THE RELATIONSHIP BETWEEN FINANCIAL LIBERALIZATION AND PRICE STABILITY IN KENYA

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D61/72596/2012

A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILMENT OF THE   REQUIREMENT FOR THE AWARD OF THE DEGREE OF MASTER OF BUSINESS ADMINISTRATION, SCHOOL OF BUSINESS, UNIVERSITY OF NAIROBI.

2014

DECLARATION

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

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

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ACKNOWLEDGEMENT

I would like to acknowledge the professionalism, effort and patience of my supervisor, Dr. Josiah Aduda. I am particularly grateful for his steadfast support, constructive criticism and skillful guidance.

I also would like to extend my gratitude's to my loving parents, Sarah and Joseph for the support accorded through this degree program.

Humble sincerest thanks to the almighty God for the Good Health and gift of knowledge and understanding.

DEDICATION

I dedicate this work to the Almighty God and my loving Parents, Sarah Bosibori Nyachogo and Joseph Nyachogo for the great love and assistance accorded.

Also dedicated to my brother Eric Nyachogo, Sisters Nancy Nyachogo and Dorcas Nyachogo and in a special way to Bill Ongeri, Harry Nyachogo, Bella Kathambi and Dr. Naftal Atei Kerochi

ABSTRACT

From the past literature, to liberalize the financial sector when inflation is high can lead to high interest rates and even higher inflation. Thereafter, when inflation is fought, a period of low inflation and high real interest rates follow. Since Kenya experienced this sequence, it appears that prices were unstable before and during the financial liberalization period.

The study used the economic growth model and paired correlations to find out whether there exists a relationship between financial liberalization and price stability in Kenya. The study used secondary data to test the relationship between Financial Liberalization and Price Stability in Kenya for the period 1980 to 2010.

The findings show that financial liberalization had a positive effect on the rates of inflation. However, although financial liberalization was not exclusively responsible for the fluctuations in the rate of interest as shown by the positive relationship before liberalization the study further established that there is a positive relationship between financial liberalization and inflation levels before and after financial liberalization and therefore, financial liberalization has a positive effect on the price stability in Kenya.

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LIST OF ABBREVIATIONS

CBK   Central Bank of Kenya

CBR   Central Bank Rate

ECT   Error Correction Term

GDP   Gross Domestic Product

KBRR   Kenya Banks' Reference Rate

MPC   Monetary Policy Committee

MRR   Minimum Rediscount Rate

MPAC   Monetary Policy Advisory Committee

OMO   Open Market Operations

SSA   Sub Sahara Africa

VECM   Vector Error Correction Model

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CHAPTER ONE

INTRODUCTION

1.0 Background of the study

In recent years financial policies in both industrial and developing countries have put increased emphasis on the market mechanism. Liberalization was partly a response to developments in the financial markets themselves: as these markets innovated to get round the restrictions placed on them, governments chose to embrace liberalization as a major stride in price stability. (Akyuz, 1993).

In early 1970s, economic management in Kenya was based on controls. These controls were an easier response to deal with the repercussions of expansionary policies and balance of payments problems. Controls were placed on foreign exchange transactions, importation and licensing, export taxes, domestic retail and producer prices, wage guidelines, ceilings on domestic rates of interest and selective restrictions on bank borrowing. Dismantling of these controls formed a basis of structural adjustment and liberalization.

In developing countries, the main impulse behind liberalization has been the belief, based on the notion that interventionist financial policies were one of the main causes of the crisis of the 1980s, that liberalization would help to restore growth and stability by raising savings and improving overall economic efficiency; greater reliance on domestic savings was necessary in view of increased external financial stringency (Isakson, 1995). However, these expectations have not generally been realized. In many developing countries, instead of lifting the level of domestic savings and

investment, financial liberalization has, rather, increased financial instability. Financial activity has increased and financial deepening occurred, but without benefiting industry and commerce. (Isakson, 1995).

When undertaking financial liberalization under conditions of high and unpredictable inflation, interest rates might rise in order to offset anticipated inflation and to balance supply and demand for loanable funds (McKinnon, 1988). Rising domestic interest rates may lead to large capital inflows that in turn cause inflation if not sterilized. High real interest rates also reduce borrower net worth, which has a negative impact on investment and financial intermediation, leading to rising non- performing assets and bank failures.

1.1.1 Financial Liberalization

Financial liberalization entails the abolition of explicit controls on the pricing and allocation of credit. Direct government intervention in bank credit decisions is brought to an end. Liberalization may also involve the abolition of controls on international capital movements. However, government policies will continue to play a central role in determining how the financial sector performs. (Pradhan & Pill 1997). How successfully the authorities perform their role as supervisor, owner, or customer will be an important determinant of the success of reform. Moreover, financial liberalization is only one component of a successful development strategy. Appropriate macroeconomic policy, institutional development, and structural reform must accompany financial liberalization and create the stable context required for it to succeed. (Pradhan & Pill 1997).

Other than interest rate liberalization and elimination of directed credits and high reserve requirements, financial liberalization involves a wide set of additional measures including the easing of portfolio restrictions on banks, changes in the ownership of banks, enhanced competition among banks, integration of domestic entities to international markets, as well as changes in the monetary policy environment. Of these, external sector reforms go hand in hand with financial sector reforms because removing restrictions on exchange and payments system and establishing a freely functioning foreign exchange market are central to removing distortions that limit portfolio behavior. Broadly, reforms involve two phases: removal of all restrictions on current payments and transfers, and capital account liberalization; the latter, by enhancing country's integration with the rest of the world, imposes perhaps the strictest limits on financial repression. (Ucer 2013)

In the liberalization period in the 1990s, monetary and exchange rate policies shifted due to conflicting objectives and problems facing the authorities with the presence of heavy capital infows. By 1994, the policy focus was to keep reserve money on the targeted path while at the same time intervening in the foreign exchange market to minimize the appreciation of the exchange rate. However, interventions in the foreign exchange market led to increased money supply. This in return called for sterilization through the sale of Treasury bills in Open Market Operations (OMO). In order to make the commercial paper attractive, the rate of interest was raised relative to other financial assets.

