DETERMINANTS OF SUPPLY OF REAL ESTATE FINANCE IN KENYA

BY

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DECLARATION

This Research Project is my own original work and has not been presented for a Degree Qualification in any other University or Institution of learning.

SIGNED …… DATE **…….**

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This Research Project has been submitted for Examination with my approval as the University Supervisor.

SIGNED: …… DATE: …….

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DEDICATION

This paper is dedicated to my parents for their guidance and persistence and for being a source of inspiration and support in the course of my studies

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The MBA programme has been a long, taxing and challenging journey and the successful completion has been as a result of support received from many people. I am indebted not only to people who gave me the inspiration, support and encouragement to purse MBA programme but also to everybody who gave me the guidance and assistance on what has been reported in this project.

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ABSTRACT

The purpose of the study was to investigate the factors affecting real estate finance supply. It was important to verify the reasons why housing finance are not being supplied by the financial intermediaries readily. Could it be that potential borrowers are not approaching the financial institutions to source for housing finance or is it that the lender's requirements are so stringent that individual's cannot meet up with this lender's requirements. The study was carried out as a survey of real estate developers, real estate owners and financiers operating in Kenya as of 31st December 2011. The sample size was made up of 30 real estate developers, 30 home owners and 10 housing financiers. It was considered necessary and important to obtain information using questionnaire in extracting information from users of real estate finance in Kenya at the time. The data collected by means of the questionnaire survey, was analysed and conclusions were used in discussing all factors that affecting supply of real estate financing in Kenya.

There were revelations about the situation in the supply of housing finance in Kenya. In lending, financial institutions give out loans in consideration of interest to be charged on the loans and the riskiness of the loan. The ability of financial institutions to lend for housing (supply of housing finance) determines the quantity of housing finance that could be supplied for house acquisitions. The research identified these factors; value of property, government regulation, income level, interest rates and loan security do affect the availability and supply of housing finance will be reduced. The efforts by the government to ensure faster clearances for active real estate development would enable developers in a great way. The researcher recommends that the government should streamline the various real estate policies in different ministries into a single guide and to set up a separate real estate division within the ministry with the objective of running a single window clearance of all required paper work and clearances. Also the government should establish a housing loan guarantee scheme run by existing government housing corporations to assess risks in some real estate development and the applicant's credit scores then giving guarantees to the developers and financiers so as to encourage financiers to lend more and at affordable interest rates.

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ABBREVIATIONS

AfDB	African Development Bank
ANOVA	Analysis of Variance
CBK	Central Bank of Kenya
CDC	Commonwealth Development Corporation
CRR	Cash Reserve Requirement
EABS	East African Building Society
GDP	Gross Domestic Product
HFIs	Housing Finance Institutions
HFCK	Housing Finance Company of Kenya
KBS	Kenya Building Society
KNBS	Kenya National Bureau of Statistics
LTV	loan-to-value
MFI	Micro Finance Institutions
NBFIs	Non-bank financial institutions
NGO	Non-Governmental Institutions
NNE	New Neoclassical Economics
NSE	Nairobi Stock Exchange
NSSF	National Social Security Fund
OMO	Open Market Operations
PLS	Partial Least Squares
S&L	Savings and Loan
SSA	Sub-Saharan Africa
TQM	Total Quality Management
USDHUD	United States Department of Housing and Urban Development
UNCHS	United Nations Centre for Human Settlements (Habitat)

CHAPTER ONE

INTRODUCTION AND BACKGROUND TO THE STUDY

1.1 Background Information

In the year's immediately preceding independence in 1963, the housing finance sector was marked by instability as a result of political uncertainty. In the event, HFI deposits plunged from KSh 208 million in 1959 to KSh 90 million in 1962. However, this period soon gave way to a phase of consolidation and the mortgage industry expanded substantially from 1964 onwards. The principal HFIs were the Housing Finance Company of Kenya, Kenya Building Society (KBS), and Savings and Loan (S&L). HFCK was incorporated in 1965 as a joint venture between government and the Commonwealth Development Corporation (of the United Kingdom), taking over the assets of First Permanent of East Africa and those of KBS. S&L, the largest HFI at the time, experienced substantial setbacks around the time of independence and was taken over, initially by Pearl Assurance and, in 1970, by Kenya Commercial Bank, a parastatal. East African Building Society, a relatively small HFI which had opened for business in 1959, weathered the political uncertainties of the day and expanded rapidly in the years that followed.

HFCK, EABS and S&L, the principal HFIs, achieved fast growth during the 1970s. Between 1975 and 1980, for instance, HFCK deposits increased at an annual average rate of 20% and those of the EABS by 24%. In mid-1981, following a general decline in the growth of deposits, tax-free housing development bonds were introduced to enable HFCK and S&L to attract additional savings. These institutions also benefited from deposits by the National Social Security Fund (NSSF) and from loans by the government. Starting in the mid-1980's the mortgage industry witnessed major changes and upheavals. By 1986, the number of HFIs had grown to about 36, comprising four limited liability companies and 32 building societies but only 15 of the latter were active. Taking into account that the country had for many years been served by only one building society, the growth in numbers of this type of HFI had been nothing short of dramatic. Gardner et al. (1986) have advanced two reasons for this growth. The first is that the coffee price boom of 1976-77 provided the financial impetus for the rapid increase in the number of such

institutions. Second, licensing of financial institutions under the Banking Act was tightened in 1985 following the collapse of a financial company. Thus, building societies remained the principal avenue for the entry of firms into the financial sector. Notwithstanding the proliferation of HFIs, the industry continued to be dominated by HFCK, EABS and S&L. Still, the newer institutions competed aggressively for savings.

In 1984, the country experienced its first post-independence failure of a financial institution, that of the Rural and Urban Credit Finance Company. In response, the government tightened the regulatory and supervisory regime. More specifically, a number of steps were taken via an amendment to the Banking Act (Cap. 488). First, stricter conditions were imposed on the level of paid-up capital, as well as that of unimpaired reserves relative to deposit liabilities. For instance, paid-up capital for local non-bank financial institutions (NBFIs) was raised from Ksh 5 million to Ksh.7.5 million. Second, NBFIs were prohibited from owning shares in commercial banks. Third, a Deposit Protection Fund was created at the Central Bank.

These measures notwithstanding, a group of financial institutions, several building societies among them, failed in due course. A combination of factors led to this failure, some political, others management-related. First, a good number of building societies had invested heavily in property development, an activity that was considered more profitable but which naturally carried a higher risk. A notable example was Pioneer Building Society which collapsed largely because of delayed house sales. Second, major institutional investors, such as the NSSF, withdrew their deposits from the new building societies, partly out of the need to comply with political directives but also as a result of genuine concern for the security of their deposits. Third, the number of building societies had expanded too rapidly relative to the volume of available deposits. Fourth, the regulatory and supervisory regime was weak and potential problems could therefore not be arrested in time. In particular, the Registrar of Building Societies did not possess the staff needed to assure effective supervision. Government intervened and re-organized some of the failed institutions under the umbrella of a new bank, the Consolidated Bank of Kenya. Potential crises were averted in the years that followed but, in the first half of

1993, a number of financial institutions were placed under receivership including one HFI.

In spite of these setbacks, the mortgage industry registered some expansion. HFCK saw its public deposits grow, in nominal terms, from Ksh.1.89 billion in 1987 to Ksh.3.4 billion (USD 120.9 million) in 1992. However, in real terms that is, after making adjustments for inflation growth was marginal. As for mortgage lending, advances increased from Ksh.204.5 million in 1984 to Ksh.614.0 million in 1992 (USD 21.8 million). Even so, there was stagnation between 1986 and 1988 but lending rebounded in 1989 and 1990 registering nominal growth rates of 34.2% and 52.3%, respectively. Stagnation set in once again in 1991. With some variations, EABS and S&L shared a similar experience. Arguably the most important historical development was the freeing of interest rates in July, 1991, a measure taken to ensure a more efficient allocation of resources. Although interest rates had hitherto been controlled by the Central Bank they had nevertheless remained positive in the years leading up to 1990. However, the liberalization of interest rates was overshadowed by the very high rate of inflation in 1993, conservatively estimated to have averaged around 40% but to have peaked at roughly 100% during the year. Since HFIs are not able to lend at nominal rates exceeding 30% -- because there is little demand at that level -- real interest rates turned sharply negative. The response of HFIs was to suspend new mortgage lending altogether, choosing instead to invest in high yielding treasury bills.

Although inflation fell substantially in subsequent years, and with it interest rates, mortgage interest rates remained above 20% per annum for the rest of the decade. Towards the end of the 1990s, the housing finance market in Kenya went through a transformation from being predominantly public-sector oriented, to a more market-driven enterprise. With interest rate decontrol and privatization, those institutions that were previously controlled and sheltered by government, became exposed to market forces.

Housing demand, commonly referred to as effective demand, seeks to measure the willingness and ability of households to pay for housing. It is a function of many factors: household income, the price (or rent) of a dwelling, financing arrangements (including

interest rate and the loan term), and household preferences for different attributes of a dwelling, such as location. There is empirical evidence that households are willing to spend more on housing if they are buying their own house than if they are renting. Housing demand is often contrasted with housing need, a socially derived concept that measures the number of dwellings required to house a population above an arbitrarily determined standard or norm, with no regard for the ability to pay.

In microeconomic terms, the housing finance market is considered as the interaction between a supply matrix of housing finance quantity classified by characteristics such as pricing / volume and a demand matrix of households classified by their characteristics, preferences and constraints Follain et al (1980). The market allocates housing finance on the basis of the price (interest rate) and the number of households that are willing to pay the bid prices in consideration that they have their preferences and constraints. It is argued that there is disequilibrium in the housing finance market when the price does not adjust fast enough to clear the market. On the supply side of the housing finance market in the developed economies, the lenders structures remain national in nature; common developments include a reduction of credit restrictions. Developments include increased loan-to-value (LTV) ratio, which is defined as the ratio of bank lending to property value, a wider array of loan contracts offered to borrowers and a move towards greater reliance on capital market funding via securitization of housing loans CGFS (2006). It is important to note that most housing finance markets that have historically relied more on fixed rate products have experienced an increased demand for, and use of adjustable rate mortgages as well as loan types combining features from both fixed and adjustable rate mortgages.

1.2 Statement of the Problem

The rise in household income is slowly percolating into growing urbanization causing a change in lifestyle trend. Urbanization has resulted in the nuclear family structure from the traditional joint-family system which is likely to create huge demand for urban housing leading to further expansion of the city's sub-urban regions. The above fundamentals in turn have created a huge demand supply gap in all sectors of the housing market, commercial, residential, retail and hospitality. The fact that more than half of the 40 million households in Kenya still live in temporary or semi-permanent structures suggest that housing has a huge potential demand in both the middle-income and high-income segments.

The housing sector in Kenya has seen tremendous growth in the recent years with property prices soaring and the number and scale of projects increasing. Developers have been looking at new sources of raising funds such as from investors, both domestic and foreign, through avenues such as listings on Nairobi Stock Exchange (NSE), private equity participation and the setting up of joint ventures. Recognizing the need for foreign funding, the government has allowed foreign direct investment. As a result, foreign investors are permitted to invest in wholly owned subsidiaries or in joint ventures with Kenyan real estate companies as long as minimum capitalization requirements are met within six months of the commencement of operations and the capital remains locked in the project for three years thereafter. (Financial Times, 2007). Entry of foreign retailers is accelerating demand for mall space.

A study by Dasan (1996) looked at analysis of factors which influence supervisor's motivation in Kenya's building and construction industry. Omufira (2001) observed the extent of TQM implementation in the construction industry. A case study of the Kenyan building industry by Njiru (2003) looked at the performance of real estate markets. The case of Central Business District of Nairobi by Sikasa C. (2004) looked at customer perception of change management practices in the mortgage industry. The case of HFCK by Mandere A.N. (2006) looked at a survey of QM practices in the large Kenyan building construction firms. Mutuku (2006) observed the factors influencing the development of

secondary mortgage market in Kenya with special emphasis on mortgage backed securities while Matara (2008) looked at a survey of sources of finance for building construction firms in Kenya. Marete D, (2011), reviewed the determinants of real estate property prices in Kiambu Municipality in Kenya. None of the local studies in the university focused on the determinants of supply of real estate in Kenya.

1.3 Objective of the study

The objective of the study was to investigate determinants of supply of real estate finance in Kenya.

1.3.1 The specific objectives were:

1. To find out if the economic model of providing housing finance in developed economies can be adopted in the Kenyan economy.
2. To evaluate the key factors that have contributed to the operational efficiencies and inefficiencies of supply of real estate financing in Kenya.

1.5 Significance of the study

The environment in which real estate developers conduct their daily routines is composed of factors which ultimately determine their success. Discovery and subsequent recommendation for elimination of any problems could improve performance of these businesses. The study therefore will contribute to business management and practice by providing an understanding on how to boost performance real estate developers. The various stakeholders will therefore understand the links between the necessary incentives for the growth and performance of the targeted businesses. Researchers who might be interested in this topic could find the results opening up new avenues for further re search. The study will also be of benefit to other researchers who may feel the need to further research on the same problem in their areas of specialization.

CHAPTER TWO

LITERATURE REVIEW

2.1 Financial institutions' role in housing finance

If the funding of mortgage loans is left primarily to the deposit-taking institutions, they can only supply mortgage loans through deposit mobilized which are short-tenured. As a consequence of the high proportion of short-term liabilities in their deposits, they tend to lend short according to the commercial bank loan theory and the real bill doctrine. The theory stipulates that bank loans should be short-term and self-liquidating because commercial banks usually have short-term deposits. According to the theory, banks should not grant long-term loans such as housing / real estate loans or loans for financing purchase of plant and machinery because they are considered too illiquid Elliot (1984); Ritter & Silber (1986) as cited by Soyibo (1996).

A large percentage of financial institutions in the emerging economies are still adopting the business model used in the era of market-making (1970s-1980s) in the US relying on short-term deposits liabilities to fund long-term mortgages assets USDHUD (2006); Cho (2007), which are contradictory to the tenets of the commercial bank loan theory. This model had a unique shortcoming under volatile interest rate environment where lenders are borrowing short-term and lending on long-term basis at high interest rates that results in dampened housing finance demand. A well-functioning primary mortgage market requires adequate funding sources and variety of lenders in the primary market to promote further development. This includes savings mobilization and simple mortgage-backed debt instruments to offer lenders funding alternatives Roy (2007). Lenders in the primary market would include non-depository mortgage specialists, non-governmental organizations (NGOs), microfinance institutions (MFIs) and contractual savings systems Follain and Zorn (2000); Warnock and Warnock (2008). In Asia, the financial sectors in countries such as China, South Korea, Malaysia, Singapore, India and Indonesia are large and well developed UNCHS (2007). Whereas, domestic debt markets in most SSA countries (except South Africa) are in the developing stage and others in their infancy stage. SSA has 15 organized securities markets and the region's financial sectors are

characterized with a limited range of investment instruments particularly for longer tenors except the Johannesburg Stock Exchange Roy (2007); Irving & Manroth (2009).

Scale issues in equities have been mirrored in the bond market, where only a limited number of private bonds have been listed and there is little secondary market trading Merrill and Tomlinson (2000); Roy (2007). The major reason for the smallness of the securities market is lack of investors; in that insurance companies and pension funds are too small to act as major institutional investors. Despite the fact that insurance companies are allowed by statute to invest in real estate, they lack the necessary long-term funds for investment Roy (2007).

2.2 Review of theories

The driving force of economic growth and development as enunciated by Schumpeter (1921) which include mobilization of savings, efficient capital allocation, effective risk management, ease of transactions with advancing technologies are lacking. In an effort to provide housing and subsidized housing finance, various central governments have established institutions to provide housing finance. Even with the establishment of these institutions, their management has been affected by political and other negative factors that are not favourable for business survival. Therefore, the theoretical framework of this study is based on the New Neoclassical Economics (NNE) which is an integration of Neoclassical Economics and Transaction Cost Economics.

2.2.1 Theory One: Mass Psychology and Irrational Exuberance

The dominant explanations of the housing finance to date have been demand-side explanations. Robert Shiller has argued that the demand is driven by consumers' irrational exuberance and belief that real estate prices would continue to appreciate, stoking the demand for housing finance.

We do not question the existence of irrational consumer expectations and behavior. There is undoubtedly a great deal of irrational or misguided consumer behavior in real estate

investment. But this behavior required readily available financing. Shiller's demand-side theory cannot explain the movement in yield spreads during the bubble and is, therefore, a necessarily incomplete explanation. Credit relationships are two-sided relationships, and the evidence from PLS spreads indicates that any increase in housing finance demand was outstripped by an increased in housing finance supply.

2.2.2 Theory Two: Consumers' Inability to Anticipate Inflation

An alternative psychological theory has been presented by Markus Brunnermeir and Christian Julliard. Brunnermeir and Julliard argue that consumers are incapable of sorting between real and nominal changes in interest rates and rents. Therefore, consumers account for low nominal rates when making mortgage decisions, but fail to account for future appreciation of prices and rents falling commensurately with anticipated inflation. The result is that consumers overestimate the value of real estate when inflation is declining.

Brunnermeir and Julliard's theory may well be correct, but it too cannot explain the movement in yield spreads during the bubble. Therefore, their theory, like Shiller's, is at best an incomplete explanation of the bubble, as the yield spread movement shows that any growth in demand was exceeded by a growth in supply.

2.2.3 Theory Three: Inelastic Housing Supply

A third demand-side quasi-hypothesis for the housing finance, presented by urban economists Edward Glaeser, Joseph Gyourko and Albert Saiz, emphasizes the geographic variation in the housing bubble. There was considerable regional and local variance; some metropolitan areas, such as Detroit and Cleveland, did not experience a bubble, while others experienced bubbles of greater or lesser size. Glaeser, Gyourko and Saiz explain the variation based in part on variations in the elasticity of housing supply. In some parts of the country, local regulations and urban growth have been on a collision course for several decades. In these cases, with the inability of supply to expand, increased demand for real estate only resulted in higher prices.

In other words, Glaeser, Gyourko and Saiz contend that in inelastic housing markets, the housing demand curve shifted rightwards. And because most consumers finance the purchase of their homes, the rightward shift in the housing demand curve would have also resulted in a rightward shift in the mortgage finance demand curve. Glaeser, Gyourko and Saiz do not present supply constraints as the explanation for the bubble, although others do. At most, Glaeser, Gyourko and Saiz see supply inelasticity as affecting variations in how the bubble played out regionally. They argue that supply inelastic regions are more likely to experience greater price volatility and bubbles and that the extent of the bubble was determined to some degree by housing supply inelasticity.

2.3 Review of emperical studies

The neoclassical economics perspective looked into the dynamics of prices and quantities though largely an institution-free perspective in which only function matters Merton & Bodie (1995); North (1994), as cited by Merton & Bodie (1995). Thereafter, Williamson (1985 p.16 and 1988) in discussing the New Institutional Economics highlights the functional perspective of the financial system. The basis of economic theory is that commercial transactions are the prime drivers of economic growth such that the more frequently transactions take place, the higher the potential of economic growth. For economic growth and development, Schumpeter (1912) argues that financial intermediaries like banks and other financial institutions mobilize savings, allocate capital, manage risk, ease transactions and monitor firms. It is in this process of lending that financial intermediaries are considered to be utilizing resources and contributing to economic growth and development and there are evidences to support Schumpeter's view that financial institutions promote development Fry (1988); King and Levine (1993); Benhabib and Siegel (2000); Arestis et al (2001); Wachtel (2001) and Scholtens & Wensveen (2003).

Further in the literature, one of the biggest problems faced by the banks is lack of information about the promoters and the projects to be financed with the bank facilities

Jones & Maclennan (1987); Altman & Saunders (1998); Byamugisha (1999); Guzman (2000) and Mints (2006). Therefore, the economics of information, which has been a great contributor to the standard Neoclassical Economics since the late 1970s' is considered to be relevant to this study. The New Neoclassical Economies (NNE) is an integration of Neoclassical Economics (NE) and Transaction Cost Economics (TCE), with a primary role for NE but without losing sight of TCE. Among the presentations that assume part of the role of TCE in the framework of NE, is the information economics survey by Stiglitz (2000). The new information economics, he claimed, not only showed that institutions mattered, and explain why the institutions arose and the forms they took, but showed why they mattered. He noted that Arnott and Stiglitz (1991) showed that non-market institutions could even exacerbate the consequences of market failure, which was earlier articulated by Coase (1960).

Coase (1960) argued that if the costs of handling through the market are high and if the net costs are lower, only then may government regulations be relevant. However, the design of appropriate government interventions can be problematic to the extent that on occasions it brings into serious questioning the suitability of government interventions as the only option in correcting market failures Hammond (2006a & 2006b). The mere failure of private industry, when left from public interference, to maximize national dividend does not itself warrant intervention; for this might make things worse. When issue of accountability is not on the agenda, governments in most of the emerging economies monopolizes resources and power, and this monopoly is often worse than that of the private sector in the sense that the former entails larger TC and hence much more social costs relative to the latter. Hurwics (1973) noted that whenever information is imperfect and/or markets are incomplete, competitive markets do not obey the Pareto optimality efficiency criterion. Also, in NE literature, Kogiku (1971) noted that a competitive equilibrium ceases to produce Pareto-optimality when there are externalities that affect the system. However, Stiglitz (2000 p.1458) concluded without taking cognizance of associated TC, that "Government interventions, in form of, say taxes or subsidies on commodities – will lead to Pareto improvements". In line with the discussions and conclusion above on transaction cost, the next section then examines transaction cost and the theory of financial intermediation.

The current theory of financial intermediation concentrates on transaction costs and asymmetric information, but is inadequate in explaining the current complex financial transactions. It is therefore, referred to as traditional approach to financial intermediation. The financial intermediaries were considered as institutions being used to execute government monetary policies Benson and Smith Jr. (1976), without contributing to economic growth and development. The assertions might be right in the case of financial intermediaries in the emerging economies, due to the level of their economic growth. The financial intermediaries in the developed economies have gone through stages of development and by their functioning and operation they are contributing to the economic growth of their domiciled environment. The success in the theory of financial intermediation can only be appreciated when a financial market is not perfect. As noted by Berger et al (1995), a large percentage of past research on financial institutions has identified assumed imperfections like taxes, costs of financial distress, transaction costs, asymmetric information and importantly regulation.

In terms of regulation, which can either be structural or prudential, the government regulates the financial market to ensure financial stability as well as addressing problems of asymmetric information and moral hazard. While structural regulation limits the degree of risk that an institution can take in order for government to protect investor's funds and exposure limits of the financial institutions Pilbeam (2005), prudential regulation takes care of disclosure requirements, capital adequacy and liquidity requirements. Even with the identified importance of effective regulations of financial institutions, Llewellyn (2008), Milnes & Wood (2009) and Shin (2009) in discussing the Northern Rock situation highlighted problems in the regulatory framework of the British Financial System. Few of the identified problems include: inadequate role of government in responding to financial market distress and ambiguity in regard to the distinction between liquidity and solvency issues in banks. Llewellyn (2008) suggested that in any regulatory / supervisory regime, four areas that need to be addressed include prudential regulation of the financial firms; management and systemic stability; lender-of-last resort function and conduct of regulation and supervision business.

The lack of adequate regulation has resulted in lending behaviour of financial intermediaries being out of tune with economic realities. This has resulted in the lending standard being disconnected from economic fundamentals Markowitz (2009); Jones and Watkins (2009) and the banks failing with great speed exposing flaws in the regulatory system designed to identify failing institutions The Wall Street Journal (2009). Also, Scholtens and van Wensveen (2000 & 2003) are of the opinion that there is imperfection in the market when information is not flowing freely (information asymmetries). In the absence of information asymmetries, due to deregulation and deepened financial market, improvement in information technology and reduction in transaction cost, which are attributes of the financial markets in the development economies, the relevance of financial intermediaries reduces greatly.

While transaction cost highlights role of these intermediaries in the distribution function, the emphasis on the information asymmetries revolves around the origination and servicing function Merton (1989); Allen & Santomero (1998). This is due to the fact that these institutions are considered as information sharing coalitions Leland & Pyle (1997) and they can achieve economies of scale and act as delegated monitors on behalf of their customers Diamond (1984); Scholtens & van Wensveen (2003). Therefore, they can deal with individuals and transact business with their dynamic strategies at minimum cost than individuals doing their businesses which might result in high transaction cost. The transaction cost is not limited to foreign exchange and cost of borrowing Tobin (1963); Towey (1974); Fischer (1983), it also includes costs of auditing and monitoring, search costs etc which are high in most of the emerging economies. The transaction costs in these economies are high because of implicit and explicit costs of doing business which ultimately reflects on the cost of borrowing for property acquisition. Pagliari (2007) noted that in acquisition and disposition of privately held real estate, transactions cost are high which reduces returns on that type of investment. The transaction cost in this type of investment includes cost of traveling in the course of acquiring and disposing the real estate, legal fees, due diligence costs, brokerage commissions and transfer taxes depending on where the transaction is taking place.

The argument goes further from the observation made by Levine (1997) that informational asymmetries and transaction costs reduces liquidity and increases liquidity risk. These asymmetric information and other credit market frictions has various effects in the financial markets. These shortcomings, observes Levine (1997) create the incentives for the establishment of institutions that augments liquidity with the intentions of increasing their profitability. Chiuri and Jappelli (2003) were of the opinion that in the quest of the financial intermediaries to accumulate savings in form of liquid wealth, the lenders (financial intermediaries) requests potential borrowers to make down-payments in arranging funds for property acquisition. This down-payment is becoming a unique factor in determining when most first time buyers start climbing the property ladder. In the US studies, Duca & Rosenthal (1994); Haurin et al (1997) observed that the down-payment drives mortgage availability and the timing of property acquisition by first time buyers. Ortala - Magne and Rady (1998 & 1999) examines the economic impact of down payment.

In the financial systems, the bank-based model has the attributes to acquire information about firms, thereby improving corporate allocations Diamond (1984); Ramakrishinan & Thakor (1984), manage cross-sectional, inter-temporal and liquidity risk in an effort to enhance investment efficiency and economic growth Allen & Gale (2000); Bencivenga & Smith (1991). In attracting projects with high returns to an economy, there should be capital to fund it Levine (1997) and at the right price. As it was argued by Vatnick (2008), a lower cost of capital is important for economic growth because it induces rising investment and higher rate of capital accumulation for faster economic growth. Therefore, the financial intermediaries are expected to be liquid to provide funds for the projects, it translates to the fact that there is linkage between liquidity and economic development.

The literature on finance reveals that there are only two broad types of finance available: debt and equity finance. Financing of a project either by debt or equity depends on the characteristics of assets being financed and transaction cost reasoning suggests the use of debt to finance re-deployable assets and equity used to finance non re-deployable assets Williamson (1988). Furthermore, Jensen and Meckling (1976) in the study of theory of

firms argue that debts are utilized if the ability to exploit potentially profitable investment opportunities is limited by the resources of the owner. Debt finance yields a fixed return to its suppliers in states when the firm is not bankrupt (that is, the firm has sufficient funds to make the fixed payment) Edwards and Fischer (1994). Bank lending as a form of debt can be categorized into two: either as asset specific or corporate loans Crosby et al (2000). Again, the debt can be either secured or unsecured.

However, equity finance gives its suppliers the right to the firm's residual returns after payments to the suppliers of debt finance, and in addition, the right to vote on decisions concerning the firm's operation in states when a firm is not bankrupt. When the firm goes bankrupt, limited liability provisions mean that suppliers of equity receive nothing. In such state, they even loose the right to make decisions about the firm's operations in such states. In situation of non-bankruptcy, suppliers of equity finance have the right to the firm's residual return; they do not have the right to receive a fixed payment in every period which may be yearly or half-yearly Edwards and Fischer (1994); Toby (2006). On the other hand, Cranston (2002) and Tirole (2006) classify debt finance into short-term and long-term. Short-term debt finance instruments includes bank overdraft, commercial papers and short-term trade credit and long-term debt finance instruments includes housing loans, mortgages and other forms of informal credit transactions. In the context of the developing world, debt finance can be obtained from formal financial institutions like banks, micro-finance arrangements, indigenous moneylenders, family members, employers and government Nubi (2005). Heffernan (2003) and Tirole (2006) argued that financial instruments vary widely according to the characteristic of term to maturity. Sight deposits at banks have zero term to maturity, as they can be withdrawn on demand. Consequently, equity has no redemption date and therefore possesses an infinite term to maturity.

One of the biggest problems faced by the banking sector is lack of information about the promoters and the projects to be financed with the bank facilities Guzman (2000); Djankov et al (2007), to determine whether the borrowers will be able to pay the principal and interest when they fall due. Altman and Saunders (1998) highlighted the array of information on various borrowers' details to include their character (reputation), capital

(leverage), capacity (volatility of earnings) and collateral. However, Mints (2006) limited the borrowers required information to "the three C's of lending" which are collateral factor, capacity factor and credit factor, which are all relevant to lending in both developed and emerging economies.

The current theory of financial intermediation concentrates on transaction cost and asymmetric information and they are considered to be inadequate as tools to explain the fundamentals of financial intermediation, which is risk management. Therefore, their contributions are being classified as traditional and old. Moreover, there are two aspects to the lending operations of the financial institutions. The ability of the financial institutions to lend determined by the strength of their balance sheets and the willingness of these institutions to lend as risk managers.

In the banking literature, capital adequacy is one of the five key variables identified in measuring bank balance sheet strength while others are asset quality, management, earnings and liquidity Rojas-Suarez (2002); Hefernan (2003); Buckle and Thompson (2005). The capital adequacy regulatory rules have impact on the bank behaviours Dewatripont and Tirole (1994); Freixas and Rochet (1997); Chiuri et al (2002). It is argued that there are two ways by which these rules affect bank behaviours. Firstly, it is known that capital adequacy regulatory rules strengthen bank capital and improves the resilience of a bank to negative shocks and secondly, capital adequacy affects banks in risk taking and management behaviour.

It has also been argued by various authors Allen (2004); Pan (2008) that capital adequacy rules like Basel II may impact the banking system's ability to extend loans and advances to the productive sector of the economy. When capital requirement arises and with capital constraints in most countries of the emerging market due to lack of depth in their capital markets; the banks adopt a risk-shifting model as means of risk management. Risk management is about managing a mismatch between supply of funds and the demand for investments and these risks could be credit risk, liquidity risk, systemic risk, mismatch risk or interest rate risk Odenbach (2002); Heffernan (2003); van Order (2005); Mints (2006) and Akinwunmi et al (2007) & (2008a). With risk management being the core

business of the financial intermediaries, Dewatripont & Maskin (1995); van Thadden (1995) opinionated that financial institutions operating in a market-based financial system, due to competition, will have their inefficiencies associated with banking activities reduced and thereby promote economic growth.

Saunders (2002) analyses a risk-shifting model as a process whereby financial institutions, banks in particular, in an effort to meet up with new capital requirements moves away from low-yielding loans to high risk loans in expectation of high earnings. Furthermore, Caprio Jr. et al (2008) argue that risk-shifting takes place at every stage of financial engineering. If these loans eventual pay off, banks meet up with their higher capital requirements from loan profits, otherwise they are liquidated.

2.4 Determinants of Supply of Housing

The role of a housing finance system does not stop at the provision of shelter, it is also very important to the mobilization of domestic savings, shelter being one of the first priorities of households and a leading reason for savings. Therefore, the literature contends that the housing finance sector can and should play a central role in the mobilization of resources by households Renaud 1984; Renaud (2008). In Asia, according to UN-Habitat's state of the World's cities 2006-7 report, 73 percent of urban dwellers live in non-permanent housing. The housing sector is severely constrained by lack of an adequate and appropriate housing finance system, in which Asian Development Bank study says that Asia's mortgage sector is the least developed in the world UNCHS (2007). The situation in SSA is similar, characterized by the lack of housing finance.

The stock of housing finance in Namibia and South Africa comes to 18-20 percent of GDP, for other countries for which data are available had about 2 percent (Nigeria, Mali, Morocco, Senegal) Roy (2007). In Asia, many countries mortgage financing per year is less than 2 percent of GDP compared to 88 percent in the United Kingdom (UNCHS (2007) and 15-21 percent in Chile, Malaysia and Thailand Honohan and Beck (2007). In societies where social housing is not on the priority list of government, the affordability

would have to be looked at from the point of view of the individual's own ability to raise money needed to meet the cost or price of housing needs. Generally, the first source of funding for the individual is their income because it does not involve payment of interest. Many countries in the emerging economy have nascent and weak financial markets. The participation of financial markets in financing housing has been limited and the majority of low-income households are also excluded from the formal financial services industry UNCHS (2007). This resulted in 70 to 80 percent of housing finance in emerging economies being raised from the informal market Okpala (1994); Buckley et al (1994); Saravanan (2007) and Tiwari & Debata (2008). These informal markets are made up of loans from relatives, employers and money lenders that supplement savings and current income for housing finance Renaud (1985); Kim (1997).

However, formal housing finance supply in emerging economies is operated through both policy-driven and the market-oriented housing finance channels Deng and Fei (2008). The policy-driven housing finance is mainly through Housing Funds Schemes, which are mandatory housing savings scheme while the market-oriented housing finance is characterized by commercial loans from financial institutions. In the developed economies, commercial mortgages are referred to as collateralized lending to property developers whereas in the emerging economies, commercial loans are basically mortgages raised from financial institutions.

With the magnitude of housing needs in most of the countries in the emerging economy, Buckley and Kalarickal (2004), Hassler (2005) and Merrill (2006) argued that there are requirements that emerging economies must embrace, if they are going to move forward in terms of delivering housing finance. The requirements include stable macroeconomic conditions, a legal framework for property rights, mortgage market infrastructure and funding sources to promote financial intermediation and each will now be discussed.

2.4.1 Macroeconomic conditions

Macroeconomic policies are impacts of exogenous interventions at the aggregate or economy-wide levels Burda and Wyplosz (1997); Hammond (2006) and Roy (2007).

Macroeconomic instability and its corollary of high and volatile domestic interest rates, erratic monetary and exchange rate policies coupled with weaknesses in the financial systems of many emerging market countries Bhattacharya et al (1997); Irving and Manroth (2009), have a disproportionate impact on long-term mortgage finance. Various factors contributes to greater macroeconomic volatility in emerging markets, the most important is that their production structure is typically much less diversified than that of developed countries and often dependent on primary commodities.

The macroeconomic policies might be adopted to affect (decrease/increase) the nominal interest rate, or volatility of inflation, which has affected the efficiency of housing finance. In differentiating between housing affordability and housing finance affordability, Buckley et al (1994) argued that housing finance affordability arises when inflation makes housing unaffordable at the market rates of interest. This resulted in indexation as means of addressing the housing finance affordability problem especially in the Latin America and a few African countries like Ghana. Therefore, the objective of and redesigning mortgage contract is to eliminate financial constraints that impede the affordability housing and provide a financing vehicle so that those who can afford to, and so desire, can purchase homes Buckley et al (1993). This assertion has been argued by Buckley (1996) and Kim (1997) that indexation of deposits and mortgage products can only deal with moderate inflation.

A sound macroeconomic policy framework is one that promotes growth by keeping inflation low, the budget deficit small and the current account sustainable Fischer (2004); Hale (2007). Therefore, the financial regulatory authorities (central banks) in most emerging market economies have used policies like the cash reserve requirement and liquidity ratio as instruments of monetary control. Cash reserve requirement is the percentage of the banks cash asset to be kept in an account with the central bank. This policy is adopted to control volume of funds available for financial institutions to invest in granting loans and advances.

2.4.2 Financial Development and Liberalization

In most of the emerging market economies, the financial sub sector is generally shallow relative to the sizes of these economies. The shallowness of these institutions results in limited access to financial services, with the low-income earners and even medium income earners mostly discriminated against in the financial market. This form of discrimination comes in the form of being denied credit facilities due to their inability to meet the stringent requirements of suppliers of finance Roy (2007); Renaud (2008). In terms of liberalization, there has been a relative efficiency in the credit markets of the emerging economies due to the adoption of market discipline and risk-based capital guidelines. Almost all countries in the emerging economies are moving away from rigid.

2.4.3 Financial Infrastructure and Incomplete Financial Systems

The financial infrastructure of a country shapes the structure, organization and performance of the finance industry and the process of capital formation, and therefore the mortgage market development strategies Renaud (2008); Boleat (2008). This is done when attempts are made to increase the depth and breadth of their financial markets. One of the indicators for measuring financial deepness of an economy is the total deposits within a financial system as a percentage of GDP Vatnick (2008). The organization and structure of the financial system also plays an important causal role in the quality and rate of economic growth Bhattacharya (1997); Levine et al (2000); World Bank (2001).

2.5 Chapter Summary

It has been identified through various studies that the financial infrastructure of a nation shapes the structure, organization and performance of the finance industry and the process of capital formation and the mortgage market development strategies in both developed and emerging economies. Specifically, housing and housing finance in emerging market economies has been subjected to various limitations like inadequacy of legal and regulatory infrastructure, macroeconomic volatility, high transaction costs associated with the lack of adequate loan management practices and infrastructures for mortgage processing.

Despite the orthodox view that a secure supply of land with a good title (registered land) is a pre-requisite for effective housing finance system, efforts to get land registered and governments to be the sole custodian of land has been a disaster in most emerging economies. The idea of land registration has slowed down the process of housing finance disbursement and eventual supply. It can further be argued that the underdevelopment of mortgage lending to individual households can be explained by lack of demand for mortgage lending which might be due to high credit risks, lack of financial depth which translates into high interest rates on mortgage loans, the limited long-term credit resources of originating banks resulting from failure to develop secondary market financing. This anomaly has hitherto been tackled in the developed economies through the introduction of stable funding source and asset-liability management tools like securitization, credit derivatives, collateralized debt obligations and mortgage covered bonds. For most of the emerging economies, a combination of economic and social factors, such as low domestic savings rate, high price-to-income ratios and a general culture and social predisposition towards homeownership, suggests that the common problem facing them lies in the provision of housing finance services that can allocate untapped resources.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter describes the research design, population and sampling design, the data collection method, the research procedures and data analysis methods that was used in the course of the research. This section also indicates the research tools used to collect data, the data collection and the analysis procedures.

3.2 Research Design

The research adopted a descriptive research design. Accroding to Cooper and Schindler, (2001), descriptive study is used when one needs to determine characteristics associated with a subject population which this study is actually concerned with.

3.3 Hypothesis and Model to be tested

Using loan to housing (housing finance supply) as the dependent variable, it could be deduced at a point, that interest levels, income levels, loan security, value of property and government regulations being independent variables do significantly affect supply of loans to housing.

The basic model is as shown below:

$$\mathbf{Y = \beta o + \beta 1x1 + \beta 2x2 + \beta 3x3 + \ldots\ldots\ldots\ldots\ldots\ldots + \beta kxk + e \quad \ldots\ldots\ldots\ldots\ldots\ldots 1}$$

Where:

x1, x2, x3.....xk are the independent variables.

e the difference between the predicted and observed value of Y for the *i*th subject.

bo is the constant term

b1, b2, b3.....bk are the regression coefficients to be estimated.

The empirical model is therefore derived as:

$$\mathbf{SHF=\alpha_0+\alpha_1 IR+\alpha_2 IL+\alpha_3 LS + \alpha_4 VP + \alpha_5 GR \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots 2}$$

Where;

SHF = Supply of Housing Finance

α_O = Coefficient of the independent variable to SHF

IR = Interest rates

IL = Income level

LS = Loan Security

VP = Value of property

GR = Government regulations

3.4 Research population

The target population was all real estate developers, real estate owners and financiers operating in Kenya as at 31st December 2011.

3.5 Sample size

The target respondents were selected using purposive sampling. In this case respondents were chosen deliberately on assumption that they have valid information regarding the problem under study. The sampling frame was all real estate developers and home owners who have engaged in development business in Nairobi, however due to nature of their work, we did not find all of them in Nairobi City. It was important that the respondents are targeted based on the locations where was easy to locate them so as to save cost and time in the course of the research. Hence, this proposal focused on the respondents at their places of work. The sample size composed of 30 real estate developers, 30 home owners and 10 housing financiers.

3.5 Data collection

Qualitative and quantitative research approaches were used in this study. For quantitative, the data was obtained from the housing finance publications and other publications in the real estate sector. Qualitative research methodologies were designed to provide the researcher with the perspective of target audience members through immersion in a culture or situation and direct interaction with the people under study. The advantage of using qualitative methods was that they generate rich, detailed data that leave the

participants' perspectives intact and provide a context for health behaviour. Qualitative methods of data collection used in this study were questionnaires.

3.6 Data analysis

The researcher edited the collected data centrally Coppers and Schindller, (2000) assert that editing is done in order to detect errors and omission, ensure data is accurate, uniformly entered, complete, consistent with intent of the question and other information in the study and arranged to simplify coding and tabulation. Alpha numeric data coding was carried out to assign numbers and other symbols to the questions, which Coopers and Schindler (2000) explain is done in order to group the respondents to a limited number of classes or categories that facilitate efficient analysis. Coded data was tabulated in Statistical Package for Social Scientist (SPSS).

3.6.1 Correlation

Pearson product-moment correlation (r), as an example of correlation coefficient, gives the numerical summary of the direction and strength of the linear relationships between two variables. Since explanation needs to be given for the possible relationship between the dependent and independent variables, the statistical association between the variables has to be measured. The Pearson Product-Moment Correlation (r) is the most commonly applied correlation coefficient used in measuring a linear association and it was therefore adopted in this study to build the framework of the conceptual model.

3.6.2 Multi-collinearity

Another important issue in multiple regression analysis is the presence of multicollinearity. There is no precise definition of collinearity firmly established in the literature Mason and Pierreault (1991). Collinearity is agreed to be present if there is an approximate linear relationship among some of the predictor variables in the data. This refers to the relationship among the independent variables and it exists when the independent variables are highly correlated (r = 0.9 and above) Pallant (2007);

Tabachnick & Fidell (2007). Multicollinearity makes it difficult to determine the contribution of each independent variable Hair et al (1998).

3.7 Data validity and reliability

Data obtained from the primary source was considered authentic and could therefore be relied upon for deriving conclusions. Such data was also considered credible and free from error or any bias. Data was moved from the field only by the researcher to ensure confidentiality and reliability was observed, discussion and clarification were sought from the organizations targeted to ensure reliability, remains confidential and used only for the purpose of this study.

CHAPTER FOUR

DATA ANALYSIS AND PRESENTATION O FINDINGS

4.1 Introduction

The main objective of this study was to establish determinants of supply of real estate finance in Kenya. A total of 70 questionnaires were sent out, of which 44 were satisfactorily filled and returned, this formed 63% response rate. The collected data was analyzed using the statistical package for social scientist. The chapter starts with the analysis of results and concludes with giving the summary and interpretation of the findings.

4.2 Data presentation and explanation

4.2.1 Descriptive Statistics

Table 4.1: Descriptive statistics for measures of performance

	N	Minimum	Maximum	Mean	Std. Deviation
Housing Finance Supply	44	13.00	85.00	27.5000	28.29664
Interest Rates	44	13.00	96.00	31.1667	31.99635
Income Level	44	14.00	117.00	38.0000	39.18673
Loan Security	44	17.00	145.00	47.1667	48.53212
Value Of Property	44	23.00	165.00	53.6667	55.07328
Government Regulations	44	24.00	193.00	62.8333	64.37831
Valid N (listwise)	44				

The Descriptive Statistics table provides summary statistics for continuous, numeric variables. Summary statistics include measures of central tendency such as the mean. Measures of dispersion (spread of the distribution) such as the standard deviation. The minimum for housing finance supply and interest rates was 13 respectively, 14 for income level, 17 for loan security, 23 for value of property while 24 for government regulations. The maximum was 85 for housing finance supply, 96 for interest rates, 117 for income level, 145 for loan security, 165 for value of property while 193 for government regulations. The mean for housing finance supply was 27.5, 31.1 for interest rates, 38 for income level, 47.1 for loan security, 53.7 for value of property and 62.8 for

government regulations. The std deviation for housing finance supply was 28.3, 31.9 for interest rates, 39.1 for income level, 48.5 for loan security, 55 for value of property and 64.4 for government regulations

4.2.2 Correlation

Table 4.2: Correlation between measures of performance

		Housing Finance Supply	Interest Rates	Income Level	Loan Security	Value Of Property	Government Regulations
Housing Finance Supply	Pearson Correlation	1	.999(**)	.997(**)	.997(**)	.998(**)	.998(**)
	Sig. (2-tailed)		.000	.000	.000	.000	.000
	N	44	44	44	44	44	44
Interest Rates	Pearson Correlation	.999(**)	1	.998(**)	.998(**)	.999(**)	.998(**)
	Sig. (2-tailed)	.000		.000	.000	.000	.000
	N	44	44	44	44	44	44
Income Level	Pearson Correlation	.997(**)	.998(**)	1	1.000(**)	.999(**)	.998(**)
	Sig. (2-tailed)	.000	.000		.000	.000	.000
	N	44	44	44	44	44	44
Loan Security	Pearson Correlation	.997(**)	.998(**)	1.000(**)	1	.999(**)	.997(**)
	Sig. (2-tailed)	.000	.000	.000		.000	.000
	N	44	44	44	44	44	44
Value Of Property	Pearson Correlation	.998(**)	.999(**)	.999(**)	.999(**)	1	.999(**)
	Sig. (2-tailed)	.000	.000	.000	.000		.000
	N	44	44	44	44	44	44
Government Regulations	Pearson Correlation	.998(**)	.998(**)	.998(**)	.997(**)	.999(**)	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	
	N	44	44	44	44	44	44

** Correlation is significant at the 0.01 level (2-tailed).

The correlations table displays Pearson correlation coefficients, significance values, and the number of cases with non-missing values. Pearson correlation coefficients assume the data are normally distributed. The Pearson correlation coefficient is a measure of linear association between two variables. The values of the correlation coefficient range from -1 to 1. The sign of the correlation coefficient indicates the direction of the relationship (positive or negative). The absolute value of the correlation coefficient indicates the

strength, with larger absolute values indicating stronger relationships. The correlation coefficients on the main diagonal are always 1.0, because each variable has a perfect positive linear relationship with itself.

The significance of each correlation coefficient is also displayed in the correlation table. The significance level (or p-value) is the probability of obtaining results as extreme as the one observed. If the significance level is very small (less than 0.01) then the correlation is significant and the two variables are linearly related. If the significance level is relatively large (for example, 0.2) then the correlation is not significant and the two variables are not linearly related.

The study showed positive relationship for all the measures of performance, with a strong significance level for all the measures of performance i.e. Interest Rates, government regulations, income level, value of property and loan security.

4.2.3 Empirical Model

Table 4.3: Collinearity Diagnostics

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions			
				(Constant)	Government Regulations	Loan Security	Interest Rates
1	1	3.723	1.000	.00	.00	.00	.00
	2	.261	3.779	.00	.01	.00	.13
	3	.011	18.077	1.00	.08	.06	.47
	4	.005	27.425	.00	.91	.93	.39

a Dependent Variable: Housing Finance Supply

This table displays statistics that help you determine if there are any problems with collinearity. Collinearity (or multicollinearity) is the undesirable situation where the correlations among the independent variables are string. Eigenvalues provide an indication of how many distinct dimensions there are among the independent variables. When several eigenvalues are close to zero, the variables are highly intercorrelated and small changes in the data values may lead to large changes in the estimates of the coefficients. Condition indices are the square roots of the ratios of the largest eigenvalue

to each successive eigenvalue. A condition index greater than 15 indicates a possible problem and an index greater than 30 suggests a serious problem with collinearity. The variance proportions are the proportions of the variance of the estimate accounted for by each principal component associated with each of the eigenvalues. Collinearity is a problem when a component associated with a high condition index contributes substantially to the variance of two or more variables.

4.3 Qualitative analysis

Housing and residential construction are considered to be central importance for determination of both the level of welfare in a society and the level of aggregate economic activities. Housing is the largest asset owned by most households and is nearly always financed, in the sense that owners of housing capital must pay for their units over a period of years. It is therefore imperative for Kenya to appreciate benefits to be derived from having a well-functioning mortgage markets despite various economic issues being tackled with limited resources. The large external benefits to the national economy were highlighted to include capital market development, efficient real estate development, construction sector employment, easier labour mobility, more efficient resources allocation and lower macroeconomic volatility.

It has been identified through various studies that the financial infrastructure of a nation shapes the structure, organisation and performance of the finance industry and the process of capital formation and the mortgage market development strategies in Kenya. Specifically, housing and housing finance in Kenya has been subjected to various limitations like inadequacy of legal and regulatory infrastructure, macroeconomic volatility, high transaction costs associated with the lack of adequate loan management practices and infrastructures for mortgage processing.

Despite the orthodox view that a secure supply of land with a good title (registered land) is a pre-requisite for effective housing finance system, efforts to get land registered and governments to be the sole custodian of land has been a disaster in Kenya. The idea of land registration has slowed down the process of housing finance disbursement and eventual supply. It is further be argued that the underdevelopment of mortgage lending to

individual households can be explained by lack of demand for mortgage lending which is due to high credit risks, lack of financial depth which translates into high interest rates on mortgage loans, the limited long-term credit resources of originating banks resulting from failure to develop secondary market financing. This anomaly has hitherto been tackled in the developed economies through the introduction of stable funding source and asset-liability management tools like securitization, credit derivatives, collateralized debt obligations (CDOs) and mortgage covered bonds (MCB).

For Kenya, a combination of economic and social factors, such as low domestic savings rate, high price-to-income ratios and a general culture and social predisposition towards homeownership, suggests that the common problem facing them lies in the provision of housing finance services that can allocate untapped resources. Some of these untapped resources could be identified as the innovative sources of funding housing finance which are peculiar to their situations like diaspora bonds, migrant remittances and pension funds.

4.4 Summary and Interpretation of the findings

The Descriptive Statistics table provides summary statistics for continuous, numeric variables. Summary statistics include measures of central tendency such as the mean. Measures of dispersion (spread of the distribution) such as the standard deviation. The minimum for housing finance supply and interest rates was 13 respectively, 14 for income level, 17 for loan security, 23 for value of property while 24 for government regulations. The maximum was 85 for housing finance supply, 96 for interest rates, 117 for income level, 145 for loan security, 165 for value of property while 193 for government regulations. The mean for housing finance supply was 27.5, 31.1 for interest rates, 38 for income level, 47.1 for loan security, 53.7 for value of property and 62.8 for government regulations. The std deviation for housing finance supply was 28.3, 31.9 for interest rates, 39.1 for income level, 48.5 for loan security, 55 for value of property and 64.4 for government regulations

The correlations table displays Pearson correlation coefficients, significance values, and the number of cases with non-missing values. Pearson correlation coefficients assume the data are normally distributed. The Pearson correlation coefficient is a measure of linear association between two variables. The values of the correlation coefficient range from -1 to 1. The sign of the correlation coefficient indicates the direction of the relationship (positive or negative). The absolute value of the correlation coefficient indicates the strength, with larger absolute values indicating stronger relationships. The correlation coefficients on the main diagonal are always 1.0, because each variable has a perfect positive linear relationship with itself.

The significance of each correlation coefficient is also displayed in the correlation table. The significance level (or p-value) is the probability of obtaining results as extreme as the one observed. If the significance level is very small (less than 0.01) then the correlation is significant and the two variables are linearly related. If the significance level is relatively large (for example, 0.2) then the correlation is not significant and the two variables are not linearly related.

The study showed positive relationship for all the measures of performance, with a strong significance level for all the measures of performance i.e. Interest Rates, government regulations, income level, value of property and loan security.

The multiple correlation coefficient is the correlation between the observed and predicted values of the dependent variable. The values of R for models produced by the regression procedure range from 0 to 1. Larger values of R indicate stronger relationships. R squared is the proportion of variation in the dependent variable explained by the regression model. The values of R squared range from 0 to 1. Small values indicate that the model does not fit the data well. The sample R squared tends to optimistically estimate how well the models fit the population. Adjusted R squared attempts to correct R squared to more closely reflect the goodness of fit of the model in the population. Choose a model with a high value of R squared that does not contain too many variables. Models with too many variables are often over fit and hard to interpret.

The model summary for this study was found to be 1.000 for R value, 0.999 for R square, 0.997 for adjusted R square, 435.775 for F change, 3 for df1, 1 for df2, 0.035 for sig. F change while the Durbin-Watson was 3.405

The output for Regression displays information about the variation accounted for by your model. The output for Residual displays information about the variation that is not accounted for by your model. And the output for Total is the sum of the information for Regression and Residual. Model with a large regression sum of squares in comparison to the residual sum of squares indicates that the model accounts for most of variation in the dependent variable. Very high residual sum of squares indicate that the model fails to explain a lot of the variation in the dependent variable, and you may want to look for additional factors that help account for a higher proportion of the variation in the dependent variable. The mean square is the sum of squares divided by the degrees of freedom. The F statistic is the regression mean square divided by the residual mean square. The regression degrees of freedom is the numerator df and the residual degrees of freedom is the denominator df for the F statistic. The total number of degrees of freedom is the number of cases minus 1. If the significance value of the F statistic is small (smaller than say 0.05) then the independent variables do a good job explaining the variation in the dependent variable. If the significance value of F is larger than say 0.05 then the independent variables do not explain the variation in the dependent variable.

The sum of squares for regression was 4001.753, df 4, mean square 1000.438, F 572.725 while the Sig. was 0.031 while for the residual values, sum of squares was 1.747, df was 1 while the mean square was 1.747.

Collinearity (or multicollinearity) is the undesirable situation where the correlations among the independent variables are string. Eigenvalues provide an indication of how many distinct dimensions there are among the independent variables. When several eigenvalues are close to zero, the variables are highly intercorrelated and small changes in the data values may lead to large changes in the estimates of the coefficients. Condition indices are the square roots of the ratios of the largest eigenvalue to each successive eigenvalue. A condition index greater than 15 indicates a possible problem

and an index greater than 30 suggests a serious problem with collinearity. The variance proportions are the proportions of the variance of the estimate accounted for by each principal component associated with each of the eigenvalues. Collinearity is a problem when a component associated with a high condition index contributes substantially to the variance of two or more variables.

The previous study found out that low income level affects the housing finance Roy (2007). Further in the literature, one of the biggest problems faced by the banks in financing for real estate is value of property and the projects to be financed with the bank facilities Jones & Maclennan (1987); Altman & Saunders (1998); Byamugisha (1999); Guzman (2000) and Mints (2006). Even with the identified importance of effective regulations of financial institutions, Llewellyn (2008), Milnes & Wood (2009) and Shin (2009) in discussing the Northern Rock situation highlighted problems in the regulatory framework of as the impediment in real estate financing. Further Llewellyn (2008) suggested that in any regulatory / supervisory regime, four areas that need to be addressed include prudential regulation of the financial firms; management and systemic stability; lender-of-last resort function and conduct of regulation and supervision business. However the findings of this study indicate value of property, government regulation, income level, interest rates and loan security all affect the financing of real estate in Kenya.

CHAPTER FIVE

SUMMARY, CONCLUSION & RECOMMENDATIONS

5.1 Summary

In lending, financial institutions give out loans in consideration of interest to be charged on the loans and the riskiness of the loan. The demand and supply of housing finance are determined by various factors. The ability of financial institutions to lend for housing (supply of housing finance) determines the quantity of housing finance that could be supplied for house acquisitions. If the identified factors, value of property, government regulation, income level, interest rates and loan security are dwindling, the availability of housing finance will be reduced.

Interest Rates: Since interest rate is considered as the rate of return on investment, when the rate of interest is low on mortgage lending maybe due to government regulations, there is the tendency for the financial institutions to look for an alternative investment outlet in order to make good profit. Apart from the ability of the financial institutions to lend, the other aspect is the willingness of the financial institutions to lend towards mortgage acquisition. The factors consider by them includes criteria of security, income, price of the property, price of alternative goods and services and household characteristics (age, marital status etc).

Criteria of Security: With a favourable reserve and liquidity position, financial institutions in Kenya do not necessarily lend to all applicants that approach them for banking facilities, even if the prevailing interest rate is acceptable to the borrower. Loans are secured on specific property and necessary steps are taken in avoiding default on repayment or depreciation of the security below the book value of the debt. There are various ways by which the lenders determine the ability of the borrower to repay and the suitability of the property as security.

Income: The income being earned by a borrower determines the ability to repay the money borrowed. The total sum advanced therefore is usually restricted to some multiple of two to three times the applicant's salary. This means that the applicant shall have

secure prospects of a continuing income. However, in the recent past in the developed economies, it is considered that average home prices range from three to four times of annual income (Warnock & Warnock 2008). In Kenya, because wages are low and construction cost is high, average home prices are usually about eight times of annual income and to make it affordable, repayments have to be spread over a very long period of time. Thus a positive relationship exists between housing construction cost and building materials price, property price, foreign exchange rates because imported building materials are used for construction, labour cost and national disposable income.

Value of property: In some cases, control of lending is also exercised by avoiding advances on the security of properties which might deteriorate. Financial institutions prefer lending on properties which are relatively modern and also prefer houses to flats. As a property is becoming old-fashioned, the less is the willingness of financial institutions to lend based on the collateral of the property. This policy affects the distribution of house prices, since it would be difficult to raise a loan on a particular property. As a result of these constraints demand is always rationed and it is difficult to assess what the real demand for mortgage is while the supply constraints in the form of the reserve and liquidity ratios are easier to observe.

Loan to Income Ratio: Financial Institutions would like to know what percentage of his total income is already committed to payment of all. In some cases, bank might not lend to individuals that would commit more than 40 per cent of his income on settling debts.

5.2 Conclusion

This study investigated factors determining housing finance supply in Kenya. Housing finance is a major factor determining the quality and tenure of housing consumption, the overall financial portfolio of the public and the stability and effectiveness of the financial system. In Kenya, the government has intervened in the markets by setting up institutions characterized by a significant degree of regulation and segmentation from the rest of the financial markets and very often with governments providing subsidized housing finance.

Additional instruments in form of questionnaire, for the sectorial allocation of loans and advances by these financial institutions were employed to gather information from Corporate Banking / Loans and Advances Managers coupled with unstructured interviews. Supplementary questionnaires were directed to the users of housing finance at the household level as control for validity to the research findings.

Applying a multiple regression approach, the model identified that housing finance supply in Kenya is significantly driven by clusters of factors related to value of property, government regulation, income level, interest rates and loan security. It is closely observed that housing finance models in the developed economies, which are largely financed by deposit liabilities, cannot be wholly adopted in the Kenyan economy. The implication for practice therefore is that financial institutions in Kenya must adequately increase their capital base for effective housing finance supply and introduce mortgage products with long-term tenure to actively mobilize resources for mortgage lending.

5.3 Policy Recommendations

The largest hitches to the development of the real estate segment of Kenya are government regulations, interest rate, loan security, value of property and income level as suggested by most of the respondents in the interviews. Changes brought in these segments can ensure a better rate of growth for the market and a relatively more attractive opportunity for the consumers and investors.

As discussed in the project, Real Estate in Kenya has a potent demand backed growth. Demand due to population increase, higher allocation to savings in real estate, actualization of mortgaging by consumers and bridging the gap of the current housing deficit will be a trigger for sustained growth.

The efforts by the government to ensure faster clearances for active real estate development would enable developers in a great way. The researcher recommends that the government should set up a separate real estate division with the objective of single

window clearance of all required paper work and clearances. Single window essentially means that the developers will need to approach only one department for the clearances required in checking the title of the land, the water treatment plant, electricity and water utility connections, permission for construction and labour related issues such as facilities and wages. Also the government should establish a housing loan guarantee scheme run by existing government housing corporations to assess risks in some real estate development and the applicant's credit scores then giving guarantees to the developers and financiers so as to encourage financiers to lend more and at affordable interest rates. The builders should be given support in ensuring that the land they own and hold is free of encroachment from slums. Also, free hold land should be released to developers with proper title clearances to the land quickly. Some litigation processes take years for clearances, which should be put onto a fast track.

5.4 Limitations of the Study

Every research has certain drawbacks. It is therefore necessary to incorporate them in the project to obtain a true perspective of the research topic. The following are a few drawbacks the researcher faced during my research study.

The study makes use of qualitative analysis, which is interview and questionnaire based in order to find out the determinants of housing finance in Kenya. However quantitative approach has not been used as it would have prolonged the study. Hence financial statements such as Balance Sheet and Profit and Loss of Real estate listed companies have not been analyzed to arrive at the growth prospects of the sector in quantitative terms.

Also due to difference in valuation methods adopted by different countries and limited relevant data; comparison of Kenyan real estate companies to international real estate companies operating in Kenya has not been possible.

Another drawback was getting through to companies for the purpose of an interview. Limited number of interviewees induced the researcher to collect further information through a questionnaire survey.

Further, there was a possibility of a biased research being carried out due to all interviewees being Nairobi-based. Therefore the researcher increased the sample size to adequately include companies from all parts of Kenya to get a clear national perspective of the real estate market.

However, the research aim was to provide a broad overview and give valuable prospects to the participants of this industry as well as to investors seeking to invest in the Kenyan real estate sector.

5.5 Suggestions for further studies

For academic world. This research Result is expected to become a valuable input in study related to housing finance for real estate. This Research has not yet expressed all variables that can influence housing finance, then in order to increase science/knowledge development, other researchers who are interested in similar problems are suggested to conduct a continuation research by adding further determinants of housing finance

The study was done for the companies and real estates in Nairobi, a suggestion is made that a similar study be done for companies and real estate developers beyond Nairobi and results be compared.

The study was done for Kenya i.e. real estate companies operating in Kenya, it is suggested that a cross sectional study be done for the other East African real estate developers.

REFERENCES

Akinwunmi, A., Gameson, R., Hammond, F. and P. Olomolaiye (2007) – Mortgage Insurance and Housing Finance in Emerging Economies- in Boyd, D.(Ed)- Proceedings of 23rd Annual ARCOM Conference, 3-5 September 2007, University of Ulster, Belfast-UK, Association of Researchers in Construction Management,

Akinwunmi, A., Gameson, R., Hammond, F. and P. Olomolaiye (2008) – The Effect of Macroeconomic Policies on Project (Housing) Finance in Emerging Economies – in Lodi,

Alhashimi, H.and Dwyer, W (2004) Is there such an entity as a housing market? Paper presented at the 10th Annual Pacific Rim Real Estate Conference, Bangkok

Allen, F. and D. Gale (1988) – Optimal Security Design, Review of Financial Studies Fall 1988 pp 229-268.

Allen, F. and D. Gale (1994) - Financial Innovation and Risk Sharing, Cambridge, Massachusetts: MIT Press

Altman, E.T. and Saunders, A. (1998) – Credit risk measurement: Developments over the last 20 years, Journal of Banking and Finance, 21(1998), pp 1721-1742.

Arnott, R. and Stiglitz, J. (1991) – Moral Hazard and Non-Market Institutions: Dysfunctional Crowding out after monitoring, American Economic Review 81, pp 179-190.

Benston, G.J. and C.W. Smith Jr (1976) – A Transaction Cost Approach to the theory of Financial Intermediation, Journal of Finance May 1976, Vol. 31 No 2, pp 215-231.

Berger, A.N., Herring, R.J. and G.P. Szego (1995) – The Role of Capital in Financial Institutions, Journal of Banking and Finance 19, pp 393-430.

Bhattacharya, A., Montiel, P.J. and S. Sharma (1997) – How Can Sub-Saharan Africa Attract More Private Capital Inflows? Finance and Development June 1997, Vol. 34 No 2 pp 3-6.

Boleat, M. (2008) – Housing Development and Housing Finance in Britain – Some lessons for emerging markets, Housing Finance International March 2008, Vol. 22 Issue 3, pp 53

Burda, M. and C. Wyplosz (1997) – Macroeconomic: A European Text, 2nd Edition, N.Y; Oxford University Press.

Buckle, M and J Thompson (1998) The UK Financial System: Theory and Practice (3rdEdition), N Y : Manchester University Press.

Buckley, R M (1996) Housing Finance in Developing Countries. N.Y: Macmillan.

Byamugisha, F. (1999) – The effects of land registration on Financial Development and Economic Growth: A Theoretical and Conceptual Framework, Policy Research Working Paper 2240, Washington DC: World Bank.

Caprio Jr, G., Demirguc-Kunt, A. and E.J. Kane (2008) – The 2007 Meltdown in Structured Securitisation: Searching for Lessons, Not Scapegoats, Finance and Private Sector Team, Development Research Group - October 2008, World Bank: Washington DC.

Chiuri, M.C. and T. Jappelli (2003) – Financial Market imperfections and home ownership: a comparative study, European Economic Review Vol.47 Issue 5, pp 857-875.

Chiuri, M.C., G. Ferri and G. Majnani (2002) – The Macroeconomic Impact of Bank Capital Requirement in Emerging Economics: Past Evidence to Assess the Future, Journal of Banking and Finance 26, pp 881-904.

Cho, M. (2007) – 180 Years' Evolution of the US Mortgage Banking System: Lessons for Emerging Mortgage Markets, International Real Estate Review, Vol. 10 No 1 pp 171-212.

Coase, R.H. (1960) – The Problem of Social Cost, Law and Economics, 3, pp 1-44

Crosby, N., French, N. and Oughton (2000) – Bank lending valuations on Commercial property: Does European mortgage lending value add anything to the process? Journal of Property Investment & Finance Vol.18 No 1, 2000, pp 66-83.

Dasan M. B. (1996) – Analysis of factors which influence supervisor's motivation in a building in Kenya in the construction industry. African Competitiveness Report 1996.

Deng, Y. and Fei, P. (2008) – The Emerging Mortgage Markets in China – in Ben-Shahar, D., Yui Leung, C.K. and S.E. Ong (Eds) – Mortgage Markets Worldwide, pp 1-33, Chichester -West Sussex, United Kingdom: John Wiley and Sons Ltd

Dewatripont, M. and E. Maskin (1995) – Credit and efficiency in centralized and decentralized economies, Review of Economic Studies October 1995, Vol. 62 Issue 213, pp 541-555.

Dewatripont, M. and J. Tirole (1994) – The Prudential Regulation of Banks, Cambridge, MA: MIT Press.

Diamond, D.W. and P. Dybvig (2000) – Bank runs, deposit insurance and liquidity, The Federal Reserve Bank of Minneapolis Quarterly Review Winter 2000, Vol.24 No 1

Diamond, D.W. (1984) – Financial Intermediation and delegated monitoring, Review of Economic Studies 51, pp 393-414

Djankov, S., McLiesh, C. and A. Shleifer (2007) – Private credit in 129 countries, Journal of Financial Economics 84(2007) pp 299-329

Edwards, J and K. Fischer (1994) – Banks, Finance and Investment in Germany, Centre for Economic Policy Research, Cambridge University Press.

Elliot, J.W. (1984) – Money, Banking and Financial Markets, New York: West Publishing Co.

Fischer, S. (2004) – IMF Essays from a time of Crisis: The International Financial System,Stabilization and Development, Cambridge, MA: MIT Press, 2004.

Fischer, S. (1984) – A framework for monetary and banking analysis, Economic Journal 93, pp 1-16

Follain, J. and P. Zorn (2000) – The unbundling of residential mortgage finance, Journal of Housing Research 1(1), pp 63-89.

Fry, M.J. (1988) – Money, Interest and Banking in Economic Development, Baltimore: John Hopkins University Press

Guzman, M.G.(2000) – The Economic Impact of Bank Structure: A Review of Recent Literature, Federal Reserve Bank of Dallas, Economic and Financial Review, 2nd Quarter 2000, pp 11-25.

Hair, J.F., Anderson, R.E., Tatham, R.L. and W.C. Black (1998) – Multivariate Data Analysis (5th Edition), New Jersey: Prentice Hall.

Hale, G. (2007) – Sound Policies for Emerging Markets Financial Stability, International Finance Vol. 10 No 1 pp 101-114.

Hammond, F.N. (2006) – The Economic Impacts of Sub-Saharan African Urban Real Estate Policies, Unpublished PhD Thesis, School of Engineering and the Built Environment, University of Wolverhampton, UK.

Haurin, D.R., Hendershott, P.H. and S.W. Watcher (1997) – Borrowing constraints and the tenure choice of young households, Journal of Housing Research 8, pp 137-154.

Heffernan, S. (2003) Modern Banking in Theory and Practice, March 2003, Chichester-West Sussex: John Wiley and Sons.

Hurwics, W.P. (1973) – The Design of Mechanisms for Resource Allocation, American Economic Review 63, pp 1-30.

Irving, J. and A. Manroth (2009) – Local Sources of Financing for Infrastructure in Africa, Policy Research Working Paper 4878, African Sustainable Development Front Office, World Bank: Washington D.C.

Jensen, M.C. and Meckling, W.H. (1976) – Theory of the firm: Managerial behaviour, agency costs and ownership structure, Journal of Financial Economics 3.

Jaffee, D.M. and Renaud, B. (1997) Strategies to develop mortgage markets in transition economies. In: J. Doukas, V.Murinde and C. Wihlborg (eds) Financial Sector Reform and Privatization in Transition Economies.Ch.4, Amsterdam: Elsevier Science Publishers.

Jones, C. and C. Watkins (2009) – Housing Markets and Planning Policy, Wiley-Blackwell, 224pp, October 2009

Kim, K-H (1997) – Housing Finance and Urban Infrastructure Finance, Urban Studies Vol. 34 No 10, pp 1597-1620.

Kogiku, K.C. (1971) – Microeconomic Models, N.Y.: Harper and Row.

Leyland, H.E. and D.H. Pyle (1977) – Informational asymmetries, financial structure, and financial intermediation, Journal of Finance 32 pp 371-387

Levine, R. (1997) – Financial development and economic growth: views and agenda, Journal of Economic Literature 35, pp 688-726.

Levine, R., Loayza N. and T Beck (2000) – Financial intermediation and Growth: Causality and Causes, Journal of Monetary Economics, Vol. 46 No 1 pp 31-77.

Llewellyn, D.T. (2008) – The Northern Rock Crisis: A Multi-Dimensional Problem Waiting to Happen, Journal of Financial Regulation and Compliance 2008 Vol. 16 Issue 1pp 35-58.

Mandere A.N. (2006) – A survey of QM practices in the large Kenyan building construction firms. Africa Private Sector Group, Kenya, 2006.

Markowitz, H.M. (2009) – Proposals Concerning the Current Financial Crisis, Financial Analysts Journal Jan / Feb. 2009, Vol. 65 Issue 1, pp 25-27.

Mason, C.H. and N.D. Perreault (1991) – Collinearity, Power and Interpretation of Multiple Regression Analysis, Journal of Marketing Research 28, August 1991 pp 268-80.

Merrill, S. and Tomlinson, M. (2006) – Housing Finance, Microfinance and Informal Settlement Upgrading: An assessment of Ghana. Paper prepared for African Union of Housing Finance and USAID, The Urban Institute, Washington DC. June 2006.

Malpezzi, S (1999) Economic Analysis of housing markets in developing and transition economies. In: Cheshire, P. and Mills, E.D. (eds) Handbook of Regional and Urban Economics Applied Urban Economics, 3, 1791-1864.

Marete D, (2011) – The determinants of real estate property prices in Kiambu Municipality in Kenya. Unpublished Masters paper, School of Business, University of Nairobi, 2011.

Merton, R.C. and Z. Bodie (1995) – A Conceptual Framework for Analyzing the Financial Environment- in Crane, D.B., K.A. Froot, S.P. Mason, A.F. Perold, R.C. Merton, E.R.Sirri and P. Tufano (Eds) – The Global Financial System: A Functional Perspective, pp 3-32, Harvard Business School Press, Cambridge: MA.

Merton, R.C. (1989) – On the application of the continuous-time theory of finance to financial intermediation and insurance. Geneva Papers on Risk and Insurance Theory 14, pp 225-261.

Milne, A. and G. Wood (2009) – Shattered on the Rock? British Financial Stability from 1866 to 2007, Journal of Banking Regulation (2009), Vol.10 No 2 pp 89-127.

Mints, V. (2006) – Specifics of Credit Risk Assessment in Mortgage Lending-Sample of Russia, Housing Finance International September 2006, Vol.21 Issue1 pp 14-21.

Njiru (2003) The performance of real estate markets in Kenya, KEPLOTRADE Research Paper No 2/2004. December 2003.

North, D.C. (1994) – The Evolution of Efficient Markets in History – in James, J.A. and M. Thomas (eds)- Capitalism in context, Chapter 11 pp 257-264, Chicago: University of Chicago Press.

Nubi, T.O.(2005) – Housing Finance in Nigeria- Need for Re-Engineering (Unpublished Reports)-www.housingfinance.org/pdfstorage/Africa

Nubi, T.O. (2008) – Affordable Housing Delivery in Nigeria, Paper presented at The Southern African Housing Foundation International Conference and Exhibition, 12-15 October 2008 – Cape Town, South Africa.

Omufira A.N. (2001) – Extent of TQM implementation in the construction industry, AICD Background Paper 13, Africa Region, World Bank, Washington, DC

Olotuah, A O (2000) The challenge of Housing in Nigeria Effective Housing in 21st Century Nigeria. In: Akinbamijo, O.B. et al. (eds) Environmental Forum, Federal University of Technology, Akure-Nigeria, 16-21.

Olotuah, A O and Aiyetan, A.O.(2006) Sustainable low-cost housing provision in Nigeria: a bottom-up participatory approach. In: Boyd, D. (ed) Proceeds of 22nd Annual

ARCOM Conference, 4-6 September 2006, Birmingham, UK, Association of Researchers in Construction Management, 633-639.

Pagliari, J. L. (2007) – The Pricing of Non-Core Real Estate Ventures: Estimating the net expected risk-adjusted return, The Journal of Portfolio Management Vol.34 (Autumn 2007), Special Real Estate Issue, pp 119-133.

Pallant, J. (2007) – SPSS Survival Manual: A Step by Step Guide to Data Analysis Using SPSS Version 15 (3rd Edition), Berkshire-England: Open University Press.

Pilbeam, K. (2005) – Finance and Financial Markets (2nd ed.), Basingstoke: Palgrave Macmillan.

Poole, W (2003) Housing in the Macroeconomy. Federal Reserve Bank of St Louis, Economic Review May/June 2003, 1-8.

Ramakrishinan, R.T.S. and A.V. Thakor (1984) – Information reliability and a theory of financial intermediation, Review of Economic Studies Vol. 51 Issue 166.

Renaud, B.M. (2008) – Mortgage Finance in Emerging Markets: Constraints and Feasible Development Paths- in Ben-Shahar, D., Yui Leung, C.K. and Ong, S.E. (Eds) – Mortgage Markets Worldwide, pp 253-288, Chichester - West Sussex, United Kingdom: John Wiley and Sons Ltd.

Ritter, L. S. and W. L. Silber (1986) – Principles of Money, Banking and Financial Markets, New York: Basic Book Inc.

Roy, F. (2007) – Expanding housing finance systems in Africa and Asia-how far Central and Eastern European models are replicable? Paper presented at APNHR 2007

Conference in Transformation in Housing, Urban Life and Public Policy, Seoul-Korea, 30 August-1 September.

Saravanan, P. (2007) – Recent Experiences in the Housing Finance Sector – A study with Reference to India, Housing Finance International September 2007, Vol.22 Issue 1.

Scholtens, B. and D. van Wensveen (2003) – The theory of Financial Intermediation: An Essay on what it Does (Not) Explain, Vienna: The European Money and Finance Forum (SUERF Studies 2003/1).

Schumpeter, J.A. (1912) – The Theory of Economic Development, Cambridge-Massachusetts: Harvard University Press.

Sikasa C. (2004), Customer perception of change management practices in the mortgage industry. Africa Private Sector Group, Kenya, 2004.

Shin, H.S. (2009) – Reflections on Northern Rock: the bank run that heralded the global financial crisis, Journal of Economic Perspective Winter 2009, Vol. 23 Issue 1 pp 101-124.

Soyibo, A. (1996) – Financial Linkage and development in Sub-Saharan Africa: The role of financial institutions in Nigeria, Working Paper 88, London: Overseas Development Institute

Stiglitz, J.E. (2000) – The Contributions of the Economics of Information to Twentieth century Economics, Quarterly Journal of Economics 115, pp 1441-1478.

Tirole, J. (2006) – The theory of Corporate Finance, New Jersey: Princeton University Press.

Tiwari, P and Moriizumi, O (2003) Efficiency of Housing Finance: A comparative Study of Mortgage instruments in Japan. European Journal of Housing Policy, 3(3).

Toby, A J (2006) Empirical study of the Liquidity Management Practices of Nigerian Banks Journal of Financial Management and Analysis, 19(1), 57-70.

UNCHS-Habitat (2007) – Improving the Performance of National Finance Institutions in Shelter Delivery, UNCHS: Nairobi-Kenya.

Van Order, R. (2005) – Risk Management and mortgage portfolios: some applications for emerging markets – in Hegedus, J. and R.J. Struyk (Eds) – Housing Finance: New and Old Models in Central Europe, Russia and Kazahkstan. Local Government and Public Service Reform Initiative, Open Society Institute, Budapest

Vatnick, S. (2008) – Financial Reforms and Emerging Markets, Financial Markets, Institutions and Instruments February 2008, Vol.17 Issue 1, pp 109-120.

Williamson, O.E. (1985) – The Economic Institutions of Capitalism, New York: The Free Press.

APPENDIX A – QUESTIONNAIRE

DETERMINANTS OF HOUSING FINANCE IN KENYA

[The following information is required for a Masters of Business Administration thesis. Kindly complete the questionnaire as per the instructions given being rest assured that the information provided will be used strictly for project purposes]

QUESTIONNAIRE TO HOUSE OWNERS

A. GENERAL BACKGROUND

1. What is your Marital Status? (Tick one box)
   a) Single
   b) Married
   c) Divorced
   d) Widow
   e) Widower

2. What is your Age? (Tick one box)
   a) 1-29
   b) 30-39
   c) 40-49
   d) 50-59
   e) 60+

3. What is the highest form of formal education that you have achieved? (Tick one box)
   a) None
   b) Primary
   c) Secondary
   d) Vocational / Technical
   e) Polytechnic / University

4. What is your current employment status? (Tick one box)
   a) White collar job (Civil Servant)
   b) White collar job (Private company)
   c) Blue collar job (Bricklayers etc)
   d) Self Employed (Specify)
   e) Other (Please specify)…….

5. What is your type of family? (Tick one box)
   a) Nuclear
   b) Joint / Extended

Others (Please specify)…….

B. SECURITY

6. What is the tenure of the house? (Tick one box)
   a) Own
   b) Rent
   c) Part Own / Part Rent
   d) Others (Please specify)…….

7. What is the form of ownership? (Tick one box)
   a) Inheritance
   b) Bought
   c) Built
   d) Others (Please specify)……..

If Answer to Q 7 is 3, go to Q 8
If Answer to Q 7 is 1, 2 or 4, go to Q 13

8. IF BUILT, did you? (Tick one box)
   a) Buy the plot
   b) Inherit the plot
   c) Others (Please specify)…….

9. IF BUILT, who carried out the construction? (Tick one box)
   a) Self-Built
   b) Contractor with material
   c) Contractor without material
   d) Others (Please specify)……..

10. If you have a loan, what security was given for the loan (Tick all that apply)
   a) The Property
   b) Another Property
   c) Agricultural Land
   d) Others (Please specify)…….

11. What kind of security can you offer for a loan? (Tick all that apply)
   a) The house itself
   b) Any other property
   c) Agricultural land
   d) Others (Please specify)…….

C. VALUE OF PROPERTY

12. When housing is to be acquired, it is either constructed from scratch or a fully erected building is purchased. If constructed from scratch, how much did the plot cost? Kshs……

13. How much did you spend on construction? Kshs.……

12. Can you give value of the property on completion?
Kshs. …….

14. If a fully erected building was purchased, what was the value?
Kshs……

15. What is the Present Value of your property? (Tick one box)
    a) Less than Kshs. 1000, 000
    b) Kshs. 1000,001- Ksh. 5000,000
    c) Kshs. 5000,001- Kshs. 10,000,000
    d) Above Kshs. 10,000,000
    e) Don't know

D. INTEREST RATE

16. Whether a house is constructed from the scratch or a fully erected building is purchased, how did you finance your house acquisition? (Tick one or more boxes as applicable)
    a) Mortgage Institution
    b) Commercial Bank
    c) Relatives and Friends
    d) Personal Savings
    e) Money from abroad
    f) Loan from employer
    g) Sold another house
    h) Private lender
    i) Other (Please specify)……..

17. If you borrowed, what was the rate of interest at the beginning of the transaction …….....

18. What is the rate of interest presently or on completion? …….....

19. If you have obtained a loan, how do you intend to repay it? (Tick all that apply)
    a) Extra work
    b) Employment income
    c) Reducing household expenditure
    d) Sale of valuables
    e) Other sources (Please specify)……

20. What is the repayment period for the loan? (Tick one box)
    a) Less than 24 months
    b) 25-48 months
    c) 49-96 months
    d) 97-144 months
    e) Others (Please specify)…….

21. Are you up to date with your loan repayments?
    a) Yes
    b) No

22. If No, How many months are you behind? (Tick one box)
    a) 3-6 months
    b) 7-12 months
    c) Over 12 months
    d) Others (Please specify)……..

23. What is the reason(s) for default in loan repayment? (Tick one box)
    a) Loss of Income
    b) Higher financial commitment
    c) Excessive Interest charges
    d) Others (Please specify)…….

24. If a loan was available, would you be willing to borrow to buy another house? (Tick one box)
    a) Yes
    b) No
    c) Don't know

E. GOVERNMENT REGULATION

25. The processing of loan applications with the financial institutions usually go through a long process, were you satisfied with the time taken to process? (Tick one box)
    a) Very satisfied
    b) Satisfied
    c) Dissatisfied
    d) Very Dissatisfied

26. On application, what percentage of the loan requested did you get? (Tick one box)
    a) 50%
    b) 60%
    c) 70%
    d) 80%
    e) 90%
    f) 100%
    g) Other (Please specify)……

27. Where did you obtain the remainder of the funds needed for your house acquisition? (Tick all that apply)
    a) From friends and families
    b) Private lenders
    c) Employer
    d) Others (Please specify)…….

28. Before applying for the loan, were you satisfied with the process and requirements? For example production of title deed, survey and architectural requirements

a) Very satisfied
b) Satisfied
c) Dissatisfied
d) Very Dissatisfied

F. INCOME LEVEL

29. How much do you save per month? (Tick one box)

a) Nothing
b) Kshs. 0 - Kshs. 10,000
c) Kshs. 10,000 – Kshs. 100,000
d) Above Kshs.100,000

30. What are your Total Household savings at present? (Tick one box)

a) Nothing
b) Kshs. 0 – Kshs. 10,000
c) Kshs. 10,000 – Kshs. 100,000
d) Above Kshs. 100,000

31. Where do you save? (Tick all that apply)

a) Commercial Bank
b) Cooperative society
c) Mortgage Institution
d) (Traditional Contributions)
e) Other (Please specify)……

32. What is your personal income per month? (Tick one box)

a) Kshs. 0 – 100, 000
b) Kshs. 100,000 – 200,000
c) Kshs. 200,000 – 300,000
d) Kshs. 300,000 – Kshs. 500,000
e) Above Kshs. 500,000

Thank you for participating in this Research. Please return questionnaire

APPENDIX B – QUESTIONNAIRE

DETERMINANTS OF HOUSING FINANCE IN KENYA

[The following information is required for a Masters of Business Administration thesis. Kindly complete the questionnaire as per the instructions given being rest assured that the information provided will be used strictly for project purposes]

QUESTIONAIRE TO PROPERTY DEVELOPERS

Name: _____
Age: ____
Company Name: _____
Position at work: _____

1. How significant do you think is Kenyans position as an investment destination for real estate at present from the point of view of both foreign and domestic investors? Please tick the appropriate box.

a) Very Significant
b) Increasingly gaining Significance
c) Minimal Significance

2. What importance does investment in real estate hold for you as an individual in contributing to your net worth? Please tick the appropriate box

a) Very Important
b) Increasingly becoming important
c) Not so important

3. What according to you is/will be the most preferred avenue for investment for an individual/ company in the real estate sector? Please tick the appropriate box.

a) Direct Investment in land/property
b) Investment in Listed Real Estate Company shares
c) Joint Venture with Realty Developer
d) Others (Please Specify)

4. Do you think the sudden surge in property prices across Kenya over the last two years is justified? Please tick the appropriate box.

a) Yes (Boom)
b) No (Bubble)
c) Cant Say

5. What according to you is the key problem faced by this sector? Please tick the appropriate box.

a) Lack of Infrastructural facilities
b) Ownership issues, unclear titles and abnormally high stamp duties

c) Rising Interest Rates dampening affordability
d) Others (Please specify)

6. Which segment according to you has the greatest scope for improving profits (IRR) – residential, commercial, retail or SEZ's (Special Economic Zones)?
How much return do you think it generates? Please tick the appropriate box

Segment _____

a) 5 – 10 %
b) 10 – 20 %
c) More than 20%

7. How do you see the real estate sector 10 years from now? Please tick the appropriate box

a) A stabilized sector
b) A risk- perceived sector
c) A high growth sector
d) Can't say

8. Which of the following sources of capital is most tapped by you? Please rank in order of preference: 1 being the most preferred and 3 being the least preferred

a) Bank loans
b) Foreign Direct Investment (FDI)
c) Capital Markets – IPOs (Initial Public Offer)

9. Do you think the Government of Kenya has taken adequate measures for the development of the real estate sector in recent years? Please tick the appropriate box

a) Yes
b) No
c) Don't Know

Thank You for your time and help!

APPENDIX C – QUESTIONNAIRE

DETERMINANTS OF HOUSING FINANCE IN KENYA

[The following information is required for a Masters of Business Administration thesis. Kindly complete the questionnaire as per the instructions given being rest assured that the information provided will be used strictly for project purposes]

QUESTIONAIRE TO HOUSING FINANCIERS

1. Why has Kenya become one of the most favoured destinations for investment in the real estate sector in the past 3 years?

……
……

2. What are the reasons for the sudden surge in property prices across Kenya? Could you throw light on whether you think this is a boom or a bubble?

……
……

3. What is the scope for the real estate segment in Kenya? Can you suggest the demand/supply dynamics for the sector?

……
……

4. What according to you are the key risks/ problems this sector will/ is facing? Could you recommend any solutions to the above problems?

……
……
……

5. What are the various approvals and regulations needed to be adhered to for the acquisition, development and completion of a project?

……
……
……

6. What are the different avenues for investment for an individual/ company in the real estate sector?

……
……
……

7. What are the different sources of capital available to a real estate developer?

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8. Which segment according to you has the greatest scope for improving profits (IRR) - residential, commercial, retail or SEZ's (Special Economic Zones)?

……
……

9. What role according to you has the Government played in the development of the real estate sector?

……
……

10. Where do you see the real estate sector 10 years from now?

……
……

Thank You for your time and help!

DETERMINANTS OF SUPPLY OF REAL ESTATE FINANCE IN KENYA

BY

PHILIP MUNYWOKI MUTHUNGU

REG NO: D61/P/8459/2006

A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE A WARD OF THE DEGREE OF MASTER OF BUSINESS ADMINISTRATION (MBA), SCHOOL OF BUSINESS, UNIVERISTY OF NAIROBI

OCTOBER 2012

DECLARATION

This Research Project is my own original work and has not been presented for a Degree Qualification in any other University or Institution of learning.

SIGNED …… DATE **…….**

PHILIP MUNYWOKI MUTHUNGU
D61/P/8459/2006

This Research Project has been submitted for Examination with my approval as the University Supervisor.

SIGNED: …… DATE: …….

DR. JOSIAH ADUDA
School of Business
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DEDICATION

This paper is dedicated to my parents for their guidance and persistence and for being a source of inspiration and support in the course of my studies

ACKNOWLEDGEMENT

The MBA programme has been a long, taxing and challenging journey and the successful completion has been as a result of support received from many people. I am indebted not only to people who gave me the inspiration, support and encouragement to purse MBA programme but also to everybody who gave me the guidance and assistance on what has been reported in this project.

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Above all, special thanks to the Almighty God for the gift of life and good health, lack of which I would not have made it this far.

ABSTRACT

The purpose of the study was to investigate the factors affecting real estate finance supply. It was important to verify the reasons why housing finance are not being supplied by the financial intermediaries readily. Could it be that potential borrowers are not approaching the financial institutions to source for housing finance or is it that the lender's requirements are so stringent that individual's cannot meet up with this lender's requirements. The study was carried out as a survey of real estate developers, real estate owners and financiers operating in Kenya as of 31st December 2011. The sample size was made up of 30 real estate developers, 30 home owners and 10 housing financiers. It was considered necessary and important to obtain information using questionnaire in extracting information from users of real estate finance in Kenya at the time. The data collected by means of the questionnaire survey, was analysed and conclusions were used in discussing all factors that affecting supply of real estate financing in Kenya.

There were revelations about the situation in the supply of housing finance in Kenya. In lending, financial institutions give out loans in consideration of interest to be charged on the loans and the riskiness of the loan. The ability of financial institutions to lend for housing (supply of housing finance) determines the quantity of housing finance that could be supplied for house acquisitions. The research identified these factors; value of property, government regulation, income level, interest rates and loan security do affect the availability and supply of housing finance will be reduced. The efforts by the government to ensure faster clearances for active real estate development would enable developers in a great way. The researcher recommends that the government should streamline the various real estate policies in different ministries into a single guide and to set up a separate real estate division within the ministry with the objective of running a single window clearance of all required paper work and clearances. Also the government should establish a housing loan guarantee scheme run by existing government housing corporations to assess risks in some real estate development and the applicant's credit scores then giving guarantees to the developers and financiers so as to encourage financiers to lend more and at affordable interest rates.

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ABBREVIATIONS

AfDB	African Development Bank
ANOVA	Analysis of Variance
CBK	Central Bank of Kenya
CDC	Commonwealth Development Corporation
CRR	Cash Reserve Requirement
EABS	East African Building Society
GDP	Gross Domestic Product
HFIs	Housing Finance Institutions
HFCK	Housing Finance Company of Kenya
KBS	Kenya Building Society
KNBS	Kenya National Bureau of Statistics
LTV	loan-to-value
MFI	Micro Finance Institutions
NBFIs	Non-bank financial institutions
NGO	Non-Governmental Institutions
NNE	New Neoclassical Economics
NSE	Nairobi Stock Exchange
NSSF	National Social Security Fund
OMO	Open Market Operations
PLS	Partial Least Squares
S&L	Savings and Loan
SSA	Sub-Saharan Africa
TQM	Total Quality Management
USDHUD	United States Department of Housing and Urban Development
UNCHS	United Nations Centre for Human Settlements (Habitat)

CHAPTER ONE

INTRODUCTION AND BACKGROUND TO THE STUDY

1.1 Background Information

In the year's immediately preceding independence in 1963, the housing finance sector was marked by instability as a result of political uncertainty. In the event, HFI deposits plunged from KSh 208 million in 1959 to KSh 90 million in 1962. However, this period soon gave way to a phase of consolidation and the mortgage industry expanded substantially from 1964 onwards. The principal HFIs were the Housing Finance Company of Kenya, Kenya Building Society (KBS), and Savings and Loan (S&L). HFCK was incorporated in 1965 as a joint venture between government and the Commonwealth Development Corporation (of the United Kingdom), taking over the assets of First Permanent of East Africa and those of KBS. S&L, the largest HFI at the time, experienced substantial setbacks around the time of independence and was taken over, initially by Pearl Assurance and, in 1970, by Kenya Commercial Bank, a parastatal. East African Building Society, a relatively small HFI which had opened for business in 1959, weathered the political uncertainties of the day and expanded rapidly in the years that followed.

HFCK, EABS and S&L, the principal HFIs, achieved fast growth during the 1970s. Between 1975 and 1980, for instance, HFCK deposits increased at an annual average rate of 20% and those of the EABS by 24%. In mid-1981, following a general decline in the growth of deposits, tax-free housing development bonds were introduced to enable HFCK and S&L to attract additional savings. These institutions also benefited from deposits by the National Social Security Fund (NSSF) and from loans by the government. Starting in the mid-1980's the mortgage industry witnessed major changes and upheavals. By 1986, the number of HFIs had grown to about 36, comprising four limited liability companies and 32 building societies but only 15 of the latter were active. Taking into account that the country had for many years been served by only one building society, the growth in numbers of this type of HFI had been nothing short of dramatic. Gardner et al. (1986) have advanced two reasons for this growth. The first is that the coffee price boom of 1976-77 provided the financial impetus for the rapid increase in the number of such

institutions. Second, licensing of financial institutions under the Banking Act was tightened in 1985 following the collapse of a financial company. Thus, building societies remained the principal avenue for the entry of firms into the financial sector. Notwithstanding the proliferation of HFIs, the industry continued to be dominated by HFCK, EABS and S&L. Still, the newer institutions competed aggressively for savings.

In 1984, the country experienced its first post-independence failure of a financial institution, that of the Rural and Urban Credit Finance Company. In response, the government tightened the regulatory and supervisory regime. More specifically, a number of steps were taken via an amendment to the Banking Act (Cap. 488). First, stricter conditions were imposed on the level of paid-up capital, as well as that of unimpaired reserves relative to deposit liabilities. For instance, paid-up capital for local non-bank financial institutions (NBFIs) was raised from Ksh 5 million to Ksh.7.5 million. Second, NBFIs were prohibited from owning shares in commercial banks. Third, a Deposit Protection Fund was created at the Central Bank.

These measures notwithstanding, a group of financial institutions, several building societies among them, failed in due course. A combination of factors led to this failure, some political, others management-related. First, a good number of building societies had invested heavily in property development, an activity that was considered more profitable but which naturally carried a higher risk. A notable example was Pioneer Building Society which collapsed largely because of delayed house sales. Second, major institutional investors, such as the NSSF, withdrew their deposits from the new building societies, partly out of the need to comply with political directives but also as a result of genuine concern for the security of their deposits. Third, the number of building societies had expanded too rapidly relative to the volume of available deposits. Fourth, the regulatory and supervisory regime was weak and potential problems could therefore not be arrested in time. In particular, the Registrar of Building Societies did not possess the staff needed to assure effective supervision. Government intervened and re-organized some of the failed institutions under the umbrella of a new bank, the Consolidated Bank of Kenya. Potential crises were averted in the years that followed but, in the first half of

1993, a number of financial institutions were placed under receivership including one HFI.

In spite of these setbacks, the mortgage industry registered some expansion. HFCK saw its public deposits grow, in nominal terms, from Ksh.1.89 billion in 1987 to Ksh.3.4 billion (USD 120.9 million) in 1992. However, in real terms that is, after making adjustments for inflation growth was marginal. As for mortgage lending, advances increased from Ksh.204.5 million in 1984 to Ksh.614.0 million in 1992 (USD 21.8 million). Even so, there was stagnation between 1986 and 1988 but lending rebounded in 1989 and 1990 registering nominal growth rates of 34.2% and 52.3%, respectively. Stagnation set in once again in 1991. With some variations, EABS and S&L shared a similar experience. Arguably the most important historical development was the freeing of interest rates in July, 1991, a measure taken to ensure a more efficient allocation of resources. Although interest rates had hitherto been controlled by the Central Bank they had nevertheless remained positive in the years leading up to 1990. However, the liberalization of interest rates was overshadowed by the very high rate of inflation in 1993, conservatively estimated to have averaged around 40% but to have peaked at roughly 100% during the year. Since HFIs are not able to lend at nominal rates exceeding 30% -- because there is little demand at that level -- real interest rates turned sharply negative. The response of HFIs was to suspend new mortgage lending altogether, choosing instead to invest in high yielding treasury bills.

Although inflation fell substantially in subsequent years, and with it interest rates, mortgage interest rates remained above 20% per annum for the rest of the decade. Towards the end of the 1990s, the housing finance market in Kenya went through a transformation from being predominantly public-sector oriented, to a more market-driven enterprise. With interest rate decontrol and privatization, those institutions that were previously controlled and sheltered by government, became exposed to market forces.

Housing demand, commonly referred to as effective demand, seeks to measure the willingness and ability of households to pay for housing. It is a function of many factors: household income, the price (or rent) of a dwelling, financing arrangements (including

interest rate and the loan term), and household preferences for different attributes of a dwelling, such as location. There is empirical evidence that households are willing to spend more on housing if they are buying their own house than if they are renting. Housing demand is often contrasted with housing need, a socially derived concept that measures the number of dwellings required to house a population above an arbitrarily determined standard or norm, with no regard for the ability to pay.

In microeconomic terms, the housing finance market is considered as the interaction between a supply matrix of housing finance quantity classified by characteristics such as pricing / volume and a demand matrix of households classified by their characteristics, preferences and constraints Follain et al (1980). The market allocates housing finance on the basis of the price (interest rate) and the number of households that are willing to pay the bid prices in consideration that they have their preferences and constraints. It is argued that there is disequilibrium in the housing finance market when the price does not adjust fast enough to clear the market. On the supply side of the housing finance market in the developed economies, the lenders structures remain national in nature; common developments include a reduction of credit restrictions. Developments include increased loan-to-value (LTV) ratio, which is defined as the ratio of bank lending to property value, a wider array of loan contracts offered to borrowers and a move towards greater reliance on capital market funding via securitization of housing loans CGFS (2006). It is important to note that most housing finance markets that have historically relied more on fixed rate products have experienced an increased demand for, and use of adjustable rate mortgages as well as loan types combining features from both fixed and adjustable rate mortgages.

1.2 Statement of the Problem

The rise in household income is slowly percolating into growing urbanization causing a change in lifestyle trend. Urbanization has resulted in the nuclear family structure from the traditional joint-family system which is likely to create huge demand for urban housing leading to further expansion of the city's sub-urban regions. The above fundamentals in turn have created a huge demand supply gap in all sectors of the housing market, commercial, residential, retail and hospitality. The fact that more than half of the 40 million households in Kenya still live in temporary or semi-permanent structures suggest that housing has a huge potential demand in both the middle-income and high-income segments.

The housing sector in Kenya has seen tremendous growth in the recent years with property prices soaring and the number and scale of projects increasing. Developers have been looking at new sources of raising funds such as from investors, both domestic and foreign, through avenues such as listings on Nairobi Stock Exchange (NSE), private equity participation and the setting up of joint ventures. Recognizing the need for foreign funding, the government has allowed foreign direct investment. As a result, foreign investors are permitted to invest in wholly owned subsidiaries or in joint ventures with Kenyan real estate companies as long as minimum capitalization requirements are met within six months of the commencement of operations and the capital remains locked in the project for three years thereafter. (Financial Times, 2007). Entry of foreign retailers is accelerating demand for mall space.

A study by Dasan (1996) looked at analysis of factors which influence supervisor's motivation in Kenya's building and construction industry. Omufira (2001) observed the extent of TQM implementation in the construction industry. A case study of the Kenyan building industry by Njiru (2003) looked at the performance of real estate markets. The case of Central Business District of Nairobi by Sikasa C. (2004) looked at customer perception of change management practices in the mortgage industry. The case of HFCK by Mandere A.N. (2006) looked at a survey of QM practices in the large Kenyan building construction firms. Mutuku (2006) observed the factors influencing the development of

secondary mortgage market in Kenya with special emphasis on mortgage backed securities while Matara (2008) looked at a survey of sources of finance for building construction firms in Kenya. Marete D, (2011), reviewed the determinants of real estate property prices in Kiambu Municipality in Kenya. None of the local studies in the university focused on the determinants of supply of real estate in Kenya.

1.3 Objective of the study

The objective of the study was to investigate determinants of supply of real estate finance in Kenya.

1.3.1 The specific objectives were:

1. To find out if the economic model of providing housing finance in developed economies can be adopted in the Kenyan economy.
2. To evaluate the key factors that have contributed to the operational efficiencies and inefficiencies of supply of real estate financing in Kenya.

1.5 Significance of the study

The environment in which real estate developers conduct their daily routines is composed of factors which ultimately determine their success. Discovery and subsequent recommendation for elimination of any problems could improve performance of these businesses. The study therefore will contribute to business management and practice by providing an understanding on how to boost performance real estate developers. The various stakeholders will therefore understand the links between the necessary incentives for the growth and performance of the targeted businesses. Researchers who might be interested in this topic could find the results opening up new avenues for further re search. The study will also be of benefit to other researchers who may feel the need to further research on the same problem in their areas of specialization.

CHAPTER TWO

LITERATURE REVIEW

2.1 Financial institutions' role in housing finance

If the funding of mortgage loans is left primarily to the deposit-taking institutions, they can only supply mortgage loans through deposit mobilized which are short-tenured. As a consequence of the high proportion of short-term liabilities in their deposits, they tend to lend short according to the commercial bank loan theory and the real bill doctrine. The theory stipulates that bank loans should be short-term and self-liquidating because commercial banks usually have short-term deposits. According to the theory, banks should not grant long-term loans such as housing / real estate loans or loans for financing purchase of plant and machinery because they are considered too illiquid Elliot (1984); Ritter & Silber (1986) as cited by Soyibo (1996).

A large percentage of financial institutions in the emerging economies are still adopting the business model used in the era of market-making (1970s-1980s) in the US relying on short-term deposits liabilities to fund long-term mortgages assets USDHUD (2006); Cho (2007), which are contradictory to the tenets of the commercial bank loan theory. This model had a unique shortcoming under volatile interest rate environment where lenders are borrowing short-term and lending on long-term basis at high interest rates that results in dampened housing finance demand. A well-functioning primary mortgage market requires adequate funding sources and variety of lenders in the primary market to promote further development. This includes savings mobilization and simple mortgage-backed debt instruments to offer lenders funding alternatives Roy (2007). Lenders in the primary market would include non-depository mortgage specialists, non-governmental organizations (NGOs), microfinance institutions (MFIs) and contractual savings systems Follain and Zorn (2000); Warnock and Warnock (2008). In Asia, the financial sectors in countries such as China, South Korea, Malaysia, Singapore, India and Indonesia are large and well developed UNCHS (2007). Whereas, domestic debt markets in most SSA countries (except South Africa) are in the developing stage and others in their infancy stage. SSA has 15 organized securities markets and the region's financial sectors are

characterized with a limited range of investment instruments particularly for longer tenors except the Johannesburg Stock Exchange Roy (2007); Irving & Manroth (2009).

Scale issues in equities have been mirrored in the bond market, where only a limited number of private bonds have been listed and there is little secondary market trading Merrill and Tomlinson (2000); Roy (2007). The major reason for the smallness of the securities market is lack of investors; in that insurance companies and pension funds are too small to act as major institutional investors. Despite the fact that insurance companies are allowed by statute to invest in real estate, they lack the necessary long-term funds for investment Roy (2007).

2.2 Review of theories

The driving force of economic growth and development as enunciated by Schumpeter (1921) which include mobilization of savings, efficient capital allocation, effective risk management, ease of transactions with advancing technologies are lacking. In an effort to provide housing and subsidized housing finance, various central governments have established institutions to provide housing finance. Even with the establishment of these institutions, their management has been affected by political and other negative factors that are not favourable for business survival. Therefore, the theoretical framework of this study is based on the New Neoclassical Economics (NNE) which is an integration of Neoclassical Economics and Transaction Cost Economics.

2.2.1 Theory One: Mass Psychology and Irrational Exuberance

The dominant explanations of the housing finance to date have been demand-side explanations. Robert Shiller has argued that the demand is driven by consumers' irrational exuberance and belief that real estate prices would continue to appreciate, stoking the demand for housing finance.

We do not question the existence of irrational consumer expectations and behavior. There is undoubtedly a great deal of irrational or misguided consumer behavior in real estate

investment. But this behavior required readily available financing. Shiller's demand-side theory cannot explain the movement in yield spreads during the bubble and is, therefore, a necessarily incomplete explanation. Credit relationships are two-sided relationships, and the evidence from PLS spreads indicates that any increase in housing finance demand was outstripped by an increased in housing finance supply.

2.2.2 Theory Two: Consumers' Inability to Anticipate Inflation

An alternative psychological theory has been presented by Markus Brunnermeir and Christian Julliard. Brunnermeir and Julliard argue that consumers are incapable of sorting between real and nominal changes in interest rates and rents. Therefore, consumers account for low nominal rates when making mortgage decisions, but fail to account for future appreciation of prices and rents falling commensurately with anticipated inflation. The result is that consumers overestimate the value of real estate when inflation is declining.

Brunnermeir and Julliard's theory may well be correct, but it too cannot explain the movement in yield spreads during the bubble. Therefore, their theory, like Shiller's, is at best an incomplete explanation of the bubble, as the yield spread movement shows that any growth in demand was exceeded by a growth in supply.

2.2.3 Theory Three: Inelastic Housing Supply

A third demand-side quasi-hypothesis for the housing finance, presented by urban economists Edward Glaeser, Joseph Gyourko and Albert Saiz, emphasizes the geographic variation in the housing bubble. There was considerable regional and local variance; some metropolitan areas, such as Detroit and Cleveland, did not experience a bubble, while others experienced bubbles of greater or lesser size. Glaeser, Gyourko and Saiz explain the variation based in part on variations in the elasticity of housing supply. In some parts of the country, local regulations and urban growth have been on a collision course for several decades. In these cases, with the inability of supply to expand, increased demand for real estate only resulted in higher prices.

In other words, Glaeser, Gyourko and Saiz contend that in inelastic housing markets, the housing demand curve shifted rightwards. And because most consumers finance the purchase of their homes, the rightward shift in the housing demand curve would have also resulted in a rightward shift in the mortgage finance demand curve. Glaeser, Gyourko and Saiz do not present supply constraints as the explanation for the bubble, although others do. At most, Glaeser, Gyourko and Saiz see supply inelasticity as affecting variations in how the bubble played out regionally. They argue that supply inelastic regions are more likely to experience greater price volatility and bubbles and that the extent of the bubble was determined to some degree by housing supply inelasticity.

2.3 Review of emperical studies

The neoclassical economics perspective looked into the dynamics of prices and quantities though largely an institution-free perspective in which only function matters Merton & Bodie (1995); North (1994), as cited by Merton & Bodie (1995). Thereafter, Williamson (1985 p.16 and 1988) in discussing the New Institutional Economics highlights the functional perspective of the financial system. The basis of economic theory is that commercial transactions are the prime drivers of economic growth such that the more frequently transactions take place, the higher the potential of economic growth. For economic growth and development, Schumpeter (1912) argues that financial intermediaries like banks and other financial institutions mobilize savings, allocate capital, manage risk, ease transactions and monitor firms. It is in this process of lending that financial intermediaries are considered to be utilizing resources and contributing to economic growth and development and there are evidences to support Schumpeter's view that financial institutions promote development Fry (1988); King and Levine (1993); Benhabib and Siegel (2000); Arestis et al (2001); Wachtel (2001) and Scholtens & Wensveen (2003).

Further in the literature, one of the biggest problems faced by the banks is lack of information about the promoters and the projects to be financed with the bank facilities

Jones & Maclennan (1987); Altman & Saunders (1998); Byamugisha (1999); Guzman (2000) and Mints (2006). Therefore, the economics of information, which has been a great contributor to the standard Neoclassical Economics since the late 1970s' is considered to be relevant to this study. The New Neoclassical Economies (NNE) is an integration of Neoclassical Economics (NE) and Transaction Cost Economics (TCE), with a primary role for NE but without losing sight of TCE. Among the presentations that assume part of the role of TCE in the framework of NE, is the information economics survey by Stiglitz (2000). The new information economics, he claimed, not only showed that institutions mattered, and explain why the institutions arose and the forms they took, but showed why they mattered. He noted that Arnott and Stiglitz (1991) showed that non-market institutions could even exacerbate the consequences of market failure, which was earlier articulated by Coase (1960).

Coase (1960) argued that if the costs of handling through the market are high and if the net costs are lower, only then may government regulations be relevant. However, the design of appropriate government interventions can be problematic to the extent that on occasions it brings into serious questioning the suitability of government interventions as the only option in correcting market failures Hammond (2006a & 2006b). The mere failure of private industry, when left from public interference, to maximize national dividend does not itself warrant intervention; for this might make things worse. When issue of accountability is not on the agenda, governments in most of the emerging economies monopolizes resources and power, and this monopoly is often worse than that of the private sector in the sense that the former entails larger TC and hence much more social costs relative to the latter. Hurwics (1973) noted that whenever information is imperfect and/or markets are incomplete, competitive markets do not obey the Pareto optimality efficiency criterion. Also, in NE literature, Kogiku (1971) noted that a competitive equilibrium ceases to produce Pareto-optimality when there are externalities that affect the system. However, Stiglitz (2000 p.1458) concluded without taking cognizance of associated TC, that "Government interventions, in form of, say taxes or subsidies on commodities – will lead to Pareto improvements". In line with the discussions and conclusion above on transaction cost, the next section then examines transaction cost and the theory of financial intermediation.

The current theory of financial intermediation concentrates on transaction costs and asymmetric information, but is inadequate in explaining the current complex financial transactions. It is therefore, referred to as traditional approach to financial intermediation. The financial intermediaries were considered as institutions being used to execute government monetary policies Benson and Smith Jr. (1976), without contributing to economic growth and development. The assertions might be right in the case of financial intermediaries in the emerging economies, due to the level of their economic growth. The financial intermediaries in the developed economies have gone through stages of development and by their functioning and operation they are contributing to the economic growth of their domiciled environment. The success in the theory of financial intermediation can only be appreciated when a financial market is not perfect. As noted by Berger et al (1995), a large percentage of past research on financial institutions has identified assumed imperfections like taxes, costs of financial distress, transaction costs, asymmetric information and importantly regulation.

In terms of regulation, which can either be structural or prudential, the government regulates the financial market to ensure financial stability as well as addressing problems of asymmetric information and moral hazard. While structural regulation limits the degree of risk that an institution can take in order for government to protect investor's funds and exposure limits of the financial institutions Pilbeam (2005), prudential regulation takes care of disclosure requirements, capital adequacy and liquidity requirements. Even with the identified importance of effective regulations of financial institutions, Llewellyn (2008), Milnes & Wood (2009) and Shin (2009) in discussing the Northern Rock situation highlighted problems in the regulatory framework of the British Financial System. Few of the identified problems include: inadequate role of government in responding to financial market distress and ambiguity in regard to the distinction between liquidity and solvency issues in banks. Llewellyn (2008) suggested that in any regulatory / supervisory regime, four areas that need to be addressed include prudential regulation of the financial firms; management and systemic stability; lender-of-last resort function and conduct of regulation and supervision business.

The lack of adequate regulation has resulted in lending behaviour of financial intermediaries being out of tune with economic realities. This has resulted in the lending standard being disconnected from economic fundamentals Markowitz (2009); Jones and Watkins (2009) and the banks failing with great speed exposing flaws in the regulatory system designed to identify failing institutions The Wall Street Journal (2009). Also, Scholtens and van Wensveen (2000 & 2003) are of the opinion that there is imperfection in the market when information is not flowing freely (information asymmetries). In the absence of information asymmetries, due to deregulation and deepened financial market, improvement in information technology and reduction in transaction cost, which are attributes of the financial markets in the development economies, the relevance of financial intermediaries reduces greatly.

While transaction cost highlights role of these intermediaries in the distribution function, the emphasis on the information asymmetries revolves around the origination and servicing function Merton (1989); Allen & Santomero (1998). This is due to the fact that these institutions are considered as information sharing coalitions Leland & Pyle (1997) and they can achieve economies of scale and act as delegated monitors on behalf of their customers Diamond (1984); Scholtens & van Wensveen (2003). Therefore, they can deal with individuals and transact business with their dynamic strategies at minimum cost than individuals doing their businesses which might result in high transaction cost. The transaction cost is not limited to foreign exchange and cost of borrowing Tobin (1963); Towey (1974); Fischer (1983), it also includes costs of auditing and monitoring, search costs etc which are high in most of the emerging economies. The transaction costs in these economies are high because of implicit and explicit costs of doing business which ultimately reflects on the cost of borrowing for property acquisition. Pagliari (2007) noted that in acquisition and disposition of privately held real estate, transactions cost are high which reduces returns on that type of investment. The transaction cost in this type of investment includes cost of traveling in the course of acquiring and disposing the real estate, legal fees, due diligence costs, brokerage commissions and transfer taxes depending on where the transaction is taking place.

The argument goes further from the observation made by Levine (1997) that informational asymmetries and transaction costs reduces liquidity and increases liquidity risk. These asymmetric information and other credit market frictions has various effects in the financial markets. These shortcomings, observes Levine (1997) create the incentives for the establishment of institutions that augments liquidity with the intentions of increasing their profitability. Chiuri and Jappelli (2003) were of the opinion that in the quest of the financial intermediaries to accumulate savings in form of liquid wealth, the lenders (financial intermediaries) requests potential borrowers to make down-payments in arranging funds for property acquisition. This down-payment is becoming a unique factor in determining when most first time buyers start climbing the property ladder. In the US studies, Duca & Rosenthal (1994); Haurin et al (1997) observed that the down-payment drives mortgage availability and the timing of property acquisition by first time buyers. Ortala - Magne and Rady (1998 & 1999) examines the economic impact of down payment.

In the financial systems, the bank-based model has the attributes to acquire information about firms, thereby improving corporate allocations Diamond (1984); Ramakrishinan & Thakor (1984), manage cross-sectional, inter-temporal and liquidity risk in an effort to enhance investment efficiency and economic growth Allen & Gale (2000); Bencivenga & Smith (1991). In attracting projects with high returns to an economy, there should be capital to fund it Levine (1997) and at the right price. As it was argued by Vatnick (2008), a lower cost of capital is important for economic growth because it induces rising investment and higher rate of capital accumulation for faster economic growth. Therefore, the financial intermediaries are expected to be liquid to provide funds for the projects, it translates to the fact that there is linkage between liquidity and economic development.

The literature on finance reveals that there are only two broad types of finance available: debt and equity finance. Financing of a project either by debt or equity depends on the characteristics of assets being financed and transaction cost reasoning suggests the use of debt to finance re-deployable assets and equity used to finance non re-deployable assets Williamson (1988). Furthermore, Jensen and Meckling (1976) in the study of theory of

firms argue that debts are utilized if the ability to exploit potentially profitable investment opportunities is limited by the resources of the owner. Debt finance yields a fixed return to its suppliers in states when the firm is not bankrupt (that is, the firm has sufficient funds to make the fixed payment) Edwards and Fischer (1994). Bank lending as a form of debt can be categorized into two: either as asset specific or corporate loans Crosby et al (2000). Again, the debt can be either secured or unsecured.

However, equity finance gives its suppliers the right to the firm's residual returns after payments to the suppliers of debt finance, and in addition, the right to vote on decisions concerning the firm's operation in states when a firm is not bankrupt. When the firm goes bankrupt, limited liability provisions mean that suppliers of equity receive nothing. In such state, they even loose the right to make decisions about the firm's operations in such states. In situation of non-bankruptcy, suppliers of equity finance have the right to the firm's residual return; they do not have the right to receive a fixed payment in every period which may be yearly or half-yearly Edwards and Fischer (1994); Toby (2006). On the other hand, Cranston (2002) and Tirole (2006) classify debt finance into short-term and long-term. Short-term debt finance instruments includes bank overdraft, commercial papers and short-term trade credit and long-term debt finance instruments includes housing loans, mortgages and other forms of informal credit transactions. In the context of the developing world, debt finance can be obtained from formal financial institutions like banks, micro-finance arrangements, indigenous moneylenders, family members, employers and government Nubi (2005). Heffernan (2003) and Tirole (2006) argued that financial instruments vary widely according to the characteristic of term to maturity. Sight deposits at banks have zero term to maturity, as they can be withdrawn on demand. Consequently, equity has no redemption date and therefore possesses an infinite term to maturity.

One of the biggest problems faced by the banking sector is lack of information about the promoters and the projects to be financed with the bank facilities Guzman (2000); Djankov et al (2007), to determine whether the borrowers will be able to pay the principal and interest when they fall due. Altman and Saunders (1998) highlighted the array of information on various borrowers' details to include their character (reputation), capital

(leverage), capacity (volatility of earnings) and collateral. However, Mints (2006) limited the borrowers required information to "the three C's of lending" which are collateral factor, capacity factor and credit factor, which are all relevant to lending in both developed and emerging economies.

The current theory of financial intermediation concentrates on transaction cost and asymmetric information and they are considered to be inadequate as tools to explain the fundamentals of financial intermediation, which is risk management. Therefore, their contributions are being classified as traditional and old. Moreover, there are two aspects to the lending operations of the financial institutions. The ability of the financial institutions to lend determined by the strength of their balance sheets and the willingness of these institutions to lend as risk managers.

In the banking literature, capital adequacy is one of the five key variables identified in measuring bank balance sheet strength while others are asset quality, management, earnings and liquidity Rojas-Suarez (2002); Hefernan (2003); Buckle and Thompson (2005). The capital adequacy regulatory rules have impact on the bank behaviours Dewatripont and Tirole (1994); Freixas and Rochet (1997); Chiuri et al (2002). It is argued that there are two ways by which these rules affect bank behaviours. Firstly, it is known that capital adequacy regulatory rules strengthen bank capital and improves the resilience of a bank to negative shocks and secondly, capital adequacy affects banks in risk taking and management behaviour.

It has also been argued by various authors Allen (2004); Pan (2008) that capital adequacy rules like Basel II may impact the banking system's ability to extend loans and advances to the productive sector of the economy. When capital requirement arises and with capital constraints in most countries of the emerging market due to lack of depth in their capital markets; the banks adopt a risk-shifting model as means of risk management. Risk management is about managing a mismatch between supply of funds and the demand for investments and these risks could be credit risk, liquidity risk, systemic risk, mismatch risk or interest rate risk Odenbach (2002); Heffernan (2003); van Order (2005); Mints (2006) and Akinwunmi et al (2007) & (2008a). With risk management being the core

business of the financial intermediaries, Dewatripont & Maskin (1995); van Thadden (1995) opinionated that financial institutions operating in a market-based financial system, due to competition, will have their inefficiencies associated with banking activities reduced and thereby promote economic growth.

Saunders (2002) analyses a risk-shifting model as a process whereby financial institutions, banks in particular, in an effort to meet up with new capital requirements moves away from low-yielding loans to high risk loans in expectation of high earnings. Furthermore, Caprio Jr. et al (2008) argue that risk-shifting takes place at every stage of financial engineering. If these loans eventual pay off, banks meet up with their higher capital requirements from loan profits, otherwise they are liquidated.

2.4 Determinants of Supply of Housing

The role of a housing finance system does not stop at the provision of shelter, it is also very important to the mobilization of domestic savings, shelter being one of the first priorities of households and a leading reason for savings. Therefore, the literature contends that the housing finance sector can and should play a central role in the mobilization of resources by households Renaud 1984; Renaud (2008). In Asia, according to UN-Habitat's state of the World's cities 2006-7 report, 73 percent of urban dwellers live in non-permanent housing. The housing sector is severely constrained by lack of an adequate and appropriate housing finance system, in which Asian Development Bank study says that Asia's mortgage sector is the least developed in the world UNCHS (2007). The situation in SSA is similar, characterized by the lack of housing finance.

The stock of housing finance in Namibia and South Africa comes to 18-20 percent of GDP, for other countries for which data are available had about 2 percent (Nigeria, Mali, Morocco, Senegal) Roy (2007). In Asia, many countries mortgage financing per year is less than 2 percent of GDP compared to 88 percent in the United Kingdom (UNCHS (2007) and 15-21 percent in Chile, Malaysia and Thailand Honohan and Beck (2007). In societies where social housing is not on the priority list of government, the affordability

would have to be looked at from the point of view of the individual's own ability to raise money needed to meet the cost or price of housing needs. Generally, the first source of funding for the individual is their income because it does not involve payment of interest. Many countries in the emerging economy have nascent and weak financial markets. The participation of financial markets in financing housing has been limited and the majority of low-income households are also excluded from the formal financial services industry UNCHS (2007). This resulted in 70 to 80 percent of housing finance in emerging economies being raised from the informal market Okpala (1994); Buckley et al (1994); Saravanan (2007) and Tiwari & Debata (2008). These informal markets are made up of loans from relatives, employers and money lenders that supplement savings and current income for housing finance Renaud (1985); Kim (1997).

However, formal housing finance supply in emerging economies is operated through both policy-driven and the market-oriented housing finance channels Deng and Fei (2008). The policy-driven housing finance is mainly through Housing Funds Schemes, which are mandatory housing savings scheme while the market-oriented housing finance is characterized by commercial loans from financial institutions. In the developed economies, commercial mortgages are referred to as collateralized lending to property developers whereas in the emerging economies, commercial loans are basically mortgages raised from financial institutions.

With the magnitude of housing needs in most of the countries in the emerging economy, Buckley and Kalarickal (2004), Hassler (2005) and Merrill (2006) argued that there are requirements that emerging economies must embrace, if they are going to move forward in terms of delivering housing finance. The requirements include stable macroeconomic conditions, a legal framework for property rights, mortgage market infrastructure and funding sources to promote financial intermediation and each will now be discussed.

2.4.1 Macroeconomic conditions

Macroeconomic policies are impacts of exogenous interventions at the aggregate or economy-wide levels Burda and Wyplosz (1997); Hammond (2006) and Roy (2007).

Macroeconomic instability and its corollary of high and volatile domestic interest rates, erratic monetary and exchange rate policies coupled with weaknesses in the financial systems of many emerging market countries Bhattacharya et al (1997); Irving and Manroth (2009), have a disproportionate impact on long-term mortgage finance. Various factors contributes to greater macroeconomic volatility in emerging markets, the most important is that their production structure is typically much less diversified than that of developed countries and often dependent on primary commodities.

The macroeconomic policies might be adopted to affect (decrease/increase) the nominal interest rate, or volatility of inflation, which has affected the efficiency of housing finance. In differentiating between housing affordability and housing finance affordability, Buckley et al (1994) argued that housing finance affordability arises when inflation makes housing unaffordable at the market rates of interest. This resulted in indexation as means of addressing the housing finance affordability problem especially in the Latin America and a few African countries like Ghana. Therefore, the objective of and redesigning mortgage contract is to eliminate financial constraints that impede the affordability housing and provide a financing vehicle so that those who can afford to, and so desire, can purchase homes Buckley et al (1993). This assertion has been argued by Buckley (1996) and Kim (1997) that indexation of deposits and mortgage products can only deal with moderate inflation.

A sound macroeconomic policy framework is one that promotes growth by keeping inflation low, the budget deficit small and the current account sustainable Fischer (2004); Hale (2007). Therefore, the financial regulatory authorities (central banks) in most emerging market economies have used policies like the cash reserve requirement and liquidity ratio as instruments of monetary control. Cash reserve requirement is the percentage of the banks cash asset to be kept in an account with the central bank. This policy is adopted to control volume of funds available for financial institutions to invest in granting loans and advances.

2.4.2 Financial Development and Liberalization

In most of the emerging market economies, the financial sub sector is generally shallow relative to the sizes of these economies. The shallowness of these institutions results in limited access to financial services, with the low-income earners and even medium income earners mostly discriminated against in the financial market. This form of discrimination comes in the form of being denied credit facilities due to their inability to meet the stringent requirements of suppliers of finance Roy (2007); Renaud (2008). In terms of liberalization, there has been a relative efficiency in the credit markets of the emerging economies due to the adoption of market discipline and risk-based capital guidelines. Almost all countries in the emerging economies are moving away from rigid.

2.4.3 Financial Infrastructure and Incomplete Financial Systems

The financial infrastructure of a country shapes the structure, organization and performance of the finance industry and the process of capital formation, and therefore the mortgage market development strategies Renaud (2008); Boleat (2008). This is done when attempts are made to increase the depth and breadth of their financial markets. One of the indicators for measuring financial deepness of an economy is the total deposits within a financial system as a percentage of GDP Vatnick (2008). The organization and structure of the financial system also plays an important causal role in the quality and rate of economic growth Bhattacharya (1997); Levine et al (2000); World Bank (2001).

2.5 Chapter Summary

It has been identified through various studies that the financial infrastructure of a nation shapes the structure, organization and performance of the finance industry and the process of capital formation and the mortgage market development strategies in both developed and emerging economies. Specifically, housing and housing finance in emerging market economies has been subjected to various limitations like inadequacy of legal and regulatory infrastructure, macroeconomic volatility, high transaction costs associated with the lack of adequate loan management practices and infrastructures for mortgage processing.

Despite the orthodox view that a secure supply of land with a good title (registered land) is a pre-requisite for effective housing finance system, efforts to get land registered and governments to be the sole custodian of land has been a disaster in most emerging economies. The idea of land registration has slowed down the process of housing finance disbursement and eventual supply. It can further be argued that the underdevelopment of mortgage lending to individual households can be explained by lack of demand for mortgage lending which might be due to high credit risks, lack of financial depth which translates into high interest rates on mortgage loans, the limited long-term credit resources of originating banks resulting from failure to develop secondary market financing. This anomaly has hitherto been tackled in the developed economies through the introduction of stable funding source and asset-liability management tools like securitization, credit derivatives, collateralized debt obligations and mortgage covered bonds. For most of the emerging economies, a combination of economic and social factors, such as low domestic savings rate, high price-to-income ratios and a general culture and social predisposition towards homeownership, suggests that the common problem facing them lies in the provision of housing finance services that can allocate untapped resources.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter describes the research design, population and sampling design, the data collection method, the research procedures and data analysis methods that was used in the course of the research. This section also indicates the research tools used to collect data, the data collection and the analysis procedures.

3.2 Research Design

The research adopted a descriptive research design. Accroding to Cooper and Schindler, (2001), descriptive study is used when one needs to determine characteristics associated with a subject population which this study is actually concerned with.

3.3 Hypothesis and Model to be tested

Using loan to housing (housing finance supply) as the dependent variable, it could be deduced at a point, that interest levels, income levels, loan security, value of property and government regulations being independent variables do significantly affect supply of loans to housing.

The basic model is as shown below:

$$\mathbf{Y = \beta o + \beta 1x1 + \beta 2x2 + \beta 3x3 + \ldots\ldots\ldots\ldots\ldots\ldots + \beta kxk + e \quad \ldots\ldots\ldots\ldots\ldots\ldots 1}$$

Where:

x1, x2, x3.....xk are the independent variables.

e the difference between the predicted and observed value of Y for the *i*th subject.

bo is the constant term

b1, b2, b3.....bk are the regression coefficients to be estimated.

The empirical model is therefore derived as:

$$\mathbf{SHF=\alpha_0+\alpha_1 IR+\alpha_2 IL+\alpha_3 LS + \alpha_4 VP + \alpha_5 GR \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots 2}$$

Where;

SHF = Supply of Housing Finance

α_O = Coefficient of the independent variable to SHF

IR = Interest rates

IL = Income level

LS = Loan Security

VP = Value of property

GR = Government regulations

3.4 Research population

The target population was all real estate developers, real estate owners and financiers operating in Kenya as at 31st December 2011.

3.5 Sample size

The target respondents were selected using purposive sampling. In this case respondents were chosen deliberately on assumption that they have valid information regarding the problem under study. The sampling frame was all real estate developers and home owners who have engaged in development business in Nairobi, however due to nature of their work, we did not find all of them in Nairobi City. It was important that the respondents are targeted based on the locations where was easy to locate them so as to save cost and time in the course of the research. Hence, this proposal focused on the respondents at their places of work. The sample size composed of 30 real estate developers, 30 home owners and 10 housing financiers.

3.5 Data collection

Qualitative and quantitative research approaches were used in this study. For quantitative, the data was obtained from the housing finance publications and other publications in the real estate sector. Qualitative research methodologies were designed to provide the researcher with the perspective of target audience members through immersion in a culture or situation and direct interaction with the people under study. The advantage of using qualitative methods was that they generate rich, detailed data that leave the

participants' perspectives intact and provide a context for health behaviour. Qualitative methods of data collection used in this study were questionnaires.

3.6 Data analysis

The researcher edited the collected data centrally Coppers and Schindller, (2000) assert that editing is done in order to detect errors and omission, ensure data is accurate, uniformly entered, complete, consistent with intent of the question and other information in the study and arranged to simplify coding and tabulation. Alpha numeric data coding was carried out to assign numbers and other symbols to the questions, which Coopers and Schindler (2000) explain is done in order to group the respondents to a limited number of classes or categories that facilitate efficient analysis. Coded data was tabulated in Statistical Package for Social Scientist (SPSS).

3.6.1 Correlation

Pearson product-moment correlation (r), as an example of correlation coefficient, gives the numerical summary of the direction and strength of the linear relationships between two variables. Since explanation needs to be given for the possible relationship between the dependent and independent variables, the statistical association between the variables has to be measured. The Pearson Product-Moment Correlation (r) is the most commonly applied correlation coefficient used in measuring a linear association and it was therefore adopted in this study to build the framework of the conceptual model.

3.6.2 Multi-collinearity

Another important issue in multiple regression analysis is the presence of multicollinearity. There is no precise definition of collinearity firmly established in the literature Mason and Pierreault (1991). Collinearity is agreed to be present if there is an approximate linear relationship among some of the predictor variables in the data. This refers to the relationship among the independent variables and it exists when the independent variables are highly correlated (r = 0.9 and above) Pallant (2007);

Tabachnick & Fidell (2007). Multicollinearity makes it difficult to determine the contribution of each independent variable Hair et al (1998).

3.7 Data validity and reliability

Data obtained from the primary source was considered authentic and could therefore be relied upon for deriving conclusions. Such data was also considered credible and free from error or any bias. Data was moved from the field only by the researcher to ensure confidentiality and reliability was observed, discussion and clarification were sought from the organizations targeted to ensure reliability, remains confidential and used only for the purpose of this study.

CHAPTER FOUR

DATA ANALYSIS AND PRESENTATION O FINDINGS

4.1 Introduction

The main objective of this study was to establish determinants of supply of real estate finance in Kenya. A total of 70 questionnaires were sent out, of which 44 were satisfactorily filled and returned, this formed 63% response rate. The collected data was analyzed using the statistical package for social scientist. The chapter starts with the analysis of results and concludes with giving the summary and interpretation of the findings.

4.2 Data presentation and explanation

4.2.1 Descriptive Statistics

Table 4.1: Descriptive statistics for measures of performance

	N	Minimum	Maximum	Mean	Std. Deviation
Housing Finance Supply	44	13.00	85.00	27.5000	28.29664
Interest Rates	44	13.00	96.00	31.1667	31.99635
Income Level	44	14.00	117.00	38.0000	39.18673
Loan Security	44	17.00	145.00	47.1667	48.53212
Value Of Property	44	23.00	165.00	53.6667	55.07328
Government Regulations	44	24.00	193.00	62.8333	64.37831
Valid N (listwise)	44				

The Descriptive Statistics table provides summary statistics for continuous, numeric variables. Summary statistics include measures of central tendency such as the mean. Measures of dispersion (spread of the distribution) such as the standard deviation. The minimum for housing finance supply and interest rates was 13 respectively, 14 for income level, 17 for loan security, 23 for value of property while 24 for government regulations. The maximum was 85 for housing finance supply, 96 for interest rates, 117 for income level, 145 for loan security, 165 for value of property while 193 for government regulations. The mean for housing finance supply was 27.5, 31.1 for interest rates, 38 for income level, 47.1 for loan security, 53.7 for value of property and 62.8 for

government regulations. The std deviation for housing finance supply was 28.3, 31.9 for interest rates, 39.1 for income level, 48.5 for loan security, 55 for value of property and 64.4 for government regulations

4.2.2 Correlation

Table 4.2: Correlation between measures of performance

		Housing Finance Supply	Interest Rates	Income Level	Loan Security	Value Of Property	Government Regulations
Housing Finance Supply	Pearson Correlation	1	.999(**)	.997(**)	.997(**)	.998(**)	.998(**)
	Sig. (2-tailed)		.000	.000	.000	.000	.000
	N	44	44	44	44	44	44
Interest Rates	Pearson Correlation	.999(**)	1	.998(**)	.998(**)	.999(**)	.998(**)
	Sig. (2-tailed)	.000		.000	.000	.000	.000
	N	44	44	44	44	44	44
Income Level	Pearson Correlation	.997(**)	.998(**)	1	1.000(**)	.999(**)	.998(**)
	Sig. (2-tailed)	.000	.000		.000	.000	.000
	N	44	44	44	44	44	44
Loan Security	Pearson Correlation	.997(**)	.998(**)	1.000(**)	1	.999(**)	.997(**)
	Sig. (2-tailed)	.000	.000	.000		.000	.000
	N	44	44	44	44	44	44
Value Of Property	Pearson Correlation	.998(**)	.999(**)	.999(**)	.999(**)	1	.999(**)
	Sig. (2-tailed)	.000	.000	.000	.000		.000
	N	44	44	44	44	44	44
Government Regulations	Pearson Correlation	.998(**)	.998(**)	.998(**)	.997(**)	.999(**)	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	
	N	44	44	44	44	44	44

** Correlation is significant at the 0.01 level (2-tailed).

The correlations table displays Pearson correlation coefficients, significance values, and the number of cases with non-missing values. Pearson correlation coefficients assume the data are normally distributed. The Pearson correlation coefficient is a measure of linear association between two variables. The values of the correlation coefficient range from -1 to 1. The sign of the correlation coefficient indicates the direction of the relationship (positive or negative). The absolute value of the correlation coefficient indicates the

strength, with larger absolute values indicating stronger relationships. The correlation coefficients on the main diagonal are always 1.0, because each variable has a perfect positive linear relationship with itself.

The significance of each correlation coefficient is also displayed in the correlation table. The significance level (or p-value) is the probability of obtaining results as extreme as the one observed. If the significance level is very small (less than 0.01) then the correlation is significant and the two variables are linearly related. If the significance level is relatively large (for example, 0.2) then the correlation is not significant and the two variables are not linearly related.

The study showed positive relationship for all the measures of performance, with a strong significance level for all the measures of performance i.e. Interest Rates, government regulations, income level, value of property and loan security.

4.2.3 Empirical Model

Table 4.3: Collinearity Diagnostics

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions			
				(Constant)	Government Regulations	Loan Security	Interest Rates
1	1	3.723	1.000	.00	.00	.00	.00
	2	.261	3.779	.00	.01	.00	.13
	3	.011	18.077	1.00	.08	.06	.47
	4	.005	27.425	.00	.91	.93	.39

a Dependent Variable: Housing Finance Supply

This table displays statistics that help you determine if there are any problems with collinearity. Collinearity (or multicollinearity) is the undesirable situation where the correlations among the independent variables are string. Eigenvalues provide an indication of how many distinct dimensions there are among the independent variables. When several eigenvalues are close to zero, the variables are highly intercorrelated and small changes in the data values may lead to large changes in the estimates of the coefficients. Condition indices are the square roots of the ratios of the largest eigenvalue

to each successive eigenvalue. A condition index greater than 15 indicates a possible problem and an index greater than 30 suggests a serious problem with collinearity. The variance proportions are the proportions of the variance of the estimate accounted for by each principal component associated with each of the eigenvalues. Collinearity is a problem when a component associated with a high condition index contributes substantially to the variance of two or more variables.

4.3 Qualitative analysis

Housing and residential construction are considered to be central importance for determination of both the level of welfare in a society and the level of aggregate economic activities. Housing is the largest asset owned by most households and is nearly always financed, in the sense that owners of housing capital must pay for their units over a period of years. It is therefore imperative for Kenya to appreciate benefits to be derived from having a well-functioning mortgage markets despite various economic issues being tackled with limited resources. The large external benefits to the national economy were highlighted to include capital market development, efficient real estate development, construction sector employment, easier labour mobility, more efficient resources allocation and lower macroeconomic volatility.

It has been identified through various studies that the financial infrastructure of a nation shapes the structure, organisation and performance of the finance industry and the process of capital formation and the mortgage market development strategies in Kenya. Specifically, housing and housing finance in Kenya has been subjected to various limitations like inadequacy of legal and regulatory infrastructure, macroeconomic volatility, high transaction costs associated with the lack of adequate loan management practices and infrastructures for mortgage processing.

Despite the orthodox view that a secure supply of land with a good title (registered land) is a pre-requisite for effective housing finance system, efforts to get land registered and governments to be the sole custodian of land has been a disaster in Kenya. The idea of land registration has slowed down the process of housing finance disbursement and eventual supply. It is further be argued that the underdevelopment of mortgage lending to

individual households can be explained by lack of demand for mortgage lending which is due to high credit risks, lack of financial depth which translates into high interest rates on mortgage loans, the limited long-term credit resources of originating banks resulting from failure to develop secondary market financing. This anomaly has hitherto been tackled in the developed economies through the introduction of stable funding source and asset-liability management tools like securitization, credit derivatives, collateralized debt obligations (CDOs) and mortgage covered bonds (MCB).

For Kenya, a combination of economic and social factors, such as low domestic savings rate, high price-to-income ratios and a general culture and social predisposition towards homeownership, suggests that the common problem facing them lies in the provision of housing finance services that can allocate untapped resources. Some of these untapped resources could be identified as the innovative sources of funding housing finance which are peculiar to their situations like diaspora bonds, migrant remittances and pension funds.

4.4 Summary and Interpretation of the findings

The Descriptive Statistics table provides summary statistics for continuous, numeric variables. Summary statistics include measures of central tendency such as the mean. Measures of dispersion (spread of the distribution) such as the standard deviation. The minimum for housing finance supply and interest rates was 13 respectively, 14 for income level, 17 for loan security, 23 for value of property while 24 for government regulations. The maximum was 85 for housing finance supply, 96 for interest rates, 117 for income level, 145 for loan security, 165 for value of property while 193 for government regulations. The mean for housing finance supply was 27.5, 31.1 for interest rates, 38 for income level, 47.1 for loan security, 53.7 for value of property and 62.8 for government regulations. The std deviation for housing finance supply was 28.3, 31.9 for interest rates, 39.1 for income level, 48.5 for loan security, 55 for value of property and 64.4 for government regulations

The correlations table displays Pearson correlation coefficients, significance values, and the number of cases with non-missing values. Pearson correlation coefficients assume the data are normally distributed. The Pearson correlation coefficient is a measure of linear association between two variables. The values of the correlation coefficient range from -1 to 1. The sign of the correlation coefficient indicates the direction of the relationship (positive or negative). The absolute value of the correlation coefficient indicates the strength, with larger absolute values indicating stronger relationships. The correlation coefficients on the main diagonal are always 1.0, because each variable has a perfect positive linear relationship with itself.

The significance of each correlation coefficient is also displayed in the correlation table. The significance level (or p-value) is the probability of obtaining results as extreme as the one observed. If the significance level is very small (less than 0.01) then the correlation is significant and the two variables are linearly related. If the significance level is relatively large (for example, 0.2) then the correlation is not significant and the two variables are not linearly related.

The study showed positive relationship for all the measures of performance, with a strong significance level for all the measures of performance i.e. Interest Rates, government regulations, income level, value of property and loan security.

The multiple correlation coefficient is the correlation between the observed and predicted values of the dependent variable. The values of R for models produced by the regression procedure range from 0 to 1. Larger values of R indicate stronger relationships. R squared is the proportion of variation in the dependent variable explained by the regression model. The values of R squared range from 0 to 1. Small values indicate that the model does not fit the data well. The sample R squared tends to optimistically estimate how well the models fit the population. Adjusted R squared attempts to correct R squared to more closely reflect the goodness of fit of the model in the population. Choose a model with a high value of R squared that does not contain too many variables. Models with too many variables are often over fit and hard to interpret.

The model summary for this study was found to be 1.000 for R value, 0.999 for R square, 0.997 for adjusted R square, 435.775 for F change, 3 for df1, 1 for df2, 0.035 for sig. F change while the Durbin-Watson was 3.405

The output for Regression displays information about the variation accounted for by your model. The output for Residual displays information about the variation that is not accounted for by your model. And the output for Total is the sum of the information for Regression and Residual. Model with a large regression sum of squares in comparison to the residual sum of squares indicates that the model accounts for most of variation in the dependent variable. Very high residual sum of squares indicate that the model fails to explain a lot of the variation in the dependent variable, and you may want to look for additional factors that help account for a higher proportion of the variation in the dependent variable. The mean square is the sum of squares divided by the degrees of freedom. The F statistic is the regression mean square divided by the residual mean square. The regression degrees of freedom is the numerator df and the residual degrees of freedom is the denominator df for the F statistic. The total number of degrees of freedom is the number of cases minus 1. If the significance value of the F statistic is small (smaller than say 0.05) then the independent variables do a good job explaining the variation in the dependent variable. If the significance value of F is larger than say 0.05 then the independent variables do not explain the variation in the dependent variable.

The sum of squares for regression was 4001.753, df 4, mean square 1000.438, F 572.725 while the Sig. was 0.031 while for the residual values, sum of squares was 1.747, df was 1 while the mean square was 1.747.

Collinearity (or multicollinearity) is the undesirable situation where the correlations among the independent variables are string. Eigenvalues provide an indication of how many distinct dimensions there are among the independent variables. When several eigenvalues are close to zero, the variables are highly intercorrelated and small changes in the data values may lead to large changes in the estimates of the coefficients. Condition indices are the square roots of the ratios of the largest eigenvalue to each successive eigenvalue. A condition index greater than 15 indicates a possible problem

and an index greater than 30 suggests a serious problem with collinearity. The variance proportions are the proportions of the variance of the estimate accounted for by each principal component associated with each of the eigenvalues. Collinearity is a problem when a component associated with a high condition index contributes substantially to the variance of two or more variables.

The previous study found out that low income level affects the housing finance Roy (2007). Further in the literature, one of the biggest problems faced by the banks in financing for real estate is value of property and the projects to be financed with the bank facilities Jones & Maclennan (1987); Altman & Saunders (1998); Byamugisha (1999); Guzman (2000) and Mints (2006). Even with the identified importance of effective regulations of financial institutions, Llewellyn (2008), Milnes & Wood (2009) and Shin (2009) in discussing the Northern Rock situation highlighted problems in the regulatory framework of as the impediment in real estate financing. Further Llewellyn (2008) suggested that in any regulatory / supervisory regime, four areas that need to be addressed include prudential regulation of the financial firms; management and systemic stability; lender-of-last resort function and conduct of regulation and supervision business. However the findings of this study indicate value of property, government regulation, income level, interest rates and loan security all affect the financing of real estate in Kenya.

CHAPTER FIVE

SUMMARY, CONCLUSION & RECOMMENDATIONS

5.1 Summary

In lending, financial institutions give out loans in consideration of interest to be charged on the loans and the riskiness of the loan. The demand and supply of housing finance are determined by various factors. The ability of financial institutions to lend for housing (supply of housing finance) determines the quantity of housing finance that could be supplied for house acquisitions. If the identified factors, value of property, government regulation, income level, interest rates and loan security are dwindling, the availability of housing finance will be reduced.

Interest Rates: Since interest rate is considered as the rate of return on investment, when the rate of interest is low on mortgage lending maybe due to government regulations, there is the tendency for the financial institutions to look for an alternative investment outlet in order to make good profit. Apart from the ability of the financial institutions to lend, the other aspect is the willingness of the financial institutions to lend towards mortgage acquisition. The factors consider by them includes criteria of security, income, price of the property, price of alternative goods and services and household characteristics (age, marital status etc).

Criteria of Security: With a favourable reserve and liquidity position, financial institutions in Kenya do not necessarily lend to all applicants that approach them for banking facilities, even if the prevailing interest rate is acceptable to the borrower. Loans are secured on specific property and necessary steps are taken in avoiding default on repayment or depreciation of the security below the book value of the debt. There are various ways by which the lenders determine the ability of the borrower to repay and the suitability of the property as security.

Income: The income being earned by a borrower determines the ability to repay the money borrowed. The total sum advanced therefore is usually restricted to some multiple of two to three times the applicant's salary. This means that the applicant shall have

secure prospects of a continuing income. However, in the recent past in the developed economies, it is considered that average home prices range from three to four times of annual income (Warnock & Warnock 2008). In Kenya, because wages are low and construction cost is high, average home prices are usually about eight times of annual income and to make it affordable, repayments have to be spread over a very long period of time. Thus a positive relationship exists between housing construction cost and building materials price, property price, foreign exchange rates because imported building materials are used for construction, labour cost and national disposable income.

Value of property: In some cases, control of lending is also exercised by avoiding advances on the security of properties which might deteriorate. Financial institutions prefer lending on properties which are relatively modern and also prefer houses to flats. As a property is becoming old-fashioned, the less is the willingness of financial institutions to lend based on the collateral of the property. This policy affects the distribution of house prices, since it would be difficult to raise a loan on a particular property. As a result of these constraints demand is always rationed and it is difficult to assess what the real demand for mortgage is while the supply constraints in the form of the reserve and liquidity ratios are easier to observe.

Loan to Income Ratio: Financial Institutions would like to know what percentage of his total income is already committed to payment of all. In some cases, bank might not lend to individuals that would commit more than 40 per cent of his income on settling debts.

5.2 Conclusion

This study investigated factors determining housing finance supply in Kenya. Housing finance is a major factor determining the quality and tenure of housing consumption, the overall financial portfolio of the public and the stability and effectiveness of the financial system. In Kenya, the government has intervened in the markets by setting up institutions characterized by a significant degree of regulation and segmentation from the rest of the financial markets and very often with governments providing subsidized housing finance.

Additional instruments in form of questionnaire, for the sectorial allocation of loans and advances by these financial institutions were employed to gather information from Corporate Banking / Loans and Advances Managers coupled with unstructured interviews. Supplementary questionnaires were directed to the users of housing finance at the household level as control for validity to the research findings.

Applying a multiple regression approach, the model identified that housing finance supply in Kenya is significantly driven by clusters of factors related to value of property, government regulation, income level, interest rates and loan security. It is closely observed that housing finance models in the developed economies, which are largely financed by deposit liabilities, cannot be wholly adopted in the Kenyan economy. The implication for practice therefore is that financial institutions in Kenya must adequately increase their capital base for effective housing finance supply and introduce mortgage products with long-term tenure to actively mobilize resources for mortgage lending.

5.3 Policy Recommendations

The largest hitches to the development of the real estate segment of Kenya are government regulations, interest rate, loan security, value of property and income level as suggested by most of the respondents in the interviews. Changes brought in these segments can ensure a better rate of growth for the market and a relatively more attractive opportunity for the consumers and investors.

As discussed in the project, Real Estate in Kenya has a potent demand backed growth. Demand due to population increase, higher allocation to savings in real estate, actualization of mortgaging by consumers and bridging the gap of the current housing deficit will be a trigger for sustained growth.

The efforts by the government to ensure faster clearances for active real estate development would enable developers in a great way. The researcher recommends that the government should set up a separate real estate division with the objective of single

window clearance of all required paper work and clearances. Single window essentially means that the developers will need to approach only one department for the clearances required in checking the title of the land, the water treatment plant, electricity and water utility connections, permission for construction and labour related issues such as facilities and wages. Also the government should establish a housing loan guarantee scheme run by existing government housing corporations to assess risks in some real estate development and the applicant's credit scores then giving guarantees to the developers and financiers so as to encourage financiers to lend more and at affordable interest rates. The builders should be given support in ensuring that the land they own and hold is free of encroachment from slums. Also, free hold land should be released to developers with proper title clearances to the land quickly. Some litigation processes take years for clearances, which should be put onto a fast track.

5.4 Limitations of the Study

Every research has certain drawbacks. It is therefore necessary to incorporate them in the project to obtain a true perspective of the research topic. The following are a few drawbacks the researcher faced during my research study.

The study makes use of qualitative analysis, which is interview and questionnaire based in order to find out the determinants of housing finance in Kenya. However quantitative approach has not been used as it would have prolonged the study. Hence financial statements such as Balance Sheet and Profit and Loss of Real estate listed companies have not been analyzed to arrive at the growth prospects of the sector in quantitative terms.

Also due to difference in valuation methods adopted by different countries and limited relevant data; comparison of Kenyan real estate companies to international real estate companies operating in Kenya has not been possible.

Another drawback was getting through to companies for the purpose of an interview. Limited number of interviewees induced the researcher to collect further information through a questionnaire survey.

Further, there was a possibility of a biased research being carried out due to all interviewees being Nairobi-based. Therefore the researcher increased the sample size to adequately include companies from all parts of Kenya to get a clear national perspective of the real estate market.

However, the research aim was to provide a broad overview and give valuable prospects to the participants of this industry as well as to investors seeking to invest in the Kenyan real estate sector.

5.5 Suggestions for further studies

For academic world. This research Result is expected to become a valuable input in study related to housing finance for real estate. This Research has not yet expressed all variables that can influence housing finance, then in order to increase science/knowledge development, other researchers who are interested in similar problems are suggested to conduct a continuation research by adding further determinants of housing finance

The study was done for the companies and real estates in Nairobi, a suggestion is made that a similar study be done for companies and real estate developers beyond Nairobi and results be compared.

The study was done for Kenya i.e. real estate companies operating in Kenya, it is suggested that a cross sectional study be done for the other East African real estate developers.

REFERENCES

Akinwunmi, A., Gameson, R., Hammond, F. and P. Olomolaiye (2007) – Mortgage Insurance and Housing Finance in Emerging Economies- in Boyd, D.(Ed)- Proceedings of 23rd Annual ARCOM Conference, 3-5 September 2007, University of Ulster, Belfast-UK, Association of Researchers in Construction Management,

Akinwunmi, A., Gameson, R., Hammond, F. and P. Olomolaiye (2008) – The Effect of Macroeconomic Policies on Project (Housing) Finance in Emerging Economies – in Lodi,

Alhashimi, H.and Dwyer, W (2004) Is there such an entity as a housing market? Paper presented at the 10th Annual Pacific Rim Real Estate Conference, Bangkok

Allen, F. and D. Gale (1988) – Optimal Security Design, Review of Financial Studies Fall 1988 pp 229-268.

Allen, F. and D. Gale (1994) - Financial Innovation and Risk Sharing, Cambridge, Massachusetts: MIT Press

Altman, E.T. and Saunders, A. (1998) – Credit risk measurement: Developments over the last 20 years, Journal of Banking and Finance, 21(1998), pp 1721-1742.

Arnott, R. and Stiglitz, J. (1991) – Moral Hazard and Non-Market Institutions: Dysfunctional Crowding out after monitoring, American Economic Review 81, pp 179-190.

Benston, G.J. and C.W. Smith Jr (1976) – A Transaction Cost Approach to the theory of Financial Intermediation, Journal of Finance May 1976, Vol. 31 No 2, pp 215-231.

Berger, A.N., Herring, R.J. and G.P. Szego (1995) – The Role of Capital in Financial Institutions, Journal of Banking and Finance 19, pp 393-430.

Bhattacharya, A., Montiel, P.J. and S. Sharma (1997) – How Can Sub-Saharan Africa Attract More Private Capital Inflows? Finance and Development June 1997, Vol. 34 No 2 pp 3-6.

Boleat, M. (2008) – Housing Development and Housing Finance in Britain – Some lessons for emerging markets, Housing Finance International March 2008, Vol. 22 Issue 3, pp 53

Burda, M. and C. Wyplosz (1997) – Macroeconomic: A European Text, 2nd Edition, N.Y; Oxford University Press.

Buckle, M and J Thompson (1998) The UK Financial System: Theory and Practice (3rdEdition), N Y : Manchester University Press.

Buckley, R M (1996) Housing Finance in Developing Countries. N.Y: Macmillan.

Byamugisha, F. (1999) – The effects of land registration on Financial Development and Economic Growth: A Theoretical and Conceptual Framework, Policy Research Working Paper 2240, Washington DC: World Bank.

Caprio Jr, G., Demirguc-Kunt, A. and E.J. Kane (2008) – The 2007 Meltdown in Structured Securitisation: Searching for Lessons, Not Scapegoats, Finance and Private Sector Team, Development Research Group - October 2008, World Bank: Washington DC.

Chiuri, M.C. and T. Jappelli (2003) – Financial Market imperfections and home ownership: a comparative study, European Economic Review Vol.47 Issue 5, pp 857-875.

Chiuri, M.C., G. Ferri and G. Majnani (2002) – The Macroeconomic Impact of Bank Capital Requirement in Emerging Economics: Past Evidence to Assess the Future, Journal of Banking and Finance 26, pp 881-904.

Cho, M. (2007) – 180 Years' Evolution of the US Mortgage Banking System: Lessons for Emerging Mortgage Markets, International Real Estate Review, Vol. 10 No 1 pp 171-212.

Coase, R.H. (1960) – The Problem of Social Cost, Law and Economics, 3, pp 1-44

Crosby, N., French, N. and Oughton (2000) – Bank lending valuations on Commercial property: Does European mortgage lending value add anything to the process? Journal of Property Investment & Finance Vol.18 No 1, 2000, pp 66-83.

Dasan M. B. (1996) – Analysis of factors which influence supervisor's motivation in a building in Kenya in the construction industry. African Competitiveness Report 1996.

Deng, Y. and Fei, P. (2008) – The Emerging Mortgage Markets in China – in Ben-Shahar, D., Yui Leung, C.K. and S.E. Ong (Eds) – Mortgage Markets Worldwide, pp 1-33, Chichester -West Sussex, United Kingdom: John Wiley and Sons Ltd

Dewatripont, M. and E. Maskin (1995) – Credit and efficiency in centralized and decentralized economies, Review of Economic Studies October 1995, Vol. 62 Issue 213, pp 541-555.

Dewatripont, M. and J. Tirole (1994) – The Prudential Regulation of Banks, Cambridge, MA: MIT Press.

Diamond, D.W. and P. Dybvig (2000) – Bank runs, deposit insurance and liquidity, The Federal Reserve Bank of Minneapolis Quarterly Review Winter 2000, Vol.24 No 1

Diamond, D.W. (1984) – Financial Intermediation and delegated monitoring, Review of Economic Studies 51, pp 393-414

Djankov, S., McLiesh, C. and A. Shleifer (2007) – Private credit in 129 countries, Journal of Financial Economics 84(2007) pp 299-329

Edwards, J and K. Fischer (1994) – Banks, Finance and Investment in Germany, Centre for Economic Policy Research, Cambridge University Press.

Elliot, J.W. (1984) – Money, Banking and Financial Markets, New York: West Publishing Co.

Fischer, S. (2004) – IMF Essays from a time of Crisis: The International Financial System,Stabilization and Development, Cambridge, MA: MIT Press, 2004.

Fischer, S. (1984) – A framework for monetary and banking analysis, Economic Journal 93, pp 1-16

Follain, J. and P. Zorn (2000) – The unbundling of residential mortgage finance, Journal of Housing Research 1(1), pp 63-89.

Fry, M.J. (1988) – Money, Interest and Banking in Economic Development, Baltimore: John Hopkins University Press

Guzman, M.G.(2000) – The Economic Impact of Bank Structure: A Review of Recent Literature, Federal Reserve Bank of Dallas, Economic and Financial Review, 2nd Quarter 2000, pp 11-25.

Hair, J.F., Anderson, R.E., Tatham, R.L. and W.C. Black (1998) – Multivariate Data Analysis (5th Edition), New Jersey: Prentice Hall.

Hale, G. (2007) – Sound Policies for Emerging Markets Financial Stability, International Finance Vol. 10 No 1 pp 101-114.

Hammond, F.N. (2006) – The Economic Impacts of Sub-Saharan African Urban Real Estate Policies, Unpublished PhD Thesis, School of Engineering and the Built Environment, University of Wolverhampton, UK.

Haurin, D.R., Hendershott, P.H. and S.W. Watcher (1997) – Borrowing constraints and the tenure choice of young households, Journal of Housing Research 8, pp 137-154.

Heffernan, S. (2003) Modern Banking in Theory and Practice, March 2003, Chichester-West Sussex: John Wiley and Sons.

Hurwics, W.P. (1973) – The Design of Mechanisms for Resource Allocation, American Economic Review 63, pp 1-30.

Irving, J. and A. Manroth (2009) – Local Sources of Financing for Infrastructure in Africa, Policy Research Working Paper 4878, African Sustainable Development Front Office, World Bank: Washington D.C.

Jensen, M.C. and Meckling, W.H. (1976) – Theory of the firm: Managerial behaviour, agency costs and ownership structure, Journal of Financial Economics 3.

Jaffee, D.M. and Renaud, B. (1997) Strategies to develop mortgage markets in transition economies. In: J. Doukas, V.Murinde and C. Wihlborg (eds) Financial Sector Reform and Privatization in Transition Economies.Ch.4, Amsterdam: Elsevier Science Publishers.

Jones, C. and C. Watkins (2009) – Housing Markets and Planning Policy, Wiley-Blackwell, 224pp, October 2009

Kim, K-H (1997) – Housing Finance and Urban Infrastructure Finance, Urban Studies Vol. 34 No 10, pp 1597-1620.

Kogiku, K.C. (1971) – Microeconomic Models, N.Y.: Harper and Row.

Leyland, H.E. and D.H. Pyle (1977) – Informational asymmetries, financial structure, and financial intermediation, Journal of Finance 32 pp 371-387

Levine, R. (1997) – Financial development and economic growth: views and agenda, Journal of Economic Literature 35, pp 688-726.

Levine, R., Loayza N. and T Beck (2000) – Financial intermediation and Growth: Causality and Causes, Journal of Monetary Economics, Vol. 46 No 1 pp 31-77.

Llewellyn, D.T. (2008) – The Northern Rock Crisis: A Multi-Dimensional Problem Waiting to Happen, Journal of Financial Regulation and Compliance 2008 Vol. 16 Issue 1pp 35-58.

Mandere A.N. (2006) – A survey of QM practices in the large Kenyan building construction firms. Africa Private Sector Group, Kenya, 2006.

Markowitz, H.M. (2009) – Proposals Concerning the Current Financial Crisis, Financial Analysts Journal Jan / Feb. 2009, Vol. 65 Issue 1, pp 25-27.

Mason, C.H. and N.D. Perreault (1991) – Collinearity, Power and Interpretation of Multiple Regression Analysis, Journal of Marketing Research 28, August 1991 pp 268-80.

Merrill, S. and Tomlinson, M. (2006) – Housing Finance, Microfinance and Informal Settlement Upgrading: An assessment of Ghana. Paper prepared for African Union of Housing Finance and USAID, The Urban Institute, Washington DC. June 2006.

Malpezzi, S (1999) Economic Analysis of housing markets in developing and transition economies. In: Cheshire, P. and Mills, E.D. (eds) Handbook of Regional and Urban Economics Applied Urban Economics, 3, 1791-1864.

Marete D, (2011) – The determinants of real estate property prices in Kiambu Municipality in Kenya. Unpublished Masters paper, School of Business, University of Nairobi, 2011.

Merton, R.C. and Z. Bodie (1995) – A Conceptual Framework for Analyzing the Financial Environment- in Crane, D.B., K.A. Froot, S.P. Mason, A.F. Perold, R.C. Merton, E.R.Sirri and P. Tufano (Eds) – The Global Financial System: A Functional Perspective, pp 3-32, Harvard Business School Press, Cambridge: MA.

Merton, R.C. (1989) – On the application of the continuous-time theory of finance to financial intermediation and insurance. Geneva Papers on Risk and Insurance Theory 14, pp 225-261.

Milne, A. and G. Wood (2009) – Shattered on the Rock? British Financial Stability from 1866 to 2007, Journal of Banking Regulation (2009), Vol.10 No 2 pp 89-127.

Mints, V. (2006) – Specifics of Credit Risk Assessment in Mortgage Lending-Sample of Russia, Housing Finance International September 2006, Vol.21 Issue1 pp 14-21.

Njiru (2003) The performance of real estate markets in Kenya, KEPLOTRADE Research Paper No 2/2004. December 2003.

North, D.C. (1994) – The Evolution of Efficient Markets in History – in James, J.A. and M. Thomas (eds)- Capitalism in context, Chapter 11 pp 257-264, Chicago: University of Chicago Press.

Nubi, T.O.(2005) – Housing Finance in Nigeria- Need for Re-Engineering (Unpublished Reports)-www.housingfinance.org/pdfstorage/Africa

Nubi, T.O. (2008) – Affordable Housing Delivery in Nigeria, Paper presented at The Southern African Housing Foundation International Conference and Exhibition, 12-15 October 2008 – Cape Town, South Africa.

Omufira A.N. (2001) – Extent of TQM implementation in the construction industry, AICD Background Paper 13, Africa Region, World Bank, Washington, DC

Olotuah, A O (2000) The challenge of Housing in Nigeria Effective Housing in 21st Century Nigeria. In: Akinbamijo, O.B. et al. (eds) Environmental Forum, Federal University of Technology, Akure-Nigeria, 16-21.

Olotuah, A O and Aiyetan, A.O.(2006) Sustainable low-cost housing provision in Nigeria: a bottom-up participatory approach. In: Boyd, D. (ed) Proceeds of 22nd Annual

ARCOM Conference, 4-6 September 2006, Birmingham, UK, Association of Researchers in Construction Management, 633-639.

Pagliari, J. L. (2007) – The Pricing of Non-Core Real Estate Ventures: Estimating the net expected risk-adjusted return, The Journal of Portfolio Management Vol.34 (Autumn 2007), Special Real Estate Issue, pp 119-133.

Pallant, J. (2007) – SPSS Survival Manual: A Step by Step Guide to Data Analysis Using SPSS Version 15 (3rd Edition), Berkshire-England: Open University Press.

Pilbeam, K. (2005) – Finance and Financial Markets (2nd ed.), Basingstoke: Palgrave Macmillan.

Poole, W (2003) Housing in the Macroeconomy. Federal Reserve Bank of St Louis, Economic Review May/June 2003, 1-8.

Ramakrishinan, R.T.S. and A.V. Thakor (1984) – Information reliability and a theory of financial intermediation, Review of Economic Studies Vol. 51 Issue 166.

Renaud, B.M. (2008) – Mortgage Finance in Emerging Markets: Constraints and Feasible Development Paths- in Ben-Shahar, D., Yui Leung, C.K. and Ong, S.E. (Eds) – Mortgage Markets Worldwide, pp 253-288, Chichester - West Sussex, United Kingdom: John Wiley and Sons Ltd.

Ritter, L. S. and W. L. Silber (1986) – Principles of Money, Banking and Financial Markets, New York: Basic Book Inc.

Roy, F. (2007) – Expanding housing finance systems in Africa and Asia-how far Central and Eastern European models are replicable? Paper presented at APNHR 2007

Conference in Transformation in Housing, Urban Life and Public Policy, Seoul-Korea, 30 August-1 September.

Saravanan, P. (2007) – Recent Experiences in the Housing Finance Sector – A study with Reference to India, Housing Finance International September 2007, Vol.22 Issue 1.

Scholtens, B. and D. van Wensveen (2003) – The theory of Financial Intermediation: An Essay on what it Does (Not) Explain, Vienna: The European Money and Finance Forum (SUERF Studies 2003/1).

Schumpeter, J.A. (1912) – The Theory of Economic Development, Cambridge-Massachusetts: Harvard University Press.

Sikasa C. (2004), Customer perception of change management practices in the mortgage industry. Africa Private Sector Group, Kenya, 2004.

Shin, H.S. (2009) – Reflections on Northern Rock: the bank run that heralded the global financial crisis, Journal of Economic Perspective Winter 2009, Vol. 23 Issue 1 pp 101-124.

Soyibo, A. (1996) – Financial Linkage and development in Sub-Saharan Africa: The role of financial institutions in Nigeria, Working Paper 88, London: Overseas Development Institute

Stiglitz, J.E. (2000) – The Contributions of the Economics of Information to Twentieth century Economics, Quarterly Journal of Economics 115, pp 1441-1478.

Tirole, J. (2006) – The theory of Corporate Finance, New Jersey: Princeton University Press.

Tiwari, P and Moriizumi, O (2003) Efficiency of Housing Finance: A comparative Study of Mortgage instruments in Japan. European Journal of Housing Policy, 3(3).

Toby, A J (2006) Empirical study of the Liquidity Management Practices of Nigerian Banks Journal of Financial Management and Analysis, 19(1), 57-70.

UNCHS-Habitat (2007) – Improving the Performance of National Finance Institutions in Shelter Delivery, UNCHS: Nairobi-Kenya.

Van Order, R. (2005) – Risk Management and mortgage portfolios: some applications for emerging markets – in Hegedus, J. and R.J. Struyk (Eds) – Housing Finance: New and Old Models in Central Europe, Russia and Kazahkstan. Local Government and Public Service Reform Initiative, Open Society Institute, Budapest

Vatnick, S. (2008) – Financial Reforms and Emerging Markets, Financial Markets, Institutions and Instruments February 2008, Vol.17 Issue 1, pp 109-120.

Williamson, O.E. (1985) – The Economic Institutions of Capitalism, New York: The Free Press.

APPENDIX A – QUESTIONNAIRE

DETERMINANTS OF HOUSING FINANCE IN KENYA

[The following information is required for a Masters of Business Administration thesis. Kindly complete the questionnaire as per the instructions given being rest assured that the information provided will be used strictly for project purposes]

QUESTIONNAIRE TO HOUSE OWNERS

A. GENERAL BACKGROUND

1. What is your Marital Status? (Tick one box)
   a) Single
   b) Married
   c) Divorced
   d) Widow
   e) Widower

2. What is your Age? (Tick one box)
   a) 1-29
   b) 30-39
   c) 40-49
   d) 50-59
   e) 60+

3. What is the highest form of formal education that you have achieved? (Tick one box)
   a) None
   b) Primary
   c) Secondary
   d) Vocational / Technical
   e) Polytechnic / University

4. What is your current employment status? (Tick one box)
   a) White collar job (Civil Servant)
   b) White collar job (Private company)
   c) Blue collar job (Bricklayers etc)
   d) Self Employed (Specify)
   e) Other (Please specify)…….

5. What is your type of family? (Tick one box)
   a) Nuclear
   b) Joint / Extended

Others (Please specify)…….

B. SECURITY

6. What is the tenure of the house? (Tick one box)
   a) Own
   b) Rent
   c) Part Own / Part Rent
   d) Others (Please specify)…….

7. What is the form of ownership? (Tick one box)
   a) Inheritance
   b) Bought
   c) Built
   d) Others (Please specify)……..

If Answer to Q 7 is 3, go to Q 8
If Answer to Q 7 is 1, 2 or 4, go to Q 13

8. IF BUILT, did you? (Tick one box)
   a) Buy the plot
   b) Inherit the plot
   c) Others (Please specify)…….

9. IF BUILT, who carried out the construction? (Tick one box)
   a) Self-Built
   b) Contractor with material
   c) Contractor without material
   d) Others (Please specify)……..

10. If you have a loan, what security was given for the loan (Tick all that apply)
   a) The Property
   b) Another Property
   c) Agricultural Land
   d) Others (Please specify)…….

11. What kind of security can you offer for a loan? (Tick all that apply)
   a) The house itself
   b) Any other property
   c) Agricultural land
   d) Others (Please specify)…….

C. VALUE OF PROPERTY

12. When housing is to be acquired, it is either constructed from scratch or a fully erected building is purchased. If constructed from scratch, how much did the plot cost? Kshs……

13. How much did you spend on construction? Kshs.……

12. Can you give value of the property on completion?
Kshs. …….

14. If a fully erected building was purchased, what was the value?
Kshs……

15. What is the Present Value of your property? (Tick one box)
    a) Less than Kshs. 1000, 000
    b) Kshs. 1000,001- Ksh. 5000,000
    c) Kshs. 5000,001- Kshs. 10,000,000
    d) Above Kshs. 10,000,000
    e) Don't know

D. INTEREST RATE

16. Whether a house is constructed from the scratch or a fully erected building is purchased, how did you finance your house acquisition? (Tick one or more boxes as applicable)
    a) Mortgage Institution
    b) Commercial Bank
    c) Relatives and Friends
    d) Personal Savings
    e) Money from abroad
    f) Loan from employer
    g) Sold another house
    h) Private lender
    i) Other (Please specify)……..

17. If you borrowed, what was the rate of interest at the beginning of the transaction …….....

18. What is the rate of interest presently or on completion? …….....

19. If you have obtained a loan, how do you intend to repay it? (Tick all that apply)
    a) Extra work
    b) Employment income
    c) Reducing household expenditure
    d) Sale of valuables
    e) Other sources (Please specify)……

20. What is the repayment period for the loan? (Tick one box)
    a) Less than 24 months
    b) 25-48 months
    c) 49-96 months
    d) 97-144 months
    e) Others (Please specify)…….

21. Are you up to date with your loan repayments?
    a) Yes
    b) No

22. If No, How many months are you behind? (Tick one box)
    a) 3-6 months
    b) 7-12 months
    c) Over 12 months
    d) Others (Please specify)……..

23. What is the reason(s) for default in loan repayment? (Tick one box)
    a) Loss of Income
    b) Higher financial commitment
    c) Excessive Interest charges
    d) Others (Please specify)…….

24. If a loan was available, would you be willing to borrow to buy another house? (Tick one box)
    a) Yes
    b) No
    c) Don't know

E. GOVERNMENT REGULATION

25. The processing of loan applications with the financial institutions usually go through a long process, were you satisfied with the time taken to process? (Tick one box)
    a) Very satisfied
    b) Satisfied
    c) Dissatisfied
    d) Very Dissatisfied

26. On application, what percentage of the loan requested did you get? (Tick one box)
    a) 50%
    b) 60%
    c) 70%
    d) 80%
    e) 90%
    f) 100%
    g) Other (Please specify)……

27. Where did you obtain the remainder of the funds needed for your house acquisition? (Tick all that apply)
    a) From friends and families
    b) Private lenders
    c) Employer
    d) Others (Please specify)…….

28. Before applying for the loan, were you satisfied with the process and requirements? For example production of title deed, survey and architectural requirements

a) Very satisfied
b) Satisfied
c) Dissatisfied
d) Very Dissatisfied

F. INCOME LEVEL

29. How much do you save per month? (Tick one box)

a) Nothing
b) Kshs. 0 - Kshs. 10,000
c) Kshs. 10,000 – Kshs. 100,000
d) Above Kshs.100,000

30. What are your Total Household savings at present? (Tick one box)

a) Nothing
b) Kshs. 0 – Kshs. 10,000
c) Kshs. 10,000 – Kshs. 100,000
d) Above Kshs. 100,000

31. Where do you save? (Tick all that apply)

a) Commercial Bank
b) Cooperative society
c) Mortgage Institution
d) (Traditional Contributions)
e) Other (Please specify)……

32. What is your personal income per month? (Tick one box)

a) Kshs. 0 – 100, 000
b) Kshs. 100,000 – 200,000
c) Kshs. 200,000 – 300,000
d) Kshs. 300,000 – Kshs. 500,000
e) Above Kshs. 500,000

Thank you for participating in this Research. Please return questionnaire

APPENDIX B – QUESTIONNAIRE

DETERMINANTS OF HOUSING FINANCE IN KENYA

[The following information is required for a Masters of Business Administration thesis. Kindly complete the questionnaire as per the instructions given being rest assured that the information provided will be used strictly for project purposes]

QUESTIONAIRE TO PROPERTY DEVELOPERS

Name: _____
Age: ____
Company Name: _____
Position at work: _____

1. How significant do you think is Kenyans position as an investment destination for real estate at present from the point of view of both foreign and domestic investors? Please tick the appropriate box.

a) Very Significant
b) Increasingly gaining Significance
c) Minimal Significance

2. What importance does investment in real estate hold for you as an individual in contributing to your net worth? Please tick the appropriate box

a) Very Important
b) Increasingly becoming important
c) Not so important

3. What according to you is/will be the most preferred avenue for investment for an individual/ company in the real estate sector? Please tick the appropriate box.

a) Direct Investment in land/property
b) Investment in Listed Real Estate Company shares
c) Joint Venture with Realty Developer
d) Others (Please Specify)

4. Do you think the sudden surge in property prices across Kenya over the last two years is justified? Please tick the appropriate box.

a) Yes (Boom)
b) No (Bubble)
c) Cant Say

5. What according to you is the key problem faced by this sector? Please tick the appropriate box.

a) Lack of Infrastructural facilities
b) Ownership issues, unclear titles and abnormally high stamp duties

c) Rising Interest Rates dampening affordability
d) Others (Please specify)

6. Which segment according to you has the greatest scope for improving profits (IRR) – residential, commercial, retail or SEZ's (Special Economic Zones)?
How much return do you think it generates? Please tick the appropriate box

Segment _____

a) 5 – 10 %
b) 10 – 20 %
c) More than 20%

7. How do you see the real estate sector 10 years from now? Please tick the appropriate box

a) A stabilized sector
b) A risk- perceived sector
c) A high growth sector
d) Can't say

8. Which of the following sources of capital is most tapped by you? Please rank in order of preference: 1 being the most preferred and 3 being the least preferred

a) Bank loans
b) Foreign Direct Investment (FDI)
c) Capital Markets – IPOs (Initial Public Offer)

9. Do you think the Government of Kenya has taken adequate measures for the development of the real estate sector in recent years? Please tick the appropriate box

a) Yes
b) No
c) Don't Know

Thank You for your time and help!

APPENDIX C – QUESTIONNAIRE

DETERMINANTS OF HOUSING FINANCE IN KENYA

[The following information is required for a Masters of Business Administration thesis. Kindly complete the questionnaire as per the instructions given being rest assured that the information provided will be used strictly for project purposes]

QUESTIONAIRE TO HOUSING FINANCIERS

1. Why has Kenya become one of the most favoured destinations for investment in the real estate sector in the past 3 years?

……
……

2. What are the reasons for the sudden surge in property prices across Kenya? Could you throw light on whether you think this is a boom or a bubble?

……
……

3. What is the scope for the real estate segment in Kenya? Can you suggest the demand/supply dynamics for the sector?

……
……

4. What according to you are the key risks/ problems this sector will/ is facing? Could you recommend any solutions to the above problems?

……
……
……

5. What are the various approvals and regulations needed to be adhered to for the acquisition, development and completion of a project?

……
……
……

6. What are the different avenues for investment for an individual/ company in the real estate sector?

……
……
……

7. What are the different sources of capital available to a real estate developer?

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8. Which segment according to you has the greatest scope for improving profits (IRR) - residential, commercial, retail or SEZ's (Special Economic Zones)?

……
……

9. What role according to you has the Government played in the development of the real estate sector?

……
……

10. Where do you see the real estate sector 10 years from now?

……
……

Thank You for your time and help!

DETERMINANTS OF SUPPLY OF REAL ESTATE FINANCE IN KENYA

BY

PHILIP MUNYWOKI MUTHUNGU

REG NO: D61/P/8459/2006

A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE A WARD OF THE DEGREE OF MASTER OF BUSINESS ADMINISTRATION (MBA), SCHOOL OF BUSINESS, UNIVERISTY OF NAIROBI

OCTOBER 2012

DECLARATION

This Research Project is my own original work and has not been presented for a Degree Qualification in any other University or Institution of learning.

SIGNED …… DATE **…….**

PHILIP MUNYWOKI MUTHUNGU
D61/P/8459/2006

This Research Project has been submitted for Examination with my approval as the University Supervisor.

SIGNED: …… DATE: …….

DR. JOSIAH ADUDA
School of Business
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DEDICATION

This paper is dedicated to my parents for their guidance and persistence and for being a source of inspiration and support in the course of my studies

ACKNOWLEDGEMENT

The MBA programme has been a long, taxing and challenging journey and the successful completion has been as a result of support received from many people. I am indebted not only to people who gave me the inspiration, support and encouragement to purse MBA programme but also to everybody who gave me the guidance and assistance on what has been reported in this project.

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Above all, special thanks to the Almighty God for the gift of life and good health, lack of which I would not have made it this far.

ABSTRACT

The purpose of the study was to investigate the factors affecting real estate finance supply. It was important to verify the reasons why housing finance are not being supplied by the financial intermediaries readily. Could it be that potential borrowers are not approaching the financial institutions to source for housing finance or is it that the lender's requirements are so stringent that individual's cannot meet up with this lender's requirements. The study was carried out as a survey of real estate developers, real estate owners and financiers operating in Kenya as of 31st December 2011. The sample size was made up of 30 real estate developers, 30 home owners and 10 housing financiers. It was considered necessary and important to obtain information using questionnaire in extracting information from users of real estate finance in Kenya at the time. The data collected by means of the questionnaire survey, was analysed and conclusions were used in discussing all factors that affecting supply of real estate financing in Kenya.

There were revelations about the situation in the supply of housing finance in Kenya. In lending, financial institutions give out loans in consideration of interest to be charged on the loans and the riskiness of the loan. The ability of financial institutions to lend for housing (supply of housing finance) determines the quantity of housing finance that could be supplied for house acquisitions. The research identified these factors; value of property, government regulation, income level, interest rates and loan security do affect the availability and supply of housing finance will be reduced. The efforts by the government to ensure faster clearances for active real estate development would enable developers in a great way. The researcher recommends that the government should streamline the various real estate policies in different ministries into a single guide and to set up a separate real estate division within the ministry with the objective of running a single window clearance of all required paper work and clearances. Also the government should establish a housing loan guarantee scheme run by existing government housing corporations to assess risks in some real estate development and the applicant's credit scores then giving guarantees to the developers and financiers so as to encourage financiers to lend more and at affordable interest rates.

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ABBREVIATIONS

AfDB	African Development Bank
ANOVA	Analysis of Variance
CBK	Central Bank of Kenya
CDC	Commonwealth Development Corporation
CRR	Cash Reserve Requirement
EABS	East African Building Society
GDP	Gross Domestic Product
HFIs	Housing Finance Institutions
HFCK	Housing Finance Company of Kenya
KBS	Kenya Building Society
KNBS	Kenya National Bureau of Statistics
LTV	loan-to-value
MFI	Micro Finance Institutions
NBFIs	Non-bank financial institutions
NGO	Non-Governmental Institutions
NNE	New Neoclassical Economics
NSE	Nairobi Stock Exchange
NSSF	National Social Security Fund
OMO	Open Market Operations
PLS	Partial Least Squares
S&L	Savings and Loan
SSA	Sub-Saharan Africa
TQM	Total Quality Management
USDHUD	United States Department of Housing and Urban Development
UNCHS	United Nations Centre for Human Settlements (Habitat)

CHAPTER ONE

INTRODUCTION AND BACKGROUND TO THE STUDY

1.1 Background Information

In the year's immediately preceding independence in 1963, the housing finance sector was marked by instability as a result of political uncertainty. In the event, HFI deposits plunged from KSh 208 million in 1959 to KSh 90 million in 1962. However, this period soon gave way to a phase of consolidation and the mortgage industry expanded substantially from 1964 onwards. The principal HFIs were the Housing Finance Company of Kenya, Kenya Building Society (KBS), and Savings and Loan (S&L). HFCK was incorporated in 1965 as a joint venture between government and the Commonwealth Development Corporation (of the United Kingdom), taking over the assets of First Permanent of East Africa and those of KBS. S&L, the largest HFI at the time, experienced substantial setbacks around the time of independence and was taken over, initially by Pearl Assurance and, in 1970, by Kenya Commercial Bank, a parastatal. East African Building Society, a relatively small HFI which had opened for business in 1959, weathered the political uncertainties of the day and expanded rapidly in the years that followed.

HFCK, EABS and S&L, the principal HFIs, achieved fast growth during the 1970s. Between 1975 and 1980, for instance, HFCK deposits increased at an annual average rate of 20% and those of the EABS by 24%. In mid-1981, following a general decline in the growth of deposits, tax-free housing development bonds were introduced to enable HFCK and S&L to attract additional savings. These institutions also benefited from deposits by the National Social Security Fund (NSSF) and from loans by the government. Starting in the mid-1980's the mortgage industry witnessed major changes and upheavals. By 1986, the number of HFIs had grown to about 36, comprising four limited liability companies and 32 building societies but only 15 of the latter were active. Taking into account that the country had for many years been served by only one building society, the growth in numbers of this type of HFI had been nothing short of dramatic. Gardner et al. (1986) have advanced two reasons for this growth. The first is that the coffee price boom of 1976-77 provided the financial impetus for the rapid increase in the number of such

institutions. Second, licensing of financial institutions under the Banking Act was tightened in 1985 following the collapse of a financial company. Thus, building societies remained the principal avenue for the entry of firms into the financial sector. Notwithstanding the proliferation of HFIs, the industry continued to be dominated by HFCK, EABS and S&L. Still, the newer institutions competed aggressively for savings.

In 1984, the country experienced its first post-independence failure of a financial institution, that of the Rural and Urban Credit Finance Company. In response, the government tightened the regulatory and supervisory regime. More specifically, a number of steps were taken via an amendment to the Banking Act (Cap. 488). First, stricter conditions were imposed on the level of paid-up capital, as well as that of unimpaired reserves relative to deposit liabilities. For instance, paid-up capital for local non-bank financial institutions (NBFIs) was raised from Ksh 5 million to Ksh.7.5 million. Second, NBFIs were prohibited from owning shares in commercial banks. Third, a Deposit Protection Fund was created at the Central Bank.

These measures notwithstanding, a group of financial institutions, several building societies among them, failed in due course. A combination of factors led to this failure, some political, others management-related. First, a good number of building societies had invested heavily in property development, an activity that was considered more profitable but which naturally carried a higher risk. A notable example was Pioneer Building Society which collapsed largely because of delayed house sales. Second, major institutional investors, such as the NSSF, withdrew their deposits from the new building societies, partly out of the need to comply with political directives but also as a result of genuine concern for the security of their deposits. Third, the number of building societies had expanded too rapidly relative to the volume of available deposits. Fourth, the regulatory and supervisory regime was weak and potential problems could therefore not be arrested in time. In particular, the Registrar of Building Societies did not possess the staff needed to assure effective supervision. Government intervened and re-organized some of the failed institutions under the umbrella of a new bank, the Consolidated Bank of Kenya. Potential crises were averted in the years that followed but, in the first half of

1993, a number of financial institutions were placed under receivership including one HFI.

In spite of these setbacks, the mortgage industry registered some expansion. HFCK saw its public deposits grow, in nominal terms, from Ksh.1.89 billion in 1987 to Ksh.3.4 billion (USD 120.9 million) in 1992. However, in real terms that is, after making adjustments for inflation growth was marginal. As for mortgage lending, advances increased from Ksh.204.5 million in 1984 to Ksh.614.0 million in 1992 (USD 21.8 million). Even so, there was stagnation between 1986 and 1988 but lending rebounded in 1989 and 1990 registering nominal growth rates of 34.2% and 52.3%, respectively. Stagnation set in once again in 1991. With some variations, EABS and S&L shared a similar experience. Arguably the most important historical development was the freeing of interest rates in July, 1991, a measure taken to ensure a more efficient allocation of resources. Although interest rates had hitherto been controlled by the Central Bank they had nevertheless remained positive in the years leading up to 1990. However, the liberalization of interest rates was overshadowed by the very high rate of inflation in 1993, conservatively estimated to have averaged around 40% but to have peaked at roughly 100% during the year. Since HFIs are not able to lend at nominal rates exceeding 30% -- because there is little demand at that level -- real interest rates turned sharply negative. The response of HFIs was to suspend new mortgage lending altogether, choosing instead to invest in high yielding treasury bills.

Although inflation fell substantially in subsequent years, and with it interest rates, mortgage interest rates remained above 20% per annum for the rest of the decade. Towards the end of the 1990s, the housing finance market in Kenya went through a transformation from being predominantly public-sector oriented, to a more market-driven enterprise. With interest rate decontrol and privatization, those institutions that were previously controlled and sheltered by government, became exposed to market forces.

Housing demand, commonly referred to as effective demand, seeks to measure the willingness and ability of households to pay for housing. It is a function of many factors: household income, the price (or rent) of a dwelling, financing arrangements (including

interest rate and the loan term), and household preferences for different attributes of a dwelling, such as location. There is empirical evidence that households are willing to spend more on housing if they are buying their own house than if they are renting. Housing demand is often contrasted with housing need, a socially derived concept that measures the number of dwellings required to house a population above an arbitrarily determined standard or norm, with no regard for the ability to pay.

In microeconomic terms, the housing finance market is considered as the interaction between a supply matrix of housing finance quantity classified by characteristics such as pricing / volume and a demand matrix of households classified by their characteristics, preferences and constraints Follain et al (1980). The market allocates housing finance on the basis of the price (interest rate) and the number of households that are willing to pay the bid prices in consideration that they have their preferences and constraints. It is argued that there is disequilibrium in the housing finance market when the price does not adjust fast enough to clear the market. On the supply side of the housing finance market in the developed economies, the lenders structures remain national in nature; common developments include a reduction of credit restrictions. Developments include increased loan-to-value (LTV) ratio, which is defined as the ratio of bank lending to property value, a wider array of loan contracts offered to borrowers and a move towards greater reliance on capital market funding via securitization of housing loans CGFS (2006). It is important to note that most housing finance markets that have historically relied more on fixed rate products have experienced an increased demand for, and use of adjustable rate mortgages as well as loan types combining features from both fixed and adjustable rate mortgages.

1.2 Statement of the Problem

The rise in household income is slowly percolating into growing urbanization causing a change in lifestyle trend. Urbanization has resulted in the nuclear family structure from the traditional joint-family system which is likely to create huge demand for urban housing leading to further expansion of the city's sub-urban regions. The above fundamentals in turn have created a huge demand supply gap in all sectors of the housing market, commercial, residential, retail and hospitality. The fact that more than half of the 40 million households in Kenya still live in temporary or semi-permanent structures suggest that housing has a huge potential demand in both the middle-income and high-income segments.

The housing sector in Kenya has seen tremendous growth in the recent years with property prices soaring and the number and scale of projects increasing. Developers have been looking at new sources of raising funds such as from investors, both domestic and foreign, through avenues such as listings on Nairobi Stock Exchange (NSE), private equity participation and the setting up of joint ventures. Recognizing the need for foreign funding, the government has allowed foreign direct investment. As a result, foreign investors are permitted to invest in wholly owned subsidiaries or in joint ventures with Kenyan real estate companies as long as minimum capitalization requirements are met within six months of the commencement of operations and the capital remains locked in the project for three years thereafter. (Financial Times, 2007). Entry of foreign retailers is accelerating demand for mall space.

A study by Dasan (1996) looked at analysis of factors which influence supervisor's motivation in Kenya's building and construction industry. Omufira (2001) observed the extent of TQM implementation in the construction industry. A case study of the Kenyan building industry by Njiru (2003) looked at the performance of real estate markets. The case of Central Business District of Nairobi by Sikasa C. (2004) looked at customer perception of change management practices in the mortgage industry. The case of HFCK by Mandere A.N. (2006) looked at a survey of QM practices in the large Kenyan building construction firms. Mutuku (2006) observed the factors influencing the development of

secondary mortgage market in Kenya with special emphasis on mortgage backed securities while Matara (2008) looked at a survey of sources of finance for building construction firms in Kenya. Marete D, (2011), reviewed the determinants of real estate property prices in Kiambu Municipality in Kenya. None of the local studies in the university focused on the determinants of supply of real estate in Kenya.

1.3 Objective of the study

The objective of the study was to investigate determinants of supply of real estate finance in Kenya.

1.3.1 The specific objectives were:

1. To find out if the economic model of providing housing finance in developed economies can be adopted in the Kenyan economy.
2. To evaluate the key factors that have contributed to the operational efficiencies and inefficiencies of supply of real estate financing in Kenya.

1.5 Significance of the study

The environment in which real estate developers conduct their daily routines is composed of factors which ultimately determine their success. Discovery and subsequent recommendation for elimination of any problems could improve performance of these businesses. The study therefore will contribute to business management and practice by providing an understanding on how to boost performance real estate developers. The various stakeholders will therefore understand the links between the necessary incentives for the growth and performance of the targeted businesses. Researchers who might be interested in this topic could find the results opening up new avenues for further re search. The study will also be of benefit to other researchers who may feel the need to further research on the same problem in their areas of specialization.

CHAPTER TWO

LITERATURE REVIEW

2.1 Financial institutions' role in housing finance

If the funding of mortgage loans is left primarily to the deposit-taking institutions, they can only supply mortgage loans through deposit mobilized which are short-tenured. As a consequence of the high proportion of short-term liabilities in their deposits, they tend to lend short according to the commercial bank loan theory and the real bill doctrine. The theory stipulates that bank loans should be short-term and self-liquidating because commercial banks usually have short-term deposits. According to the theory, banks should not grant long-term loans such as housing / real estate loans or loans for financing purchase of plant and machinery because they are considered too illiquid Elliot (1984); Ritter & Silber (1986) as cited by Soyibo (1996).

A large percentage of financial institutions in the emerging economies are still adopting the business model used in the era of market-making (1970s-1980s) in the US relying on short-term deposits liabilities to fund long-term mortgages assets USDHUD (2006); Cho (2007), which are contradictory to the tenets of the commercial bank loan theory. This model had a unique shortcoming under volatile interest rate environment where lenders are borrowing short-term and lending on long-term basis at high interest rates that results in dampened housing finance demand. A well-functioning primary mortgage market requires adequate funding sources and variety of lenders in the primary market to promote further development. This includes savings mobilization and simple mortgage-backed debt instruments to offer lenders funding alternatives Roy (2007). Lenders in the primary market would include non-depository mortgage specialists, non-governmental organizations (NGOs), microfinance institutions (MFIs) and contractual savings systems Follain and Zorn (2000); Warnock and Warnock (2008). In Asia, the financial sectors in countries such as China, South Korea, Malaysia, Singapore, India and Indonesia are large and well developed UNCHS (2007). Whereas, domestic debt markets in most SSA countries (except South Africa) are in the developing stage and others in their infancy stage. SSA has 15 organized securities markets and the region's financial sectors are

characterized with a limited range of investment instruments particularly for longer tenors except the Johannesburg Stock Exchange Roy (2007); Irving & Manroth (2009).

Scale issues in equities have been mirrored in the bond market, where only a limited number of private bonds have been listed and there is little secondary market trading Merrill and Tomlinson (2000); Roy (2007). The major reason for the smallness of the securities market is lack of investors; in that insurance companies and pension funds are too small to act as major institutional investors. Despite the fact that insurance companies are allowed by statute to invest in real estate, they lack the necessary long-term funds for investment Roy (2007).

2.2 Review of theories

The driving force of economic growth and development as enunciated by Schumpeter (1921) which include mobilization of savings, efficient capital allocation, effective risk management, ease of transactions with advancing technologies are lacking. In an effort to provide housing and subsidized housing finance, various central governments have established institutions to provide housing finance. Even with the establishment of these institutions, their management has been affected by political and other negative factors that are not favourable for business survival. Therefore, the theoretical framework of this study is based on the New Neoclassical Economics (NNE) which is an integration of Neoclassical Economics and Transaction Cost Economics.

2.2.1 Theory One: Mass Psychology and Irrational Exuberance

The dominant explanations of the housing finance to date have been demand-side explanations. Robert Shiller has argued that the demand is driven by consumers' irrational exuberance and belief that real estate prices would continue to appreciate, stoking the demand for housing finance.

We do not question the existence of irrational consumer expectations and behavior. There is undoubtedly a great deal of irrational or misguided consumer behavior in real estate

investment. But this behavior required readily available financing. Shiller's demand-side theory cannot explain the movement in yield spreads during the bubble and is, therefore, a necessarily incomplete explanation. Credit relationships are two-sided relationships, and the evidence from PLS spreads indicates that any increase in housing finance demand was outstripped by an increased in housing finance supply.

2.2.2 Theory Two: Consumers' Inability to Anticipate Inflation

An alternative psychological theory has been presented by Markus Brunnermeir and Christian Julliard. Brunnermeir and Julliard argue that consumers are incapable of sorting between real and nominal changes in interest rates and rents. Therefore, consumers account for low nominal rates when making mortgage decisions, but fail to account for future appreciation of prices and rents falling commensurately with anticipated inflation. The result is that consumers overestimate the value of real estate when inflation is declining.

Brunnermeir and Julliard's theory may well be correct, but it too cannot explain the movement in yield spreads during the bubble. Therefore, their theory, like Shiller's, is at best an incomplete explanation of the bubble, as the yield spread movement shows that any growth in demand was exceeded by a growth in supply.

2.2.3 Theory Three: Inelastic Housing Supply

A third demand-side quasi-hypothesis for the housing finance, presented by urban economists Edward Glaeser, Joseph Gyourko and Albert Saiz, emphasizes the geographic variation in the housing bubble. There was considerable regional and local variance; some metropolitan areas, such as Detroit and Cleveland, did not experience a bubble, while others experienced bubbles of greater or lesser size. Glaeser, Gyourko and Saiz explain the variation based in part on variations in the elasticity of housing supply. In some parts of the country, local regulations and urban growth have been on a collision course for several decades. In these cases, with the inability of supply to expand, increased demand for real estate only resulted in higher prices.

In other words, Glaeser, Gyourko and Saiz contend that in inelastic housing markets, the housing demand curve shifted rightwards. And because most consumers finance the purchase of their homes, the rightward shift in the housing demand curve would have also resulted in a rightward shift in the mortgage finance demand curve. Glaeser, Gyourko and Saiz do not present supply constraints as the explanation for the bubble, although others do. At most, Glaeser, Gyourko and Saiz see supply inelasticity as affecting variations in how the bubble played out regionally. They argue that supply inelastic regions are more likely to experience greater price volatility and bubbles and that the extent of the bubble was determined to some degree by housing supply inelasticity.

2.3 Review of emperical studies

The neoclassical economics perspective looked into the dynamics of prices and quantities though largely an institution-free perspective in which only function matters Merton & Bodie (1995); North (1994), as cited by Merton & Bodie (1995). Thereafter, Williamson (1985 p.16 and 1988) in discussing the New Institutional Economics highlights the functional perspective of the financial system. The basis of economic theory is that commercial transactions are the prime drivers of economic growth such that the more frequently transactions take place, the higher the potential of economic growth. For economic growth and development, Schumpeter (1912) argues that financial intermediaries like banks and other financial institutions mobilize savings, allocate capital, manage risk, ease transactions and monitor firms. It is in this process of lending that financial intermediaries are considered to be utilizing resources and contributing to economic growth and development and there are evidences to support Schumpeter's view that financial institutions promote development Fry (1988); King and Levine (1993); Benhabib and Siegel (2000); Arestis et al (2001); Wachtel (2001) and Scholtens & Wensveen (2003).

Further in the literature, one of the biggest problems faced by the banks is lack of information about the promoters and the projects to be financed with the bank facilities

Jones & Maclennan (1987); Altman & Saunders (1998); Byamugisha (1999); Guzman (2000) and Mints (2006). Therefore, the economics of information, which has been a great contributor to the standard Neoclassical Economics since the late 1970s' is considered to be relevant to this study. The New Neoclassical Economies (NNE) is an integration of Neoclassical Economics (NE) and Transaction Cost Economics (TCE), with a primary role for NE but without losing sight of TCE. Among the presentations that assume part of the role of TCE in the framework of NE, is the information economics survey by Stiglitz (2000). The new information economics, he claimed, not only showed that institutions mattered, and explain why the institutions arose and the forms they took, but showed why they mattered. He noted that Arnott and Stiglitz (1991) showed that non-market institutions could even exacerbate the consequences of market failure, which was earlier articulated by Coase (1960).

Coase (1960) argued that if the costs of handling through the market are high and if the net costs are lower, only then may government regulations be relevant. However, the design of appropriate government interventions can be problematic to the extent that on occasions it brings into serious questioning the suitability of government interventions as the only option in correcting market failures Hammond (2006a & 2006b). The mere failure of private industry, when left from public interference, to maximize national dividend does not itself warrant intervention; for this might make things worse. When issue of accountability is not on the agenda, governments in most of the emerging economies monopolizes resources and power, and this monopoly is often worse than that of the private sector in the sense that the former entails larger TC and hence much more social costs relative to the latter. Hurwics (1973) noted that whenever information is imperfect and/or markets are incomplete, competitive markets do not obey the Pareto optimality efficiency criterion. Also, in NE literature, Kogiku (1971) noted that a competitive equilibrium ceases to produce Pareto-optimality when there are externalities that affect the system. However, Stiglitz (2000 p.1458) concluded without taking cognizance of associated TC, that "Government interventions, in form of, say taxes or subsidies on commodities – will lead to Pareto improvements". In line with the discussions and conclusion above on transaction cost, the next section then examines transaction cost and the theory of financial intermediation.

The current theory of financial intermediation concentrates on transaction costs and asymmetric information, but is inadequate in explaining the current complex financial transactions. It is therefore, referred to as traditional approach to financial intermediation. The financial intermediaries were considered as institutions being used to execute government monetary policies Benson and Smith Jr. (1976), without contributing to economic growth and development. The assertions might be right in the case of financial intermediaries in the emerging economies, due to the level of their economic growth. The financial intermediaries in the developed economies have gone through stages of development and by their functioning and operation they are contributing to the economic growth of their domiciled environment. The success in the theory of financial intermediation can only be appreciated when a financial market is not perfect. As noted by Berger et al (1995), a large percentage of past research on financial institutions has identified assumed imperfections like taxes, costs of financial distress, transaction costs, asymmetric information and importantly regulation.

In terms of regulation, which can either be structural or prudential, the government regulates the financial market to ensure financial stability as well as addressing problems of asymmetric information and moral hazard. While structural regulation limits the degree of risk that an institution can take in order for government to protect investor's funds and exposure limits of the financial institutions Pilbeam (2005), prudential regulation takes care of disclosure requirements, capital adequacy and liquidity requirements. Even with the identified importance of effective regulations of financial institutions, Llewellyn (2008), Milnes & Wood (2009) and Shin (2009) in discussing the Northern Rock situation highlighted problems in the regulatory framework of the British Financial System. Few of the identified problems include: inadequate role of government in responding to financial market distress and ambiguity in regard to the distinction between liquidity and solvency issues in banks. Llewellyn (2008) suggested that in any regulatory / supervisory regime, four areas that need to be addressed include prudential regulation of the financial firms; management and systemic stability; lender-of-last resort function and conduct of regulation and supervision business.

The lack of adequate regulation has resulted in lending behaviour of financial intermediaries being out of tune with economic realities. This has resulted in the lending standard being disconnected from economic fundamentals Markowitz (2009); Jones and Watkins (2009) and the banks failing with great speed exposing flaws in the regulatory system designed to identify failing institutions The Wall Street Journal (2009). Also, Scholtens and van Wensveen (2000 & 2003) are of the opinion that there is imperfection in the market when information is not flowing freely (information asymmetries). In the absence of information asymmetries, due to deregulation and deepened financial market, improvement in information technology and reduction in transaction cost, which are attributes of the financial markets in the development economies, the relevance of financial intermediaries reduces greatly.

While transaction cost highlights role of these intermediaries in the distribution function, the emphasis on the information asymmetries revolves around the origination and servicing function Merton (1989); Allen & Santomero (1998). This is due to the fact that these institutions are considered as information sharing coalitions Leland & Pyle (1997) and they can achieve economies of scale and act as delegated monitors on behalf of their customers Diamond (1984); Scholtens & van Wensveen (2003). Therefore, they can deal with individuals and transact business with their dynamic strategies at minimum cost than individuals doing their businesses which might result in high transaction cost. The transaction cost is not limited to foreign exchange and cost of borrowing Tobin (1963); Towey (1974); Fischer (1983), it also includes costs of auditing and monitoring, search costs etc which are high in most of the emerging economies. The transaction costs in these economies are high because of implicit and explicit costs of doing business which ultimately reflects on the cost of borrowing for property acquisition. Pagliari (2007) noted that in acquisition and disposition of privately held real estate, transactions cost are high which reduces returns on that type of investment. The transaction cost in this type of investment includes cost of traveling in the course of acquiring and disposing the real estate, legal fees, due diligence costs, brokerage commissions and transfer taxes depending on where the transaction is taking place.

The argument goes further from the observation made by Levine (1997) that informational asymmetries and transaction costs reduces liquidity and increases liquidity risk. These asymmetric information and other credit market frictions has various effects in the financial markets. These shortcomings, observes Levine (1997) create the incentives for the establishment of institutions that augments liquidity with the intentions of increasing their profitability. Chiuri and Jappelli (2003) were of the opinion that in the quest of the financial intermediaries to accumulate savings in form of liquid wealth, the lenders (financial intermediaries) requests potential borrowers to make down-payments in arranging funds for property acquisition. This down-payment is becoming a unique factor in determining when most first time buyers start climbing the property ladder. In the US studies, Duca & Rosenthal (1994); Haurin et al (1997) observed that the down-payment drives mortgage availability and the timing of property acquisition by first time buyers. Ortala - Magne and Rady (1998 & 1999) examines the economic impact of down payment.

In the financial systems, the bank-based model has the attributes to acquire information about firms, thereby improving corporate allocations Diamond (1984); Ramakrishinan & Thakor (1984), manage cross-sectional, inter-temporal and liquidity risk in an effort to enhance investment efficiency and economic growth Allen & Gale (2000); Bencivenga & Smith (1991). In attracting projects with high returns to an economy, there should be capital to fund it Levine (1997) and at the right price. As it was argued by Vatnick (2008), a lower cost of capital is important for economic growth because it induces rising investment and higher rate of capital accumulation for faster economic growth. Therefore, the financial intermediaries are expected to be liquid to provide funds for the projects, it translates to the fact that there is linkage between liquidity and economic development.

The literature on finance reveals that there are only two broad types of finance available: debt and equity finance. Financing of a project either by debt or equity depends on the characteristics of assets being financed and transaction cost reasoning suggests the use of debt to finance re-deployable assets and equity used to finance non re-deployable assets Williamson (1988). Furthermore, Jensen and Meckling (1976) in the study of theory of

firms argue that debts are utilized if the ability to exploit potentially profitable investment opportunities is limited by the resources of the owner. Debt finance yields a fixed return to its suppliers in states when the firm is not bankrupt (that is, the firm has sufficient funds to make the fixed payment) Edwards and Fischer (1994). Bank lending as a form of debt can be categorized into two: either as asset specific or corporate loans Crosby et al (2000). Again, the debt can be either secured or unsecured.

However, equity finance gives its suppliers the right to the firm's residual returns after payments to the suppliers of debt finance, and in addition, the right to vote on decisions concerning the firm's operation in states when a firm is not bankrupt. When the firm goes bankrupt, limited liability provisions mean that suppliers of equity receive nothing. In such state, they even loose the right to make decisions about the firm's operations in such states. In situation of non-bankruptcy, suppliers of equity finance have the right to the firm's residual return; they do not have the right to receive a fixed payment in every period which may be yearly or half-yearly Edwards and Fischer (1994); Toby (2006). On the other hand, Cranston (2002) and Tirole (2006) classify debt finance into short-term and long-term. Short-term debt finance instruments includes bank overdraft, commercial papers and short-term trade credit and long-term debt finance instruments includes housing loans, mortgages and other forms of informal credit transactions. In the context of the developing world, debt finance can be obtained from formal financial institutions like banks, micro-finance arrangements, indigenous moneylenders, family members, employers and government Nubi (2005). Heffernan (2003) and Tirole (2006) argued that financial instruments vary widely according to the characteristic of term to maturity. Sight deposits at banks have zero term to maturity, as they can be withdrawn on demand. Consequently, equity has no redemption date and therefore possesses an infinite term to maturity.

One of the biggest problems faced by the banking sector is lack of information about the promoters and the projects to be financed with the bank facilities Guzman (2000); Djankov et al (2007), to determine whether the borrowers will be able to pay the principal and interest when they fall due. Altman and Saunders (1998) highlighted the array of information on various borrowers' details to include their character (reputation), capital

(leverage), capacity (volatility of earnings) and collateral. However, Mints (2006) limited the borrowers required information to "the three C's of lending" which are collateral factor, capacity factor and credit factor, which are all relevant to lending in both developed and emerging economies.

The current theory of financial intermediation concentrates on transaction cost and asymmetric information and they are considered to be inadequate as tools to explain the fundamentals of financial intermediation, which is risk management. Therefore, their contributions are being classified as traditional and old. Moreover, there are two aspects to the lending operations of the financial institutions. The ability of the financial institutions to lend determined by the strength of their balance sheets and the willingness of these institutions to lend as risk managers.

In the banking literature, capital adequacy is one of the five key variables identified in measuring bank balance sheet strength while others are asset quality, management, earnings and liquidity Rojas-Suarez (2002); Hefernan (2003); Buckle and Thompson (2005). The capital adequacy regulatory rules have impact on the bank behaviours Dewatripont and Tirole (1994); Freixas and Rochet (1997); Chiuri et al (2002). It is argued that there are two ways by which these rules affect bank behaviours. Firstly, it is known that capital adequacy regulatory rules strengthen bank capital and improves the resilience of a bank to negative shocks and secondly, capital adequacy affects banks in risk taking and management behaviour.

It has also been argued by various authors Allen (2004); Pan (2008) that capital adequacy rules like Basel II may impact the banking system's ability to extend loans and advances to the productive sector of the economy. When capital requirement arises and with capital constraints in most countries of the emerging market due to lack of depth in their capital markets; the banks adopt a risk-shifting model as means of risk management. Risk management is about managing a mismatch between supply of funds and the demand for investments and these risks could be credit risk, liquidity risk, systemic risk, mismatch risk or interest rate risk Odenbach (2002); Heffernan (2003); van Order (2005); Mints (2006) and Akinwunmi et al (2007) & (2008a). With risk management being the core

business of the financial intermediaries, Dewatripont & Maskin (1995); van Thadden (1995) opinionated that financial institutions operating in a market-based financial system, due to competition, will have their inefficiencies associated with banking activities reduced and thereby promote economic growth.

Saunders (2002) analyses a risk-shifting model as a process whereby financial institutions, banks in particular, in an effort to meet up with new capital requirements moves away from low-yielding loans to high risk loans in expectation of high earnings. Furthermore, Caprio Jr. et al (2008) argue that risk-shifting takes place at every stage of financial engineering. If these loans eventual pay off, banks meet up with their higher capital requirements from loan profits, otherwise they are liquidated.

2.4 Determinants of Supply of Housing

The role of a housing finance system does not stop at the provision of shelter, it is also very important to the mobilization of domestic savings, shelter being one of the first priorities of households and a leading reason for savings. Therefore, the literature contends that the housing finance sector can and should play a central role in the mobilization of resources by households Renaud 1984; Renaud (2008). In Asia, according to UN-Habitat's state of the World's cities 2006-7 report, 73 percent of urban dwellers live in non-permanent housing. The housing sector is severely constrained by lack of an adequate and appropriate housing finance system, in which Asian Development Bank study says that Asia's mortgage sector is the least developed in the world UNCHS (2007). The situation in SSA is similar, characterized by the lack of housing finance.

The stock of housing finance in Namibia and South Africa comes to 18-20 percent of GDP, for other countries for which data are available had about 2 percent (Nigeria, Mali, Morocco, Senegal) Roy (2007). In Asia, many countries mortgage financing per year is less than 2 percent of GDP compared to 88 percent in the United Kingdom (UNCHS (2007) and 15-21 percent in Chile, Malaysia and Thailand Honohan and Beck (2007). In societies where social housing is not on the priority list of government, the affordability

would have to be looked at from the point of view of the individual's own ability to raise money needed to meet the cost or price of housing needs. Generally, the first source of funding for the individual is their income because it does not involve payment of interest. Many countries in the emerging economy have nascent and weak financial markets. The participation of financial markets in financing housing has been limited and the majority of low-income households are also excluded from the formal financial services industry UNCHS (2007). This resulted in 70 to 80 percent of housing finance in emerging economies being raised from the informal market Okpala (1994); Buckley et al (1994); Saravanan (2007) and Tiwari & Debata (2008). These informal markets are made up of loans from relatives, employers and money lenders that supplement savings and current income for housing finance Renaud (1985); Kim (1997).

However, formal housing finance supply in emerging economies is operated through both policy-driven and the market-oriented housing finance channels Deng and Fei (2008). The policy-driven housing finance is mainly through Housing Funds Schemes, which are mandatory housing savings scheme while the market-oriented housing finance is characterized by commercial loans from financial institutions. In the developed economies, commercial mortgages are referred to as collateralized lending to property developers whereas in the emerging economies, commercial loans are basically mortgages raised from financial institutions.

With the magnitude of housing needs in most of the countries in the emerging economy, Buckley and Kalarickal (2004), Hassler (2005) and Merrill (2006) argued that there are requirements that emerging economies must embrace, if they are going to move forward in terms of delivering housing finance. The requirements include stable macroeconomic conditions, a legal framework for property rights, mortgage market infrastructure and funding sources to promote financial intermediation and each will now be discussed.

2.4.1 Macroeconomic conditions

Macroeconomic policies are impacts of exogenous interventions at the aggregate or economy-wide levels Burda and Wyplosz (1997); Hammond (2006) and Roy (2007).

Macroeconomic instability and its corollary of high and volatile domestic interest rates, erratic monetary and exchange rate policies coupled with weaknesses in the financial systems of many emerging market countries Bhattacharya et al (1997); Irving and Manroth (2009), have a disproportionate impact on long-term mortgage finance. Various factors contributes to greater macroeconomic volatility in emerging markets, the most important is that their production structure is typically much less diversified than that of developed countries and often dependent on primary commodities.

The macroeconomic policies might be adopted to affect (decrease/increase) the nominal interest rate, or volatility of inflation, which has affected the efficiency of housing finance. In differentiating between housing affordability and housing finance affordability, Buckley et al (1994) argued that housing finance affordability arises when inflation makes housing unaffordable at the market rates of interest. This resulted in indexation as means of addressing the housing finance affordability problem especially in the Latin America and a few African countries like Ghana. Therefore, the objective of and redesigning mortgage contract is to eliminate financial constraints that impede the affordability housing and provide a financing vehicle so that those who can afford to, and so desire, can purchase homes Buckley et al (1993). This assertion has been argued by Buckley (1996) and Kim (1997) that indexation of deposits and mortgage products can only deal with moderate inflation.

A sound macroeconomic policy framework is one that promotes growth by keeping inflation low, the budget deficit small and the current account sustainable Fischer (2004); Hale (2007). Therefore, the financial regulatory authorities (central banks) in most emerging market economies have used policies like the cash reserve requirement and liquidity ratio as instruments of monetary control. Cash reserve requirement is the percentage of the banks cash asset to be kept in an account with the central bank. This policy is adopted to control volume of funds available for financial institutions to invest in granting loans and advances.

2.4.2 Financial Development and Liberalization

In most of the emerging market economies, the financial sub sector is generally shallow relative to the sizes of these economies. The shallowness of these institutions results in limited access to financial services, with the low-income earners and even medium income earners mostly discriminated against in the financial market. This form of discrimination comes in the form of being denied credit facilities due to their inability to meet the stringent requirements of suppliers of finance Roy (2007); Renaud (2008). In terms of liberalization, there has been a relative efficiency in the credit markets of the emerging economies due to the adoption of market discipline and risk-based capital guidelines. Almost all countries in the emerging economies are moving away from rigid.

2.4.3 Financial Infrastructure and Incomplete Financial Systems

The financial infrastructure of a country shapes the structure, organization and performance of the finance industry and the process of capital formation, and therefore the mortgage market development strategies Renaud (2008); Boleat (2008). This is done when attempts are made to increase the depth and breadth of their financial markets. One of the indicators for measuring financial deepness of an economy is the total deposits within a financial system as a percentage of GDP Vatnick (2008). The organization and structure of the financial system also plays an important causal role in the quality and rate of economic growth Bhattacharya (1997); Levine et al (2000); World Bank (2001).

2.5 Chapter Summary

It has been identified through various studies that the financial infrastructure of a nation shapes the structure, organization and performance of the finance industry and the process of capital formation and the mortgage market development strategies in both developed and emerging economies. Specifically, housing and housing finance in emerging market economies has been subjected to various limitations like inadequacy of legal and regulatory infrastructure, macroeconomic volatility, high transaction costs associated with the lack of adequate loan management practices and infrastructures for mortgage processing.

Despite the orthodox view that a secure supply of land with a good title (registered land) is a pre-requisite for effective housing finance system, efforts to get land registered and governments to be the sole custodian of land has been a disaster in most emerging economies. The idea of land registration has slowed down the process of housing finance disbursement and eventual supply. It can further be argued that the underdevelopment of mortgage lending to individual households can be explained by lack of demand for mortgage lending which might be due to high credit risks, lack of financial depth which translates into high interest rates on mortgage loans, the limited long-term credit resources of originating banks resulting from failure to develop secondary market financing. This anomaly has hitherto been tackled in the developed economies through the introduction of stable funding source and asset-liability management tools like securitization, credit derivatives, collateralized debt obligations and mortgage covered bonds. For most of the emerging economies, a combination of economic and social factors, such as low domestic savings rate, high price-to-income ratios and a general culture and social predisposition towards homeownership, suggests that the common problem facing them lies in the provision of housing finance services that can allocate untapped resources.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter describes the research design, population and sampling design, the data collection method, the research procedures and data analysis methods that was used in the course of the research. This section also indicates the research tools used to collect data, the data collection and the analysis procedures.

3.2 Research Design

The research adopted a descriptive research design. Accroding to Cooper and Schindler, (2001), descriptive study is used when one needs to determine characteristics associated with a subject population which this study is actually concerned with.

3.3 Hypothesis and Model to be tested

Using loan to housing (housing finance supply) as the dependent variable, it could be deduced at a point, that interest levels, income levels, loan security, value of property and government regulations being independent variables do significantly affect supply of loans to housing.

The basic model is as shown below:

$$\mathbf{Y = \beta o + \beta 1x1 + \beta 2x2 + \beta 3x3 + \ldots\ldots\ldots\ldots\ldots\ldots + \beta kxk + e \quad \ldots\ldots\ldots\ldots\ldots\ldots 1}$$

Where:

x1, x2, x3.....xk are the independent variables.

e the difference between the predicted and observed value of Y for the *i*th subject.

bo is the constant term

b1, b2, b3.....bk are the regression coefficients to be estimated.

The empirical model is therefore derived as:

$$\mathbf{SHF=\alpha_0+\alpha_1 IR+\alpha_2 IL+\alpha_3 LS + \alpha_4 VP + \alpha_5 GR \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots 2}$$

Where;

SHF = Supply of Housing Finance

α_O = Coefficient of the independent variable to SHF

IR = Interest rates

IL = Income level

LS = Loan Security

VP = Value of property

GR = Government regulations

3.4 Research population

The target population was all real estate developers, real estate owners and financiers operating in Kenya as at 31st December 2011.

3.5 Sample size

The target respondents were selected using purposive sampling. In this case respondents were chosen deliberately on assumption that they have valid information regarding the problem under study. The sampling frame was all real estate developers and home owners who have engaged in development business in Nairobi, however due to nature of their work, we did not find all of them in Nairobi City. It was important that the respondents are targeted based on the locations where was easy to locate them so as to save cost and time in the course of the research. Hence, this proposal focused on the respondents at their places of work. The sample size composed of 30 real estate developers, 30 home owners and 10 housing financiers.

3.5 Data collection

Qualitative and quantitative research approaches were used in this study. For quantitative, the data was obtained from the housing finance publications and other publications in the real estate sector. Qualitative research methodologies were designed to provide the researcher with the perspective of target audience members through immersion in a culture or situation and direct interaction with the people under study. The advantage of using qualitative methods was that they generate rich, detailed data that leave the

participants' perspectives intact and provide a context for health behaviour. Qualitative methods of data collection used in this study were questionnaires.

3.6 Data analysis

The researcher edited the collected data centrally Coppers and Schindller, (2000) assert that editing is done in order to detect errors and omission, ensure data is accurate, uniformly entered, complete, consistent with intent of the question and other information in the study and arranged to simplify coding and tabulation. Alpha numeric data coding was carried out to assign numbers and other symbols to the questions, which Coopers and Schindler (2000) explain is done in order to group the respondents to a limited number of classes or categories that facilitate efficient analysis. Coded data was tabulated in Statistical Package for Social Scientist (SPSS).

3.6.1 Correlation

Pearson product-moment correlation (r), as an example of correlation coefficient, gives the numerical summary of the direction and strength of the linear relationships between two variables. Since explanation needs to be given for the possible relationship between the dependent and independent variables, the statistical association between the variables has to be measured. The Pearson Product-Moment Correlation (r) is the most commonly applied correlation coefficient used in measuring a linear association and it was therefore adopted in this study to build the framework of the conceptual model.

3.6.2 Multi-collinearity

Another important issue in multiple regression analysis is the presence of multicollinearity. There is no precise definition of collinearity firmly established in the literature Mason and Pierreault (1991). Collinearity is agreed to be present if there is an approximate linear relationship among some of the predictor variables in the data. This refers to the relationship among the independent variables and it exists when the independent variables are highly correlated (r = 0.9 and above) Pallant (2007);

Tabachnick & Fidell (2007). Multicollinearity makes it difficult to determine the contribution of each independent variable Hair et al (1998).

3.7 Data validity and reliability

Data obtained from the primary source was considered authentic and could therefore be relied upon for deriving conclusions. Such data was also considered credible and free from error or any bias. Data was moved from the field only by the researcher to ensure confidentiality and reliability was observed, discussion and clarification were sought from the organizations targeted to ensure reliability, remains confidential and used only for the purpose of this study.

CHAPTER FOUR

DATA ANALYSIS AND PRESENTATION O FINDINGS

4.1 Introduction

The main objective of this study was to establish determinants of supply of real estate finance in Kenya. A total of 70 questionnaires were sent out, of which 44 were satisfactorily filled and returned, this formed 63% response rate. The collected data was analyzed using the statistical package for social scientist. The chapter starts with the analysis of results and concludes with giving the summary and interpretation of the findings.

4.2 Data presentation and explanation

4.2.1 Descriptive Statistics

Table 4.1: Descriptive statistics for measures of performance

	N	Minimum	Maximum	Mean	Std. Deviation
Housing Finance Supply	44	13.00	85.00	27.5000	28.29664
Interest Rates	44	13.00	96.00	31.1667	31.99635
Income Level	44	14.00	117.00	38.0000	39.18673
Loan Security	44	17.00	145.00	47.1667	48.53212
Value Of Property	44	23.00	165.00	53.6667	55.07328
Government Regulations	44	24.00	193.00	62.8333	64.37831
Valid N (listwise)	44				

The Descriptive Statistics table provides summary statistics for continuous, numeric variables. Summary statistics include measures of central tendency such as the mean. Measures of dispersion (spread of the distribution) such as the standard deviation. The minimum for housing finance supply and interest rates was 13 respectively, 14 for income level, 17 for loan security, 23 for value of property while 24 for government regulations. The maximum was 85 for housing finance supply, 96 for interest rates, 117 for income level, 145 for loan security, 165 for value of property while 193 for government regulations. The mean for housing finance supply was 27.5, 31.1 for interest rates, 38 for income level, 47.1 for loan security, 53.7 for value of property and 62.8 for

government regulations. The std deviation for housing finance supply was 28.3, 31.9 for interest rates, 39.1 for income level, 48.5 for loan security, 55 for value of property and 64.4 for government regulations

4.2.2 Correlation

Table 4.2: Correlation between measures of performance

		Housing Finance Supply	Interest Rates	Income Level	Loan Security	Value Of Property	Government Regulations
Housing Finance Supply	Pearson Correlation	1	.999(**)	.997(**)	.997(**)	.998(**)	.998(**)
	Sig. (2-tailed)		.000	.000	.000	.000	.000
	N	44	44	44	44	44	44
Interest Rates	Pearson Correlation	.999(**)	1	.998(**)	.998(**)	.999(**)	.998(**)
	Sig. (2-tailed)	.000		.000	.000	.000	.000
	N	44	44	44	44	44	44
Income Level	Pearson Correlation	.997(**)	.998(**)	1	1.000(**)	.999(**)	.998(**)
	Sig. (2-tailed)	.000	.000		.000	.000	.000
	N	44	44	44	44	44	44
Loan Security	Pearson Correlation	.997(**)	.998(**)	1.000(**)	1	.999(**)	.997(**)
	Sig. (2-tailed)	.000	.000	.000		.000	.000
	N	44	44	44	44	44	44
Value Of Property	Pearson Correlation	.998(**)	.999(**)	.999(**)	.999(**)	1	.999(**)
	Sig. (2-tailed)	.000	.000	.000	.000		.000
	N	44	44	44	44	44	44
Government Regulations	Pearson Correlation	.998(**)	.998(**)	.998(**)	.997(**)	.999(**)	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	
	N	44	44	44	44	44	44

** Correlation is significant at the 0.01 level (2-tailed).

The correlations table displays Pearson correlation coefficients, significance values, and the number of cases with non-missing values. Pearson correlation coefficients assume the data are normally distributed. The Pearson correlation coefficient is a measure of linear association between two variables. The values of the correlation coefficient range from -1 to 1. The sign of the correlation coefficient indicates the direction of the relationship (positive or negative). The absolute value of the correlation coefficient indicates the

strength, with larger absolute values indicating stronger relationships. The correlation coefficients on the main diagonal are always 1.0, because each variable has a perfect positive linear relationship with itself.

The significance of each correlation coefficient is also displayed in the correlation table. The significance level (or p-value) is the probability of obtaining results as extreme as the one observed. If the significance level is very small (less than 0.01) then the correlation is significant and the two variables are linearly related. If the significance level is relatively large (for example, 0.2) then the correlation is not significant and the two variables are not linearly related.

The study showed positive relationship for all the measures of performance, with a strong significance level for all the measures of performance i.e. Interest Rates, government regulations, income level, value of property and loan security.

4.2.3 Empirical Model

Table 4.3: Collinearity Diagnostics

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions			
				(Constant)	Government Regulations	Loan Security	Interest Rates
1	1	3.723	1.000	.00	.00	.00	.00
	2	.261	3.779	.00	.01	.00	.13
	3	.011	18.077	1.00	.08	.06	.47
	4	.005	27.425	.00	.91	.93	.39

a Dependent Variable: Housing Finance Supply

This table displays statistics that help you determine if there are any problems with collinearity. Collinearity (or multicollinearity) is the undesirable situation where the correlations among the independent variables are string. Eigenvalues provide an indication of how many distinct dimensions there are among the independent variables. When several eigenvalues are close to zero, the variables are highly intercorrelated and small changes in the data values may lead to large changes in the estimates of the coefficients. Condition indices are the square roots of the ratios of the largest eigenvalue

to each successive eigenvalue. A condition index greater than 15 indicates a possible problem and an index greater than 30 suggests a serious problem with collinearity. The variance proportions are the proportions of the variance of the estimate accounted for by each principal component associated with each of the eigenvalues. Collinearity is a problem when a component associated with a high condition index contributes substantially to the variance of two or more variables.

4.3 Qualitative analysis

Housing and residential construction are considered to be central importance for determination of both the level of welfare in a society and the level of aggregate economic activities. Housing is the largest asset owned by most households and is nearly always financed, in the sense that owners of housing capital must pay for their units over a period of years. It is therefore imperative for Kenya to appreciate benefits to be derived from having a well-functioning mortgage markets despite various economic issues being tackled with limited resources. The large external benefits to the national economy were highlighted to include capital market development, efficient real estate development, construction sector employment, easier labour mobility, more efficient resources allocation and lower macroeconomic volatility.

It has been identified through various studies that the financial infrastructure of a nation shapes the structure, organisation and performance of the finance industry and the process of capital formation and the mortgage market development strategies in Kenya. Specifically, housing and housing finance in Kenya has been subjected to various limitations like inadequacy of legal and regulatory infrastructure, macroeconomic volatility, high transaction costs associated with the lack of adequate loan management practices and infrastructures for mortgage processing.

Despite the orthodox view that a secure supply of land with a good title (registered land) is a pre-requisite for effective housing finance system, efforts to get land registered and governments to be the sole custodian of land has been a disaster in Kenya. The idea of land registration has slowed down the process of housing finance disbursement and eventual supply. It is further be argued that the underdevelopment of mortgage lending to

individual households can be explained by lack of demand for mortgage lending which is due to high credit risks, lack of financial depth which translates into high interest rates on mortgage loans, the limited long-term credit resources of originating banks resulting from failure to develop secondary market financing. This anomaly has hitherto been tackled in the developed economies through the introduction of stable funding source and asset-liability management tools like securitization, credit derivatives, collateralized debt obligations (CDOs) and mortgage covered bonds (MCB).

For Kenya, a combination of economic and social factors, such as low domestic savings rate, high price-to-income ratios and a general culture and social predisposition towards homeownership, suggests that the common problem facing them lies in the provision of housing finance services that can allocate untapped resources. Some of these untapped resources could be identified as the innovative sources of funding housing finance which are peculiar to their situations like diaspora bonds, migrant remittances and pension funds.

4.4 Summary and Interpretation of the findings

The Descriptive Statistics table provides summary statistics for continuous, numeric variables. Summary statistics include measures of central tendency such as the mean. Measures of dispersion (spread of the distribution) such as the standard deviation. The minimum for housing finance supply and interest rates was 13 respectively, 14 for income level, 17 for loan security, 23 for value of property while 24 for government regulations. The maximum was 85 for housing finance supply, 96 for interest rates, 117 for income level, 145 for loan security, 165 for value of property while 193 for government regulations. The mean for housing finance supply was 27.5, 31.1 for interest rates, 38 for income level, 47.1 for loan security, 53.7 for value of property and 62.8 for government regulations. The std deviation for housing finance supply was 28.3, 31.9 for interest rates, 39.1 for income level, 48.5 for loan security, 55 for value of property and 64.4 for government regulations

The correlations table displays Pearson correlation coefficients, significance values, and the number of cases with non-missing values. Pearson correlation coefficients assume the data are normally distributed. The Pearson correlation coefficient is a measure of linear association between two variables. The values of the correlation coefficient range from -1 to 1. The sign of the correlation coefficient indicates the direction of the relationship (positive or negative). The absolute value of the correlation coefficient indicates the strength, with larger absolute values indicating stronger relationships. The correlation coefficients on the main diagonal are always 1.0, because each variable has a perfect positive linear relationship with itself.

The significance of each correlation coefficient is also displayed in the correlation table. The significance level (or p-value) is the probability of obtaining results as extreme as the one observed. If the significance level is very small (less than 0.01) then the correlation is significant and the two variables are linearly related. If the significance level is relatively large (for example, 0.2) then the correlation is not significant and the two variables are not linearly related.

The study showed positive relationship for all the measures of performance, with a strong significance level for all the measures of performance i.e. Interest Rates, government regulations, income level, value of property and loan security.

The multiple correlation coefficient is the correlation between the observed and predicted values of the dependent variable. The values of R for models produced by the regression procedure range from 0 to 1. Larger values of R indicate stronger relationships. R squared is the proportion of variation in the dependent variable explained by the regression model. The values of R squared range from 0 to 1. Small values indicate that the model does not fit the data well. The sample R squared tends to optimistically estimate how well the models fit the population. Adjusted R squared attempts to correct R squared to more closely reflect the goodness of fit of the model in the population. Choose a model with a high value of R squared that does not contain too many variables. Models with too many variables are often over fit and hard to interpret.

The model summary for this study was found to be 1.000 for R value, 0.999 for R square, 0.997 for adjusted R square, 435.775 for F change, 3 for df1, 1 for df2, 0.035 for sig. F change while the Durbin-Watson was 3.405

The output for Regression displays information about the variation accounted for by your model. The output for Residual displays information about the variation that is not accounted for by your model. And the output for Total is the sum of the information for Regression and Residual. Model with a large regression sum of squares in comparison to the residual sum of squares indicates that the model accounts for most of variation in the dependent variable. Very high residual sum of squares indicate that the model fails to explain a lot of the variation in the dependent variable, and you may want to look for additional factors that help account for a higher proportion of the variation in the dependent variable. The mean square is the sum of squares divided by the degrees of freedom. The F statistic is the regression mean square divided by the residual mean square. The regression degrees of freedom is the numerator df and the residual degrees of freedom is the denominator df for the F statistic. The total number of degrees of freedom is the number of cases minus 1. If the significance value of the F statistic is small (smaller than say 0.05) then the independent variables do a good job explaining the variation in the dependent variable. If the significance value of F is larger than say 0.05 then the independent variables do not explain the variation in the dependent variable.

The sum of squares for regression was 4001.753, df 4, mean square 1000.438, F 572.725 while the Sig. was 0.031 while for the residual values, sum of squares was 1.747, df was 1 while the mean square was 1.747.

Collinearity (or multicollinearity) is the undesirable situation where the correlations among the independent variables are string. Eigenvalues provide an indication of how many distinct dimensions there are among the independent variables. When several eigenvalues are close to zero, the variables are highly intercorrelated and small changes in the data values may lead to large changes in the estimates of the coefficients. Condition indices are the square roots of the ratios of the largest eigenvalue to each successive eigenvalue. A condition index greater than 15 indicates a possible problem

and an index greater than 30 suggests a serious problem with collinearity. The variance proportions are the proportions of the variance of the estimate accounted for by each principal component associated with each of the eigenvalues. Collinearity is a problem when a component associated with a high condition index contributes substantially to the variance of two or more variables.

The previous study found out that low income level affects the housing finance Roy (2007). Further in the literature, one of the biggest problems faced by the banks in financing for real estate is value of property and the projects to be financed with the bank facilities Jones & Maclennan (1987); Altman & Saunders (1998); Byamugisha (1999); Guzman (2000) and Mints (2006). Even with the identified importance of effective regulations of financial institutions, Llewellyn (2008), Milnes & Wood (2009) and Shin (2009) in discussing the Northern Rock situation highlighted problems in the regulatory framework of as the impediment in real estate financing. Further Llewellyn (2008) suggested that in any regulatory / supervisory regime, four areas that need to be addressed include prudential regulation of the financial firms; management and systemic stability; lender-of-last resort function and conduct of regulation and supervision business. However the findings of this study indicate value of property, government regulation, income level, interest rates and loan security all affect the financing of real estate in Kenya.

CHAPTER FIVE

SUMMARY, CONCLUSION & RECOMMENDATIONS

5.1 Summary

In lending, financial institutions give out loans in consideration of interest to be charged on the loans and the riskiness of the loan. The demand and supply of housing finance are determined by various factors. The ability of financial institutions to lend for housing (supply of housing finance) determines the quantity of housing finance that could be supplied for house acquisitions. If the identified factors, value of property, government regulation, income level, interest rates and loan security are dwindling, the availability of housing finance will be reduced.

Interest Rates: Since interest rate is considered as the rate of return on investment, when the rate of interest is low on mortgage lending maybe due to government regulations, there is the tendency for the financial institutions to look for an alternative investment outlet in order to make good profit. Apart from the ability of the financial institutions to lend, the other aspect is the willingness of the financial institutions to lend towards mortgage acquisition. The factors consider by them includes criteria of security, income, price of the property, price of alternative goods and services and household characteristics (age, marital status etc).

Criteria of Security: With a favourable reserve and liquidity position, financial institutions in Kenya do not necessarily lend to all applicants that approach them for banking facilities, even if the prevailing interest rate is acceptable to the borrower. Loans are secured on specific property and necessary steps are taken in avoiding default on repayment or depreciation of the security below the book value of the debt. There are various ways by which the lenders determine the ability of the borrower to repay and the suitability of the property as security.

Income: The income being earned by a borrower determines the ability to repay the money borrowed. The total sum advanced therefore is usually restricted to some multiple of two to three times the applicant's salary. This means that the applicant shall have

secure prospects of a continuing income. However, in the recent past in the developed economies, it is considered that average home prices range from three to four times of annual income (Warnock & Warnock 2008). In Kenya, because wages are low and construction cost is high, average home prices are usually about eight times of annual income and to make it affordable, repayments have to be spread over a very long period of time. Thus a positive relationship exists between housing construction cost and building materials price, property price, foreign exchange rates because imported building materials are used for construction, labour cost and national disposable income.

Value of property: In some cases, control of lending is also exercised by avoiding advances on the security of properties which might deteriorate. Financial institutions prefer lending on properties which are relatively modern and also prefer houses to flats. As a property is becoming old-fashioned, the less is the willingness of financial institutions to lend based on the collateral of the property. This policy affects the distribution of house prices, since it would be difficult to raise a loan on a particular property. As a result of these constraints demand is always rationed and it is difficult to assess what the real demand for mortgage is while the supply constraints in the form of the reserve and liquidity ratios are easier to observe.

Loan to Income Ratio: Financial Institutions would like to know what percentage of his total income is already committed to payment of all. In some cases, bank might not lend to individuals that would commit more than 40 per cent of his income on settling debts.

5.2 Conclusion

This study investigated factors determining housing finance supply in Kenya. Housing finance is a major factor determining the quality and tenure of housing consumption, the overall financial portfolio of the public and the stability and effectiveness of the financial system. In Kenya, the government has intervened in the markets by setting up institutions characterized by a significant degree of regulation and segmentation from the rest of the financial markets and very often with governments providing subsidized housing finance.

Additional instruments in form of questionnaire, for the sectorial allocation of loans and advances by these financial institutions were employed to gather information from Corporate Banking / Loans and Advances Managers coupled with unstructured interviews. Supplementary questionnaires were directed to the users of housing finance at the household level as control for validity to the research findings.

Applying a multiple regression approach, the model identified that housing finance supply in Kenya is significantly driven by clusters of factors related to value of property, government regulation, income level, interest rates and loan security. It is closely observed that housing finance models in the developed economies, which are largely financed by deposit liabilities, cannot be wholly adopted in the Kenyan economy. The implication for practice therefore is that financial institutions in Kenya must adequately increase their capital base for effective housing finance supply and introduce mortgage products with long-term tenure to actively mobilize resources for mortgage lending.

5.3 Policy Recommendations

The largest hitches to the development of the real estate segment of Kenya are government regulations, interest rate, loan security, value of property and income level as suggested by most of the respondents in the interviews. Changes brought in these segments can ensure a better rate of growth for the market and a relatively more attractive opportunity for the consumers and investors.

As discussed in the project, Real Estate in Kenya has a potent demand backed growth. Demand due to population increase, higher allocation to savings in real estate, actualization of mortgaging by consumers and bridging the gap of the current housing deficit will be a trigger for sustained growth.

The efforts by the government to ensure faster clearances for active real estate development would enable developers in a great way. The researcher recommends that the government should set up a separate real estate division with the objective of single

window clearance of all required paper work and clearances. Single window essentially means that the developers will need to approach only one department for the clearances required in checking the title of the land, the water treatment plant, electricity and water utility connections, permission for construction and labour related issues such as facilities and wages. Also the government should establish a housing loan guarantee scheme run by existing government housing corporations to assess risks in some real estate development and the applicant's credit scores then giving guarantees to the developers and financiers so as to encourage financiers to lend more and at affordable interest rates. The builders should be given support in ensuring that the land they own and hold is free of encroachment from slums. Also, free hold land should be released to developers with proper title clearances to the land quickly. Some litigation processes take years for clearances, which should be put onto a fast track.

5.4 Limitations of the Study

Every research has certain drawbacks. It is therefore necessary to incorporate them in the project to obtain a true perspective of the research topic. The following are a few drawbacks the researcher faced during my research study.

The study makes use of qualitative analysis, which is interview and questionnaire based in order to find out the determinants of housing finance in Kenya. However quantitative approach has not been used as it would have prolonged the study. Hence financial statements such as Balance Sheet and Profit and Loss of Real estate listed companies have not been analyzed to arrive at the growth prospects of the sector in quantitative terms.

Also due to difference in valuation methods adopted by different countries and limited relevant data; comparison of Kenyan real estate companies to international real estate companies operating in Kenya has not been possible.

Another drawback was getting through to companies for the purpose of an interview. Limited number of interviewees induced the researcher to collect further information through a questionnaire survey.

Further, there was a possibility of a biased research being carried out due to all interviewees being Nairobi-based. Therefore the researcher increased the sample size to adequately include companies from all parts of Kenya to get a clear national perspective of the real estate market.

However, the research aim was to provide a broad overview and give valuable prospects to the participants of this industry as well as to investors seeking to invest in the Kenyan real estate sector.

5.5 Suggestions for further studies

For academic world. This research Result is expected to become a valuable input in study related to housing finance for real estate. This Research has not yet expressed all variables that can influence housing finance, then in order to increase science/knowledge development, other researchers who are interested in similar problems are suggested to conduct a continuation research by adding further determinants of housing finance

The study was done for the companies and real estates in Nairobi, a suggestion is made that a similar study be done for companies and real estate developers beyond Nairobi and results be compared.

The study was done for Kenya i.e. real estate companies operating in Kenya, it is suggested that a cross sectional study be done for the other East African real estate developers.

REFERENCES

Akinwunmi, A., Gameson, R., Hammond, F. and P. Olomolaiye (2007) – Mortgage Insurance and Housing Finance in Emerging Economies- in Boyd, D.(Ed)- Proceedings of 23rd Annual ARCOM Conference, 3-5 September 2007, University of Ulster, Belfast-UK, Association of Researchers in Construction Management,

Akinwunmi, A., Gameson, R., Hammond, F. and P. Olomolaiye (2008) – The Effect of Macroeconomic Policies on Project (Housing) Finance in Emerging Economies – in Lodi,

Alhashimi, H.and Dwyer, W (2004) Is there such an entity as a housing market? Paper presented at the 10th Annual Pacific Rim Real Estate Conference, Bangkok

Allen, F. and D. Gale (1988) – Optimal Security Design, Review of Financial Studies Fall 1988 pp 229-268.

Allen, F. and D. Gale (1994) - Financial Innovation and Risk Sharing, Cambridge, Massachusetts: MIT Press

Altman, E.T. and Saunders, A. (1998) – Credit risk measurement: Developments over the last 20 years, Journal of Banking and Finance, 21(1998), pp 1721-1742.

Arnott, R. and Stiglitz, J. (1991) – Moral Hazard and Non-Market Institutions: Dysfunctional Crowding out after monitoring, American Economic Review 81, pp 179-190.

Benston, G.J. and C.W. Smith Jr (1976) – A Transaction Cost Approach to the theory of Financial Intermediation, Journal of Finance May 1976, Vol. 31 No 2, pp 215-231.

Berger, A.N., Herring, R.J. and G.P. Szego (1995) – The Role of Capital in Financial Institutions, Journal of Banking and Finance 19, pp 393-430.

Bhattacharya, A., Montiel, P.J. and S. Sharma (1997) – How Can Sub-Saharan Africa Attract More Private Capital Inflows? Finance and Development June 1997, Vol. 34 No 2 pp 3-6.

Boleat, M. (2008) – Housing Development and Housing Finance in Britain – Some lessons for emerging markets, Housing Finance International March 2008, Vol. 22 Issue 3, pp 53

Burda, M. and C. Wyplosz (1997) – Macroeconomic: A European Text, 2nd Edition, N.Y; Oxford University Press.

Buckle, M and J Thompson (1998) The UK Financial System: Theory and Practice (3rdEdition), N Y : Manchester University Press.

Buckley, R M (1996) Housing Finance in Developing Countries. N.Y: Macmillan.

Byamugisha, F. (1999) – The effects of land registration on Financial Development and Economic Growth: A Theoretical and Conceptual Framework, Policy Research Working Paper 2240, Washington DC: World Bank.

Caprio Jr, G., Demirguc-Kunt, A. and E.J. Kane (2008) – The 2007 Meltdown in Structured Securitisation: Searching for Lessons, Not Scapegoats, Finance and Private Sector Team, Development Research Group - October 2008, World Bank: Washington DC.

Chiuri, M.C. and T. Jappelli (2003) – Financial Market imperfections and home ownership: a comparative study, European Economic Review Vol.47 Issue 5, pp 857-875.

Chiuri, M.C., G. Ferri and G. Majnani (2002) – The Macroeconomic Impact of Bank Capital Requirement in Emerging Economics: Past Evidence to Assess the Future, Journal of Banking and Finance 26, pp 881-904.

Cho, M. (2007) – 180 Years' Evolution of the US Mortgage Banking System: Lessons for Emerging Mortgage Markets, International Real Estate Review, Vol. 10 No 1 pp 171-212.

Coase, R.H. (1960) – The Problem of Social Cost, Law and Economics, 3, pp 1-44

Crosby, N., French, N. and Oughton (2000) – Bank lending valuations on Commercial property: Does European mortgage lending value add anything to the process? Journal of Property Investment & Finance Vol.18 No 1, 2000, pp 66-83.

Dasan M. B. (1996) – Analysis of factors which influence supervisor's motivation in a building in Kenya in the construction industry. African Competitiveness Report 1996.

Deng, Y. and Fei, P. (2008) – The Emerging Mortgage Markets in China – in Ben-Shahar, D., Yui Leung, C.K. and S.E. Ong (Eds) – Mortgage Markets Worldwide, pp 1-33, Chichester -West Sussex, United Kingdom: John Wiley and Sons Ltd

Dewatripont, M. and E. Maskin (1995) – Credit and efficiency in centralized and decentralized economies, Review of Economic Studies October 1995, Vol. 62 Issue 213, pp 541-555.

Dewatripont, M. and J. Tirole (1994) – The Prudential Regulation of Banks, Cambridge, MA: MIT Press.

Diamond, D.W. and P. Dybvig (2000) – Bank runs, deposit insurance and liquidity, The Federal Reserve Bank of Minneapolis Quarterly Review Winter 2000, Vol.24 No 1

Diamond, D.W. (1984) – Financial Intermediation and delegated monitoring, Review of Economic Studies 51, pp 393-414

Djankov, S., McLiesh, C. and A. Shleifer (2007) – Private credit in 129 countries, Journal of Financial Economics 84(2007) pp 299-329

Edwards, J and K. Fischer (1994) – Banks, Finance and Investment in Germany, Centre for Economic Policy Research, Cambridge University Press.

Elliot, J.W. (1984) – Money, Banking and Financial Markets, New York: West Publishing Co.

Fischer, S. (2004) – IMF Essays from a time of Crisis: The International Financial System,Stabilization and Development, Cambridge, MA: MIT Press, 2004.

Fischer, S. (1984) – A framework for monetary and banking analysis, Economic Journal 93, pp 1-16

Follain, J. and P. Zorn (2000) – The unbundling of residential mortgage finance, Journal of Housing Research 1(1), pp 63-89.

Fry, M.J. (1988) – Money, Interest and Banking in Economic Development, Baltimore: John Hopkins University Press

Guzman, M.G.(2000) – The Economic Impact of Bank Structure: A Review of Recent Literature, Federal Reserve Bank of Dallas, Economic and Financial Review, 2nd Quarter 2000, pp 11-25.

Hair, J.F., Anderson, R.E., Tatham, R.L. and W.C. Black (1998) – Multivariate Data Analysis (5th Edition), New Jersey: Prentice Hall.

Hale, G. (2007) – Sound Policies for Emerging Markets Financial Stability, International Finance Vol. 10 No 1 pp 101-114.

Hammond, F.N. (2006) – The Economic Impacts of Sub-Saharan African Urban Real Estate Policies, Unpublished PhD Thesis, School of Engineering and the Built Environment, University of Wolverhampton, UK.

Haurin, D.R., Hendershott, P.H. and S.W. Watcher (1997) – Borrowing constraints and the tenure choice of young households, Journal of Housing Research 8, pp 137-154.

Heffernan, S. (2003) Modern Banking in Theory and Practice, March 2003, Chichester-West Sussex: John Wiley and Sons.

Hurwics, W.P. (1973) – The Design of Mechanisms for Resource Allocation, American Economic Review 63, pp 1-30.

Irving, J. and A. Manroth (2009) – Local Sources of Financing for Infrastructure in Africa, Policy Research Working Paper 4878, African Sustainable Development Front Office, World Bank: Washington D.C.

Jensen, M.C. and Meckling, W.H. (1976) – Theory of the firm: Managerial behaviour, agency costs and ownership structure, Journal of Financial Economics 3.

Jaffee, D.M. and Renaud, B. (1997) Strategies to develop mortgage markets in transition economies. In: J. Doukas, V.Murinde and C. Wihlborg (eds) Financial Sector Reform and Privatization in Transition Economies.Ch.4, Amsterdam: Elsevier Science Publishers.

Jones, C. and C. Watkins (2009) – Housing Markets and Planning Policy, Wiley-Blackwell, 224pp, October 2009

Kim, K-H (1997) – Housing Finance and Urban Infrastructure Finance, Urban Studies Vol. 34 No 10, pp 1597-1620.

Kogiku, K.C. (1971) – Microeconomic Models, N.Y.: Harper and Row.

Leyland, H.E. and D.H. Pyle (1977) – Informational asymmetries, financial structure, and financial intermediation, Journal of Finance 32 pp 371-387

Levine, R. (1997) – Financial development and economic growth: views and agenda, Journal of Economic Literature 35, pp 688-726.

Levine, R., Loayza N. and T Beck (2000) – Financial intermediation and Growth: Causality and Causes, Journal of Monetary Economics, Vol. 46 No 1 pp 31-77.

Llewellyn, D.T. (2008) – The Northern Rock Crisis: A Multi-Dimensional Problem Waiting to Happen, Journal of Financial Regulation and Compliance 2008 Vol. 16 Issue 1pp 35-58.

Mandere A.N. (2006) – A survey of QM practices in the large Kenyan building construction firms. Africa Private Sector Group, Kenya, 2006.

Markowitz, H.M. (2009) – Proposals Concerning the Current Financial Crisis, Financial Analysts Journal Jan / Feb. 2009, Vol. 65 Issue 1, pp 25-27.

Mason, C.H. and N.D. Perreault (1991) – Collinearity, Power and Interpretation of Multiple Regression Analysis, Journal of Marketing Research 28, August 1991 pp 268-80.

Merrill, S. and Tomlinson, M. (2006) – Housing Finance, Microfinance and Informal Settlement Upgrading: An assessment of Ghana. Paper prepared for African Union of Housing Finance and USAID, The Urban Institute, Washington DC. June 2006.

Malpezzi, S (1999) Economic Analysis of housing markets in developing and transition economies. In: Cheshire, P. and Mills, E.D. (eds) Handbook of Regional and Urban Economics Applied Urban Economics, 3, 1791-1864.

Marete D, (2011) – The determinants of real estate property prices in Kiambu Municipality in Kenya. Unpublished Masters paper, School of Business, University of Nairobi, 2011.

Merton, R.C. and Z. Bodie (1995) – A Conceptual Framework for Analyzing the Financial Environment- in Crane, D.B., K.A. Froot, S.P. Mason, A.F. Perold, R.C. Merton, E.R.Sirri and P. Tufano (Eds) – The Global Financial System: A Functional Perspective, pp 3-32, Harvard Business School Press, Cambridge: MA.

Merton, R.C. (1989) – On the application of the continuous-time theory of finance to financial intermediation and insurance. Geneva Papers on Risk and Insurance Theory 14, pp 225-261.

Milne, A. and G. Wood (2009) – Shattered on the Rock? British Financial Stability from 1866 to 2007, Journal of Banking Regulation (2009), Vol.10 No 2 pp 89-127.

Mints, V. (2006) – Specifics of Credit Risk Assessment in Mortgage Lending-Sample of Russia, Housing Finance International September 2006, Vol.21 Issue1 pp 14-21.

Njiru (2003) The performance of real estate markets in Kenya, KEPLOTRADE Research Paper No 2/2004. December 2003.

North, D.C. (1994) – The Evolution of Efficient Markets in History – in James, J.A. and M. Thomas (eds)- Capitalism in context, Chapter 11 pp 257-264, Chicago: University of Chicago Press.

Nubi, T.O.(2005) – Housing Finance in Nigeria- Need for Re-Engineering (Unpublished Reports)-www.housingfinance.org/pdfstorage/Africa

Nubi, T.O. (2008) – Affordable Housing Delivery in Nigeria, Paper presented at The Southern African Housing Foundation International Conference and Exhibition, 12-15 October 2008 – Cape Town, South Africa.

Omufira A.N. (2001) – Extent of TQM implementation in the construction industry, AICD Background Paper 13, Africa Region, World Bank, Washington, DC

Olotuah, A O (2000) The challenge of Housing in Nigeria Effective Housing in 21st Century Nigeria. In: Akinbamijo, O.B. et al. (eds) Environmental Forum, Federal University of Technology, Akure-Nigeria, 16-21.

Olotuah, A O and Aiyetan, A.O.(2006) Sustainable low-cost housing provision in Nigeria: a bottom-up participatory approach. In: Boyd, D. (ed) Proceeds of 22nd Annual

ARCOM Conference, 4-6 September 2006, Birmingham, UK, Association of Researchers in Construction Management, 633-639.

Pagliari, J. L. (2007) – The Pricing of Non-Core Real Estate Ventures: Estimating the net expected risk-adjusted return, The Journal of Portfolio Management Vol.34 (Autumn 2007), Special Real Estate Issue, pp 119-133.

Pallant, J. (2007) – SPSS Survival Manual: A Step by Step Guide to Data Analysis Using SPSS Version 15 (3rd Edition), Berkshire-England: Open University Press.

Pilbeam, K. (2005) – Finance and Financial Markets (2nd ed.), Basingstoke: Palgrave Macmillan.

Poole, W (2003) Housing in the Macroeconomy. Federal Reserve Bank of St Louis, Economic Review May/June 2003, 1-8.

Ramakrishinan, R.T.S. and A.V. Thakor (1984) – Information reliability and a theory of financial intermediation, Review of Economic Studies Vol. 51 Issue 166.

Renaud, B.M. (2008) – Mortgage Finance in Emerging Markets: Constraints and Feasible Development Paths- in Ben-Shahar, D., Yui Leung, C.K. and Ong, S.E. (Eds) – Mortgage Markets Worldwide, pp 253-288, Chichester - West Sussex, United Kingdom: John Wiley and Sons Ltd.

Ritter, L. S. and W. L. Silber (1986) – Principles of Money, Banking and Financial Markets, New York: Basic Book Inc.

Roy, F. (2007) – Expanding housing finance systems in Africa and Asia-how far Central and Eastern European models are replicable? Paper presented at APNHR 2007

Conference in Transformation in Housing, Urban Life and Public Policy, Seoul-Korea, 30 August-1 September.

Saravanan, P. (2007) – Recent Experiences in the Housing Finance Sector – A study with Reference to India, Housing Finance International September 2007, Vol.22 Issue 1.

Scholtens, B. and D. van Wensveen (2003) – The theory of Financial Intermediation: An Essay on what it Does (Not) Explain, Vienna: The European Money and Finance Forum (SUERF Studies 2003/1).

Schumpeter, J.A. (1912) – The Theory of Economic Development, Cambridge-Massachusetts: Harvard University Press.

Sikasa C. (2004), Customer perception of change management practices in the mortgage industry. Africa Private Sector Group, Kenya, 2004.

Shin, H.S. (2009) – Reflections on Northern Rock: the bank run that heralded the global financial crisis, Journal of Economic Perspective Winter 2009, Vol. 23 Issue 1 pp 101-124.

Soyibo, A. (1996) – Financial Linkage and development in Sub-Saharan Africa: The role of financial institutions in Nigeria, Working Paper 88, London: Overseas Development Institute

Stiglitz, J.E. (2000) – The Contributions of the Economics of Information to Twentieth century Economics, Quarterly Journal of Economics 115, pp 1441-1478.

Tirole, J. (2006) – The theory of Corporate Finance, New Jersey: Princeton University Press.

Tiwari, P and Moriizumi, O (2003) Efficiency of Housing Finance: A comparative Study of Mortgage instruments in Japan. European Journal of Housing Policy, 3(3).

Toby, A J (2006) Empirical study of the Liquidity Management Practices of Nigerian Banks Journal of Financial Management and Analysis, 19(1), 57-70.

UNCHS-Habitat (2007) – Improving the Performance of National Finance Institutions in Shelter Delivery, UNCHS: Nairobi-Kenya.

Van Order, R. (2005) – Risk Management and mortgage portfolios: some applications for emerging markets – in Hegedus, J. and R.J. Struyk (Eds) – Housing Finance: New and Old Models in Central Europe, Russia and Kazahkstan. Local Government and Public Service Reform Initiative, Open Society Institute, Budapest

Vatnick, S. (2008) – Financial Reforms and Emerging Markets, Financial Markets, Institutions and Instruments February 2008, Vol.17 Issue 1, pp 109-120.

Williamson, O.E. (1985) – The Economic Institutions of Capitalism, New York: The Free Press.

APPENDIX A – QUESTIONNAIRE

DETERMINANTS OF HOUSING FINANCE IN KENYA

[The following information is required for a Masters of Business Administration thesis. Kindly complete the questionnaire as per the instructions given being rest assured that the information provided will be used strictly for project purposes]

QUESTIONNAIRE TO HOUSE OWNERS

A. GENERAL BACKGROUND

1. What is your Marital Status? (Tick one box)
   a) Single
   b) Married
   c) Divorced
   d) Widow
   e) Widower

2. What is your Age? (Tick one box)
   a) 1-29
   b) 30-39
   c) 40-49
   d) 50-59
   e) 60+

3. What is the highest form of formal education that you have achieved? (Tick one box)
   a) None
   b) Primary
   c) Secondary
   d) Vocational / Technical
   e) Polytechnic / University

4. What is your current employment status? (Tick one box)
   a) White collar job (Civil Servant)
   b) White collar job (Private company)
   c) Blue collar job (Bricklayers etc)
   d) Self Employed (Specify)
   e) Other (Please specify)…….

5. What is your type of family? (Tick one box)
   a) Nuclear
   b) Joint / Extended

Others (Please specify)…….

B. SECURITY

6. What is the tenure of the house? (Tick one box)
   a) Own
   b) Rent
   c) Part Own / Part Rent
   d) Others (Please specify)…….

7. What is the form of ownership? (Tick one box)
   a) Inheritance
   b) Bought
   c) Built
   d) Others (Please specify)……..

If Answer to Q 7 is 3, go to Q 8
If Answer to Q 7 is 1, 2 or 4, go to Q 13

8. IF BUILT, did you? (Tick one box)
   a) Buy the plot
   b) Inherit the plot
   c) Others (Please specify)…….

9. IF BUILT, who carried out the construction? (Tick one box)
   a) Self-Built
   b) Contractor with material
   c) Contractor without material
   d) Others (Please specify)……..

10. If you have a loan, what security was given for the loan (Tick all that apply)
   a) The Property
   b) Another Property
   c) Agricultural Land
   d) Others (Please specify)…….

11. What kind of security can you offer for a loan? (Tick all that apply)
   a) The house itself
   b) Any other property
   c) Agricultural land
   d) Others (Please specify)…….

C. VALUE OF PROPERTY

12. When housing is to be acquired, it is either constructed from scratch or a fully erected building is purchased. If constructed from scratch, how much did the plot cost? Kshs……

13. How much did you spend on construction? Kshs.……

12. Can you give value of the property on completion?
Kshs. …….

14. If a fully erected building was purchased, what was the value?
Kshs……

15. What is the Present Value of your property? (Tick one box)
    a) Less than Kshs. 1000, 000
    b) Kshs. 1000,001- Ksh. 5000,000
    c) Kshs. 5000,001- Kshs. 10,000,000
    d) Above Kshs. 10,000,000
    e) Don't know

D. INTEREST RATE

16. Whether a house is constructed from the scratch or a fully erected building is purchased, how did you finance your house acquisition? (Tick one or more boxes as applicable)
    a) Mortgage Institution
    b) Commercial Bank
    c) Relatives and Friends
    d) Personal Savings
    e) Money from abroad
    f) Loan from employer
    g) Sold another house
    h) Private lender
    i) Other (Please specify)……..

17. If you borrowed, what was the rate of interest at the beginning of the transaction …….....

18. What is the rate of interest presently or on completion? …….....

19. If you have obtained a loan, how do you intend to repay it? (Tick all that apply)
    a) Extra work
    b) Employment income
    c) Reducing household expenditure
    d) Sale of valuables
    e) Other sources (Please specify)……

20. What is the repayment period for the loan? (Tick one box)
    a) Less than 24 months
    b) 25-48 months
    c) 49-96 months
    d) 97-144 months
    e) Others (Please specify)…….

21. Are you up to date with your loan repayments?
    a) Yes
    b) No

22. If No, How many months are you behind? (Tick one box)
    a) 3-6 months
    b) 7-12 months
    c) Over 12 months
    d) Others (Please specify)……..

23. What is the reason(s) for default in loan repayment? (Tick one box)
    a) Loss of Income
    b) Higher financial commitment
    c) Excessive Interest charges
    d) Others (Please specify)…….

24. If a loan was available, would you be willing to borrow to buy another house? (Tick one box)
    a) Yes
    b) No
    c) Don't know

E. GOVERNMENT REGULATION

25. The processing of loan applications with the financial institutions usually go through a long process, were you satisfied with the time taken to process? (Tick one box)
    a) Very satisfied
    b) Satisfied
    c) Dissatisfied
    d) Very Dissatisfied

26. On application, what percentage of the loan requested did you get? (Tick one box)
    a) 50%
    b) 60%
    c) 70%
    d) 80%
    e) 90%
    f) 100%
    g) Other (Please specify)……

27. Where did you obtain the remainder of the funds needed for your house acquisition? (Tick all that apply)
    a) From friends and families
    b) Private lenders
    c) Employer
    d) Others (Please specify)…….

28. Before applying for the loan, were you satisfied with the process and requirements? For example production of title deed, survey and architectural requirements

a) Very satisfied
b) Satisfied
c) Dissatisfied
d) Very Dissatisfied

F. INCOME LEVEL

29. How much do you save per month? (Tick one box)

a) Nothing
b) Kshs. 0 - Kshs. 10,000
c) Kshs. 10,000 – Kshs. 100,000
d) Above Kshs.100,000

30. What are your Total Household savings at present? (Tick one box)

a) Nothing
b) Kshs. 0 – Kshs. 10,000
c) Kshs. 10,000 – Kshs. 100,000
d) Above Kshs. 100,000

31. Where do you save? (Tick all that apply)

a) Commercial Bank
b) Cooperative society
c) Mortgage Institution
d) (Traditional Contributions)
e) Other (Please specify)……

32. What is your personal income per month? (Tick one box)

a) Kshs. 0 – 100, 000
b) Kshs. 100,000 – 200,000
c) Kshs. 200,000 – 300,000
d) Kshs. 300,000 – Kshs. 500,000
e) Above Kshs. 500,000

Thank you for participating in this Research. Please return questionnaire

APPENDIX B – QUESTIONNAIRE

DETERMINANTS OF HOUSING FINANCE IN KENYA

[The following information is required for a Masters of Business Administration thesis. Kindly complete the questionnaire as per the instructions given being rest assured that the information provided will be used strictly for project purposes]

QUESTIONAIRE TO PROPERTY DEVELOPERS

Name: _____
Age: ____
Company Name: _____
Position at work: _____

1. How significant do you think is Kenyans position as an investment destination for real estate at present from the point of view of both foreign and domestic investors? Please tick the appropriate box.

a) Very Significant
b) Increasingly gaining Significance
c) Minimal Significance

2. What importance does investment in real estate hold for you as an individual in contributing to your net worth? Please tick the appropriate box

a) Very Important
b) Increasingly becoming important
c) Not so important

3. What according to you is/will be the most preferred avenue for investment for an individual/ company in the real estate sector? Please tick the appropriate box.

a) Direct Investment in land/property
b) Investment in Listed Real Estate Company shares
c) Joint Venture with Realty Developer
d) Others (Please Specify)

4. Do you think the sudden surge in property prices across Kenya over the last two years is justified? Please tick the appropriate box.

a) Yes (Boom)
b) No (Bubble)
c) Cant Say

5. What according to you is the key problem faced by this sector? Please tick the appropriate box.

a) Lack of Infrastructural facilities
b) Ownership issues, unclear titles and abnormally high stamp duties

c) Rising Interest Rates dampening affordability
d) Others (Please specify)

6. Which segment according to you has the greatest scope for improving profits (IRR) – residential, commercial, retail or SEZ's (Special Economic Zones)?
How much return do you think it generates? Please tick the appropriate box

Segment _____

a) 5 – 10 %
b) 10 – 20 %
c) More than 20%

7. How do you see the real estate sector 10 years from now? Please tick the appropriate box

a) A stabilized sector
b) A risk- perceived sector
c) A high growth sector
d) Can't say

8. Which of the following sources of capital is most tapped by you? Please rank in order of preference: 1 being the most preferred and 3 being the least preferred

a) Bank loans
b) Foreign Direct Investment (FDI)
c) Capital Markets – IPOs (Initial Public Offer)

9. Do you think the Government of Kenya has taken adequate measures for the development of the real estate sector in recent years? Please tick the appropriate box

a) Yes
b) No
c) Don't Know

Thank You for your time and help!

APPENDIX C – QUESTIONNAIRE

DETERMINANTS OF HOUSING FINANCE IN KENYA

[The following information is required for a Masters of Business Administration thesis. Kindly complete the questionnaire as per the instructions given being rest assured that the information provided will be used strictly for project purposes]

QUESTIONAIRE TO HOUSING FINANCIERS

1. Why has Kenya become one of the most favoured destinations for investment in the real estate sector in the past 3 years?

……
……

2. What are the reasons for the sudden surge in property prices across Kenya? Could you throw light on whether you think this is a boom or a bubble?

……
……

3. What is the scope for the real estate segment in Kenya? Can you suggest the demand/supply dynamics for the sector?

……
……

4. What according to you are the key risks/ problems this sector will/ is facing? Could you recommend any solutions to the above problems?

……
……
……

5. What are the various approvals and regulations needed to be adhered to for the acquisition, development and completion of a project?

……
……
……

6. What are the different avenues for investment for an individual/ company in the real estate sector?

……
……
……

7. What are the different sources of capital available to a real estate developer?

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8. Which segment according to you has the greatest scope for improving profits (IRR) - residential, commercial, retail or SEZ's (Special Economic Zones)?

……
……

9. What role according to you has the Government played in the development of the real estate sector?

……
……

10. Where do you see the real estate sector 10 years from now?

……
……

Thank You for your time and help!

DETERMINANTS OF SUPPLY OF REAL ESTATE FINANCE IN KENYA

BY

PHILIP MUNYWOKI MUTHUNGU

REG NO: D61/P/8459/2006

A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE A WARD OF THE DEGREE OF MASTER OF BUSINESS ADMINISTRATION (MBA), SCHOOL OF BUSINESS, UNIVERISTY OF NAIROBI

OCTOBER 2012

DECLARATION

This Research Project is my own original work and has not been presented for a Degree Qualification in any other University or Institution of learning.

SIGNED …… DATE **…….**

PHILIP MUNYWOKI MUTHUNGU
D61/P/8459/2006

This Research Project has been submitted for Examination with my approval as the University Supervisor.

SIGNED: …… DATE: …….

DR. JOSIAH ADUDA
School of Business
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DEDICATION

This paper is dedicated to my parents for their guidance and persistence and for being a source of inspiration and support in the course of my studies

ACKNOWLEDGEMENT

The MBA programme has been a long, taxing and challenging journey and the successful completion has been as a result of support received from many people. I am indebted not only to people who gave me the inspiration, support and encouragement to purse MBA programme but also to everybody who gave me the guidance and assistance on what has been reported in this project.

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Above all, special thanks to the Almighty God for the gift of life and good health, lack of which I would not have made it this far.

ABSTRACT

The purpose of the study was to investigate the factors affecting real estate finance supply. It was important to verify the reasons why housing finance are not being supplied by the financial intermediaries readily. Could it be that potential borrowers are not approaching the financial institutions to source for housing finance or is it that the lender's requirements are so stringent that individual's cannot meet up with this lender's requirements. The study was carried out as a survey of real estate developers, real estate owners and financiers operating in Kenya as of 31st December 2011. The sample size was made up of 30 real estate developers, 30 home owners and 10 housing financiers. It was considered necessary and important to obtain information using questionnaire in extracting information from users of real estate finance in Kenya at the time. The data collected by means of the questionnaire survey, was analysed and conclusions were used in discussing all factors that affecting supply of real estate financing in Kenya.

There were revelations about the situation in the supply of housing finance in Kenya. In lending, financial institutions give out loans in consideration of interest to be charged on the loans and the riskiness of the loan. The ability of financial institutions to lend for housing (supply of housing finance) determines the quantity of housing finance that could be supplied for house acquisitions. The research identified these factors; value of property, government regulation, income level, interest rates and loan security do affect the availability and supply of housing finance will be reduced. The efforts by the government to ensure faster clearances for active real estate development would enable developers in a great way. The researcher recommends that the government should streamline the various real estate policies in different ministries into a single guide and to set up a separate real estate division within the ministry with the objective of running a single window clearance of all required paper work and clearances. Also the government should establish a housing loan guarantee scheme run by existing government housing corporations to assess risks in some real estate development and the applicant's credit scores then giving guarantees to the developers and financiers so as to encourage financiers to lend more and at affordable interest rates.

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ABBREVIATIONS

AfDB	African Development Bank
ANOVA	Analysis of Variance
CBK	Central Bank of Kenya
CDC	Commonwealth Development Corporation
CRR	Cash Reserve Requirement
EABS	East African Building Society
GDP	Gross Domestic Product
HFIs	Housing Finance Institutions
HFCK	Housing Finance Company of Kenya
KBS	Kenya Building Society
KNBS	Kenya National Bureau of Statistics
LTV	loan-to-value
MFI	Micro Finance Institutions
NBFIs	Non-bank financial institutions
NGO	Non-Governmental Institutions
NNE	New Neoclassical Economics
NSE	Nairobi Stock Exchange
NSSF	National Social Security Fund
OMO	Open Market Operations
PLS	Partial Least Squares
S&L	Savings and Loan
SSA	Sub-Saharan Africa
TQM	Total Quality Management
USDHUD	United States Department of Housing and Urban Development
UNCHS	United Nations Centre for Human Settlements (Habitat)

CHAPTER ONE

INTRODUCTION AND BACKGROUND TO THE STUDY

1.1 Background Information

In the year's immediately preceding independence in 1963, the housing finance sector was marked by instability as a result of political uncertainty. In the event, HFI deposits plunged from KSh 208 million in 1959 to KSh 90 million in 1962. However, this period soon gave way to a phase of consolidation and the mortgage industry expanded substantially from 1964 onwards. The principal HFIs were the Housing Finance Company of Kenya, Kenya Building Society (KBS), and Savings and Loan (S&L). HFCK was incorporated in 1965 as a joint venture between government and the Commonwealth Development Corporation (of the United Kingdom), taking over the assets of First Permanent of East Africa and those of KBS. S&L, the largest HFI at the time, experienced substantial setbacks around the time of independence and was taken over, initially by Pearl Assurance and, in 1970, by Kenya Commercial Bank, a parastatal. East African Building Society, a relatively small HFI which had opened for business in 1959, weathered the political uncertainties of the day and expanded rapidly in the years that followed.

HFCK, EABS and S&L, the principal HFIs, achieved fast growth during the 1970s. Between 1975 and 1980, for instance, HFCK deposits increased at an annual average rate of 20% and those of the EABS by 24%. In mid-1981, following a general decline in the growth of deposits, tax-free housing development bonds were introduced to enable HFCK and S&L to attract additional savings. These institutions also benefited from deposits by the National Social Security Fund (NSSF) and from loans by the government. Starting in the mid-1980's the mortgage industry witnessed major changes and upheavals. By 1986, the number of HFIs had grown to about 36, comprising four limited liability companies and 32 building societies but only 15 of the latter were active. Taking into account that the country had for many years been served by only one building society, the growth in numbers of this type of HFI had been nothing short of dramatic. Gardner et al. (1986) have advanced two reasons for this growth. The first is that the coffee price boom of 1976-77 provided the financial impetus for the rapid increase in the number of such

institutions. Second, licensing of financial institutions under the Banking Act was tightened in 1985 following the collapse of a financial company. Thus, building societies remained the principal avenue for the entry of firms into the financial sector. Notwithstanding the proliferation of HFIs, the industry continued to be dominated by HFCK, EABS and S&L. Still, the newer institutions competed aggressively for savings.

In 1984, the country experienced its first post-independence failure of a financial institution, that of the Rural and Urban Credit Finance Company. In response, the government tightened the regulatory and supervisory regime. More specifically, a number of steps were taken via an amendment to the Banking Act (Cap. 488). First, stricter conditions were imposed on the level of paid-up capital, as well as that of unimpaired reserves relative to deposit liabilities. For instance, paid-up capital for local non-bank financial institutions (NBFIs) was raised from Ksh 5 million to Ksh.7.5 million. Second, NBFIs were prohibited from owning shares in commercial banks. Third, a Deposit Protection Fund was created at the Central Bank.

These measures notwithstanding, a group of financial institutions, several building societies among them, failed in due course. A combination of factors led to this failure, some political, others management-related. First, a good number of building societies had invested heavily in property development, an activity that was considered more profitable but which naturally carried a higher risk. A notable example was Pioneer Building Society which collapsed largely because of delayed house sales. Second, major institutional investors, such as the NSSF, withdrew their deposits from the new building societies, partly out of the need to comply with political directives but also as a result of genuine concern for the security of their deposits. Third, the number of building societies had expanded too rapidly relative to the volume of available deposits. Fourth, the regulatory and supervisory regime was weak and potential problems could therefore not be arrested in time. In particular, the Registrar of Building Societies did not possess the staff needed to assure effective supervision. Government intervened and re-organized some of the failed institutions under the umbrella of a new bank, the Consolidated Bank of Kenya. Potential crises were averted in the years that followed but, in the first half of

1993, a number of financial institutions were placed under receivership including one HFI.

In spite of these setbacks, the mortgage industry registered some expansion. HFCK saw its public deposits grow, in nominal terms, from Ksh.1.89 billion in 1987 to Ksh.3.4 billion (USD 120.9 million) in 1992. However, in real terms that is, after making adjustments for inflation growth was marginal. As for mortgage lending, advances increased from Ksh.204.5 million in 1984 to Ksh.614.0 million in 1992 (USD 21.8 million). Even so, there was stagnation between 1986 and 1988 but lending rebounded in 1989 and 1990 registering nominal growth rates of 34.2% and 52.3%, respectively. Stagnation set in once again in 1991. With some variations, EABS and S&L shared a similar experience. Arguably the most important historical development was the freeing of interest rates in July, 1991, a measure taken to ensure a more efficient allocation of resources. Although interest rates had hitherto been controlled by the Central Bank they had nevertheless remained positive in the years leading up to 1990. However, the liberalization of interest rates was overshadowed by the very high rate of inflation in 1993, conservatively estimated to have averaged around 40% but to have peaked at roughly 100% during the year. Since HFIs are not able to lend at nominal rates exceeding 30% -- because there is little demand at that level -- real interest rates turned sharply negative. The response of HFIs was to suspend new mortgage lending altogether, choosing instead to invest in high yielding treasury bills.

Although inflation fell substantially in subsequent years, and with it interest rates, mortgage interest rates remained above 20% per annum for the rest of the decade. Towards the end of the 1990s, the housing finance market in Kenya went through a transformation from being predominantly public-sector oriented, to a more market-driven enterprise. With interest rate decontrol and privatization, those institutions that were previously controlled and sheltered by government, became exposed to market forces.

Housing demand, commonly referred to as effective demand, seeks to measure the willingness and ability of households to pay for housing. It is a function of many factors: household income, the price (or rent) of a dwelling, financing arrangements (including

interest rate and the loan term), and household preferences for different attributes of a dwelling, such as location. There is empirical evidence that households are willing to spend more on housing if they are buying their own house than if they are renting. Housing demand is often contrasted with housing need, a socially derived concept that measures the number of dwellings required to house a population above an arbitrarily determined standard or norm, with no regard for the ability to pay.

In microeconomic terms, the housing finance market is considered as the interaction between a supply matrix of housing finance quantity classified by characteristics such as pricing / volume and a demand matrix of households classified by their characteristics, preferences and constraints Follain et al (1980). The market allocates housing finance on the basis of the price (interest rate) and the number of households that are willing to pay the bid prices in consideration that they have their preferences and constraints. It is argued that there is disequilibrium in the housing finance market when the price does not adjust fast enough to clear the market. On the supply side of the housing finance market in the developed economies, the lenders structures remain national in nature; common developments include a reduction of credit restrictions. Developments include increased loan-to-value (LTV) ratio, which is defined as the ratio of bank lending to property value, a wider array of loan contracts offered to borrowers and a move towards greater reliance on capital market funding via securitization of housing loans CGFS (2006). It is important to note that most housing finance markets that have historically relied more on fixed rate products have experienced an increased demand for, and use of adjustable rate mortgages as well as loan types combining features from both fixed and adjustable rate mortgages.

1.2 Statement of the Problem

The rise in household income is slowly percolating into growing urbanization causing a change in lifestyle trend. Urbanization has resulted in the nuclear family structure from the traditional joint-family system which is likely to create huge demand for urban housing leading to further expansion of the city's sub-urban regions. The above fundamentals in turn have created a huge demand supply gap in all sectors of the housing market, commercial, residential, retail and hospitality. The fact that more than half of the 40 million households in Kenya still live in temporary or semi-permanent structures suggest that housing has a huge potential demand in both the middle-income and high-income segments.

The housing sector in Kenya has seen tremendous growth in the recent years with property prices soaring and the number and scale of projects increasing. Developers have been looking at new sources of raising funds such as from investors, both domestic and foreign, through avenues such as listings on Nairobi Stock Exchange (NSE), private equity participation and the setting up of joint ventures. Recognizing the need for foreign funding, the government has allowed foreign direct investment. As a result, foreign investors are permitted to invest in wholly owned subsidiaries or in joint ventures with Kenyan real estate companies as long as minimum capitalization requirements are met within six months of the commencement of operations and the capital remains locked in the project for three years thereafter. (Financial Times, 2007). Entry of foreign retailers is accelerating demand for mall space.

A study by Dasan (1996) looked at analysis of factors which influence supervisor's motivation in Kenya's building and construction industry. Omufira (2001) observed the extent of TQM implementation in the construction industry. A case study of the Kenyan building industry by Njiru (2003) looked at the performance of real estate markets. The case of Central Business District of Nairobi by Sikasa C. (2004) looked at customer perception of change management practices in the mortgage industry. The case of HFCK by Mandere A.N. (2006) looked at a survey of QM practices in the large Kenyan building construction firms. Mutuku (2006) observed the factors influencing the development of

secondary mortgage market in Kenya with special emphasis on mortgage backed securities while Matara (2008) looked at a survey of sources of finance for building construction firms in Kenya. Marete D, (2011), reviewed the determinants of real estate property prices in Kiambu Municipality in Kenya. None of the local studies in the university focused on the determinants of supply of real estate in Kenya.

1.3 Objective of the study

The objective of the study was to investigate determinants of supply of real estate finance in Kenya.

1.3.1 The specific objectives were:

1. To find out if the economic model of providing housing finance in developed economies can be adopted in the Kenyan economy.
2. To evaluate the key factors that have contributed to the operational efficiencies and inefficiencies of supply of real estate financing in Kenya.

1.5 Significance of the study

The environment in which real estate developers conduct their daily routines is composed of factors which ultimately determine their success. Discovery and subsequent recommendation for elimination of any problems could improve performance of these businesses. The study therefore will contribute to business management and practice by providing an understanding on how to boost performance real estate developers. The various stakeholders will therefore understand the links between the necessary incentives for the growth and performance of the targeted businesses. Researchers who might be interested in this topic could find the results opening up new avenues for further re search. The study will also be of benefit to other researchers who may feel the need to further research on the same problem in their areas of specialization.

CHAPTER TWO

LITERATURE REVIEW

2.1 Financial institutions' role in housing finance

If the funding of mortgage loans is left primarily to the deposit-taking institutions, they can only supply mortgage loans through deposit mobilized which are short-tenured. As a consequence of the high proportion of short-term liabilities in their deposits, they tend to lend short according to the commercial bank loan theory and the real bill doctrine. The theory stipulates that bank loans should be short-term and self-liquidating because commercial banks usually have short-term deposits. According to the theory, banks should not grant long-term loans such as housing / real estate loans or loans for financing purchase of plant and machinery because they are considered too illiquid Elliot (1984); Ritter & Silber (1986) as cited by Soyibo (1996).

A large percentage of financial institutions in the emerging economies are still adopting the business model used in the era of market-making (1970s-1980s) in the US relying on short-term deposits liabilities to fund long-term mortgages assets USDHUD (2006); Cho (2007), which are contradictory to the tenets of the commercial bank loan theory. This model had a unique shortcoming under volatile interest rate environment where lenders are borrowing short-term and lending on long-term basis at high interest rates that results in dampened housing finance demand. A well-functioning primary mortgage market requires adequate funding sources and variety of lenders in the primary market to promote further development. This includes savings mobilization and simple mortgage-backed debt instruments to offer lenders funding alternatives Roy (2007). Lenders in the primary market would include non-depository mortgage specialists, non-governmental organizations (NGOs), microfinance institutions (MFIs) and contractual savings systems Follain and Zorn (2000); Warnock and Warnock (2008). In Asia, the financial sectors in countries such as China, South Korea, Malaysia, Singapore, India and Indonesia are large and well developed UNCHS (2007). Whereas, domestic debt markets in most SSA countries (except South Africa) are in the developing stage and others in their infancy stage. SSA has 15 organized securities markets and the region's financial sectors are

characterized with a limited range of investment instruments particularly for longer tenors except the Johannesburg Stock Exchange Roy (2007); Irving & Manroth (2009).

Scale issues in equities have been mirrored in the bond market, where only a limited number of private bonds have been listed and there is little secondary market trading Merrill and Tomlinson (2000); Roy (2007). The major reason for the smallness of the securities market is lack of investors; in that insurance companies and pension funds are too small to act as major institutional investors. Despite the fact that insurance companies are allowed by statute to invest in real estate, they lack the necessary long-term funds for investment Roy (2007).

2.2 Review of theories

The driving force of economic growth and development as enunciated by Schumpeter (1921) which include mobilization of savings, efficient capital allocation, effective risk management, ease of transactions with advancing technologies are lacking. In an effort to provide housing and subsidized housing finance, various central governments have established institutions to provide housing finance. Even with the establishment of these institutions, their management has been affected by political and other negative factors that are not favourable for business survival. Therefore, the theoretical framework of this study is based on the New Neoclassical Economics (NNE) which is an integration of Neoclassical Economics and Transaction Cost Economics.

2.2.1 Theory One: Mass Psychology and Irrational Exuberance

The dominant explanations of the housing finance to date have been demand-side explanations. Robert Shiller has argued that the demand is driven by consumers' irrational exuberance and belief that real estate prices would continue to appreciate, stoking the demand for housing finance.

We do not question the existence of irrational consumer expectations and behavior. There is undoubtedly a great deal of irrational or misguided consumer behavior in real estate

investment. But this behavior required readily available financing. Shiller's demand-side theory cannot explain the movement in yield spreads during the bubble and is, therefore, a necessarily incomplete explanation. Credit relationships are two-sided relationships, and the evidence from PLS spreads indicates that any increase in housing finance demand was outstripped by an increased in housing finance supply.

2.2.2 Theory Two: Consumers' Inability to Anticipate Inflation

An alternative psychological theory has been presented by Markus Brunnermeir and Christian Julliard. Brunnermeir and Julliard argue that consumers are incapable of sorting between real and nominal changes in interest rates and rents. Therefore, consumers account for low nominal rates when making mortgage decisions, but fail to account for future appreciation of prices and rents falling commensurately with anticipated inflation. The result is that consumers overestimate the value of real estate when inflation is declining.

Brunnermeir and Julliard's theory may well be correct, but it too cannot explain the movement in yield spreads during the bubble. Therefore, their theory, like Shiller's, is at best an incomplete explanation of the bubble, as the yield spread movement shows that any growth in demand was exceeded by a growth in supply.

2.2.3 Theory Three: Inelastic Housing Supply

A third demand-side quasi-hypothesis for the housing finance, presented by urban economists Edward Glaeser, Joseph Gyourko and Albert Saiz, emphasizes the geographic variation in the housing bubble. There was considerable regional and local variance; some metropolitan areas, such as Detroit and Cleveland, did not experience a bubble, while others experienced bubbles of greater or lesser size. Glaeser, Gyourko and Saiz explain the variation based in part on variations in the elasticity of housing supply. In some parts of the country, local regulations and urban growth have been on a collision course for several decades. In these cases, with the inability of supply to expand, increased demand for real estate only resulted in higher prices.

In other words, Glaeser, Gyourko and Saiz contend that in inelastic housing markets, the housing demand curve shifted rightwards. And because most consumers finance the purchase of their homes, the rightward shift in the housing demand curve would have also resulted in a rightward shift in the mortgage finance demand curve. Glaeser, Gyourko and Saiz do not present supply constraints as the explanation for the bubble, although others do. At most, Glaeser, Gyourko and Saiz see supply inelasticity as affecting variations in how the bubble played out regionally. They argue that supply inelastic regions are more likely to experience greater price volatility and bubbles and that the extent of the bubble was determined to some degree by housing supply inelasticity.

2.3 Review of emperical studies

The neoclassical economics perspective looked into the dynamics of prices and quantities though largely an institution-free perspective in which only function matters Merton & Bodie (1995); North (1994), as cited by Merton & Bodie (1995). Thereafter, Williamson (1985 p.16 and 1988) in discussing the New Institutional Economics highlights the functional perspective of the financial system. The basis of economic theory is that commercial transactions are the prime drivers of economic growth such that the more frequently transactions take place, the higher the potential of economic growth. For economic growth and development, Schumpeter (1912) argues that financial intermediaries like banks and other financial institutions mobilize savings, allocate capital, manage risk, ease transactions and monitor firms. It is in this process of lending that financial intermediaries are considered to be utilizing resources and contributing to economic growth and development and there are evidences to support Schumpeter's view that financial institutions promote development Fry (1988); King and Levine (1993); Benhabib and Siegel (2000); Arestis et al (2001); Wachtel (2001) and Scholtens & Wensveen (2003).

Further in the literature, one of the biggest problems faced by the banks is lack of information about the promoters and the projects to be financed with the bank facilities

Jones & Maclennan (1987); Altman & Saunders (1998); Byamugisha (1999); Guzman (2000) and Mints (2006). Therefore, the economics of information, which has been a great contributor to the standard Neoclassical Economics since the late 1970s' is considered to be relevant to this study. The New Neoclassical Economies (NNE) is an integration of Neoclassical Economics (NE) and Transaction Cost Economics (TCE), with a primary role for NE but without losing sight of TCE. Among the presentations that assume part of the role of TCE in the framework of NE, is the information economics survey by Stiglitz (2000). The new information economics, he claimed, not only showed that institutions mattered, and explain why the institutions arose and the forms they took, but showed why they mattered. He noted that Arnott and Stiglitz (1991) showed that non-market institutions could even exacerbate the consequences of market failure, which was earlier articulated by Coase (1960).

Coase (1960) argued that if the costs of handling through the market are high and if the net costs are lower, only then may government regulations be relevant. However, the design of appropriate government interventions can be problematic to the extent that on occasions it brings into serious questioning the suitability of government interventions as the only option in correcting market failures Hammond (2006a & 2006b). The mere failure of private industry, when left from public interference, to maximize national dividend does not itself warrant intervention; for this might make things worse. When issue of accountability is not on the agenda, governments in most of the emerging economies monopolizes resources and power, and this monopoly is often worse than that of the private sector in the sense that the former entails larger TC and hence much more social costs relative to the latter. Hurwics (1973) noted that whenever information is imperfect and/or markets are incomplete, competitive markets do not obey the Pareto optimality efficiency criterion. Also, in NE literature, Kogiku (1971) noted that a competitive equilibrium ceases to produce Pareto-optimality when there are externalities that affect the system. However, Stiglitz (2000 p.1458) concluded without taking cognizance of associated TC, that "Government interventions, in form of, say taxes or subsidies on commodities – will lead to Pareto improvements". In line with the discussions and conclusion above on transaction cost, the next section then examines transaction cost and the theory of financial intermediation.

The current theory of financial intermediation concentrates on transaction costs and asymmetric information, but is inadequate in explaining the current complex financial transactions. It is therefore, referred to as traditional approach to financial intermediation. The financial intermediaries were considered as institutions being used to execute government monetary policies Benson and Smith Jr. (1976), without contributing to economic growth and development. The assertions might be right in the case of financial intermediaries in the emerging economies, due to the level of their economic growth. The financial intermediaries in the developed economies have gone through stages of development and by their functioning and operation they are contributing to the economic growth of their domiciled environment. The success in the theory of financial intermediation can only be appreciated when a financial market is not perfect. As noted by Berger et al (1995), a large percentage of past research on financial institutions has identified assumed imperfections like taxes, costs of financial distress, transaction costs, asymmetric information and importantly regulation.

In terms of regulation, which can either be structural or prudential, the government regulates the financial market to ensure financial stability as well as addressing problems of asymmetric information and moral hazard. While structural regulation limits the degree of risk that an institution can take in order for government to protect investor's funds and exposure limits of the financial institutions Pilbeam (2005), prudential regulation takes care of disclosure requirements, capital adequacy and liquidity requirements. Even with the identified importance of effective regulations of financial institutions, Llewellyn (2008), Milnes & