THE RELATIONSHIP BETWEEN CAPITAL MARKET DEVELOPMENT AND ECONOMIC GROWTH IN KENYA

BY

JAMES MOGAKA OMOKE

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DECLARATION

This research is my original work and has not been submitted for a degree in any other university.

Signed………………………………….………Date………………………

James M. Omoke

D61/P/7430/2002

This project has been submitted for examination with my approval as the University supervisor

Signed………………………………….………Date………………………

Mr. Joseph Barasa

Lecturer, Department of Accounting and Finance

University of Nairobi

DEDICATION

To my lovely parents,

Papa Samuel Omoke Sirimani

and

Mama Rebeca Kerubo Omoke

ACKNOWLEDGEMENTS

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ABSTRACT

Traditional growth theorists believed that there is no correlation between capital market development and economic growth because of the presence of level effect and not the rate effect. Many viewed stock market as an agent that harm economic development due to their susceptibility to market failure, which is often manifest in the volatile nature of stock markets in many developing countries. Contrary to traditional view, there are evidences that support the hypothesis that there exist long-run correlation between stock market development and economic growth. But in literature the testing of this hypothesis is rare for developing countries. This study therefore aimed at answering the question on whether there is a relationship between capital market development and economic growth in Kenya.

Causal research design was used for this study. The population of the study was all the listed firms at the Nairobi Stock Exchange for the period 2004-2009. The Central bank of Kenya provided economic growth figures for the same period. There are 47 listed firms at the Nairobi stock exchange. The sampling procedure for this study was simple random sampling. The researcher used financial institutions that had been listed in the NSE in the years between 2004 and 2009 to come up with the sample size. The sample size for this study was therefore 8 financial institutions and the sample period was 2004-2009. Secondary data was used for this study. The data collected for the study was analyzed using a multivariate regression model. Statistical package for social sciences (SPSS) version 17 was used to aid in analysis of the data. The independent variables of this study are market capitalization, trading volume, and change in stock market prices. Where Y was economic growth indicated by GDP per capita growth and GDP growth rate, X1 was market capitalization, X2 was trading volume, and X3 was change in stock market prices.

This study concludes that capital market development affects the growth of the financial sector. This study also revealed that market capitalization, change in stock market price and trading volume affect economic growth.

CHAPTER ONE

INTRODUCTION

1.1 Background to the study

A capital market refers to where securities are traded. Capital markets include the stock and bond markets. It is defined as a market in which money is provided for periods longer than a year, as the raising of short-term funds takes place on other markets (e.g., the money market). The capital market includes the stock market (equity securities) and the bond market (debt). Companies and governments use capital markets to raise funds for their operations; for example, a company may issue an IPO while a government may issue a bond in order to conduct new or expand ongoing activities. Investors purchase securities in the capital markets in order to extract a return and earn profit on the securities. Capital markets include primary markets, such as IPOs that are placed with investors through underwriters, and secondary markets, in which all subsequent trading takes place. Capital markets development refers to increase in volumes and sustainability of theses primary and secondary markets. Government agencies in different countries regulate local capital markets, though some, especially exchanges, play some role in regulating themselves (Demirguc-Kunt, Asli and Levine, 1996).

Economic growth is the increase of per capita gross domestic product (GDP) or other measure of aggregate income. It is often measured as the rate of change in GDP. Economic growth refers only to the quantity of goods and services produced. Economic growth can be either positive or negative. Negative growth can be referred to by saying that the economy is shrinking. Negative growth is associated with economic recession and economic depression (Barro, 1997).

An organized and well managed stock market stimulate investment opportunities by recognizing and financing productive projects that lead to economic activity, mobilize domestic savings, allocate capital proficiency, help to diversify risks, and facilitate exchange of goods and services (Mishkin, 2001; and Caporale et al, 2004). Undoubtedly,

stock markets are expected to increase economic growth by increasing the liquidity of financial assets, make global and domestic risk diversification possible, promote wiser investment decisions, and influence corporate governance, i.e., solving institutional problems by increasing shareholders interest/value (Osei, 2005). In addition, stock markets are best indicators to forecast future economic activity and describe actual causal effect between future economic growth and stock prices. If the firm's cost of borrowing will become high as compared to investment, it slows down the growth of the economy.

Stock markets play an important role in allocation of capital to corporate sector that in turn stimulate real economic activity. Many countries face financial constraints particularly developing countries, where bank loans are restricted to some favorable groups of companies and personage investors. This limitation can also reflect constraints in credit markets (Mirakhor & Villanueva, 1990). Due to stagnant bank's return from lending to specific groups of borrowers, these returns do not increase as the interest rate to borrowers rises [Stiglitz & Weiss, (1981); and Cho, (1986)]. Efficient stock markets provide guidelines as a mean to keep appropriate monetary policy through the issuance and repurchase of government securities in the liquid market, which is an important step towards financial liberalization. Similarly, well-organized and active stock markets could modify the pattern of demand for money, and would help create liquidity that eventually enhances economic growth (Caporale *et al*., 2004).

1.2 Statement of the Problem

Traditional growth theorists believed that there is no correlation between capital market development and economic growth because of the presence of level effect and not the rate effect. Similarly, Singh (1997) argued that stock markets are not necessary institutions for achieving high levels of economic development. Many viewed stock market as an agent that harm economic development due to their susceptibility to market failure, which is often manifest in the volatile nature of stock markets in many developing countries (Singh, 1997). Contrary to traditional view, there are evidences that support the hypothesis that there exist long-run correlation between stock market

development and economic growth. But in literature the testing of this hypothesis is rare for developing countries.

According to Levine (1997) and Bencivenga (1991), more liquid markets can create long-term investment and hence economic growth through lower transaction cost. Rajan and Zingales (1998) argued that stock market size is correlated to growth of financial dependent firms. Many of the studies done have supported the view that stock markets promote economic growth. It has been observed that well functioning capital markets increases economic efficiency, investment and growth. Kenya's capital market has been described as narrow and shallow. There has been significant focus on the capital market with for example the institutional development of the stock market and introduction of new instruments in the bonds market. It has been assumed that these efforts will facilitate mobilization of adequate resources and allocation of these resources efficiently to achieve growth objectives.

Previous related studies on capital markets have not focused on its relationship with economic growth. Kogi (2003), for instance did a study on the future of collective investment schemes in the Kenyan capital market. Otieno (2003) did a study on the contribution of privatization to capital market development: The case of companies privatized at the NSE. Ndegwa (2008) studied the factors limiting the integration of capital markets in East African countries. There has been no known study that had attempted to establish the relationship between capital markets development and economic growth. This study therefore aimed at answering the question on whether there is a relationship between capital market development and economic growth in Kenya.

1.3 Objectives of the study

1. To establish the relationship between capital market development and economic growth

2. To establish the effect of capital market development in facilitating financial sector growth

1.4 Importance of the study

The study was expected to be useful to the following:

To the government - the government has the mandate to create a conducive environment for investment by encouraging the development of a market infrastructure in which a sound securities' market can thrive. Findings of this study will, among other things, provide information to support the government in fulfilling this duty.

To the investment advisors –Investment advisors have a responsibility of advising their clients on the best investment options. Information from this study will be useful in improving their investment advice.

To the fund managers –The information from this study will provide valid input for fund managers who have to make decisions on the portfolio formation process while investing in financial securities.

To the regulatory authorities –The capital markets regulatory authorities in Kenya include the Capital Markets authority (CMA) and the Nairobi stock Exchange (NSE). The information from this study will provide additional information to CMA and NSE to further facilitate regulation and development of capital markets in Kenya.

To the academicians and researchers – the findings of this study will provide them with a basis for further research. It will also provide a wealth of knowledge for those pursuing studies in related areas such as investment and portfolio management, investment banking and financial management.

To the investing public – the findings of this study will enable members of the public understand how a stock market develops.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter reviews related works on capital markets development and economic growth. It also outlines the theoretical framework of the study. The chapter examines different perspectives on capital markets, capital markets in developing countries and finally an empirical review that forms the conceptual framework used by this study.

2.2 Theoretical Framework

2.2.1 Efficient-market hypothesis (EMH)

In finance, the efficient-market hypothesis (EMH) asserts that financial markets are "informationally efficient". That is, one cannot consistently achieve returns in excess of average market returns on a risk-adjusted basis, given the information publicly available at the time the investment is made. There are three major versions of the hypothesis: "weak", "semi-strong", and "strong". Weak EMH claims that prices on traded assets (*e.g.,* stocks, bonds, or property) already reflect all past publicly available information. Semi-strong EMH claims both that prices reflect all publicly available information and that prices instantly change to reflect new public information. Strong EMH additionally claims that prices instantly reflect even hidden or "insider" information. There is evidence for and against the weak and semi-strong EMHs, while there is powerful evidence against strong EMH (Burton, 1996).

Beyond the normal utility maximizing agents, the efficient-market hypothesis requires that agents have a rational expectation; that on average the population is correct (even if no one person is) and whenever new relevant information appears, the agents update their expectations appropriately. Note that it is not required that the agents be rational. EMH allows that when faced with new information, some investors may overreact and some may underreact. All that is required by the EMH is that investors' reactions be random and follow a normal distribution pattern so that the net effect on market prices cannot be

reliably exploited to make an abnormal profit, especially when considering transaction costs (including commissions and spreads). Thus, any one person can be wrong about the market—indeed, everyone can be—but the market as a whole is always right. There are three common forms in which the efficient-market hypothesis is commonly stated—weak-form efficiency, semi-strong-form efficiency and strong-form efficiency, each of which has different implications for how markets work (Burton, 1996).

In weak-form efficiency, future prices cannot be predicted by analyzing prices from the past. Excess returns cannot be earned in the long run by using investment strategies based on historical share prices or other historical data. Technical analysis techniques will not be able to consistently produce excess returns, though some forms of fundamental analysis may still provide excess returns. Share prices exhibit no serial dependencies, meaning that there are no "patterns" to asset prices. This implies that future price movements are determined entirely by information not contained in the price series. Hence, prices must follow a random walk. This 'soft' EMH does not require that prices remain at or near equilibrium, but only that market participants can not be able to systematically profit from market 'inefficiencies'. However, while EMH predicts that all price movement (in the absence of change in fundamental information) is random (i.e., non-trending), many studies have shown a marked tendency for the stock markets to trend over time periods of weeks or longer (Khan and Arshad, 1986) and that, moreover, there is a positive correlation between degree of trending and length of time period studied (Granger et al., 2007) (but note that over long time periods, the trending is sinusoidal in appearance). Various explanations for such large and apparently non-random price movements have been promulgated. But the best explanation seems to be that the distribution of stock market prices is non-Gaussian (in which case EMH, in any of its current forms, would not be strictly applicable).

In semi-strong-form efficiency, it is implied that share prices adjust to publicly available new information very rapidly and in an unbiased fashion, such that no excess returns can be earned by trading on that information. Semi-strong-form efficiency implies that neither fundamental analysis nor technical analysis techniques will be able to reliably

produce excess returns. To test for semi-strong-form efficiency, the adjustments to previously unknown news must be of a reasonable size and must be instantaneous. To test for this, consistent upward or downward adjustments after the initial change must be looked for. If there are any such adjustments it would suggest that investors had interpreted the information in a biased fashion and hence in an inefficient manner (Burton, 1996).

In strong-form efficiency, share prices reflect all information, public and private, and no one can earn excess returns. If there are legal barriers to private information becoming public, as with insider trading laws, strong-form efficiency is impossible, except in the case where the laws are universally ignored. To test for strong-form efficiency, a market needs to exist where investors cannot consistently earn excess returns over a long period of time. Even if some money managers are consistently observed to beat the market, no refutation even of strong-form efficiency follows: with hundreds of thousands of fund managers worldwide, even a normal distribution of returns (as efficiency predicts) should be expected to produce a few dozen "star" performers (Chan et al, 2003).