In most developing countries, the banking sector dominates the financial system and securities markets are not well developed. Restrictions on bank behavior imposed by the government often result in negative real interest rates and an excess demand for

credit, requiring banks to ration their lending. Consequently, credit is allocated to favored sectors and firms by administrative decision, rather than by market mechanisms (Pradhan & Pill 1997). Furthermore (Akyuz, 1993) argues that the focus of financial policies in developing countries should be industrialization and stability. A common feature of all modern examples of industrialization is that they have all succeeded in making finance serve industry and trade not the other way round. This has often necessitated a considerable amount of intervention and control over financial activities.

1.1.2 Price Stability

Recent years have seen a worldwide movement toward greater emphasis upon the achievement of inflation targets as the primary criterion for judging the success of central banks' conduct of monetary policy. At the same time, the independence of central banks in their choice of the means with which to pursue this goal has also increased. An implication would seem to be that it is now widely accepted that the choice of monetary policy to achieve a target path for inflation is a problem that can be, and indeed ought to be, separated from other aspects of government policy, such as the choice of fiscal policy.

The basic indicator for the evaluation of price developments is a price index that comprehensively covers goods and services consumed by households and that the general public at large is accustomed to. When assessing the consumer price developments and extracting the underlying fluctuations, a variety of price indexes has to be monitored comprehensively. In the long run, price indexes will show the

same movements as the overall index; at each time point, however, they could move differently due to temporary factors.

Under the vision 2030, the government has committed to pursue prudent and stable macroeconomic policies as a basis of achieving strong economic growth and employment creation for the benefit of all Kenyans. The role of the monetary policy is crucial in this regard. Low and stable inflation allows better economic performance by reducing uncertainty about the future and thus, in the medium and long term, facilitates a faster growth of the economy, and therefore higher employment creation and poverty reduction. This commitment to macroeconomic stability recognizes that at times the economy may suffer from adverse external events such as political instability. Such disturbances may result in actual inflation deviating from target and thus attempts to keep inflation at target level may produce unwarranted variability in output.

1.1.3 Financial Liberalization and Price stability

In the year 2014 the exchange rate remained stable supported mainly by foreign exchange inflows through diaspora remittances and increased foreign investor participation in the Nairobi Securities Exchange as well as enhanced confidence following successful issuance of the Sovereign Bond in June 2014. Considering the 8.5 CBR set by the MPC and the introduction of a Kenya Banks' Reference Rate (KBRR) which enhances the supply of private sector credit and mortgage finance in Kenya by facilitating a transparent credit pricing framework. It will be the commercial banks' lending rate and will deliver the desired price stability as overall inflation remains within range.

1.1.4 Financial Liberalization and Price Stability in Kenya

Technological progress in Kenya's financial sector continues with the notable innovations being adoption of electronic-banking and mobile banking. Kenya has also adopted the real time gross settlement and payments system. In terms of institutional development, deposit taking micro-finance institutions, agency banking and credit rating agencies have also been licensed in the recent past and continue to be operational. Banks have to be regulated because of the threat financial instability poses to the economy. History proves a need for regulation. However, the manner in which it is conducted will determine the state of how the financial system is run. For example, if the policies that are implemented by government are repressive, then the outcome will produce inefficient markets; increased economic costs and hampered economic growth. If the policies implemented by government are more market-friendly, then this will result in greater competition and more efficient markets with stable prices.

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

Deregulation of interest rates in this monopolistic environment has permitted banks to widen their margins such that real interest rates on bank deposits fell substantially. Partly in consequence, financial deepening has been modest, especially when measured by the ratio of private sector credit to national income. Although it is too early to evaluate the success of financial liberalization, the lack of accompanying institutional and structural reforms suggests that financial sector reforms will provide only modest benefits to the overall Kenyan development strategy. (Pradhan and Pill 1997).

The Kenyan price stability was unstable when inflation reached unprecedented levels in 2008 in the period of 2000-2014Q1, forcing the government to attempt to halt it by pursuing restrictive monetary policy. As the economy stagnated at the same time, the prediction of the neo-structuralists that financial liberalization may lead to stagflation seemed fulfilled. However, while the Government had managed to control inflation by 2010, inflation rates again skyrocketed in 2011, indicating a continued high cost of investment. In these circumstances it is high-return, high-risk projects that are financed suggesting instances of adverse selection and moral hazard (Stiglitz and Weiss, 1981).

On the other hand the Central Bank of Kenya Act section 4 provides that the cabinet secretary of finance to specify at least in very period of 12 months, the price stability target and economic policies to be taken by the government . It also requires the cabinet secretary to publish the notice in such a manner deemed fit and lay a copy of the notice before the appropriate committee of the National Assembly. In order to

comply with these provisions, this notification sets out what price stability shall be taken to consist of what the economic policy of the government shall be taken to be.

1.2 Research Problem

Financial liberalization aims to eliminate inefficiencies through banking activities liberalization, by eliminating the interest rate threshold and ceiling on bank deposits and loans, removing the interest contingents, removing the preferential interest rates, reducing the obligatory reserve requirements and having stable prices. Financial liberalization is expected to allow for real interest rates and stimulate the mobilization and efficient allocation of domestic financial resources for a depressed economy. Both the economic theory and practical experience suggests that financial liberalization can stimulate the economic development of the Kenya economy.

Central Bank of Kenya (CBK) has studied the monetary policy transmission mechanism in Kenya from time to time. Cheng (2006), Maturu (2007), Maturu, Maana and Kisinguh (2010), Sichei and Njenga (2012), and Davoodi, Dixit and Pinter (2013). The evidence from these studies suggests that the money, interest rate, exchange rate and credit channels were operational during varied study periods with various strengths. Cheng (2006), for instance points that the interest rate channel was weak during in 1997-2005 because of financial sector rigidities.

 Davoodi, Dixit and Pinter (2013) show that the credit channel is important in complementing the money and interest rate channels. It is also inferred from such studies as Maturu, Maana and Kisinguh (2007) that the expectations channel of monetary policy transmission has also been important.

Furthermore Benjamin and Lydia (2012) in assessing on how monetary policy is transmitted in Kenya used quarterly data to estimate a Bayesian vector autoregressive (BVAR) model with the Kalman filter while taking into account a number of analytical innovations and found out that on average, for every 30 basis points of monetary policy tightening using the policy rate, a 1 basis point reduction in the headline consumer price index could be achieved. However, the 30 basis points of monetary policy tightening would also penalize the economy to the extent of 0.6 basis points of reduced real output.

