# THE EFFECT OF CHANGE IN DIVIDEND POLICY ON STOCK RETURNS OF COMMERCIAL BANKS LISTED AT THE NAIROBI SECURITIES EXCHANGE

**BY:**

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## DECLARATION

This research project is my original work and has not been presented to any other institution or university.

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This research project has been submitted for examination with our approval as the university's department supervisors.

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## DEDICATION

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# LIST OF ABBREVIATIONS

**ADF:** Augmented Dickey-Fuller

**CBK:** Central Bank of Kenya

**CFC:** Credit Finance Corporation

**CMA:** Capital Markets Authority

**DSE:** Dhaka Stock Exchange

**DY:** Dividend Yield

**ESJ:** European Scientific Journal

**IJSR:** International Journal of Science and Research

**I&M:** Investments and Mortgages

**JFSR:** Journal of Financial Services Research

**MM:** Miller and Modigliani

**NBK:** National Bank of Kenya

**NIC:** National Industrial Credit

**N.S.E:** Nairobi Securities Exchange

**P/E:** Price Earnings Ratio

**VIF:** Variance Inflation Factor

# ABSTRACT

The study investigated the effect of dividend policy on stock returns of commercial banks listed at the Nairobi Securities Exchange as at 2014. The study specifically sought to determine whether dividend initiation, mode of dividend payment, dividend timing, profitability, leverage and asset base have any effect on stock returns among listed commercial banks in Kenya. The study adopted descriptive research design. The target population was all the 11 listed financial institutions in Kenya, these included 10 commercial banks and one mortgage finance institution which was included as part of the study since they are regulated by the same prudential guidelines issued by Central Bank of Kenya. All the 11 banks listed were involved in the study as at 2014. A census survey was adopted as the sampling design. The study used secondary data obtained from Nairobi Securities Exchange, Central Bank of Kenya and the various websites of the participating listed banks for the period between 2010 and 2014. Each bank under study was analyzed year by year resulting in 51 data points of study. The data collected was analyzed using descriptive statistics. Data analysis was done with the aid of Statistical Package for Social Sciences software. The study revealed that there is an insignificant and positive relationship between stock returns and mode of dividend payments, dividend initiation, dividend timing and leverage of listed commercial banks. The fact that the regression coefficients are positive means that increase in one variable corresponds to increase in stock returns. The study therefore concludes that there is an insignificant and positive relationship between dividend policy and stock returns among listed commercial banks at the Nairobi Securities Exchange. The study further revealed that there is a negative relationship between stock returns and profitability and asset base of a listed commercial banks. The study recommends that listed banks should moderately consider the mode of dividend payment, dividend initiation, dividend timing and leverage when formulating dividend policies but with more emphasis on the mode of dividend payment.

# CHAPTER ONE: INTRODUCTION

## 1.1 Background of the Study

Dividend policy is a widely researched topic in the field of investments and finance but still remains a mystery as to whether it affects the stock returns or not. The results of researchers conducted in various stock markets are different. There are many internal and external factors, which simultaneously affect stock returns and it is almost impossible to segregate the effect of each, so the variations remain (Mohammad, 2013). To date, however, there is no consensus as to whether or not corporate dividend policy affects the firm's stock returns. The issue gets even more complicated when it comes to developing markets and especially when the study is narrowed to a specific industry segment in the market.

One question that has bothered most finance managers over several decades is the decision on whether to pay or not to pay dividends. Following Miller and Modigliani (1961) pioneering dividend irrelevance hypothesis, financial economists have advanced a number of contradicting theories in an attempt to explain why corporate dividend policy does seem to matter in practice. Companies without a dividend history are generally viewed favorably when they declare new dividends (Gill, Biger, & Tibrewala, 2010). Dividend yield has a significant positive effect on share price while retention ratios have a significant negative effect on it (Duke, Ikenna & Nkamare, 2015). There exists a significant and positive relationship between market value and capital structure, corporate earnings, dividend payout ratio and capital market investments; hence the dividend policy adopted has a

significant impact on market value of banks (Lilian, Mungai & Eddie 2014). Ali and Chowdhury (2010) concluded otherwise that there is insignificant relationship between stock prices and dividends.

This study investigated the effect of dividend policy on stock returns of commercial banks listed at the Nairobi Securities Exchange. Ongore (2011) highlighted that banks are the back bone for economic development of any country. The commercial banks play a pivotal role in the economic advancement of Kenya hence their importance cannot be overemphasized. The current listed banks that participated in this study were all the banks listed at the Nairobi Securities Exchange as at 2014.

### 1.1.1 Change in Dividend Policy

Tariq, Chaubey and Khalid (2012) defined change in dividend policy as a pattern or decision to switch to either stable dividend policy, constant dividend payout policy or residual dividend policy. Linter (1956) stated that dividends are paid to investors according to two factors firstly, the net present value of earnings, with higher values indicating higher dividends and secondly, the sustainability of earnings that a company may increase its earnings without increasing its dividend payouts until finance managers are convinced that it will continue to maintain such earnings.

Pandey (as cited in Josiah & Henry, 2011) defined dividend policy as the plan of action adopted by the firm's directors whenever there is a dividend decision to be made. It determines the divisions of earnings between dividend payment to shareholders and reinvestment of cash to be done. Firms design policies that enable them achieve their various goals. The main approaches include: residual, stable predictable, constant payout

or low regular plus extra policy. Dividend policies assist to resolve a firm's attempt to maintain a steady, stable dividend growth pattern or vary dividend payment from period to period and from year to year depending on the cash flows and the financing requirements. The financing decisions and investment decisions are both dependent on the amount of retained earnings available and this is influenced by the dividend policy (Preeti & Singh, 2014).

### 1.1.2 Stock Returns

Kothari and Warner (2005) defined stock returns as a combination of dividend yield and capital gain yield. Shareholder value has become an increasingly important demand among investors now more than ever. In the 1980's, shareholder activism reached unforeseen levels among companies in the United States (Mäkeläinen, 1998). Haugen and Baker (1996) defined stock returns as the gains that the investors generate out of their investments in the stock market which could be either in the form of earnings in cash or stock dividends from a firm that is issued from time to time.

The theory of Economic Value Added has traditionally suggested that every company's primary goal is to maximize the wealth of its shareholders, which should be a given since it is the shareholders that own the company and any sensible investor expects a good return on his or her investment in a firm. When investors know the return of stock of a firm they will tend to hold on to their investments and the reverse is true. The return on stock to an investor will only be measured by what dividend they pay and as to whether the dividend is increasing or decreasing or constant (Tariq, Chaubey & Khalid, 2012).

### 1.1.3 Change in Dividend Policy and Stock Returns

Change in dividend policy and its impact on stock returns still remains a very controversial study topic. Michael, Clifford and Ross (1997) stated that there are three schools of thought on dividend policy. The dividend irrelevance school believes that dividends do not really matter because they do not affect a firm's value. The proponents of the second school feel that dividends are bad for the average stockholder because of the tax disadvantage they create, which results in lower value. Finally, there are those in a third group who argue that dividends are clearly good because stockholders, at least some of them react accordingly when dividends are increased. Over the years, the importance of dividend policy in determining the share price or stock returns has been one of the most debated topics in the world of finance and has remained a very puzzling issue.

Several scholars namely, Lilian, Mungai and Eddie (2014), Samuel, Duncan and Lilian (2013), Preeti and Jeet (2014), Martin and Assumptah (2013), Ali and Chowdhury (2010) both locally and internationally have engaged in extensive researches to explain why banks should attach importance or not on the kind of dividend policy they adopt. Other researchers have developed empirical tested models to explain dividend behavior. It is against this background that this study empirically investigated the impact of dividend policy on the stock returns of listed banks in Kenya.

### 1.1.4 Listed Commercial Banks

According to the CBK, Kenya has 43 banks and one mortgage finance company that are all licensed and regulated pursuant to the provisions of the Banking Act Chapter 488 and

the regulations and prudential guidelines. Out of the 43 banks, 31 are locally owned and 13 are foreign. The locally owned financial institutions comprise three banks with significant shareholding by the Government of Kenya and state corporations, 27 commercial banks and one mortgage finance institution, housing finance. Out of the 44 regulated financial institutions, 11 are listed in the Nairobi Securities Exchange. The listed banks are further regulated by the Capital Markets Authority. Refer to appendix one for the listed commercial banks in Kenya as at December 2014. Ongore (2011) highlighted that banks are the back bone for economic development of any country. The commercial banks play a pivotal role in the economic advancement of Kenya hence their importance cannot be overemphasized.

Lilian, Mungai and Eddie (2014) concluded that the dividend policy adopted has a significant impact on market value among listed banking companies in Kenya. Most of the banks specific factors that impact on dividend paid out are the past dividends, current earnings, future earnings, stock price, sources of capital and returns on capital and target capital structure. They further stated that changes in the specific factors that impact on the dividend payout has a significant effect on the market value of the firm.

## 1.2 Research Problem

Dividend policy is the most controversial subject in finance and is widely researched by financial scholars. It is not clear why companies keeps paying cash dividend to shareholders and why some companies keeps changing their dividend policy. Questions as to whether dividend policy really affects the value of the company and as to whether there is an optimal dividend policy is a common question amongst most scholars. Lintner (1956),

Baker and Powell (1999), Shelor and Officer (1994) are among financial scholars who found out that dividend policy does affect the value of the firm. In contradiction, Miller and Modigliani (1961) theoretically explained that the value of the firm is unaffected by dividend policy in a world without tax, and supported by other scholars (Black & Scholes, 1974; Miller & Scholes, 1978).