2.2.2 Theory of capital and investment

Irving Fisher's theory of capital and investment was introduced in his Nature of Capital and Income (1906) and Rate of Interest (1907), although it has its clearest and most famous exposition in his Theory of Interest (1930). Of concern is what he called his "second approximation to the theory of interest" (Fisher, 1930: Chs.6-8), which sets the investment decision of the firm as an inter-temporal problem.

In his theory, Fisher assumed (note carefully) that all capital was circulating capital. In other words, all capital is used up in the production process, thus a "stock" of capital K did not exist. Rather, all "capital" is, in fact, investment. Friedrich Hayek (1941) would later take him to task on this assumption - in particular, questioning how Fisher could reconcile his theory of investment with the Clarkian theory of production which underlies the factor market equilibrium.

The second part of the separation theorem effectively claims that the firm's financing needs are independent of the production decision. To see why more clearly, we can restate this in terms of the Neoclassical theory of "real" loanable funds set out by Fisher (1930). The demand for "loanable funds" equals desired investment plus desired borrowing of borrowers whereas the supply of "loanable funds" equals desired savings minus desired investment of savers.

Note the condition that for total investment to be equal to total savings, then the demand for loanable funds must equal the supply for loanable funds and this is only possible if the rate of interest is appropriately defined. If the interest rate was such that the demand for loanable funds was not equal to the supply of it, then we would also not have investment equal to savings. Thus, in Fisher's "real" theory of loanable funds, the rate of interest that equilibrates supply and demand for loanable funds will also equilibriate investment and savings.

2.2.3 Market Microstructure

Market microstructure is a branch of finance concerned with the details of how exchange occurs in markets. While the theory of market microstructure applies to the exchange of real or financial assets, more evidence is available on the microstructure of financial markets due to the availability of transactions data from them. The major thrust of market microstructure research examines the ways in which the working processes of a market affects determinants of transaction costs, prices, quotes, volume, and trading behavior. O'Hara (1995) defines market microstructure as the study of the process and outcomes of exchanging assets under a specific set of rules. While much of economics abstracts from the mechanics of trading, microstructure theory focuses on how specific trading mechanisms affect the price formation process. Microstructure deals with issues of market structure and design, price formation and price discovery, transaction and timing cost, information and disclosure, and market maker and investor behavior.

Market structure and design focuses on the relationship between price determination and trading rules. In some markets, for instance, assets are traded through dealers who keep an inventory (e.g., new cars), while other markets are dominated by brokers who act as

intermediaries (e.g. housing). One of the important questions in microstructure research is how market structure affects trading costs and whether one structure is more efficient than another. Price formation and discovery focuses on the process by which the price for an asset is determined. For example, in some markets prices are formed through an auction process, in other markets prices are negotiated (e.g., new cars) or simply posted (e.g. local supermarket) and buyers can choose to buy or not. Transaction cost and timing cost is a factor that focuses on transaction cost and timing cost and the impact of transaction cost on investment returns and execution methods. Transaction costs include order processing costs, adverse selection costs, inventory holding costs, and monopoly power. Information and disclosure focuses on the market information and transparency and the impact of the information on the behavior of the market participants (O'Hara, 1995).

2.3 Perspectives on Capital Markets

Capital markets can be seen from several perspectives: the vast amount of capital available for investment, the instruments used to raise capital, the issuers of these securities, the financial intermediaries that facilitate the trading and transfer of the securities from buyers to the sellers, and the stock exchange 'the market where these securities are traded'. To complete the equation, capital markets generally need regulators, whose principal role is to protect investors, ensure fair, efficient and transparent market operations. Regulators also protect the market from systemic risk or failure that may have serious consequences on the economy (Osei, 1998)

Countries in the early stages of economic development tend to have less organized and structured capital market activity. The economies of these countries are mostly dominated by subsistence agriculture or primary production. Industrial and service sectors are fairly rudimentary, with low levels of technology. These countries are also characterized by low levels of savings and investments, and underdeveloped financial systems (Engberg, 1975)

Capital market is therefore a market for long-term loans and equity capital. Companies and the government can raise funds for long-term investments via the capital market. The capital market includes the stock market, the bond market, and the primary market

(Engberg, 1975). A well organized capital market is crucial for mobilizing both domestic and international capital. In most developing countries, however, capital has been a major constraint in economic development (Osei, 1998).

Dailami and Atkin (1990) describe the provision of funds to finance domestic capital formation as a key factor in the prospects for long-term economic growth in developing nations. The authors observe that the reality of a much reduced supply of foreign funds from the previous sources, such as commercial banks, compels governments in many developing countries to pay increased attention to capital markets development as a way of improving domestic resource mobilization, enhancing the supply of long term capital and encouraging the efficient use of existing assets. They argue that the ongoing debt crisis is serving to focus attention on the importance of equity rather than debt, particularly in the financing of risky projects with long-term gestation periods. As Pardy (1992) observes, securities markets have an important role to play in financial sector deepening and liberalization. The author argues that apart from providing a means of diversifying risk for both capital raisers and investors, securities markets could play other roles. For example, they are a mechanism for capital allocation and corporate monitoring, and a means for government to exercise market-based rather than direct fiscal and monetary policies for control.

Demirguc-Kunt (1992) observes that in the poorest developing countries, firms rely mostly on internal resources and informal credit markets for financing. Commercial banks are the main financial institutions. The author argues that the loan contracts of these commercial banks are generally short term, and formal direct credit markets for long-term debt or equity do not exist, thereby constraining both corporate and economic growth.

Engberg (1975) recognizes the need for capital markets even for less-developed economies. He argues that capital markets can significantly raise the level of domestic savings and contribute to a more efficient allocation of such savings among competing uses. The author emphasizes that through the capital market, a variety of financial assets,

carrying different risks, yields and liquidity, is added to the traditional types of financial assets such as demand and savings deposits. He further observers that the availability of this wider range of financial assets will induce people to increase the rate of current savings. The reason is that the capital markets enables savers to achieve a better wealth composition and also permits adjustments to be made in the wealth composition with speed and at a low cost whenever the circumstances change. Moreover, competition among the users of capital market funds, including business, government and individuals, will tend to increase the efficiency with which capital is used, with direct effect on the growth rate of the economy.