Njuguna and Rose also in their paper of analyzing the impact of liberalization on financial and foreign exchange markets showed that inflation profile changes with exchange rate policy and interest rates have not been market determined even after liberalization and interest rate spreads have increased with liberalization. In this study, the researcher will update the available evidence using quarterly data for the period 2002 Q1 -2014Q1. This will specifically test the effect of political instability of 2007 and the new monetary policies of the period.

The studies done did not look deeply on the price stability since the inception of the new millennium in the year 2000 and through the three changes of government in the period. Therefore this study attempts to answer the following research question; Does financial liberalization affect price stability in Kenya?

1.3 Objective of the study

The objective of this study is to determine the relationship between financial liberalization and price stability in Kenya.

1.4 Value of the study

The finding of the study on financial liberalization and price stability in Kenya will be useful to the financial advisors and financial managers in the country, for they will know how financial liberalizations affects the price stability in the country.

Considering the Kenyan literacy levels, the government policy makers will find it prudential to have clear policies regarding price stability in the country and any other financial shocks shield in the future. This will benefit the government in mitigating the financial shocks in the future and provide a stable price in the country.

The study will also help training institutions in understanding the significance of financial liberalization and price stability in the country. This will provide good theoretical literature for the academicians.

Furthermore the study will benefit the researchers interested in the field and give room for further research of the topic.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This section reviews literature under; theories related to the topic of the study, review of empirical studies, financial liberalization, price stability and a chapter summary.

2.2 Review of theories

This section discussed three major theories namely financial liberalization theory, economic growth theory and Kynesian Theory of price which will help us to better understand the context of the research problem.

2.2.1 Financial Liberalization Theory

Financial liberalization theory has its origins in the work of McKinnon and Shaw in 1973. It was Patrick (1966), however, who published the seminal work on the relationship between financial development and economic growth. He hypothesized two possible relationships, a "demand-following" approach, in which financial development arises as the economy develops, and a "supply-leading" phenomenon, in which the widespread expansion of financial institutions leads to economic growth.

The financial liberalization school leans towards the supply-leading relationship between growth and development (McKinnon, 1973). The argument arises out of a highly simplified world without financial intermediaries, whereby the purchase of capital can only arise from self-finance; for when an individual who is limited to self-

finance wishes to "purchase physical capital of a type that is different from his own output, he may store inventories of his own output for eventual sale when the capital assets are acquired or he may steadily accumulate cash balances for the same purpose (McKinnon, 1973).

McKinnon (1973) further argued that competition through private ownership can shrink the difference between deposit and loan rates, encouraging "optimal" agreements between banks, and among borrowers and lenders, in turn increasing the efficiency of intermediation. Moreover, "fragmentation" in developing countries has different effective prices for land, labor, and capital and produced commodities which have been largely attributed to the government policies.

Arbitrary measures to introduce modern technology via tariffs or to increase the rate of capital accumulation by relying on foreign aid or domestic forced saving, will not necessarily lead to economic development. Thus it is hypothesized that unification of the capital market, which sharply increases rates of return to domestic savers by widening exploitable investment opportunities, is essential for eliminating other forms of fragmentation (McKinnon, 1973). By implication, McKinnon and Shaw (1973) support the liberalization of the capital account in order to provide a unified capital market for private decision makers to undertake utility maximizing intertemporal choice.

2.2.2 Economic Growth Theory

Economic growth is the increase in the market value of the goods and services produced by an economy over time. It is conventionally measured as the percent rate

of increase in real gross domestic product, or real GDP. Of more importance is the growth of the ratio of GDP to population (GDP per capita), which is also called per capita income. An increase in growth caused by more efficient use of inputs is referred to as intensive growth. GDP growth caused only by increases in inputs such as capital, population or territory is called extensive growth.

Growth is usually calculated in real terms; that is inflation adjusted terms to eliminate the distorting effect of inflation on the price of goods produced. Measurement of economic growth uses national income accounting. As an area of study, economic growth is generally distinguished from development economics. The former is primarily the study of how countries can advance their economies. The latter is the study of the economic aspects of the development process in low-income countries.

Since economic growth is measured as the annual percent change of gross domestic product (GDP), it has all the advantages and drawbacks of that measure. For example, GDP only measures the market economy, which tends to overstate growth during the change over from a farming economy with household production. An adjustment was made for food grown on and consumed on farms, but no correction was made for other household production. Also, there is no allowance in GDP calculations for depletion of natural resources.

2.2.3 Kynesian Theory of Price

Keynes's theory of the determination of equilibrium real GDP, employment, and prices focuses on the relationship between aggregate income and expenditure. Keynes used his income- expenditure model to argue that the economy's equilibrium level of output or real GDP may not correspond to the natural level of real GDP. In the income- expenditure model, the equilibrium level of real GDP is the level of real

GDP that is consistent with the current level of aggregate expenditure. If the current level of aggregate expenditure is not sufficient to purchase all of the real GDP supplied, output will be cut back until the level of real GDP is equal to the level of aggregate expenditure. Hence, if the current level of aggregate expenditure is not sufficient to purchase the natural level of real GDP, then the equilibrium level of real GDP will lie somewhere below the natural level. In this situation, the classical theorists believe that prices and wages will fall, reducing producer costs and increasing the supply of real GDP until it is again equal to the natural level of real GDP.

2.2.4 Prospect Theory

Daniel Kahneman and Amos Tversky developed the theory in 1979. They argued that investors make choices depending on the situation which usually involves a risk. The investor evaluates the potential gains and losses before making the decision and avoids making losses to protect their investments. They identified two distinct phases to each decision an initial phase called Editing or Framing; and a second phase called Evaluation phase, framing effects in decision situations arise when different imagery and descriptions of the same problem highlight different aspects of the decision outcomes and in the evaluation phase related contingencies and outcomes for each decision choice are evaluated. In this phase the edited prospects such as business opportunities are evaluated and the business opportunity with the highest value is selected (Kahneman and Tversky, 1979).

2.3 Review of empirical studies

According to Eschenbach (2004), the absence of financial liberalization is a function of indiscriminate nominal interest rate ceilings and accelerating inflation. A high reserve requirement may also play a role thus hampering the attainment of economic development. This is why financial liberalization in combination with a weak regulatory structure may have strongly adverse effects on growth (Andersen and Tarp 2003).