The dividend policy in the banking industry is affected by several factors which include the past dividends, current earnings, future earnings, stock prices, sources of capital and returns on capital and target capital structure. Changes in the specific factors that impact on the dividend payout has a significant effect on the market value of the firm (Lilian, Mungai & Eddie, 2014). This study sought to reveal further the puzzle of banking industry specific factors that affect the stock returns of listed commercial banks that included dividend initiation, dividend termination, mode of dividend payment, dividend payment type, dividend timing, profitability, asset base and leverage.

Several relevant studies both locally and internationally have been done that focuses on the impact of dividend policy on stock returns or stock prices or market values of listed banks. On the international scene the most recent related studies by Duke, Ikenna and Nkamare (2015) investigated the impact of dividend policy on share price valuation in Nigerian banks. The gap in the study was that it only focused on two banks in Nigeria hence may not have been representative of the banking industry in the country of study. Ali and Chowdhury (2010) analyzed the price movement of private commercial banks listed at Dhaka Stock Exchange towards the dividend announcement. The gap in this study was that

it only focused on dividend announcement as the determinant factor that affects the stock prices thereby leaving room for speculative investors and insider trading, hence not representative of the true impact on dividend decisions on stock prices of the banks sampled.

In the local scene recent similar studies by Lilian, Mungai and Eddie (2014) analyzed the effects of dividend payout on market value among listed banks in Kenya. The study did not apply the banking industry specific market determinants of stock returns, hence not conclusive in its findings and still left room for more studies to be explored in the same area. Samuel, Duncan and Lilian (2013) determined the effects of dividend policy on the market share value in the banking industry in Kenya, using National Bank Kenya as a case study. The gap in this study was that the sample was not representative enough for a conclusive finding as to whether the steady dividend payment affects the stock returns of all banks within the banking industry of listed banks in Kenya. Martin and Assumptah (2013) analyzed the effect of capital structure to the company's financial performance of the listed banking institutions at Nairobi Securities Exchange. The gap in the study was that it focused on the specific banking industry variables targets that are geared towards risk management and not focusing on non-risk based factors such as change in dividend policy which many theories and studies have revealed that may significantly affect the stock returns of a firm.

This study addressed the research question: What is the effect of change in dividend policy on stock returns of listed commercial banks?

## 1.3 Research Objectives

The objective of this study was to determine the effect of change in dividend policy on stock returns of commercial banks listed at the Nairobi Securities Exchange.

## 1.4 Value of the Study

The study is beneficial to many groups and will provide an avenue for an in-depth understanding of the topic by students, financial managers, board of directors of commercial banks, financial regulators, securities market regulators and other decision makers in formulating optimum dividend policies for their respective banks or financial institutions.

The study also forms a tool for assisting investors in making their investment decisions as well as aiding to expose the various factors that may influence stock returns. This study will further serve as a research material for future investors of the listed commercial banks and also add to the existing body of knowledge.

# CHAPTER TWO: LITERATURE REVIEW

## 2.1 Introduction

This chapter presents the literature reviews of the theoretical review, determinants of the stock returns of listed commercial banks, empirical literature review and summary of the literature review of the study.

## 2.2 Theoretical Review

There are various dividend theories that exist. The three theories identified relevant to this study and discussed below are the dividend irrelevance theory, the bird in hand theory and the clientele effect theory.

### 2.2.1 Dividend Irrelevance Theory

Dividend irrelevance theory was first developed by Modigliani and Miller (1961). This theory proposes that in a perfect market, dividend policy has no effect on either the price of a firm’s stock or its cost of capital, shareholders wealth is not affected by the dividend decision and therefore they would be indifferent between dividends and capital gains. It therefore implies that a change in dividend policy cannot alter the stock value of the firm. They further showed that a firm's value is enhanced by investing in productive assets and not by the way in which income is distributed to shareholders (Stulz, 2000). According to Modigliani and Miller (as cited in Stulz, 2000), only the firm's ability to earn money and riskiness of its activity can have an impact on the firm's stock value.

This theory is significant to this study as it assisted in understanding the concept that is based on the premise that dividend policy of a given company should not be considered important by investors and finance managers need to look at other factors affecting the firm's stock returns. With this particular financial theory, the idea is that if an investor wants to increase their cash flow, then they can always sell a portion of their stocks to improve their liquidity position.

### 2.2.2 The Bird in Hand Theory

The essence of the bird-in-the-hand theory of dividend policy advanced by (Litner, 1962 and Gordon, 1963) implies that shareholders are risk-averse and prefer to receive dividend payments rather than future capital gains. Shareholders consider dividend payments to be more certain than future capital gains - thus a bird in the hand is worth more than two in the bush. This implies that shareholders prefer the bird in the hand of cash dividends rather than the two in the bush of future capital gains. Assuming all things are constant, increasing dividend payments may have a direct relationship with an increase in a firm's stock value.

This theory is significant to this study as it assisted in determining the impact of dividend payout method as either cash or stock on the stock returns of the listed banks in Kenya. Litzenberger and Ramaswamy (1979) in their tax preference theory argued that investors want companies to retain earnings and thus provide returns in the form of lower-taxed capital gains rather than heavily taxed dividends. In other words, low dividend payout ratio lowers the required rate of return and increases the market value of the firm’s shares. Shareholders would therefore prefer dividends to capital gains (Amidu, 2007).

### 2.2.3 The Clientele Effect of Dividend Theory

Modigliani and Miller (1961) noted that the pre-existing dividend clientele effect hypothesis might play a role in dividend policy under certain conditions. They pointed out that the portfolio choices of individual investors might be influenced by certain market imperfections such as transaction costs and differential tax rates who prefer different mixes of capital gains and dividends.

Modigliani and Miller (1961) implied that these imperfections might cause investors to choose securities that reduce these costs. Modigliani and Miller (1961) termed the tendency of investors to be attracted to a certain type of dividend-paying stocks as dividend clientele effect. Nonetheless, Modigliani and Miller (1961) maintained that even though the clientele effect might change a firm's dividend policy to attract certain clienteles, in a perfect market each clientele is as good as another; hence the return on a firm's stock is not affected; that is, dividend policy remains irrelevant.

This theory was significant to this study as it revealed that clienteles such as institutional investors tend to be attracted to invest in dividend-paying stocks because they have relative tax advantages over individual investors. These institutions are also often subject to restrictions in institutional charters, which, to some extent, prevent them from investing in non-paying or low-dividend stocks. Similarly, good quality firms prefer to attract institutional clienteles by paying dividends because institutions are better informed than retail investors. The institutional investors also have more ability to monitor or detect firm's net worth, they are also the ones that forms the bulk of investors in bank's stocks at the

Nairobi Securities Exchange and formed a better measure of the impact of change in dividend policy on stock returns in this study. Allen, Bernardo and Welch (2000) concluded that the proposition that these clientele effects are the very reason for the presence of dividends.

## 2.3 Determinants of Stock Returns of Listed Commercial Banks

Balke and Wohar (2006) argued that there is a fundamental problem with identifying the main sources of stock price movements. This problem is rooted in the fact that, since price-dividend ratios are very persistent, a market-fundamentals-based explanation of stock price movements would require the existence of a persistent component in real dividend growth or in equity returns, despite the fact that neither of these two series is very persistent.

In addition to the change in dividend policy, the other financial industry specific determinants of stock returns of listed commercial banks that was relevant to this study included profitability of the firm, the firm's asset base and the leverage level of the firm as discussed below.

### 2.3.1 Change in Dividend Policy

Dividend policy of a company generally determines the division of cash reserves generated through efficient overall performance between payments to shareholders and reinvestment in the firms through retention. Before declaring dividend, banks have to make many consideration under the shadow of statutory rules and regulation for their competitive survival, like bank's transaction costs, personal taxation, dividend clientele, dividend payout ratio, dividend cover, dividend signaling, divisible profits, liquidity ratios, rate of expansion, rate of return, stability of earnings, stability of dividends, legal and regulatory

provisions, contractual constraints, cost of financing, degree of control, capital market access and state of economy (Tariq, Chaubey & Khalid, 2012). The change in dividend policy in this study focused mainly on the changes in the dividend payout covering changes relating to; dividend initiation, dividend termination, mode of dividend payment, dividend payment type and dividend payment timing.

### 2.3.2 Profitability

As per the literature reviews above, it is evident that profitability has a direct impact on the stock returns. Other findings include the fact that firms with past high profitability have generally had higher than average stock returns (Haugen & Baker, 1996). In fact, evidence in Malaysia (Cheng & Ariff, 2007) suggests that investors revalued bank share prices in response to earnings changes much more strongly than they did in the cases of non-banks as shown in their original returns-to-earnings relation. The determinants to take into consideration on this study included the impact on change of earnings on the bank's stock returns measured by the profits before taxation.

### 2.3.3 Asset Base

Vennet, Jonghe, and Baele (2004) assessed the effect of business cycle variables on bank stocks and concluded that returns can differ across countries, types of banks, size of banks and that better capitalized banks produce higher stock returns during downturns. However, all these studies say little about how the banking industry specific market financial performance indicators actually affects the stock returns of listed banks. Since the banks capitalization and strength is mainly measured by the total risk weighted assets held, this

study focused on the effect in the bank's asset base measured by the total capital to total risk weighted assets ratio on the bank's stock returns.

### 2.3.4 Leverage

The risk associated with high degrees of financial leverage may result in low dividend payments because, ceteris paribus, firms need to maintain their internal cash flow to pay their obligations rather than distributing the cash to shareholders. Moreover, Rozeff (1982) pointed out that, firms with high financial leverage tend to have low payouts ratios as they seek to reduce the transaction costs associated with external financing. In addition, some debt covenants have restrictions on dividend payments. Therefore, other things being equal, an inverse relationship between debt and dividend payouts seems plausible. Firms with higher leverage tend to have outperformed firms with lower leverage (Bhandari, 1988). Rouwenhorst (1998) made the same studies in the European markets and concluded that banks tend to be more highly leveraged and tend to hold their liquid deposits against relatively illiquid loans. This study focused on effect of bank's leverage measured by liquidity ratio on the bank's stock returns.

## 2.4 Empirical Literature Review

The empirical literature review in this study focused mainly on those relevant and most recent studies that have been done internationally and locally as discussed below.

### 2.4.1 International Studies

Duke, Ikenna and Nkamare (2015) investigated the impact of dividend policy on share price valuation in Nigerian banks. The data used for the study was market price, dividend

yield and retention ratio of two banks operating in the Nigerian economy. ADF Unit Root Test and the ordinary least squares test was applied. The study revealed that dividend yield had a significantly positive effect on share price while retention ratio was found to have a significantly negative effect on it. The gap in the study was that it only focused on two banks in Nigeria hence may not have been representative of the banking industry in the country of study.

Rabindra (2012) examined the impact of dividends on stock price in the context of Nepal. The total population of the study was 210 companies which were listed at the Nepal Stock Exchange for fiscal year 2010/11. The study applied a descriptive and analytical research design. The overall conclusion drawn in the study revealed that, the impact of dividends is more pronounced than that of retained earnings in the context of Nepal. The gap in the study was that it was too generalized and not industry specific as the factors affecting stock returns are different in each industry sector and especially very different in the banking sector.

Ali and Chowdhury (2010) analyzed the price movement of private commercial banks listed at Dhaka Stock Exchange towards the dividend announcement. They took a sample of 25 banks. The event study approach and market adjusted returns methodology was applied with a statistical pooled t-test. Overall results of their study showed that there is insignificant relation between stock prices and dividends. The gap in this study was that it only focused on dividend announcement as the main determinant factor that affects the stock prices thereby leaving room for speculative investors and insider trading, hence not

representative of the true impact of dividend decisions on stock prices of the banks sampled.

Chen, Huang and Cheng (2009) analyzed the effect of cash dividend on share price for the period 2000-2004 in China. An event study approach was applied using a sample of cash dividend payments from all listed A-share firms in China during the period of 2000 to 2004. They found out that cash dividend has significantly positive effect on the stock prices. The study ignored the stock dividends as a determinant of share price movement which is representative of the reinvesting needs of both the firm and investors.

Adefila, Oladipo and Adeoti (2004) studied the factors that can affect the dividend policy of Nigerian firms and its effect on stock prices and firm's value. The methodology adopted was Person's Product Movement Correlation and applying the panel model and Granger Causality test. The study covered a period of 10 years spanning 1990 to 1999 of published accounts of selected 15 firms obtained from the Nigerian Stock Exchange, Kaduna branch. Results of their study concluded that there is no relationship between dividend payments, net earnings and stock prices. Nigerian firms pay dividends to their shareholders regardless of their level of profits for satisfaction of their shareholders. The gap in this study is evident in that the study applied the panel model and Granger Causality test. These results are contradictory and confusing because the two test methods employed by the study reported different results for the same set of data.

### 2.4.2 Local Studies

Lilian, Mungai and Eddie (2014) analyzed the effects of dividend payout on market value among listed banks in Kenya. The study adopted descriptive research design with a target population of all the 10 listed banks in Kenya as at December 2010. The study concluded that the dividend policy adopted has a significant impact on market value of banks. The study has not applied the banking industry specific market determinants of stock returns, hence not conclusive in its findings and still left room for more studies to be explored in the same area.

Samuel, Duncan and Lilian (2013) investigated the effects of dividend policy on the market share value in the banking industry in Kenya, using National Bank of Kenya as case for the study. The study applied an explanatory research design covering a proportionate sample of 100 shareholders drawn from a target population of 47,000 shareholders of National Bank of Kenya. The study revealed that there is a positive correlation between regularity of dividend declaration and market share value. The gap in this study was that the sample was not representative enough for a conclusive finding as to whether the steady dividend payment affects the stock returns of all banks within the banking industry of listed banks in Kenya.

Martin and Assumptah (2013) investigated the effect of capital structure to the company's financial performance of the 11 listed banking institutions at the Nairobi Securities Exchange as at 2013. The study made use of descriptive research study design and data was collected using questionnaires which were administered to the management of the

selected banks under study. The study findings revealed that the combined effect of the four aspects under study on financial performance of commercial banks listed at the Nairobi Securities Exchange was statistically significant. The gap in the study was that it focused on the specific banking industry control variables that are geared towards risk management and not focusing on non-risk based factors such as change in dividend policy which many theories and studies have revealed may affect stock returns of a firm.

Timothy and Peter (2012) studied the relationship between dividend payout and firm performance among listed firms in the Nairobi Securities Exchange. The study consisted of all firms listed at the Nairobi Securities Exchange classified into 10 sectors. Simple regression analysis was applied. The findings indicated that dividend payout was a major factor affecting firm's performance. The gap in this study was that it applied only one test method of regression analysis which would not have given a representative findings and the researchers ought to have applied multiple linear regression test methods and widen the independent variables so as to give a near true finding of the study.

Josiah and Henry (2011) studied the applicability of constant dividend model from companies listed at the Nairobi Stock Exchange. A survey design was applied to the study by collecting data from annual reports and share price schedules obtained from Nairobi Stock Exchange and Capital Markets Authority for a sample of 18 companies that paid dividends consistently from 2002 to 2008. The study concluded that the relationship between the stock market prices and the dividend paid from the constant dividend model is uneven from one year to another and where there was a relationship it was insignificant.

The study did not review deeply as to the shortcomings resulting in the companies using a constant and predictable model. It could have been that the technologies or systems were not available to apply different dividend payout models in the local market.

## 2.5 Summary of Literature Review

The review of the dividend theories clearly shows that dividend decisions are complex and challenging and will continue to be debated and especially as regards the effect of such decisions to a firm's stock returns. In a perfect market condition dividend policy is irrelevant and a rational investor does not have a preference between dividends and capital gains (Stulz, 2000). Modigliani and Miller (as cited in Stulz, 2000), stated that the firm's ability to earn money and riskiness of its activity can have an impact on the firm's stock value. Modigliani and Miller (1961) further in the clientele effect theory maintained that even though the clientele effect might change a firm's dividend policy to attract certain clienteles, in a perfect market each clientele is as good as another; hence the returns on a firm's stock is not affected; that is, dividend policy remains irrelevant.

The empirical studies have shown that dividend policy adopted by most commercial banks has a significant impact on stock returns. Duke, Ikenna and Nkamare (2015) revealed that dividend yield had a significantly positive effect on share price while retention ratio was found to have a significantly negative effect on it. Lilian, Mungai and Eddie (2014) concluded that there is a relationship between capital structure and market value among listed banking companies in Kenya. However two other studies under review have also shown otherwise as noted in the study of Ali and Chowdhury (2010) where the results of their study showed that there is insignificant relation between stock prices and dividends.

Similarly Adefila, Oladipo and Adeoti (2004) concluded that there is no relation between dividend payments, net earnings and stock prices.

From the reviews it is clear that several studies have been done on the impact of dividend policies on stock returns both locally and internationally. However locally the majority of the studies have focused generally on all listed companies with very few studies focusing on the industry specific for example listed commercial banks. And where related studies specific to banking industry have been done, there exists a lot of contradictions and inconsistencies which still left room for further investigations applying different independent specific and control market variables that are specific to the banking industry. The most recent study locally by Lilian, Mungai and Eddie (2014) that is close to this study has not applied the banking industry specific determinants of stock returns, hence not conclusive in their findings and it is this gap that this study was trying to fill.

# CHAPTER THREE: RESEARCH METHODOLOGY

## 3.1 Introduction

This chapter of the study involved; the research design, population of the study, sample design. Data collection techniques and data analysis techniques which covered the model and test of significance.

## 3.2 Research Design

This study used the descriptive research design since it sought to determine the effect of change in dividend policy on stock returns of commercial banks listed at the Nairobi Securities Exchange of which the study applied both comparative and correlation methods. This approach of research design was the only approach that could be used since the data was already available and can only be meaningful if studied over a period of past times. According to Kothari (2004), descriptive research studies are those studies which are concerned with describing the characteristics of a particular individual. The major purpose of descriptive research is description of the state of affairs as it exists at present.

## 3.3 Population and Sample of the Study

The population of the study focused on all the 11 listed commercial banks at the Nairobi Securities Exchange as at December 2014. Since the population was not large, a census survey was undertaken. Each bank under study was analyzed year by year resulting in 51 points of study. The study focused on a census of listed banks because information on stock returns, dividend payments is only available for listed banks at the Nairobi Securities Exchange.

## 3.4 Data Collection Techniques

Data was obtained from secondary sources; these were the various stock data available from the Nairobi Securities Exchange and which covered a period of five years from 2010-2014 of the 11 listed financial institutions with year 2009 being the base year or year zero for stock prices of 2010. The data set included stock prices and dividends paid from all the listed financial institutions which included the 10 commercial banks and the one mortgage finance company. The yearly financial statements publication of the listed banks was also sourced from the Central bank of Kenya website that provided the total capital to total risk weighted assets ratio, liquidity ratios and profitability figures. Each bank under study was analyzed year by year resulting in 51 points of study. The study employed yearly opening and closing data.

## 3.5 Data Analysis Techniques

The data analysis approach focused on descriptive statistics applying the data collected from the secondary sources at the Nairobi Securities Exchange and Central Bank of Kenya. Pearson product-moment correlation analysis method was also used to establish the relationship between the study variables, specifically to assess both the direction and strength of the relationship between the variables. A positive correlation indicates that as one variable increases, so does the other. A negative correlation indicates that as one variable increases, the other decreases. Multiple regression analyses was used to explore the predictive ability of change in dividend policy on the stock returns measure.

### 3.5.1 Model

From the literature review in chapter two, majority of similar local study results revealed that there is a relationship between dividend decisions and market value among listed banking companies in Kenya. To establish the kind and strength of the relationship, multiple linear regression model was applied on the data that was collected so as to conclusively derive the relationship. The multiple linear regression model equation that was applied to the study was as follows:

$$Y = \beta_0 + \beta_1 X_{1,i,t} + \beta_2 X_{2,i,t} + \beta_3 X_{3,i,t} + \beta_4 X_{4,i,t} + \beta_5 X_{5,i,t} + \beta_6 X_{6,i,t} + \beta_7 X_{7,i,t} + \beta_8 X_{8,i,t} + \varepsilon_{,i,t}$$

*Where:*

**Y**= Stock Returns of bank ***i***

Stock Returns $= \frac{D1}{P} + \frac{P1-P}{P}$

Dividend Yield = $\frac{D1}{P}$

Capital Gain Yield = $\frac{P1-P}{P}$

**$D_1$**= Annual dividend per share

**$P_0$** = Original price of the security

**$P_1$** = Current/selling price of the security

*Independent Variables*

**$X_1$**= Dividend initiation of bank ***i*** in period ***t*** measured by dummy variables of **1**= Dividend initiation and **0** = No dividend initiation,

**$X_2$**= Dividend termination of bank ***i*** in period ***t*** measured by dummy variables of **1**= Dividend termination and **0** = No dividend termination,

**$X_3$**= Mode of dividend payment of bank ***i*** in period ***t*** measured by proportion of cash dividends to total dividends,

$\mathbf{X_4}$= Change in dividend payment type of bank ***i*** in period ***t*** measured by dummy variables of **1**= Constant to variable dividend payment; **2**= Variable to constant dividend payments; and **0**= otherwise,

$\mathbf{X_5}$= Dividend timing of bank ***i*** in period ***t*** measured by proportion of final dividends to total dividends.

*Control Variables*

$\mathbf{X_6}$= Profitability of bank ***i*** measured by profits before taxation in period ***t***,

$\mathbf{X_7}$= Leverage of bank ***i*** measured by liquidity ratio in period ***t,***

$\mathbf{X_8}$= Asset base of bank ***i*** measured by total capital to total risk weighted assets ratio in period ***t.***

$\boldsymbol{\varepsilon}$= Error term,

$\boldsymbol{\beta}$ = the value of **Y** when all of the independent variables $\mathbf{X_1}$ through $\mathbf{X_8}$ are equal to zero,

$\boldsymbol{\beta_1}$ through $\boldsymbol{\beta_8}$ = the estimated regression coefficients,

***t*** = period,

***i*** = listed commercial bank participating in the study.

### 3.5.2 Test of Significance

An analysis of variance was used to test and estimate the hypotheses regarding the population, variance and means. P and F values was used to explain the random variables. T-test was used to investigate the existence of any relationship, F-test was used to test the strength and robustness of the model, Adjusted R-Squared was used to tell how much variance in the Stock returns is explained by the independent variables and VIF was used to test multicollinearity.

# CHAPTER FOUR: DATA ANALYSIS, RESULTS AND DISCUSSION

## 4.1 Introduction

This chapter provides data analysis, findings and interpretation of the study results within the framework of the study objectives and hypotheses. Analysis and interpretation of the results was based on the overall objective of the study which was to determine the effect of dividend policy on stock returns of listed commercial banks at the Nairobi Securities Exchange. The chapter ends with a summary of key results. Regression analysis was conducted to test the hypothesized relationships. Before the regression analysis was done, further key data variable tests and checks were done on the data.

## 4.2 Key Data Variable Tests and Checks

Key data variable tests and checks were done on the study data. This includes reliability tests and preliminary analysis to check suitability of the data for further analysis.

### 4.2.1. Reliability

Reliability is a measure of the degree to which a research instrument yields consistent results or data after repeated trials (Mugenda & Mugenda, 2004). Since the data was obtained from secondary sources of the various stock data available from the Nairobi Securities Exchange of listed commercial banks, in this study, it was deemed to be reliable.

### 4.2.2. Dummy Coding

Linear regression allows the inclusion of categorical independent variableas as dummy variables in the regression model (Kahane, 2008). Whenever a categorical variable with more than two level is included in a multiple regression prediction model, additional steps are needed to ensure that the results are interpretable (Allison, 1999). The steps include recoding the categorical variable into a number of separate, dichotomous variables in what is called dummy coding. A categorical variable with k levels is transformed into k-1 variables each with two levels. In this study, $\mathbf{X_4}$ (Change in dividend payment type) has 3 categories, thus, two dichotomous variables were created (3 – 1 = 2). $\mathbf{X_4}$ was coded as follows: **1**= Constant to variable dividend payment; **2**= Variable to constant dividend payments and **0**= No change in dividend payment type. The two new dichotomous variables were named $\mathbf{X_{4a}}$ (Constant to variable dividend payment) and $\mathbf{X_{4b}}$ (Variable to constant dividend payments). No change in dividend payment type was in the reference category.

### 4.2.3. Preliminary Analysis

Preliminary analysis were performed to ensure no violation of normality and linearity before carrying out further analysis using correlation and regression. Preliminary data screening also indicated that two dichotomous variables were constants, thus not suitable for further analysis. They were therefore excluded from the analysis. These variables were $\mathbf{X_{4a}}$ (Constant to variable dividend payment) and $\mathbf{X_{4b}}$ (Variable to constant dividend payments).

### 4.2.4. Normality Tests

To test whether the variables fit a normal distribution, Kolmogorov-Smirnov and Shapiro-Wilk tests were used. Tests of normality results for dividend initiation, mode of dividend payment, dividend timing, leverage and asset base indicated highly significant values (<0.05), an indication that the data does not fit a normal distribution as shown below.

**Table 4.2.1: Tests of Normality**

**Tests of Normality**

| | Kolmogorov-Smirnov[a] | | | Shapiro-Wilk | | |
|---|---|---|---|---|---|---|
| | Statistic | df | Sig. | Statistic | df | Sig. |
| Stock Returns | .081 | 51 | .200* | .978 | 51 | .462 |
| Dividend Initiation | .448 | 51 | .000 | .572 | 51 | .000 |
| Mode of dividend Payment | .540 | 51 | .000 | .196 | 51 | .000 |
| Dividend timing | .364 | 51 | .000 | .610 | 51 | .000 |
| Profitability | .097 | 51 | .200* | .936 | 51 | .009 |
| Leverage | .132 | 51 | .026 | .907 | 51 | .001 |
| Asset Base | .167 | 51 | .001 | .849 | 51 | .000 |

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

### 4.2.5. Data Transformation

Before transformation, the data was checked to ensure there are no extreme outliers. The non-normal data was transformed using methods suggested by Tabachnick and Fidell (2007) and Howell (2007). The primary attribute for deciding upon a transformation is whether the data is positively skewed (skewed to right, skew > 0) or negatively skewed (skewed to left, skew < 0).The following guidelines in table 4.2.2 was used for data transformation.

**Table 4.2.2.: Data Transformation Method**

| Type of Distribution | Data Transformation Method |
|---|---|
| Moderately positive skewness | Square-Root, NEWX = SQRT(X) |
| Substantially positive skewness | Logarithmic (Log 10), NEWX = LG10(X) |
| Substantially positive skewness (with zero values) | Logarithmic (Log 10), NEWX = LG10(X + C) |
| Moderately negative skewness | Square-Root, NEWX = SQRT(K – X) |
| Substantially negative skewness | Logarithmic (Log 10), NEWX = LG10(K – X) |

C = a constant added to each score so that the smallest score is 1. K = a constant from which each score is subtracted so that the smallest score is 1; usually equal to the largest score + 1.

## 4.3 Descriptive Statistics

Descriptive statistics was done using tabulation, cross tabulation, means and standard deviations for the dependent and independent variables.

### 4.3.1. Dividend Initiation

Dividend initiation was a dichotomous variable taking two values (1=Dividend initiation and 0= No dividend initiation). Among all the banks under study, only three banks had dividend initiation for the period of study (2010 to 2014). This includes CFC Stanbic (2010 & 2012), I&M (2013) and NBK (2010) as shown in Table 4.3.1 below. For I&M bank it was first listed in 2013.

**Table 4.3.1: Dividend Initiation**

| Name of Bank | Dividend Initiation – 2010 to 2014 | | | | |
|---|---|---|---|---|---|
| | 2010 | 2011 | 2012 | 2013 | 2014 |
| Barclays | 0 | 0 | 0 | 0 | 0 |
| CFC Stanbic | 1 | 0 | 1 | 0 | 0 |
| Co-op Bank | 0 | 0 | 0 | 0 | 0 |
| DTB | 0 | 0 | 0 | 0 | 0 |
| Equity | 0 | 0 | 0 | 0 | 0 |
| HF | 0 | 0 | 0 | 0 | 0 |
| I&M | 0 | 0 | 0 | 1 | 0 |
| KCB | 0 | 0 | 0 | 0 | 0 |
| NBK | 1 | 0 | 0 | 0 | 0 |
| NIC | 0 | 0 | 0 | 0 | 0 |
| Standard Chartered | 0 | 0 | 0 | 0 | 0 |

1= dividend initiation, 0=No dividend initiation

### 4.3.2. Dividend Termination

Dividend termination was a dichotomous variable taking two values (1=Dividend termination and 0= No dividend termination). During the period of the study, two banks had a dividend termination. This included CFC Stanbic (2011) and NBK (2014) as shown in Table 4.3.2 below.

**Table 4.3.2: Dividend Termination**

| Name of Bank | Dividend Termination- 2010 to 2014 | | | | |
|---|---|---|---|---|---|
| | 2010 | 2011 | 2012 | 2013 | 2014 |
| Barclays | 0 | 0 | 0 | 0 | 0 |
| CFC Stanbic | 0 | 1 | 0 | 0 | 0 |
| Co-op Bank | 0 | 0 | 0 | 0 | 0 |
| DTB | 0 | 0 | 0 | 0 | 0 |
| Equity | 0 | 0 | 0 | 0 | 0 |
| HF | 0 | 0 | 0 | 0 | 0 |
| I&M | 0 | 0 | 0 | 0 | 0 |
| KCB | 0 | 0 | 0 | 0 | 0 |
| NBK | 0 | 0 | 0 | 0 | 1 |
| NIC | 0 | 0 | 0 | 0 | 0 |
| Standard Chartered | 0 | 0 | 0 | 0 | 0 |

1= Dividend termination, 0=No dividend termination

### 4.3.3. Mode of Dividend Payment

Mode of dividend payment was measured by proportion of cash dividends to total dividends paid by the banks where 1 shows that cash dividends was the same as total dividends and 0 means there was no cash dividends payments. From the study two banks did not pay cash dividends during the period of the study that included; CFC Stanbic (2011) and NBK (2014). NBK paid stock dividends in the year 2014 instead of cash dividends while CFC Stanbic in the year 2011 did not pay dividends as shown in table 4.3.3 below.

**Table 4.3.3: Mode of Dividend Payment**

| Name of Bank | Mode of dividend payment -2010 to 2014 | | | | |
|---|---|---|---|---|---|
| | 2010 | 2011 | 2012 | 2013 | 2014 |
| Barclays | 1 | 1 | 1 | 1 | 1 |
| CFC Stanbic | 1 | 0 | 1 | 1 | 1 |
| Co-op Bank | 1 | 1 | 1 | 1 | 1 |
| DTB | 1 | 1 | 1 | 1 | 1 |
| Equity | 1 | 1 | 1 | 1 | 1 |
| HF | 1 | 1 | 1 | 1 | 1 |
| I&M | 0 | 0 | 0 | 1 | 1 |
| KCB | 1 | 1 | 1 | 1 | 1 |
| NBK | 1 | 1 | 1 | 1 | 0 |
| NIC | 1 | 1 | 1 | 1 | 1 |
| Standard Chartered | 1 | 1 | 1 | 1 | 1 |

### 4.3.4. Dividend Timing

Dividend timing was measured by proportion of final dividends to total dividends. During the period under study it was noted that a majority of banks paid only final dividends while a few of them paid both final and interim dividends which included; Barclays (with the exception of 2014) , CFC Stanbic, Housing finance and NIC as shown in Table 4.3.4 below.

**Table 4.3.4: Dividend Timing**

| Name of Bank | Dividend timing- 2010 to 2014 | | | | |
|---|---|---|---|---|---|
| | 2010 | 2011 | 2012 | 2013 | 2014 |
| Barclays | 3.46 | 0.87 | 0.7 | 0.71 | 1 |
| CFC Stanbic | 0.34 | 0 | 0.68 | 0.32 | 0.87 |
| Co-op Bank | 1 | 1 | 1 | 1 | 1 |
| DTB | 1 | 1 | 1 | 1 | 1 |
| Equity | 1.6 | 1.25 | 1 | 1 | 1 |
| HF | 0.5 | 0.58 | 0.5 | 0.57 | 0.43 |
| I&M | 0 | 0 | 0 | 0 | 1 |
| KCB | 1 | 1 | 1 | 1 | 1 |
| NBK | 1 | 1 | 1 | 1 | 1 |
| NIC | 0.5 | 0.5 | 1 | 0.75 | 1 |
| Standard Chartered | 0.63 | 1 | 1 | 1 | 0.74 |

### 4.3.5. Profitability

The study attempts to understand the profitability of the banks listed at the Nairobi Security Exchange. Profitability was measured by profits before taxation of the participating banks under study. The participating banks had a steady increase in the profitability levels over the years with the exception of Barclays (between 2010 & 2012 and 2013 & 2014) and NBK (between 2011 & 2012 and 2013 & 2014) which had fluctuating profit levels as shown in Table 4.3.5 below.

**Table 4.3.5: Profitability**

| Name of Bank | Profitability- Profits before taxation " Millions" 2010 to 2014 | | | | |
|---|---|---|---|---|---|
| | 2010 | 2011 | 2012 | 2013 | 2014 |
| Barclays | 13553 | 12071 | 13020 | 11134 | 12293 |
| CFC Stanbic | 2104 | 2799 | 4588 | 7005 | 7391 |
| Co-op Bank | 5771 | 6366 | 9984 | 10872 | 10916 |
| DTB | 3463 | 4307 | 6028 | 7235 | 8521 |
| Equity | 9045 | 12834 | 17420 | 19004 | 22364 |
| HF | 561 | 976 | 908 | 1480 | 1401 |
| I&M | 0 | 0 | 0 | 0 | 7749 |
| KCB | 9748 | 15129 | 17208 | 20124 | 23787 |
| NBK | 2698 | 2444 | 1157 | 1812 | 1303 |
| NIC | 2608 | 3605 | 4518 | 5010 | 6231 |
| Standard Chartered | 7682 | 8255 | 11566 | 13355 | 14346 |

### 4.3.6. Leverage

Leverage was measured by liquidity ratios of the banks participating under the study. The minimum CBK regulatory liquidity ratio requirements is 20%. From the banks under study, none of the banks was below this statutory requirements as at 2014, however only three banks were above 40% which included; Barclays, CFC Stanbic and Standard Chartered as shown in table 4.3.6 below.

**Table 4.3.6: Leverage**

| Name of Bank | Leverage -Liquidity Ratio- 2010 to 2015 | | | | |
|---|---|---|---|---|---|
| | 2010 | 2011 | 2012 | 2013 | 2014 |
| Barclays | 0.54 | 0.43 | 0.47 | 0.42 | 0.44 |
| CFC Stanbic | 0.37 | 0.38 | 0.46 | 0.68 | 0.41 |
| Co-op Bank | 0.26 | 0.27 | 0.36 | 0.33 | 0.34 |
| DTB | 0.23 | 0.34 | 0.38 | 0.33 | 0.36 |
| Equity | 0.4 | 0.37 | 0.46 | 0.34 | 0.3 |
| HF | 0.25 | 0.29 | 0.37 | 0.33 | 0.31 |
| I&M | 0 | 0 | 0 | 0 | 0.27 |
| KCB | 0.31 | 0.31 | 0.36 | 0.33 | 0.31 |
| NBK | 0.41 | 0.34 | 0.3 | 0.42 | 0.32 |
| NIC | 0.34 | 0.27 | 0.35 | 0.29 | 0.33 |
| Standard Chartered | 0.55 | 0.34 | 0.39 | 0.38 | 0.46 |

### 4.3.7. Asset Base

Asset base was measured by total capital to total risk weighted assets ratio of the banks participating in the study. The Asset base of bank measures the strength of a bank and the minimum CBK regulatory requirements is 10.5% and from the banks under study all the banks were above the minimum regulatory requirements as at 2014. However only four banks were above the 20% mark that included CFC Stanbic, Co-op bank, KCB and Standard Chartered as shown in table 4.3.7 below.

**Table 4.3.7: Asset Base**

| Name of Bank | Asset base -Total Capital to total risk weighted assets Ratio- 2010-2012 | | | | |
|---|---|---|---|---|---|
| | 2010 | 2011 | 2012 | 2013 | 2014 |
| Barclays | 0.32 | 0.28 | 0.26 | 0.17 | 0.19 |
| CFC Stanbic | 0.16 | 0.19 | 0.26 | 0.21 | 0.22 |
| Co-op Bank | 0.17 | 0.16 | 0.24 | 0.21 | 0.22 |
| DTB | 0.18 | 0.17 | 0.2 | 0.21 | 0.19 |
| Equity | 0.28 | 0.22 | 0.3 | 0.24 | 0.18 |
| HF | 0.49 | 0.34 | 0.3 | 0.22 | 0.15 |
| I&M | 0 | 0 | 0 | 0 | 0.19 |
| KCB | 0.23 | 0.21 | 0.23 | 0.23 | 0.21 |
| NBK | 0.37 | 0.29 | 0.28 | 0.24 | 0.14 |
| NIC | 0.16 | 0.16 | 0.16 | 0.15 | 0.21 |
| Standard Chartered | 0.14 | 0.14 | 0.18 | 0.21 | 0.2 |

### 4.3.8. Stock Returns

The stock returns was computed as a combination of dividend yield and capital gain. Based on the data available at NSE for the period under study (2010 to 2014), a number of banks had negative returns as shown in Table 4.3.8 below. These included Barclays (2011 and 2014), CFC Stanbic (2011), Co-op bank (2011), DTB (2011), Equity (2011), Housing finance (2011), KCB (2011), NBK (2011, 2012 &2014) and standard chartered (2011) as shown in table 4.3.8 below.

**Table 4.3.8: Stock Returns**

| Name of Bank | Stock Returns 2010-2015 | | | | |
|---|---|---|---|---|---|
| | 2010 | 2011 | 2012 | 2013 | 2014 |
| Barclays | 0.42 | -0.77 | 0.28 | 0.17 | -0.01 |
| CFC Stanbic | 0.73 | -0.47 | 0.07 | 1.07 | 0.67 |
| Co-op Bank | 1.17 | -0.33 | 0.07 | 0.44 | 0.16 |
| DTB | 0.95 | -0.32 | 0.29 | 0.66 | 0.26 |
| Equity | 0.9 | -0.36 | 0.52 | 0.37 | 0.67 |
| HF | 0.51 | -0.49 | 0.36 | 1.12 | 0.52 |
| I&M | 0 | 0 | 0 | 0 | 0.44 |
| KCB | 0.12 | -0.14 | 0.88 | 0.56 | 0.33 |
| NBK | 0.01 | -0.47 | -0.14 | 0.57 | -0.07 |
| NIC | 0.49 | -0.47 | 0.64 | 0.52 | 0.03 |
| Standard Chartered | 0.69 | -0.34 | 0.55 | 0.27 | 0.24 |

### 4.3.9. Means and Standard Deviations

Table 4.3.9 shows the descriptive statistics including means and standard deviations of all the validated variables. The results of the descriptive statistics for stock returns ranged between -.77 and 1.17 (M=.2812, SD=.4605), dividend initiation ranged between 0 and 1 (M=.08, SD=.272), mode of dividend payment ranged between 0 and 1 (M=.96, SD=.196), dividend timing ranged between .00 and 3.46 (M=.9118, SD=.4525), profitability ranged between 561 and 23787 (M=8346.61, SD=5996.227), leverage ranged between 0 and 1 (M=.36, SD=.082) and asset base ranged between .14 and .49 (M=.2225, SD=.07025).

Standard deviation shows the variation in the data. The highest value standard deviation is 5996.227 and a variance of 35954732 which shows that the great variation in the stock returns of listed commercial banks at the Nairobi Securities Exchange is due to profitability while the lowest standard deviation is.07025. The asset base has the minimum variance i.e. 0.005 which shows that asset base causes minimum variation in the value of stock returns listed commercial banks at the Nairobi Securities Exchange.

**Table 4.3.9: Mean and Standard Deviation**

| Descriptive Statistics | | | | | | |
|---|---|---|---|---|---|---|
| Variables | Statistics | | | | | |
| | N | Min | Max | Mean | SD | Var |
| Stock Returns | 51 | -0.77 | 1.17 | 0.2812 | 0.4605 | 0.212 |
| Dividend Initiation | 51 | 0 | 1 | 0.08 | 0.272 | 0.074 |
| Mode of dividend payment | 51 | 0 | 1 | 0.96 | 0.196 | 0.038 |
| Dividend timing | 51 | 0 | 3.46 | 0.9118 | 0.4525 | 0.205 |
| Profitability | 51 | 561 | 23787 | 8346 | 5996 | 35954732 |
| Leverage | 51 | 0 | 1 | 0.36 | 0.082 | 0.007 |
| Asset base | 51 | 0.14 | 0.49 | 0.2225 | 0.07025 | 0.005 |

## 4.4 Correlation Analysis

Pearson Correlation was used to explore relationships between the study variables, specifically to assess both the direction and strength of the relationship between the variables. A positive correlation indicates that as one variable increases, so does the other. A negative correlation indicates that as one variable increases, the other decreases. In addition, the correlation matrix helps to determine whether multicollinearity exists between the independent variables before carrying further analysis using multiple regression. Multicollinearity exists when independent variables are highly correlated (r=0.7 and above). Multicollinearity leads to a poor regression model. A recommended way to deal with multicollinearity is to omit one the variables that are highly correlated (Allison, 1999).

**Table 4.4.1: Pearson Product-Moment Correlation between Variables**

Pearson Product-Moment Correlation between variables

| **Scale** | **1** | **2** | **3** | **4** | **5** | **6** | **7** |
|---|---|---|---|---|---|---|---|
| 1. Stock returns | 1 | .020 | .244 | .039 | .089 | .135 | -.131 |
| 2. Dividend initiation | | 1 | .059 | -.102 | -.200 | .046 | .094 |
| 3. Mode of dividend payment | | | 1 | .186 | .214 | .036 | .167 |
| 4. Dividend timing | | | | 1 | .339* | .132 | .151 |
| 5. Profitability | | | | | 1 | .170 | -.091 |
| 6. Leverage | | | | | | 1 | .050 |
| 7. Asset base | | | | | | | 1 |

*. Correlation is significant at the 0.05 level (2-tailed).

Results of Pearson correlation analysis are shown in table 4.4.1 above. There was a very weak positive correlation between stock returns and dividend initiation which was not

statistically significant, ($r$ = .020, p=0.889). The relationship between stock returns and mode of dividend payment was positive but not statistically significant ($r$=.244, p=0.084). The relationship between stock returns and mode of dividend timing was positive but not statistically significant ($r$=.039, p=0.788). Dividend termination and dividend initiation were highly correlated which would cause multicollinearity problem if entered together in a multiple regression model. In this study, dividend termination was dropped from the analysis. The correlation between mode of dividend payment and dividend timing was positive and statistically insignificant as shown in table 4.4.1 above ($r$ =.186, p=.192). Similarly the relationship between leverage and asset base was positive and statistically insignificant ($r$ =.050, p=0.727). The correlation between dividend timing and profitability was strong, positive and statistically significant as shown in table 4.4.1 above ($r$ =.339, p=.015). The relationship between mode of dividend payment and leverage was positive and statistically insignificant, ($r$ =.036, p=.799). The correlation between mode of dividend payment and asset base was positive and statistically moderately insignificant as shown in table 4.4.1 above ($r$ =.167, p=.241).

## 4.5 Exploring the Relationship between Study Variables

The objective of this study was to determine the effect of change in dividend policy on stock returns of commercial banks listed at the Nairobi Securities Exchange. To answer the research question “What is the effect of change in dividend policy on stock returns of listed commercial banks”, a regression analysis was conducted at 95% confidence level.

### 4.5.1. The Effect of Change in Dividend Policy on Stock Returns

Multiple regression analysis was used to determine the effect of change in dividend policy on stock returns on commercial banks listed at the Nairobi Securities Exchage.

### 4.5.2. Multiple Regression Analysis

The results of regression analysis are shown in table 4.5.3 below. Collinearity statistics (Tolerance and VIF) were all within accepted limits (VIF<10 and Tolerance>0.2) and therefore the assumption of multicollinearity was deemed to have been met. This was an indication that the variables were not highly correlated and therefore they were suitable for analysis using multiple regression.

#### 4.5.2.1. Multiple Regression Analysis

The multiple regression model produced $R^2$ =.108, F (6, 44) = .890, p>0.05. The results of regression analysis in tables 4.5.1 below indicates that the predictors explained 10.8% of the variance in stock returns ($R^2$ =-0.108) of commercial banks listed in Nairobi Securities Exchange. The overall model reveals a statistically insignificant relationship between stock returns and the predictors (asset base, profitability, dividend initiation, leverage, dividend timing and mode of dividend payment). The correlation coefficient (R) of 0.329 is an indication that there is a positive and moderate relationship between stock returns and the predictors.

**Table 4.5.1 Regression Model Summary Output**

Regression model summary output (dependent variable: stock returns)

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .329[a] | .108 | -.013 | .46357 |

a. Predictors: (Constant), asset base, profitability, dividend initiation, leverage, dividend timing, mode of dividend payment

The ANOVA table 4.5.2 below provides the results of a test of significance for R and $R^2$ using the F-statistic. In this analysis, the *p*-value is well greater than 0.05 (p>0.05) and

therefore we conclude that R and $R^2$ between recovery satisfaction and perceived justice is not statistically significant.

**Table 4.5.2: Linear Regression ANOVA Output**

Linear regression ANOVA output (dependent variable: Stock Returns)

| Model | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|
| Regression | 1.148 | 6 | .191 | .890 | .510[b] |
| Residual | 9.455 | 44 | .215 | | |
| Total | 10.603 | 50 | | | |

a. Dependent Variable: Stock returns
b. Predictors: (Constant), Asset base, leverage, dividend initiation, mode of dividend payment, dividend timing, Profitability.

The below table 4.5.3 provides information about model regression coefficients, useful for understanding the regression equation. Under the column marked unstandardized coefficients, the numerical value of the first row labelled (constant) is the value of the intercept (α) in the regression equation. The numerical value of the second, third, fourth, fifth and sixth rows (in this case representing the independent variables) are the values of the regression coefficients. Based on this results, dividend initiation has a positive and statistically insignificant relationship with stock returns ($\beta = .024$, $t = 0.097$, $p>.05$), dividend timing has a positive and statistically insignificant relationship with stock returns ($\beta = .003$, $t = 0.016$, $p>.05$). Mode of dividend payment has a positive and statistically insignificant relationship with stock returns ($\beta = .635$, $t = 1.805$, $p>.05$). Similarly, leverage has a positive and statistically insignificant relationship with stock returns ($\beta = .753$, $t = 0.924$, $p>.05$) as shown in table 4.5.3 below. The fact that the regression coefficient is positive means that increase in mode of dividend payment corresponds to increase in stock returns. Lilian, Mungai and Eddie (2014), concluded that

the dividend payout ratio adopted has a significant impact on market value of banks and that it increases or decreases as the payout proportion changes.

**Table 4.5.3 Model Regression Coefficients**

Model regression coefficients (dependent variable: Stock returns)

| Coefficients[a] | | | | | | | |
|---|---|---|---|---|---|---|---|
| Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. | Collinearity Statistics | |
| | B | Std. Error | Beta | | | Tolerance | VIF |
| (Constant) | -0.333 | 0.455 | | -0.732 | 0.468 | | |
| Dividend initiation | 0.024 | 0.25 | 0.014 | 0.097 | 0.923 | 0.936 | 1.069 |
| Mode of dividend payment | 0.635 | 0.352 | 0.271 | 1.805 | 0.078 | 0.902 | 1.109 |
| Dividend timing | 0.003 | 0.158 | 0.003 | 0.016 | 0.987 | 0.837 | 1.195 |
| Profitability | -0.00000055 | 0 | -0.007 | -0.045 | 0.965 | 0.788 | 1.27 |
| Leverage | 0.753 | 0.816 | 0.135 | 0.924 | 0.361 | 0.955 | 1.047 |
| Asset base | -1.215 | 0.973 | -0.185 | -1.248 | 0.219 | 0.919 | 1.088 |
| a. Dependent Variable: Stock Returns | | | | | | | |

The regression coefficient (β) of profitability was -.00000055 ($p$=0.965) and regression coefficient (β) of asset base was -1.215 ($p$=0.219) as shown in table 4.5.3 above. This is an indication that the variables were not significant predictors of stock returns. Furthermore, the relationship between stock returns and asset base is negative.

The values in the coefficients table under the column standardized coefficient and the sub-column Beta is the regression coefficient when the dependent variable and independent variables are converted to a z-score. In this analysis, this standardized regression coefficient allows us to compare the relative strength of each independent variable's relationship with the dependent variable. Based on these results, mode of dividend payment (0.271) has the highest relationship with stock returns compared to dividend initiation

(0.014), dividend timing (0.003), profitability (-0.007), Leverage (0.135) and asset base (-0.185).

Recalling the prediction equation:

$$Y = \beta_0 + \beta_1 X_{1,i,t} + \beta_3 X_{3,i,t} + \beta_5 X_{5,i,t} + \beta_6 X_{6,i,t} + \beta_7 X_{7,i,t} + \beta_8 X_{8,i,t} + \varepsilon_{,i,t}$$

*Where:*

**Y**= Stock Returns; $\mathbf{X_1}$= Dividend initiation***;*** $\mathbf{X_3}$= Mode of dividend payment***;*** $\mathbf{X_5}$= Dividend timing; X6= Profitability; $\mathbf{X_7}$= Leverage; $\mathbf{X_8}$= Asset base; $\boldsymbol{\varepsilon}$= Error term and $\beta_i$ the values for the regression weights.

$$Y = -.333 + 0.024\,X_1 + 0.635X_3 - 0.003X_5 - 0.00000055X_6 + 0.753X_7 - 1.215X_8 + \varepsilon$$

## 4.6 Discussion of Findings

One question that has bothered most finance managers over several decades is the decision on whether to pay or not to pay dividends. The study revealed that the mode of dividend payment has the highest and insignificant positive relationship with stock returns compared to dividend initiation, dividend timing and leverage. Based on this study results, mode of dividend payment, dividend initiation, dividend timing and leverage has a positive and statistically insignificant relationship with stock returns. The fact that the regression coefficients are positive means that increase in one variable corresponds to increase in stock returns. Lilian, Mungai and Eddie (2014), concluded that the dividend payout ratio adopted has a significant impact on market value of banks and that it increases or decreases as the payout proportion changes. The implication is that change in mode of dividend payments affects the movements of stock returns of commercial banks listed at the Nairobi securities exchange. Increase in cash dividend payments increases the stock prices of the

securities of listed commercial banks and therefore dividend decisions of listed commercial banks at the Nairobi Securities Exchange affects the stock returns, hence mode of dividend payment decisions are relevant to an investor in determining which of the listed banks to invest in. Dividend initiation and dividend timing decision are equally insignificantly importantly to an investor in making investment decisions as to which bank to invest in. Leverage of a listed commercial bank positively and insignificantly affects the stock returns and for this reason it is clear that an investor is not concerned by how much liquidity a bank holds but rather how much cash dividends the bank declares.

Profitability and asset base of a listed commercial bank negatively affects the stock returns of listed commercial banks and for this reason it is clear that an investor will not take into consideration the profits earned by the bank as well as its strength measured by the asset base when making investments decisions in the banking industry. The study therefore concludes that there is an insignificant and positive relationship between dividend policy and stock returns among listed commercial banks at the Nairobi Securities Exchange. The study recommends that listed commercials banks should consider the mode of dividend payment, dividend initiation, dividend timing and leverage when formulating dividend policies but with more emphasizes on the mode of dividend payment.

# CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

## 5.1. Introduction

This chapter addresses the findings of the study in relation to the objectives outlined in chapter one. It also highlights the limitations of the study and suggestions for further research.

## 5.2. Summary of Findings

The study examined the effect of dividend policy on stock returns of commercial banks listed at the Nairobi Securities Exchange for the period between 2010 and 2014. A regression model was used with the dependent variable being stock returns and the independent variables being dividend initiation, dividend termination, mode of dividend payment, change in dividend payment type and dividend timing. The study also had control variables of profitability, leverage and asset base as they were estimated to have an effect on the stock returns even though not significant.

The descriptive statistics including means and standard deviations of all the validated variables were used in the study. The mean value of profitability variable is the highest while the lowest mean was that of dividend initiation. The highest value standard deviation and variance is profitability which shows that it has the greatest variation in the stock returns of listed commercial banks at the Nairobi Securities Exchange while the lowest standard deviation and variance is asset base which shows that it causes minimum variation in the value of stock returns listed commercial banks at the Nairobi Securities Exchange.

For the correlation statistics, the mode of dividend payment has the highest and insignificant positive relationship with stock returns compared to dividend initiation, dividend timing and leverage. Based on this results, mode of dividend payment, dividend initiation, dividend timing and leverage has a positive and statistically insignificant relationship with stock returns. The fact that the regression coefficients are positive means that increase in one variable corresponds to increase in stock returns.

The implication is that mode of dividend payments, dividend initiation and dividend timing affects the movements of stock returns. Therefore dividend decisions of commercial banks at the Nairobi Securities Exchange affects the stock returns, hence dividend decisions are relevant to an investor in determining which of the listed banks to invest in but not very important. Leverage of a listed commercial bank positively and insignificantly affects the stock returns and for this reason it is clear that an investor is not highly concerned by how much liquidity a bank holds but rather how much cash dividends the bank declares. Profitability and asset base of a listed commercial bank negatively affects the stock returns of listed commercial banks and for this reason it is presumed that an investor will not take profitability and asset base into consideration when making investment decisions to invest on bank's stocks.

## 5.3. Conclusion and Recommendations

The study revealed that there is a relationship between dividend policy and stock returns among listed commercial banks at the Nairobi Securities Exchange even though not significant. This implies that listed commercial bank investors values dividend decisions

and with moderate emphasis on the mode of dividend payments in relation to cash dividend payments. The study further concluded that there is an insignificant and positive relationship between dividend initiation and stock returns, similarly dividend timing decisions has insignificant and positive relationship on the stock returns of listed commercial banks at the Nairobi Securities Exchange. The study also revealed that leverage of a listed commercial bank positively and insignificantly affect the stock returns.

The study also revealed a positive and insignificant relationship between the leverage of the listed commercial banks and the stock returns. This could have been attributed to the fact that the liquidity of a bank is mainly composed of the depositor's liability and that the liquidity reserve rations imposed or controlled by the regulator, Central Bank of Kenya that currently stands at 20%.

The research also revealed that profitability that determines the ability of a listed commercial bank to declare dividends negatively affects the stock returns. Similarly the research concluded that there is an insignificant and negative relationship between the asset base of the listed commercial banks and the stock returns. The investors are not concerned with the strength of the bank but rather the ability to declare and pay cash dividends.

The study recommends that listed commercials banks should consider the mode of dividend payment, dividend initiation, dividend timing and leverage when formulating dividend policies but moderately emphasize on the mode of dividend payment. The research further recommends that listed commercial banks should consider proportion of cash dividends to the total dividends when formulating dividend payout policy.

Since the leverage of a listed commercial bank has an insignificant and positive relationship with the stock returns, the listed commercial banks should consider utilizing the retained earnings as a means to finance the investment needs of the bank while at the same time ensuring the cash dividend payments do not affect the liquidity position of the bank taking into consideration that cash dividend payments which measures the mode of dividend payment has the highest positive relationship with the stock returns.

## 5.4. Limitations of the Study

The study limited itself to the banking sector in Kenya and narrowed down to listed banks at the Nairobi Securities Exchange and relied on the secondary data since the stock prices of banks is only available for listed commercial banks.

The study also dropped the dividend termination as well as the change in dividend payment type as the dummy variables measures. The dividend termination showed a very high correlation with dividend initiation and hence had to be dropped while the change in dividend payment type's two dichotomous dummy variables were constant and therefore were excluded from the analysis hence reducing the number of independent variables to three.

## 5.5. Suggestions for Further Research

Since the study was based on listed commercial banks only, future research should involve all companies in the financial industry to include listed insurance companies as well. The same study variables period could also be enlarged to cover more than five years. Alternative measures of dividend termination and change in dividend payment type may

be considered so as to investigate further their effect on stock returns of listed banks or the financial industry as a whole.

Further research could be done by looking at half yearly results as opposed to yearly results and stock prices. This could assist to gauge the effect on stock returns of those firms that adopt interim dividend payments policy within the financial sector.

Additional or different control variables may also be used that is specific to the financial industry as a whole and determine if there is a further significance and positive relationship with the stock returns.

A focused research study on the research question on all listed financial institutions at the Nairobi Securities Exchange that covers insurance companies has not been done and future researchers should focus on this kind of study.

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# APPENDICES

## Appendix 1: List of Listed Commercial Banks

The listed banks include;

Barclays Bank Ltd,

CFC Stanbic Holdings Ltd,

Co-operative Bank of Kenya Ltd,

Diamond Trust Bank Kenya Ltd,

Equity Bank Ltd,

Housing Finance Co Ltd,

I&M Holdings Ltd,

Kenya Commercial Bank Ltd,

National Bank of Kenya Ltd,

NIC Bank Ltd,

Standard Chartered Bank Ltd.

*Source: Nairobi Securities Exchange website*

## Appendix 2: Study Data Variable Points

| ID | Banks in ***period t*** | Stock Returns | Dividend initiation | Mode of dividend payment | Dividend timing | Profitability | Leverage | Asset Base |
|---|---|---|---|---|---|---|---|---|
| 1 | Barclays10 | 0.42 | 0.00 | 1.00 | 3.46 | 13,553 | 0.54 | 0.32 |
| 2 | Barclays11 | -0.77 | 0.00 | 1.00 | 0.87 | 12,071 | 0.43 | 0.28 |
| 3 | Barclays12 | 0.28 | 0.00 | 1.00 | 0.70 | 13,020 | 0.47 | 0.26 |
| 4 | Barclays13 | 0.17 | 0.00 | 1.00 | 0.71 | 11,134 | 0.42 | 0.17 |
| 5 | Barclays14 | -0.01 | 0.00 | 1.00 | 1.00 | 12,293 | 0.44 | 0.19 |
| 6 | CFC Stanbic10 | 0.73 | 1.00 | 1.00 | 0.34 | 2,104 | 0.37 | 0.16 |
| 7 | CFC Stanbic11 | -0.47 | 0.00 | 0.00 | 0.00 | 2,799 | 0.38 | 0.19 |
| 8 | CFC Stanbic12 | 0.07 | 1.00 | 1.00 | 0.68 | 4,588 | 0.46 | 0.26 |
| 9 | CFC Stanbic13 | 1.07 | 0.00 | 1.00 | 0.32 | 7,005 | 0.68 | 0.21 |
| 10 | CFC Stanbic14 | 0.67 | 0.00 | 1.00 | 0.87 | 7,391 | 0.41 | 0.22 |
| 11 | Co-op Bank10 | 1.17 | 0.00 | 1.00 | 1.00 | 5,771 | 0.26 | 0.17 |
| 12 | Co-op Bank11 | -0.33 | 0.00 | 1.00 | 1.00 | 6,366 | 0.27 | 0.16 |
| 13 | Co-op Bank12 | 0.07 | 0.00 | 1.00 | 1.00 | 9,984 | 0.36 | 0.24 |
| 14 | Co-op Bank13 | 0.44 | 0.00 | 1.00 | 1.00 | 10,872 | 0.33 | 0.21 |
| 15 | Co-op Bank14 | 0.16 | 0.00 | 1.00 | 1.00 | 10,916 | 0.34 | 0.22 |
| 16 | DTB10 | 0.95 | 0.00 | 1.00 | 1.00 | 3,463 | 0.23 | 0.18 |
| 17 | DTB11 | -0.32 | 0.00 | 1.00 | 1.00 | 4,307 | 0.34 | 0.17 |
| 18 | DTB12 | 0.29 | 0.00 | 1.00 | 1.00 | 6,028 | 0.38 | 0.2 |
| 19 | DTB13 | 0.66 | 0.00 | 1.00 | 1.00 | 7,235 | 0.33 | 0.21 |
| 20 | DTB14 | 0.26 | 0.00 | 1.00 | 1.00 | 8,521 | 0.36 | 0.19 |
| 21 | Equity10 | 0.90 | 0.00 | 1.00 | 1.60 | 9,045 | 0.4 | 0.28 |
| 22 | Equity11 | -0.36 | 0.00 | 1.00 | 1.25 | 12,834 | 0.37 | 0.22 |
| 23 | Equity12 | 0.52 | 0.00 | 1.00 | 1.00 | 17,420 | 0.46 | 0.3 |
| 24 | Equity13 | 0.37 | 0.00 | 1.00 | 1.00 | 19,004 | 0.34 | 0.24 |
| 25 | Equity14 | 0.67 | 0.00 | 1.00 | 1.00 | 22,364 | 0.3 | 0.18 |
| 26 | HF10 | 0.51 | 0.00 | 1.00 | 0.50 | 561 | 0.25 | 0.49 |
| 27 | HF11 | -0.49 | 0.00 | 1.00 | 0.58 | 976 | 0.29 | 0.43 |
| 28 | HF12 | 0.36 | 0.00 | 1.00 | 0.50 | 908 | 0.37 | 0.3 |
| 29 | HF13 | 1.12 | 0.00 | 1.00 | 0.57 | 1,408 | 0.33 | 0.22 |
| 30 | HF14 | 0.52 | 0.00 | 1.00 | 0.43 | 1,401 | 0.31 | 0.15 |
| 31 | I&M14 | 0.44 | 1.00 | 1.00 | 1.00 | 7,749 | 0.27 | 0.19 |
| 32 | KCB10 | 0.12 | 0.00 | 1.00 | 1.00 | 9,748 | 0.31 | 0.23 |
| 33 | KCB11 | -0.14 | 0.00 | 1.00 | 1.00 | 15,129 | 0.31 | 0.21 |
| 34 | KCB12 | 0.88 | 0.00 | 1.00 | 1.00 | 17,208 | 0.36 | 0.23 |
| 35 | KCB13 | 0.56 | 0.00 | 1.00 | 1.00 | 20,124 | 0.33 | 0.23 |
| 36 | KCB14 | 0.33 | 0.00 | 1.00 | 1.00 | 23,787 | 0.31 | 0.21 |
| 37 | NBK10 | 0.01 | 1.00 | 1.00 | 1.00 | 2,698 | 0.41 | 0.37 |
| 38 | NBK11 | -0.47 | 0.00 | 1.00 | 1.00 | 2,444 | 0.34 | 0.29 |
| 39 | NBK12 | -0.14 | 0.00 | 1.00 | 1.00 | 1,157 | 0.3 | 0.28 |
| 40 | NBK13 | 0.57 | 0.00 | 1.00 | 1.00 | 1,812 | 0.42 | 0.24 |
| 41 | NBK14 | -0.07 | 0.00 | 0.00 | 1.00 | 1,303 | 0.32 | 0.14 |
| 42 | NIC10 | 0.49 | 0.00 | 1.00 | 0.50 | 2,608 | 0.34 | 0.16 |
| 43 | NIC11 | -0.47 | 0.00 | 1.00 | 0.50 | 3,605 | 0.27 | 0.16 |
| 44 | NIC12 | 0.64 | 0.00 | 1.00 | 1.00 | 4,518 | 0.35 | 0.16 |
| 45 | NIC13 | 0.52 | 0.00 | 1.00 | 0.75 | 5,010 | 0.29 | 0.15 |
| 46 | NIC14 | 0.03 | 0.00 | 1.00 | 1.00 | 6,231 | 0.33 | 0.21 |
| 47 | Stanchart10 | 0.69 | 0.00 | 1.00 | 0.63 | 7,682 | 0.55 | 0.14 |
| 48 | Stanchart11 | -0.34 | 0.00 | 1.00 | 1.00 | 8,255 | 0.34 | 0.14 |
| 49 | Stanchart12 | 0.55 | 0.00 | 1.00 | 1.00 | 11,566 | 0.39 | 0.18 |
| 50 | Stanchart13 | 0.27 | 0.00 | 1.00 | 1.00 | 13,355 | 0.38 | 0.21 |
| 51 | Stanchart14 | 0.24 | 0.00 | 1.00 | 0.74 | 14,346 | 0.46 | 0.20 |