18/10/2019	KUKZ	423.50	423.50
18/10/2019	LIMT	460.00	460.00
18/10/2019	SASN	16.00	15.33
18/10/2019	WTK	140.00	134.38
22/10/2019	KAPC	77.00	77.00
22/10/2019	SASN	16.50	16.00
22/10/2019	WTK	134.00	134.00
23/10/2019	SASN	16.50	16.50
23/10/2019	WTK	134.00	135.79
24/10/2019	EGAD	12.50	12.50
24/10/2019	KUKZ	423.50	423.50
24/10/2019	SASN	16.50	16.50
25/10/2019	SASN	16.45	16.36

25/10/2019	WTK	134.00	134.33
28/10/2019	SASN	16.45	16.37
28/10/2019	WTK	134.00	134.00
29/10/2019	SASN	16.20	15.85
29/10/2019	WTK	134.00	133.25
30/10/2019	KAPC	75.00	75.00
30/10/2019	SASN	16.50	15.45
30/10/2019	WTK	135.00	132.54
31/10/2019	EGAD	12.50	12.50
31/10/2019	KAPC	75.00	75.00
31/10/2019	SASN	17.05	16.02
31/10/2019	WTK	134.00	132.43
01/11/2019	KAPC	75.00	76.00
01/11/2019	LIMT	450.00	450.00
01/11/2019	SASN	15.00	15.67
01/11/2019	WTK	134.00	134.00
04/11/2019	EGAD	12.50	12.50
04/11/2019	KAPC	75.50	75.25
04/11/2019	SASN	16.10	15.90
04/11/2019	WTK	132.00	130.50
05/11/2019	KUKZ	410.00	410.00
05/11/2019	SASN	17.00	17.15
05/11/2019	WTK	130.00	134.17
06/11/2019	KAPC	80.00	80.00
06/11/2019	KUKZ	400.00	400.00
06/11/2019	SASN	17.30	17.98
06/11/2019	WTK	134.00	137.63
07/11/2019	KAPC	80.00	77.50
07/11/2019	SASN	18.65	18.45
07/11/2019	WTK	134.00	133.50
08/11/2019	EGAD	12.50	12.50
08/11/2019	KAPC	73.00	74.00
08/11/2019	KUKZ	440.00	435.00
08/11/2019	SASN	17.50	17.50
08/11/2019	WTK	129.00	131.00
11/11/2019	KAPC	73.00	73.00
11/11/2019	KUKZ	360.00	360.00
11/11/2019	SASN	18.40	17.60
11/11/2019	WTK	133.00	132.33
12/11/2019	EGAD	12.50	12.50
12/11/2019	KAPC	72.00	72.20
12/11/2019	SASN	16.80	18.20
12/11/2019	WTK	131.00	131.00
13/11/2019	KAPC	73.00	73.00
13/11/2019	KUKZ	365.00	362.00
13/11/2019	SASN	16.80	16.80
13/11/2019	WTK	143.75	143.75
14/11/2019	EGAD	12.00	11.55
14/11/2019	KAPC	80.25	79.88
14/11/2019	KUKZ	330.00	333.33

14/11/2019	SASN	16.60	16.65
14/11/2019	WTK	130.75	130.05
15/11/2019	EGAD	12.00	12.00
15/11/2019	KAPC	73.00	73.00
15/11/2019	WTK	132.00	133.38
18/11/2019	EGAD	12.00	12.00
18/11/2019	KAPC	73.00	73.00
18/11/2019	KUKZ	330.00	330.00
18/11/2019	SASN	15.40	15.40
18/11/2019	WTK	132.00	132.00
19/11/2019	EGAD	10.40	10.40
19/11/2019	KAPC	72.00	72.63
19/11/2019	WTK	133.00	131.71
20/11/2019	KAPC	73.00	74.50
20/11/2019	KUKZ	330.00	343.33
20/11/2019	SASN	16.80	16.73
20/11/2019	WTK	125.00	129.33
21/11/2019	KUKZ	350.00	350.00
21/11/2019	SASN	18.50	17.70
21/11/2019	WTK	131.00	130.67
22/11/2019	KAPC	75.00	75.00
22/11/2019	SASN	16.90	16.90
22/11/2019	WTK	131.00	131.00
25/11/2019	KAPC	72.00	72.00
25/11/2019	KUKZ	330.00	330.00
25/11/2019	SASN	18.35	17.19
26/11/2019	KAPC	72.00	72.00
26/11/2019	KUKZ	350.00	350.00
26/11/2019	SASN	18.00	18.00
27/11/2019	KAPC	75.00	75.00
27/11/2019	KUKZ	350.00	350.00
27/11/2019	WTK	135.00	135.00
28/11/2019	KUKZ	330.00	330.00
28/11/2019	SASN	18.00	18.00
29/11/2019	EGAD	10.45	10.43
29/11/2019	KUKZ	345.00	345.00
29/11/2019	SASN	18.35	17.73
29/11/2019	WTK	135.00	133.00
02/12/2019	EGAD	10.20	10.51
02/12/2019	SASN	17.00	17.81
02/12/2019	WTK	132.00	132.00
03/12/2019	KUKZ	350.00	349.00
03/12/2019	SASN	17.00	17.10
03/12/2019	WTK	134.00	134.00
04/12/2019	KUKZ	350.00	345.67
04/12/2019	SASN	18.50	17.94
04/12/2019	WTK	133.00	132.25
05/12/2019	EGAD	10.30	10.30
05/12/2019	KUKZ	350.00	348.13
05/12/2019	SASN	17.10	17.01

05/12/2019	WTK	133.00	132.50
06/12/2019	EGAD	11.25	10.90
06/12/2019	KAPC	74.00	73.50
06/12/2019	KUKZ	350.00	350.00
06/12/2019	SASN	17.90	17.58
06/12/2019	WTK	132.00	132.00
09/12/2019	EGAD	11.50	11.38
09/12/2019	KAPC	75.00	75.00
09/12/2019	KUKZ	350.00	349.50
09/12/2019	SASN	17.10	17.10
09/12/2019	WTK	134.00	134.00
10/12/2019	EGAD	11.25	11.25
10/12/2019	KAPC	75.00	75.00
10/12/2019	KUKZ	365.00	365.00
10/12/2019	SASN	17.10	17.08
11/12/2019	KAPC	75.00	75.25
11/12/2019	KUKZ	365.00	365.00
11/12/2019	SASN	17.40	17.20
11/12/2019	WTK	133.00	133.75
13/12/2019	KAPC	75.00	75.17
13/12/2019	SASN	16.00	16.50
13/12/2019	WTK	140.00	136.29
16/12/2019	EGAD	11.25	11.25
16/12/2019	KAPC	75.00	75.00
16/12/2019	KUKZ	350.00	350.00
16/12/2019	SASN	17.00	17.00
16/12/2019	WTK	135.00	134.67
17/12/2019	KAPC	75.00	75.25
17/12/2019	SASN	17.00	17.17
17/12/2019	WTK	133.00	131.70
18/12/2019	KAPC	75.00	75.00
18/12/2019	SASN	17.50	17.50
18/12/2019	WTK	133.00	133.00
19/12/2019	EGAD	11.30	11.30
19/12/2019	KAPC	75.00	75.19
19/12/2019	SASN	17.50	17.25
19/12/2019	WTK	133.00	133.00
20/12/2019	KAPC	75.25	75.25
20/12/2019	KUKZ	340.00	340.00
20/12/2019	SASN	17.00	17.64
20/12/2019	WTK	133.00	132.75
23/12/2019	EGAD	12.30	12.30
23/12/2019	SASN	17.40	17.47
23/12/2019	WTK	132.00	132.00
24/12/2019	EGAD	12.30	12.30
24/12/2019	KUKZ	340.00	340.00
24/12/2019	SASN	18.00	18.00
27/12/2019	EGAD	11.20	11.20
27/12/2019	KAPC	80.00	80.00
27/12/2019	SASN	17.40	17.60

27/12/2019	WTK	135.00	133.54
30/12/2019	KAPC	80.00	80.00
30/12/2019	SASN	16.90	16.90
30/12/2019	WTK	132.25	132.25
31/12/2019	EGAD	10.10	10.10
31/12/2019	SASN	16.90	16.90
31/12/2019	WTK	145.25	139.36