Awojobi (2013) in assessing time series evidence of the economic growth pattern of Greece and the hidden impact of its financial liberalization process in terms of the links between trade and gross domestic output for the period 1960-2009. He estimated a Vector Error Correction Model (VECM) in analyzing the long-run equilibrium features of proxies for openness and growth in Greece and further tested the relationship between financial development and economic growth using the Granger causality hypothesis. The study found out that from regression estimates the Error Correction Term (ECT) to be 0.20 for the sampled data. This suggested that there is long-run convergence among financial development, trade openness and domestic output in Greece. This convergence is expected within an average of five cumulative years. Furthermore, the Granger causality test shows that there is a causal relationship between financial development and economic growth, but that financial development has no causal impact on trade in the case of Greece, which is theoretically unexpected.

Ayadi and Hyman (2006) in testing the relationship between financial liberalization and price rigidity in the Nigerian banking system studied wholesale and retail interest rates for the period 1987 to 2001 quarters. He used cointegration and error correction models to analyze their long run as well as short run dynamics of real and wholesale interest rates. The retail lending and deposit rates possess a long run equilibrium

relationship. Moreover, the Minimum Rediscount (Wholesale) Rate (MRR) and the deposit rate also exhibit a long run equilibrium relationship. If the lending and deposit rates diverge from their long run equilibrium relationship, 37 per cent of the disequilibrium is corrected each quarter by changes in the lending rate. On the other hand, any disequilibrium in the long run relationship between the deposit and MRRs can be corrected by changes in the MRR at about 58 per cent per quarter.

Karikari (2010) in assessing the relationship between financial liberalization, financial development and growth in the 15 Sub-Saharan African countries with annual observations over the period of 1976-2005. The research used various measures of proxies for financial intermediary development including ratio of private sector credit and share of domestic credit to income. The results obtained from a heterogeneous panel investigation and time series methodology such as Granger causality, indicate a long-run equilibrium relationship between financial development and economic growth. This is consistent with the view that financial development can act as an "engine of growth" and plays a crucial role in the process of economic development. However, there is little evidence to support the hypothesis that financial liberalization directly "leads" growth.

Isaksson, (1998) in assessing the relationship between liberalizing the financial sector when inflation is high and price stability studied the period 1970 to 1999. The study found out that when the cointegrating relationship breaks down, which it does in Kenya after the financial liberalization, economic agents can no longer forecast inflation with confidence using historical data. This breakdown of the cointegratina vector implies that agents switch to forward-looking behavior, perhaps an indication of lack of credibility, in the financial liberalization process. Furthermore it has been

postulated in the literature that attempts to liberalize the financial sector when inflation is high can lead to high interest rates and even higher inflation.

Onukwa & Maduka (1986) used cross-section analysis to estimate the correlation between financial deepening and economic growth by using data for 20 countries in Africa from 1969 - 1983. The degree of financial intermediation was measured using the ratios of monetary liabilities (M1, M2, and M3) to GDP. For the full sample, all the monetary liabilities were negative and only the ratio of M3 to GDP were statistically significant. When the countries are split into high and low income countries, some of the coefficients of the monetary liabilities are positive while some are negative. However, they are all insignificant and offer no support to the growth enhancing capabilities of financial intermediation.

Bhatia and Khatkhate (1975) used correlation graphs to examine the relationship between economic growth and financial intermediation for eleven African countries. Financial intermediation was measured by the ratio of currency, demand deposits, and time and savings deposits to GDP. The authors found no definite relationship between growth and financial intermediation for the countries either individually, or for the whole group. Splitting the financial intermediation measure into two -the ratio of money to GDP and the ratio of quasi-money to GDP – still do not reveal any definite relationship between growth and financial intermediation.

Oshikoya (1992) used time series econometrics to see how interest rate liberalization has affected economic growth in Kenya. The author used data from 1970 to 1989 and the results showed a negative and insignificant coefficient for the real interest rate. The sample was then split into two subperiods:1970-1979 and 1980-1989. The real

interest rate had a negative and significant coefficient for the 1970-1979 period, but was positive and significant for the 1980-1989 period; thus offering no robust result of the effect of interest rate liberalization on growth.

Panel data have been used by some authors (Seck and El Nil, 1993; Charlier and Oguie, 2002; Allen and Ndikumana, 2000; Aziakpono, 2004) to examine the relationship between finance and growth in SSA. Seck and El Nil (1993) and Charlier and Oguie (2002) find a significantly positive relationship between economic growth and the real interest rate. Allen and Ndikumana (2000) used the ratio of liquid liabilities, ratio of banks' private sector credit, ratio of banks' total credit, and an index to include all three measures as proxies for financial intermediation.

The authors found out that only the ratio of liquid liabilities is positive and significant, and even the variable was insignificant in the fixed effects estimation and when annual data are used. The other financial intermediation variables took on different signs but were all insignificant. Aziakpono (2004) used the ratio of liquid liabilities and the ratio of banks' private credit as measures of financial intermediation and found mixed results. They found that growth was negatively related to financial intermediation in Botswana and Swaziland while the relationship was positive in Lesotho and South Africa.

2.4 Determinants of Price Stability

The inflation rate determines the price stability of an economy and is determined by the following three factors:

2.4.1 Aggregate demand and supply balance

From a somewhat long-term perspective, there is a mild positive correlation between the rates of increase in the CPI and the aggregate demand and supply balance. If the aggregate demand of the economy as a whole increases relative to its production capacity and, therefore, the balance between aggregate demand and supply improves, the rate of increase in the CPI will rise with a time lag of several quarters. For that purpose, in order to raise inflation rates, it is necessary to improve the economy ahead. When import prices rise, inflation rates could go up ahead. Such inflation is not accompanied by economic improvement because the terms of trade will deteriorate and real income of households and firms will fall. (Akyuz, 1993).

2.4.2 Inflation expectations

Inflation expectations will influence the actual inflation rates through wage and price-setting behavior. Firms and households are likely to take account of future price fluctuations and determine their output prices and wages accordingly. Economic decision making of firms and households will largely be based on medium- to long-term inflation expectations rather than short-term expectations. (Akyuz, 1993).