2.4 Stock Market Development in Emerging Markets

The stock markets in emerging markets have seen considerable development since the early 1990s. The market capitalization of emerging market countries has more than doubled over the past decade growing from less than $2 trillion in 1995 to about $5 trillion in 2005. As a percentage of world market capitalization, emerging markets are now more than 12 percent and steadily growing (Standard and Poor, 2005).

Stock market development has been central to the domestic financial liberalization programs of most emerging markets. Apart from their role in domestic financial liberalization, the stock markets have also been very important in recent years as a major channel for foreign capital flows to emerging economies. Net equity flows to the emerging markets have grown to roughly $200 billion per year, providing an important source of capital for development. The share of foreign direct investment and portfolio equity in the finance mix of many developing countries has grown in recent years. Equity flows accounted for 80 percent of total external financing to developing nations during 1999–2003, compared with just 60 percent during 1993–98 (Global Development Finance, 2005).

The rapid development of stock markets in emerging market does not mean that even the most advanced emerging stock markets are mature. In most stock markets, trading occurs in only a few stocks which account for a considerable part of the total market

capitalization. Beyond these actively traded shares, there are serious informational and disclosure deficiencies for other stocks. There are serious weaknesses in the transparency of transactions on these markets. The less developed of the stock markets suffer from a far wider range of such deficits.

Compared with the highly organized and properly regulated stock market activity in the US and the UK, most emerging markets do not have such a well functioning market. Not only are there inadequate government regulation, private information gathering and dissemination firms as found in more developed stock markets are inadequate. Moreover, young firms in emerging stock markets do not have a long enough track record to form a reputation. As a result, one expects share prices in emerging markets to be arbitrary and volatile (Tirole, 1991). Empirical evidence indicates that share prices in emerging markets are considerably more volatile than in advanced markets (El-Erian and Kumar, 1995).

Despite this volatility, large corporations have made considerable use of the stock market. For example, the Indian stock market has more than 8,000 listed firms, one of the highest in the World. Singh (1995), looking at the corporate financing pattern in emerging markets found that contrary to expectation, emerging market corporations rely heavily on external finance and new equity issues to finance long term investment. This result indicates that stock markets have been successful in providing considerable funds to the top 100 corporations in emerging markets.

2.5 Determinants of Development of Capital Markets of Developing countries

Many factors affect the developments of the capital markets of developing countries. Demirgue-Kunt and Levine (1993) points out the characteristics of stock market development as; traditional characteristics, which include market capitalization, the amount of new capital raised through stock offerings, the number of listed companies and turnover; Institutional characteristics, which include regulations of the capital markets, information disclosure requirement, transparency rules and trading costs; and asset

pricing characteristics, which is the efficiency with which the market prices risk and the degree of integration into world stock markets.

Pardy (1992) argues that there are two basic building blocks necessary for a thriving securities market; First, a macroeconomic and fiscal environment conducive to the supply of good quality securities and sufficient demand for them; and Secondly, a market infrastructure capable of supporting efficient operation of the securities market. Under the first building block, the author indicates that the demand for and supply of securities is crucially linked to the state of the macro-economy. If the macro-economy is conducive to profitable business operation, a sufficient number of sound businesses can develop to a stage where access to securities market is useful for their continued growth. This means that if there is no sufficient profitable business with good prospects for the future, there is little reason to have securities market.

The market infrastructure that will make the securities market operate in an efficient, fair and stable manner is broken into three: First the institutional infrastructure, which provides the operational basis for the market, relates to intermediaries that provide trading, investment management and financial advisory services; market and market-related service providers for stock exchanges, over-the-counter markets, market information services, transaction clearance and settlement systems, and securities transfer, registration and custody; and providers of ancillary services such as accounting and auditing, legal advice, and financial valuation and debt rating services; Secondly, the regulatory infrastructure relates to not only to the government body that has the power and the responsibility to supervise the market, but also includes self-regulatory organizations such as stock exchanges, accounting standards boards, and accounting and auditing professional associations and similar organizations. It also includes their rules and regulations, procedures, and facilities such as stock exchange listing and trading rules or accounting and auditing standards, plus the monitoring and enforcement of these rules; Thirdly, The legal infrastructure provides the basis for the operational and regulatory framework. It provides for property rights, contractual relationships, forms of incorporation, and rights and responsibilities of the participants in the market. It also

specifies the powers and responsibilities of the government supervisory authority and self-regulatory organizations (Pardy, 1992).

The first building block for sound securities market development put forward by Pardy (1992) recognizes the importance of fiscal policy (taxation). The author finds that differential effective tax rates on either income or capital gains from different financial instruments will distort capital raising and investment decisions. Pardy supports this conclusion by observing that quite a number of developing countries with state ownership of commercial banks have tax rates that discriminate in favor of savings and demand deposits as opposed to securities investment, and in favor of borrowing from banks as opposed to raising capital from the public. For capital market development, these taxation differentials must be removed.

2.6 Empirical Review

In the financial literature on endogenous growth, the relationship between capital markets development and economic growth has received much attention (King and Levine, 1993; Levine, 1997; Rajan and Zingales, 1998; Filler, Hanousek, and Campos, 1999; Arestis, Demetriades, and Luintel, 2001; Calderon and Liu, 2002, Carlin and Mayer, 2003). In this context, King and Levine (1993) state that the level of financial intermediation is a good predictor for economic growth rate, capital accumulation and productivity. In the same context, Carlin and Mayer (2003) concluded that there is a strong relationship between the structure of countries' financial system and economic growth.

Garretsen, Lensink and Sterken (2004) found out a causal relationship between economic growth and financial markets development: a 1% improvement of economic growth determines a 0.4% rise of market capitalization/GDP ratio. Yet, according to their results, market capitalization/GDP ratio does not represent a significant determinant of the economic growth. Beck, Lundberg and Majnoni (2006), also, found a positive correlation between capital market development (measured by a dummy variable computed to reflect if the market capitalization exceeds 13.5% of GDP) and economic growth. Bose (2005) offers a theoretical financial model that explains the positive correlation between stock market development and economic growth; the model is based on the hypothesis that for

levels of GDP per capita higher than a certain threshold the information costs become lower than bankruptcy costs, determining the development of capital markets. Hence, it is explained why stock markets appeared late after banks.