2.4.3 Import prices

Rise and fall in import prices will affect consumer prices directly and fluctuations in materials goods prices such as the oil shock will ultimately influence consumer goods prices through changes in costs. (Akyuz, 1993).

2.5 Chapter Summary

From the past studied reviewed it is understood that when undertaking financial liberalization under conditions of price instability, interest rates might rise in order to offset anticipated inflation and to balance supply and demand for loanable funds. Domestic interest rates may lead to large capital inflows and reduce borrower net worth. This may cause inflation and reduce investment and financial intermediation. Under such circumstances implementing a financial liberalization is difficult.

From the empirical studies assessed, financial liberalization is difficult to determine for at least two reasons. First, the experiences are relatively recent, whereas it takes several business cycles to assess whether efforts have been successful or not. And second, measurement is a problem with the influences of political instability; on the one hand, it is difficult to determine exactly when liberalization efforts might have started and ended, on the other, it is difficult to come up with single empirical measures of financial liberalization and price stability under financial liberalization that would help assess the relationship. Furthermore is clear that financial liberalization may affect the price rigidity and overall economic growth as in the case in Nigeria.

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CHAPTER THREE

RESEARCH METHODOLOGY

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3.1 Introduction

This chapter focused on research methodology that was applied in carrying out the study. It explored the research design, target population, sample design, data collection tools and data analysis techniques.

3.2 Research Design

A research design is a framework or a blue print of conducting a research. It provides a clear plan on how the research will be conducted and helps the researcher in sticking to the plan. The research was conducted using a descriptive research design which sought to assess the effects of Financial Liberalization on Price Stability.

3.3 Research Population

A population is the entire set of elements from a sample is drawn. The population of this study was four economic growth variables for example, Real GDP, Customer Price Index (CPI), inflation, deflation, Interest Rates, Consumer Confidence Survey, Nominal Lending Rates, Retail Trade Sales and Food Service Sales, assets prices, and Manufacturing and trade Inventories and Sales.

3.4 Sample Design

A sample is a segment of the population under study. A sample of three economic growth variables was used. That is inflation levels, Consumer price index, and nominal lending rates for period 1980 to 2010. This constituted a large percentage of effect financial liberalization on price stability and hence ensuring data accuracy and validity. Random sampling was used to select the variables.

3.5 Data Collection

Secondary data was used in this study which was extracted from past financial reports of the Central Bank of Kenya economic growth reports for the period 1980 Q1 to 2009 Q4 and Kenya Bureau of Statistics databases.

3.6 Data Analysis

Data analysis is a systematic process which applies statistic techniques to evaluate data through inspecting, transforming and modeling data to draw useful information for decision making. Data will be analyzed by the use of Statistical package for social scientist (SPSS) data analysis program to generate inferential and descriptive statistics and regression models.

3.6.1 Integrated Growth Model

A fully interacted growth model, similar to ones used in past studies by Bekaert et. al. (2004) and Li (2004) will be employed using data from 1980 Q1 to 2009 Q4. Data was obtained frm the Central Bank of Kenya and the Kenya Bureau of Statistics.

$$y_t = \beta 0 + \beta 1\ Xa + \beta 2\ Xb + \beta 3Xc + e$$

The sample means for the respective variables (random, cutoff and conditional) was formulated as follows:

y_t Represents Financial Liberalization

X_a Represents the mean before financial liberalization (1980-1989)

X_c Represents the mean during financial liberalization (2000-2009)

X_b Represents the mean after financial liberalization (1990-1999)

e   Represents standard error

<center>**CHAPTER FOUR**</center>

<center>**DATA ANALYSIS, RESULTS AND DISCUSSION**</center>

4.1 Introduction

This chapter presents the analysis of data, results and discussion of the study findings. The objective of the study was to determine the relationship between financial liberalization and price stability in Kenya. The independent variable was financial liberalization and the dependent variable was price stability which was measured in terms of Consumer Price Index (CPI) and Inflation Rates. The study employs descriptive statistics (mean and standard deviation) and inferential statistics (Paired T-test) to determine the relationship between financial liberalization and price stability in Kenya.

According to (Ndung'u, 1997), financial reforms in Kenya were initiated as from 1989. They were later intensified in the 1990s with the following reforms being initiated: interest rate were freed in July 1991; enforcement of credit guidelines were relaxed from 1991; exchange rate were allowed to float from 1993; offshore borrowing was allowed from 1994; and foreign investors allowed to participate in local stock market from 1995. The data captured a thirty-year-period from 1980-2009. The data collected was divided into 3 ten-year-periods as follows: 10-years-period before financial liberalization (1980-1989), 10-year-period during financial liberalization (1990-1999) and the 10-year-period after financial liberalization in Kenya (2000-2009). Table 4.1 shows data for Consumer Price Index (CPI) and Inflation Rates during the study period.

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The results show that liberalization of the financial sector in Kenya did stimulate economic growth. Popular policy studies on liberalization advocate for a wise coordination between liberalization of the financial sector and reforms aimed at strengthening the real sector of the economy. Most studies argue that liberalization of the capital account should follow that of the domestic financial system and the current account together with stabilization of prices in an economy.

The base year was February 2009 and this was arrived at because of the inflation rate was high at 16.6 and the CPI at 96.38 also these were taken into consideration because of the political instability experienced in the change of government between 2007 and 2008. The political instability also affects status of the economy.

Table 4.1: Consumer Price Index (CPI) and Inflation Rates (1980-2009)

Period of Financial Liberalization	Year	Inflation Rate	CPI
Period before Financial Liberalization	1980	12.8	3.15
	1981	12.6	4
	1982	22.3	4.94
	1983	14.6	5.72
	1984	9.1	6.16
	1985	10.8	6.72
	1986	10.5	7.38
	1987	8.7	8.1
	1988	12.3	9.21
	1989	13.5	10.39
Period during Financial Liberalization	1990	15.8	12.48
	1991	19.6	14.48
	1992	27.3	19
	1993	46.0	29.69
	1994	28.8	32.38
	1995	1.6	34.07
	1996	9.0	37.77
	1997	11.2	40.95
	1998	6.6	42.46
	1999	5.8	46.8
Period after Financial Liberalization	2000	10	52.21
	2001	5.8	53.42
	2002	2.0	54.97
	2003	9.8	59.8
	2004	11.8	70.32
	2005	9.9	73.43
	2006	6.0	78.27
	2007	4.3	82.68
	2008	15.1	96.38
	2009	10.5	104.07

Source: Kenya National Bureau of Statistics (2014).