Pardy (1992) also argues that a company that raises funds from the public must be required to disclose sufficient information to allow an educated investor to make a reasoned investment decision so that the aggregate of investor's decisions may be a good assessment of a company's worth. This requires an effective legal infrastructure to specify and enforce disclosure standards for all companies issuing securities to the public. Those companies that have securities listed for secondary trading on a market such as a stock exchange should be subjected to additional disclosure requirements imposed as listing rules.

Demirguc-Kunt and Huizinga's (1992) study has implications for the design of tax policy related to foreign portfolio investment in developing countries. They indicate that the existence of foreign tax credits for dividend taxes paid suggests that a country should tax capital gains lightly in comparison with repatriated dividends. Lyon (1992) finds that differing tax treatment of equity and debt can create divergent costs in the use of retained earnings, new share issues and debt finance. In the literature, another factor that affects the development of the capital market is information disclosure or transparency of transaction. Versluysen (1988) indicates that in markets for publicly offered securities, investor access to information pertaining to their prospective investments is more limited than that of professional intermediaries. Investors can therefore be protected by the compulsory disclosure of financial data and other relevant information relating to the issues of securities.

Chuppe and Atkin (1992) assert that information asymmetries abound in financial markets. The managers of a firm know more about that firm's market prospects and investment opportunities than do outsiders. Financial market professionals often have access to information that is not widely available. In an unregulated market, the possibility exists that unsuspecting investors will be harmed by those with access to information not available to the public at large. This is important for the economy

because lack of public confidence in securities markets would cause the supply of funds to the markets to dry up, thus depriving the economy of the benefits of a functioning market. The authors further observe that these information asymmetries are the basic justifications for a large number of regulations. Disclosure requirements for public companies must ensure that financial information is available for investors in a way that facilitates inter-company comparisons. It must be noted, however, that disclosure is only effective if there are good accounting standards in place, standards that allow investors to assess the financial health of enterprises. A study by Cheung and Krinsky (1994) confirms under pricing by investment bankers in an environment of information asymmetry.

Beckaert, Harvey and Lundblad (2005) analyzed financial liberalization as a special case of capital market development and determined that equity market liberalizations, on average, led to a 1% increase in annual real economic growth. Studying the link between domestic stock market development and internationalization, Claessens, Klingebiel and Schmukler (2006) using a panel data technique concluded that domestic stock market development as well as stock market internationalization are positively influenced by the log of GDP per capita, the stock market liberalization, the capital account liberalization and the country growth opportunities and negatively influenced by the government deficit/GDP ratio.

Minier (2003) analyzed the influence of the stock market dimension on economic development by regression tree techniques; he found evidence that the positive influence of stock market development on economic growth held only for developed stock markets in terms of turnover, in the case of underdeveloped stock markets the influence is negative. Ergungor (2006) analyzed the impact of financial structure on the economic growth on the period 1980-1995; he concluded that in countries with inflexible judicial systems the stronger impact on economic growth is generated by the development of the bank-system, whereas in countries with greater flexibility of judicial systems the development of the capital market had a stronger influence.

Studies on the relationship between capital market development and economic growth in different countries were performed. Nieuwerburgh, Buelens and Cuyvers (2006) analysed the long-run relationship between stock market development (measured by market capitalization and number of listed shares) and economic growth (measured as a logarithmic difference of GDP per capita) in Belgium. They performed Granger causality tests and emphasized that stock market development determined economic growth in Belgium especially in the period 1873-1935, but also on the entire analyzed period (1800-2000) with variations in time dues to institutional changes affecting the stock exchange.

Hondroyiannis, Lolos and Papapetrou (2005) studied the case of Greece (1986-1999); they found out that the relationship between economic growth and capital market development is bi-directional. Studying the effect of different components of financial systems on economic growth in Taiwan, Korea and Japan, Liu and Hsu (2006) emphasized the positive effect of stock market development (measured by market capitalization as percentage of GDP, turnover as percentage in GDP and stock return) on economic growth. Bolbol, Fatheldin, and Omran (2005) analyzed the effect of financial markets (measured by the ratio of market capitalization on GDP and the turnover ratio) on total factor productivity and growth (the per capita GDP growth rate) in Egypt (1974-2002); they demonstrated that capital market development had a positive influence on factor productivity and growth.

Ben Naceur and Ghazouani (2007), studying the influence of stock markets and bank system development on economic growth on a sample of 11 Arab countries, concluded that financial development could negatively influence the economic growth in countries with underdeveloped financial systems; they stressed the role of building a sound financial system.

In the context of European Union enlargement, an analysis of the relationship between capital markets development and economic growth could explain why different countries reach different economic growth rates, and could find solutions in order to stimulate the process of economic growth through capital market using public policy instruments. Related to this issue, even there are many studies regarding developed countries,

approaches on East- European ex-communist countries' economies are very few relatively to developed countries cases.

Romanian capital market had developed slowly starting from 1995. Moreover, several years after 1989 Romania had negative economic growth rates (the real rate of GDP growth). Only since 2000 Romania had positive economic growth rates accompanied by the development of the financial system; these particular aspects could alter the relationship between economic growth and capital market development, and more specifically the conclusion on whether capital market development is a good predictor for economic growth rates.

Kogi (2003) did a study on the future of collective investment schemes in the Kenyan capital market. He found that the Kenyan capital markets will continue to offer an array of investment products in the form of shares, bonds and unit trusts. The type of products chosen by the collective investment schemes to commit their capital will largely depend on their financial goals, time frame, and amount of capital available.

Otieno (2003) did a study on the contribution of privatization to capital market development: The case of companies privatized at the NSE. Otieno found out that privatization broadens and deepens the capital market resulting from increased listings and market size, improved liquidity and regulatory infrastructure, improved awareness and enlarged investor base. Privatization has also provided opportunity for risk diversification, enhanced professionalism and increased government attention.

Ndegwa (2008) studied the factors limiting the integration of capital markets in East African countries. He found that high interest rates on bank deposits associated with weaknesses in banking systems have contributed to unsustainable capital inflows. A key challenge for policymakers in the regional market countries was found to be reducing their vulnerability to volatile capital flows and to ensure that weaknesses in the financial sector do not limit the ability of authorities to pursue macroeconomic policies needed to safeguard monetary stability.

2.7 Conclusion

There are several empirical studies that analyse the correlation between the economic growth and the financial development. As a general trend, these studies argue that financial development generates economic growth, the causal relation being stronger in the emergent countries and being explained by two channels: the fast capital accumulation and the growth of productivity. Capital market's liquidity is a good predictor of the GDP per capita growth and of the physical capital and productivity growth, but other indicators of the capital market development such as volatility, size and international integration are not significant for explaining economic growth.

The economic growth is a complex process that is influenced by more factors, other than the capital market development. Moreover, capital market development is the results of many influence factors. There are several interdependencies between these factors, which makes it difficult to establish and isolate the causal relationship between the economic growth and the capital market development.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter outlines the methods and procedures that were used by this study to achieve the set objectives. It starts with the research design that was used by the study. The population, data collection and analysis procedure are also described.

3.2 Research Design

Causal research design was used for this study. Causal research design attempts to specify the nature of functional relationship between two or more variables. It analyzes the cause – effect relationship between the variables. Causal research is often used to infer causation or causality, that is, which variables are the causes (independent variables) and which variables are the consequence or effect (dependent variables) (Kelly, 1999).

3.3 Population

The population of the study was all the listed firms at the Nairobi Stock Exchange for the period 2004-2009. The Central bank of Kenya provided economic growth figures for the same period. There are 47 listed firms at the Nairobi stock exchange. Those that joined the NSE later than 2004 and those that have since been suspended were not included in the study.

3.4 Sampling and sample size

The 47 firms listed in Nairobi stock exchange are categorized in 4 groups (agriculture, commercial and services, finance and investment, industrial and allied). The sampling procedure for this study was random sampling. The researcher used financial institutions that had been listed in the NSE in the years between 2004 and 2009 to come up with the sample size. The sample size for this study was therefore 8 financial institutions and the sample period was 2004-2009.

3.5 Data Collection

Secondary data was used for this study. Market capitalization, trading volume, and change in stock market prices were obtained from NSE for use in this study. The researcher visited Nairobi Stock Exchange office and from the customer care desk he requested for NSE data for the years between 2004 and 2009 which he was advised to take after three days. After three days the researcher went for the data which he got in form of a soft copy (in excel worksheet) in flash disk. GDP per capita growth and GDP growth rate were obtained from Central bank of Kenya. There was no cash involved in getting data from Central bank of Kenya. The researcher incurred a cost of Ksh 30,000 in data collection from Nairobi Stock Exchange and Ksh 5,000 in printing and binding of the document.

3.6 Data Analysis

The data collected for the study was analyzed using a multivariate regression model. Statistical package for social sciences (SPSS) version 17 was used to aid in analysis of the data. The independent variables of this study are market capitalization, trading volume, and change in stock market prices. The researcher used the secondary data collected from Nairobi stock exchange to calculate market capitalization, trading volume and change in stock market prices. Market capitalization was calculated from annual share price and shares issued. Change in stock market prices was calculated by getting the difference in annual stock market price. The multivariate regression model for this study will be;

$$Y = A + B_1X_1 + B_2X_2 + B_3X_3 \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots$$

Where Y was economic growth indicated by GDP per capita growth and GDP growth rate, X1 was market capitalization, X2 was trading volume, and X3 was change in stock market prices.

CHAPTER FOUR

DATA ANALYSIS AND INTERPRETATION OF FINDINGS

4.1 Introduction

This chapter discusses the interpretation and presentation of the findings. The objectives of the study were to establish the relationship between capital market development and economic growth and to establish the effect of capital market development in facilitating financial sector growth. This study analyzed the following financial institutions; NIC, KCB, CFC, Barclays, Standard chartered, National bank, Equity bank, Diamond Trust and Housing finance. Secondary data for these financial institutions was collected from Nairobi stock exchange daily price lists for the years 2004 to 2009. This chapter focused on data analysis, interpretation and presentation.

4.2 Regression Analysis

A multivariate regression model was applied to determine the relative importance of each of the three variables with respect to economic growth in financial institutions.
The regression model was as follows:

$Y = A + B_1X_1 + B_2X_2 + B_3X_3$

Where Y will be economic growth indicated by GDP per capita growth and GDP growth rate, X1 will be market capitalization, X2 will be trading volume, and X3 will be change in stock market prices.

Where:

Y = economic growth

A = Constant Term

β_1 = Beta coefficients

X₁= market capitalization

X₂= trading volume

X₃= change in stock market prices

4.2.1 Regression analysis 2005

Table 4. 1: Coefficients of regression for year 2005

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
2005	(Constant)	5.403	.117		46.054	.000
	market capitalization 2005	2.833E-13	.000	.159	.352	.742
	trading volume 2005	2.734E-08	.000	.322	.595	.584
	change in stock market prices 2005	.007	.009	.347	.761	.489

a Dependent Variable: GDP 2005

According to the results shown in table 4.1 the regression model for the year 2005 will be;

$Y= 5.403+ (2.833E\text{-}13) X_1+ (2.734E\text{-}08) X_2+0.007X_3$

According to the regression equation established, taking all factors (market capitalization, trading volume and change in stock market prices) constant at zero, the GDP will be 5.403 for all the financial institutions. The data findings analyzed also shows that taking all other independent variables constant at zero, a unit increase in market capitalization will lead to a 2.833E-13 increase in GDP, a unit increase in trading volume will lead to a 2.734E-08 increase in GDP while a unit increase in change in stock market prices will lead to a 0.007 increase in GDP. This infers that there is a weak positive relationship between the GDP, market capitalization and trading volume. From these results we can

deduce that in the year 2005 there was a stronger relationship between GDP and change in stock market prices than between GDP and market capitalization/ trading volume.

4.2.2 Regression analysis 2006

Table 4. 2: Coefficients of regression for year 2006

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
2006	(Constant)	6.360	.122		51.93	.000
	market capitalization 2006	-4.561E-13	.000	-.080	-.111	.917
	trading volume 2006	-1.527E-09	.000	-.606	-.855	.441
	change in stock market prices 2006	-.003	.004	-.315	-.869	.434

a Dependent Variable: GDP 2006

Following the results shown in table 4.2 the regression equation for the year 2006 will be;

Y= 6.36- (4.561E-13) X_1- (1.527E-09) X_2-0.00.3X_3

From the regression equation established, taking all factors (market capitalization, trading volume and change in stock market prices) constant at zero, the GDP will be 6.36 for all the financial institutions. From the findings also taking all other independent factors constant at zero, a unit increase in market capitalization will lead to a 4.561E-13 decrease in GDP, a unit increase in trading volume will lead to a 1.527E-09 decrease in GDP while a unit increase in stock market prices will lead to 0.003 decrease in GDP. This infers that in the year 2006 there was negative relationship between GDP and market capitalization, trading volume and change in market prices.

4.2.3 Regression analysis 2007

Table 4. 3: Coefficients of regression for year 2007

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
2007	(Constant)	7.003	.153		45.779	.000
	market capitalization 2007	-1.333E-12	.000	-.234	-.333	.756
	trading volume 2007	3.226E-09	.000	.434	.884	.426
	change in stock market prices 2007	.001	.002	.498	.673	.538

a Dependent Variable: GDP 2007

Table 4.3 above shows the coefficients for the year 2007. From the results the regression equation will be;

$Y = 7.003 - (1.333E\text{-}12) X_1 + (3.226E\text{-}09) X_2 + 0.001X_3$

According to the linear regression above, taking all factors (market capitalization, trading volume and change in stock market prices) constant at zero, the GDP will be7.003 for all the financial institutions. From these findings taking all other independent variables constant at zero, a unit increase in market capitalization will lead to a 1.333E-12 decrease in GDP, a unit increase in trading volume will lead to a 3.226E-09 increase in GDP while a unit increase in change in stock market prices will lead to a 0.001 increase in GDP. From these findings we can deduce that there was a weak positive relationship between GDP and trading volume. A stronger relationship was realized between GDP and change in stock market prices. These findings also show that there was a negative relationship between GDP and market capitalization.

4.2.4 Regression analysis 2008

Table 4. 4: Coefficients of regression for year 2008

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
2008	(Constant)	8.352	.116		72.014	.000
	market capitalization 2008	2.587E-12	.000	.278	.898	.420
	trading volume 2008	-2.175E-08	.000	-.995	-3.020	.039
	change in stock market prices 2008	.001	.003	.051	.192	.857

a Dependent Variable: GDP 2008

According to table 4.4 above the regression equation for the year 2008 will be;

Y= 8.352+ (2.587E-12) X_1- (2.175E-08) X_2+0.001X_3

From the above regression equation holding all factors (market capitalization, trading volume and change in stock market prices) constant at zero, the GDP will be 8.352 for all the financial institutions analyzed. From the results also taking all other independent variables constant at zero, a unit increase in market capitalization will lead to 2.587E-12 increase in GDP, a unit increase in trading volume will lead to a 2.175E-08 decrease in GDP while a unit increase in change in stock market prices will lead to 0.001 increase in GDP. This infers that there was a weak positive relationship between GDP and market capitalization. A strong positive relationship was realized between GDP and change in stock market prices. There was a negative relationship between GDP and trading volume.

4.2.5 Regression analysis 2009

Table 4. 5: Coefficients of regression for year 2009

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	9.158	.195		46.881	.000
	market capitalization 2009	-1.213E-11	.000	-.656	-3.038	.038
	trading volume 2009	2.966E-08	.000	.462	2.025	.113
	change in stock market prices 2009	.027	.007	.751	3.880	.018

a Dependent Variable: GDP 2009

According to table 4.5 above the regression equation for the year 2009 will be;

Y= 9.158-(1.213E-11) X_1+ (2.966E-08) X_2+0.027X_3

From the regression equation shown above, taking all factors (market capitalization, trading volume and change in stock market prices) constant at zero, the GDP will be 9.158 for all the financial institutions. The findings also show that taking all other independent variables constant at zero, a unit increase in market capitalization will lead to a 1.213E-11 decrease in GDP, a unit increase in trading volume will lead to a 2.966E-08 increase in GDP while a unit increase in change in stock market prices will lead to a 0.027 increase in GDP. This infers that there is a weak negative relationship between GDP and market capitalization. A stronger positive relationship was realized between GDP and change in stock market prices. There was a weak positive relationship between GDP and trading volume.

CHAPER FIVE

SUMMARY OF THE FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the discussion of key data findings, conclusion drawn from the findings highlighted and recommendations made there-to. The conclusions and recommendations drawn were focused on addressing the objectives of this study which were to establish the relationship between capital market development and economic growth and to establish the effect of capital market development in facilitating financial sector growth.

5.2 Summary of the findings

From the findings of this study, in the year 2005 taking all factors (market capitalization, trading volume and change in stock market prices) constant at zero, the GDP was 5.403 for all the financial institutions analyzed in this study. The results in this year indicated a weak positive relationship between the GDP, market capitalization and trading volume. From these results we can deduce that in the year 2005 there was a stronger relationship between GDP and change in stock market prices than between GDP and market capitalization/ trading volume. The study found that market capitalization, trading volume and change in stock market prices affect the gross domestic product. The study also found that in 2005 market capitalization and trading volume were affecting the gross domestic product positively but to a low extent as compared to change in stock market prices.

In the year 2006 taking all factors (market capitalization, trading volume and change in stock market prices) constant at zero, the GDP was 6.36 for all the financial institutions. The study found that there was weak negative relationship between GDP, market capitalization, and trading volume. The study also found that there was stronger positive relationship between GDP and change in stock market prices. In 2006 market

capitalization and trading volume were affecting the gross domestic product positively and to a great extent. Capital market development depends on trading volume, market capitalization and change in stock market prices among other factors. This shows that an increase in any of them will lead to an increase in the gross domestic product which translates to financial sector growth.

In the year 2007 taking all the factors (market capitalization, trading volume and change in stock market prices) constant at zero, the GDP was 7.003 for all the financial institutions. From these findings there was a weak positive relationship between GDP and trading volume. A stronger relationship was realized between GDP and change in market capitalization. Considering market capitalization and trading volume as factors that affect the financial sector growth, the study revealed that in the year 2007 their increase would lead to an increase in gross domestic product which translates to financial sector growth. Change in market prices was found to affect the financial sector growth more than market capitalization and trading volume.

From the findings of the year 2008 holding all factors (market capitalization, trading volume and change in stock market prices) constant at zero, the GDP will be 8.352 for all the financial institutions analyzed. This indicates that there was a weak positive relationship between GDP and market capitalization. A strong positive relationship was realized between GDP and change in stock market prices. There was a weak negative relationship between GDP and trading volume. In the year 2008 the findings of this study show that market capitalization, trading volume and change in market prices were all affecting the financial sector growth. Increase in market capitalization was affecting the financial sector growth positively but to a lower extent compared to a change in stock market prices. The study also found that in the same year trading volume was affecting the growth of financial sector negatively though to a very low extent.

From the findings of the year 2009 taking all factors (market capitalization, trading volume and change in stock market prices) constant at zero, the GDP was 9.158 for all the financial institutions. This study realized that there was a weak negative relationship between GDP and market capitalization. A strong positive relationship was realized

between GDP and change in stock market prices. There was a weak positive relationship between GDP and trading volume. In the year 2009 the study found that market capitalization, change in market price and trading volume were affecting the growth of the financial sector. Market capitalization and change in stock market prices were affecting the growth of the financial sector positively though change in market price was affecting it to a greater extent than market capitalization.

5.3 Conclusions

This study concludes that in the year 2005 there was a weak positive relationship between the GDP, market capitalization and trading volume while there was a stronger relationship between GDP and change in stock market prices.

In the year 2006 the study found that there was weak negative relationship between GDP, market capitalization, and trading volume. The study also found that there was a stronger negative relationship between GDP and change in market capitalization.

In the year 2007 the study established that there was a weak negative relationship between GDP and a change in market capitalization. There was a stronger positive relationship between GDP and change in stock market prices as compared to trading volume.

The study revealed that in the year 2008 there was a weak positive relationship between GDP and market capitalization. A strong positive relationship was realized between GDP and change in stock market prices. There was a weak negative relationship between GDP and trading volume. These findings also show that there was a positive relationship between GDP and change in market capitalization.

The study found out that in the year 2009 there was a weak positive relationship between GDP and market capitalization. A strong negative relationship was realized between GDP and a change in market capitalization. There was a weak positive relationship between GDP and trading volume.

On analyzing all the years from 2004 to 2009 we can conclude that there is a strong positive relationship between GDP and change in stock market prices. We can also conclude that the relationship between gross domestic product, market capitalization and trading volume is a weak relationship.

This study also concludes that capital market development affects the growth of the financial sector. This study also revealed that market capitalization, change in stock market price and trading volume affect economic growth.

5.4 Recommendations

This study recommends that;

- To increase the GDP financial institutions should ensure an increase in market capitalization and trading volume.

- Since market capitalization depends on the number of outstanding shares and the stock price, financial institutions should ensure an increase in the number of issued shares.

5.5 Recommendations for further studies

This study used secondary data to analyze the relationship between capital market development and economic growth in Kenya for companies listed in the Nairobi stock exchange, more studies should be conducted to include other unlisted companies so as to understand better the overall performance of the economy. This would help stakeholders to better understand the relationship between capital market development and economic growth in Kenya and also to establish the effect of capital market development in facilitating financial sector growth.

5.6 Limitations of the study

The study was limited to investigating the financial sector only due to time and financial resources since the researcher was taking care of all the expenses. This research study was limited to only 8 financial institutions. The rest of the financial institutions, not

included in the study got listed in NSE between 2004 and 2009 which means they had incomplete data to be analyzed.

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APPENDICES

Appendix I: Listed Companies at the NSE

Agriculture

1. Rea Vipingo Ltd.
2. Sasini Tea & Coffee Ltd.
3. Kakuzi Ltd.

Commercial and Services

1. Access Kenya Group
2. Marshalls E.A. Ltd.
3. Car & General Ltd.
4. Hutchings Biemer Ltd. **Suspended**
5. Kenya Airways Ltd.
6. CMC Holdings Ltd.
7. Uchumi Supermarkets Ltd. **Suspended**
8. Nation Media Group Ltd.
9. TPS (Serena) Ltd.
10. ScanGroup Ltd.
11. Standard Group Ltd.
12. Safaricom Ltd.

Finance and Investment

1. Barclays Bank of Kenya Ltd.
2. CFC Stanbic Bank Ltd.
3. Housing Finance Ltd.
4. Centum Investment Ltd.
5. Kenya Commercial Bank Ltd.
6. National Bank of Kenya Ltd.
7. Pan Africa Insurance Holdings Co. Ltd
8. Diamond Trust Bank of Kenya Ltd.
9. Jubilee Insurance Co. Ltd
10. Standard Chartered Bank Ltd.
11. NIC Bank Ltd.
12. Equity Bank Ltd.
13. Olympia Capital Holdings Ltd
14. The Co-operative Bank of Kenya Ltd.
15. Kenya Re-Insurance Ltd.

Industrial and Allied

1. Athi River Mining Ltd.
2. BOC Kenya Ltd.
3. British American Tobacco Kenya Ltd.
4. Carbacid Investments Ltd.
5. E.A. Cables Ltd.
6. E.A. Breweries Ltd.
7. Sameer Africa Ltd.
8. Kenya Oil Ltd.
9. Mumias Sugar Company Ltd.
10. Unga Group Ltd.
11. Bamburi Cement Ltd.
12. Crown berger (K) Ltd.
13. E.A Portland Cement Co. Ltd.
14. Kenya Power & Lighting Co. Ltd.
15. Total Kenya Ltd.
16. Eveready East Africa Ltd.
17. Kengen Ltd.

Appendix II: Raw Data