4.2 The effect of financial liberalization on the Consumer Price Index (CPI)

Tables 4.2 and 4.3 present the findings of the study on influence of financial liberalization and the Consumer Price Index (CPI).

Table 4.2: Descriptive Statistics for Consumer Price Index (CPI)

	N	Minimum	Maximum	Mean	Std. Deviation
CPI.BL	10	8.70	22.30	12.72	3.85855
CPI.DL	10	1.60	46.00	17.17	13.59183
CPI.AL	10	2.00	15.10	8.52	3.91260
Valid N	10				

The study findings in Table 4.2 indicate that highest Consumer Price Index were recorded during the period of financial liberalization as indicated by a mean of 17.17. The period of financial liberalization also recorded the highest fluctuation in the Consumer Price Index as indicated by standard deviation of 13.59. Comparatively, the period before financial liberalization recorded higher rates of inflation (mean 12.72, Std. Deviation=3.85) than the period after financial liberalization (mean 8.52, Std. Deviation= 3.91). The fluctuations in the Consumer Price Index remained relatively low, similar and stable in the periods before liberalization (Std. Deviation=3.85) and after liberalization (Std. Deviation= 3.91).

Table 4.3: Paired Samples T-Test for Consumer Price Index

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	CPI.BL - CPI.DL	-4.45	12.66643	4.00548	-13.51101	4.61101	-1.111	9	.295
Pair 2	CPI.AL - CPI.DL	-8.65	14.66373	4.63708	-19.13980	1.83980	-1.865	9	.095

The study findings in Table 4.3 show that the t-calculated of -1.111 at 9 degrees of freedom and 95% confidence interval of the difference for the first pair (periods before and during financial liberalization). The critical t value is 2.37 at 95% confidence interval of the difference. The t-calculated (-1.111) is less that t-critical (2.37) and significance value (p=0.295) is greater than 0.05 hence the conclusion that there is no significant relationship between financial liberalization and Consumer Price Index before financial liberalization.

The t-calculated for the period after liberalization was 1.865 (less that t-critical=2.37 and p= 0.095 (greater than 0.05). Therefore, financial liberalization had no significant effect on the Consumer Price Index.

4.3 The effect of financial liberalization on the Inflation Rates

The study sought to establish the effect of financial liberalization on the Inflation Rates. The study findings are presented in Tables 4.4 and 4.5.

Table 4.4: Descriptive Statistics for Inflation Rates

	N	Minimum	Maximum	Mean	Std. Deviation
IR.BL	10	3.15	10.39	6.577	2.27131
IR.DL	10	12.48	46.80	31.008	12.01274
IR.AL	10	52.21	104.07	72.555	18.11615
Valid N	10				

The study findings in Table 4.4 indicate that highest rates of inflation were recorded in the period after financial liberalization as indicated by a mean of 72.55. The period of financial liberalization also recorded the highest fluctuation in the rates of inflation as indicated by standard deviation of 18.11. The lowest rates of inflation were recorded in the period before financial liberalization as indicated by a mean of 6.57. Inflation rates were more stable in the period before financial liberalization as indicated by a small standard deviation of 2.27.

Table 4.5: Paired Samples T-Test for Rate of inflation

		Paired Differences				t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference			
					Lower	Upper			
Pair 1	IR.BL - IR.DL	-24.431	9.83092	3.10881	-31.46361	-17.39839	-7.859	9	.000
Pair 2	IR.AL - IR.DL	41.547	8.10509	2.56306	35.74897	47.34503	16.210	9	.000

The study findings in Table 4.3 shows a t-calculated of -7.859 at 9 degrees of freedom and 95% confidence interval of the difference for the periods before and during financial liberalization. The critical t value is 2.37 at 95% confidence interval of the difference. The t-calculated (7.859) is less that t-critical (2.37) and significance value (p=0.000) is less than 0.05 hence the conclusion that there is a significant relationship between financial liberalization and rates of inflation before financial liberalization.

Similarly, t-calculated for the period after liberalization was 16.210 (greater that t-critical=2.37 and p= 0.000 (less than 0.05). The t-calculated for the period after liberalization t=16.210 was much greater than t-calculated before liberalization t= -7.859. Therefore, financial liberalization had a significant effect on the rates of inflation.

4.6 Summary and interpretation of Findings

The study examined the relationship between financial liberalization and price stability in Kenya. The variables under investigation included the Consumer Price Index (CPI) and Inflation Rates. The following is the discussion of the study findings.

4.6.1 The effect of financial liberalization on Consumer Price Index

The study established that the fluctuations in the Consumer Price Index remained relatively low, similar and stable in the periods before liberalization (mean 12.72, Std. Deviation=3.85) and after liberalization (mean 8.52, Std. Deviation= 3.91). There was a slight increase in the fluctuation of the Consumer Price Index during the implementation of financial liberalization as indicated by standard deviation of (mean = 17.17 Std. Deviation= 13.59). The t-calculated (-1.111) is less that t-critical (2.37) and significance value (p=0.295) is greater than 0.05. Similarly, the t-calculated for the period after liberalization was 1.865 (less that t-critical=2.37 and p= 0.095 (greater than 0.05).

The findings show that there is no significant relationship between financial liberalization and Consumer Price Index before and after financial liberalization. Therefore, financial liberalization had no significant effect on the Consumer Price Index in Kenya. The study findings are in agreement with Benjamin and Lydia (2012) who argued that on average, for every 30 basis points of monetary policy tightening using the policy rate, a 1 basis point reduction in the headline consumer price index could be achieved. However, the 30 basis points of monetary policy tightening would also penalize the economy to the extent of 0.6 basis points of reduced real output. Therefore, financial reforms may end up with minimal effect on price stability.

4.6.2 The effect of financial liberalization on the rate of inflation

The study established that the highest rates of inflation were recorded in the period after financial liberalization as indicated by a mean of 72.55. The lowest rates of inflation were recorded in the period before financial liberalization as indicated by a mean of 6.57. The t-calculated (-7.859 and 16.210) were less that t-critical (2.37) and significance value (p=0.000) is less than 0.05 for the periods before and after financial liberalization respectively. Inflation rates were more stable in the period before financial liberalization as indicated by a small standard deviation of 2.27 compared to standard deviation of 18.11 after liberalization.

The study findings imply that financial liberalization had a significant effect on the rates of inflation. However, financial liberalization was not exclusively responsible for the fluctuations in the rate of interest as shown by a significant relationship before liberalization (t-calculated, p=0.000). The study findings are in tandem with Kasekende and Atingi-Ego (2003) who examined the impact of financial liberalization on the conduct of banking business and its effect on the real sector using Gross Domestic Product and Inflation Rate in quarterly data from 1987Q1 to 1995Q3 as variables. Their findings shows that financial liberalization promoted efficiency gains in the banking industry, increased growth of credit to the private sector, reduced inflation rates and consequently led to economic growth.

The study findings show mixed results for the effect of financial liberalization on price stability indicators. While financial liberalization influenced the rates of inflation, liberalization had no effect on Consumer Price Index. The study findings correlates with Stiglitz and Weiss (1981) who established that the Kenyan price stability was unstable when inflation reached unprecedented levels in 2008 in the

period of 2000-2014Q1, forcing the government to attempt to halt it by pursuing restrictive monetary policy. While the Government had managed to control inflation by 2010, inflation rates again skyrocketed in 2011, indicating a continued high cost of investment. Pradhan and Pill (1997) argued that the financial liberalization in Kenya lack accompanying institutional and structural reforms thus financial sector reforms only provide modest benefits to the overall Kenyan development strategy.

CHAPTER FIVE

5.0 SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.0 Summary

In addition, this chapter presents the summary of key data findings, conclusions drawn from the findings highlighted and policy and practice recommendations that were made. The conclusions and Recommendations drawn were in quest of addressing the research objective of determining the relationship between financial liberalization and Price stability in Kenya.

The study established that the fluctuations in the Consumer Price Index remained relatively low, similar and stable in the periods before liberalization (mean 12.72, Std. Deviation=3.85) and after liberalization (mean 8.52, Std. Deviation= 3.91). There was a slight increase in the fluctuation of the Consumer Price Index during the implementation of financial liberalization as indicated by standard deviation of (mean = 17.17 Std. Deviation= 13.59). On the other hand the study established that the highest rates of inflation were recorded in the period after financial liberalization as indicated by a mean of 72.55. The lowest rates of inflation were recorded in the period before financial liberalization as indicated by a mean of 6.57. The t-calculated (-7.859 and 16.210) were less that t-critical (2.37) and significance value (p=0.000) is less than 0.05 for the periods before and after financial liberalization respectively.

5.2 Conclusion

The purpose of this research was to test whether there exists a relationship between financial liberalization and price stability in Kenya. When undertaking financial liberalization under conditions of price instability, interest rates might rise in order to offset anticipated inflation and to balance supply and demand for loanable funds. Furthermore domestic interest rates may lead to large capital inflows and reduce borrower net worth. This may cause inflation and reduce investment within an economy.

The study concludes that financial liberalization has mixed results on price stability metrics. The established that no significant relationship exists between financial liberalization and Consumer Price Index before and therefore financial liberalization has no significant effect on the Consumer Price Index in Kenya.

On the other hand financial liberalization influenced the rates of inflation. Financial liberalization is yet to bring about high stability of prices in Kenya. The financial liberalization policies need continuous review particularly in regard to determinants of price stability and the availability of institutional and structural reforms to aid in the achievement of stable prices in Kenya.

5.3 Recommendations to Policy and Practice

The study recommends that the central bank of Kenya should come up with a policy package that combines financial liberalization with structural reforms to improve price stability. Structural reforms that improve macro and microeconomic stability in Kenya can make financial liberalization successful.

The study recommends that there is need for the government to have a stable, credible and sustained macroeconomic environment. There is also the need to control inflation in real terms through effective monetary policy. This is because an increase in inflation in Kenya makes households to keep more currency and less quasi money.

There is a further need to Strengthening the Central Bank of Kenya's capacity in controlling and guiding the activities of financial institutions and financial intermediaries with a view to enhance price stability.

The political processes also should be taken into consideration when liberalizing the economy to avoid negative political processes which will influence policy makers. This will enhance a stable economy with stable prices that can be enhanced through liberalizing the economy.

5.4 Limitations of the study

The study is limited by the fact that not all the components of Financial Liberalization Index were investigated. The Financial Liberalization Index are: credit controls, interest rate controls, entry barriers in banking, operational restriction on banks (for example, branching regulations), privatization, and restrictions on international financial transactions (for example, multiple exchange rates) (Abiad and Mody, 2005). Therefore, the analysis of the effects financial liberalization on the price stability in Kenya would be more comprehensive if all the components of Financial Liberalization Index are examined.

Further the study is limited because it does not take into consideration the monetary policy indicators and interest rates regulation. This is also important because every year there is changes to the monetary policies in the country.

The study is also limited to the fact it does not take into consideration the Polical instability variable in the country. The changes in governments comes with changes in fiscal and monetary policies which may also affect the price stability in an economy, for example the change in government in 2007/2008 greatly affected the inflation rates to hit the highest level in the decade due to the political process.

The study was also limited to secondary data. The findings may be more comprehensive if primary data is collected to complement the secondary data. This would ensure a more comprehensive evaluation of the all the components of Financial Liberalization Index.

5.5 Suggestions for further research

The study recommends research on the Financial Liberalization Index in the country to come up with a clear index which can be used to test other relationships on the Liberalizing effects. This will help in getting the clear and more accurate findings on the same variable.

The study recommends further research on the determinants of Financial Liberalization Index and how they influence price stability in Kenya. The research will complement the findings of this study by establishing whether determinants of components of Financial Liberalization Index have significant influence on the price stability in Kenya. The study will suggest measures through which price stability can be enhanced using the components of Financial Liberalization Index.

The study also recommends the study of political processes and change of governments and their effect on the price stability in an economy. This will help I

determining the real effects of financial liberalization on the stability of prices in an economy.

The study recommends also the study of Financial Liberalization with the economic growth indicators to establish the long-term effects of Financial Liberalization in an economy. And also a comparative study can be carried out to establish whether financial liberalization in other countries in Africa have a relationship with Price stability taking into consideration different economic standards. Thus enabling comparison with the Kenyan experience and provide concrete facts upon which reliable conclusions can be made.

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APPENDICES

APPENDIX I: QUARTELY CPI FROM 1963 TO DATE

	Base period February 2009=100		
Year	Month	CPI	Inflation Rate
1963	March	0.95	
	June	0.96	
	September	0.98	
	December	0.99	
1964	March	0.98	3.2
	June	0.98	2.1
	September	0.99	1.0
	December	1.01	2.0
1965	March	1.01	3.1
	June	1.02	4.1
	September	1.03	4.0
	December	1.04	3.0
1966	March	1.04	3.0
	June	1.05	2.9
	September	1.06	2.9
	December	1.06	1.9
1967	March	1.07	2.9
	June	1.08	2.9
	September	1.08	1.9
	December	1.09	2.8
1968	March	1.10	2.8
	June	1.10	1.9
	September	1.11	2.8
	December	1.11	1.8
1969	March	1.11	0.9
	June	1.12	1.8
	September	1.13	1.8
	December	1.13	1.8
1970	March	1.14	2.7
	June	1.22	8.9
	September	1.23	8.8
	December	1.24	9.7
1971	March	1.24	8.8
	June	1.25	2.5
	September	1.25	1.6
	December	1.26	1.6
1972	March	1.27	2.4
	June	1.30	4.0
	September	1.33	6.4
	December	1.37	8.7

1973	March	1.37	7.9
	June	1.43	10.0
	September	1.44	8.3
	December	1.50	9.5
1974	March	1.59	16.1
	June	1.66	16.1
	September	1.70	18.1
	December	1.74	16.0
1975	March	1.89	18.9
	June	1.95	17.5
	September	2.00	17.6
	December	2.04	17.2
1976	March	2.15	13.8
	June	2.16	10.8
	September	2.17	8.5
	December	2.19	7.4
1977	March	2.37	10.2
	June	2.44	13.0
	September	2.46	13.4
	December	2.50	14.2
1978	March	2.66	12.2
	June	2.73	11.9
	September	2.80	13.8
	December	2.82	12.8
1979	March	2.86	7.5
	June	2.95	8.1
	September	3.01	7.5
	December	3.12	10.6
1980	March	3.17	10.8
	June	3.33	12.9
	September	3.46	15.0
	December	3.51	12.5
1981	March	3.61	13.9
	June	3.70	11.1
	September	3.85	11.3
	December	4.00	14.0
1982	March	4.43	22.7
	June	4.46	20.5
	September	4.72	22.6
	December	4.94	23.5
1983	March	5.01	13.1
	June	5.14	15.2
	September	5.39	14.2
	December	5.72	15.8
1984	March	5.69	13.5
	June	5.80	12.8
	September	6.03	11.9

	December	6.16	7.7
1985	March	6.35	11.8
	June	6.52	12.5
	September	6.62	9.8
	December	6.72	9.2
1986	March	7.14	12.3
	June	7.21	10.7
	September	7.25	9.5
	December	7.38	9.8

APPENDIX II: BASE PERIOD FEBRUARY 2009= 100

	Base period February 2009=100		
Year	Month	CPI	Inflation Rate
1987	March	7.69	7.8
	June	7.80	8.1
	September	7.90	8.9
	December	8.10	9.7
1988	March	8.48	10.2
	June	8.72	11.8
	September	8.98	13.7
	December	9.21	13.8
1989	March	9.65	13.8
	June	9.94	14.0
	September	10.16	13.2
	December	10.39	12.8
1990	March	11.02	14.2
	June	11.34	14.1
	September	11.57	13.8
	December	12.48	20.2
1991	March	13.04	18.3
	June	13.59	19.8
	September	14.12	22.0
	December	14.48	16.0
1992	March	15.36	17.8
	June	17.34	27.6
	September	18.62	31.9
	December	19.00	31.2
1993	March	20.86	35.8
	June	24.49	41.2
	September	27.62	48.3
	December	29.69	56.2
1994	March	32.61	56.4
	June	34.00	38.8
	September	33.24	20.3
	December	32.38	9.1
1995	March	33.06	1.4
	June	33.38	-1.8
	September	33.76	1.6
	December	34.07	5.2
1996	March	35.01	5.9
	June	36.03	7.9
	September	37.38	10.7
	December	37.77	10.8
1997	March	39.56	13.0
	June	41.62	15.5
	September	40.61	8.6

	December	40.95	8.4
1998	March	42.83	8.3
	June	42.86	3.0
	September	43.40	6.9
	December	42.46	3.7
1999	March	43.40	1.3
	June	44.94	4.9
	September	46.32	6.7
	December	46.80	10.2
2000	March	46.73	7.7
	June	49.00	9.0
	September	51.63	11.5
	December	52.21	11.6
2001	March	51.66	10.5
	June	52.35	6.8
	September	53.58	3.8
	December	53.42	2.3
2002	March	52.29	1.2
	June	53.30	1.8
	September	54.60	1.9
	December	54.97	2.9
2003	March	56.45	8.0
	June	60.46	13.4
	September	59.53	9.0
	December	59.80	8.8
2004	March	61.59	9.1
	June	64.11	6.0
	September	68.09	14.4
	December	70.32	17.6
2005	March	70.41	14.3
	June	73.22	14.2
	September	73.23	7.5
	December	73.43	4.4
2006	March	76.35	8.4
	June	76.39	4.3
	September	76.80	4.9
	December	78.27	6.6
2007	March	78.90	3.4
	June	78.46	2.7
	September	80.90	5.3
	December	82.68	5.6
2008	March	87.18	10.5
	June	92.14	17.4
	September	93.75	15.9
	December	96.38	16.6
2009	March	99.50	14.1
	June	101.91	10.6

	September	102.90	9.8
	December	104.07	8.0
2010	March	105.01	5.5
	June	105.65	3.7
	September	106.32	3.3
	December	108.07	3.8
2011	March	112.41	7.0
	June	119.56	13.2
	September	123.88	16.5
	December	128.81	19.2
2012	March	131.36	16.9
	June	133.63	11.8
	September	131.78	6.4
	December	133.35	3.5
2013	March	136.72	4.1
	June	139.46	4.4
	September	140.99	7.0
	December	143.25	7.4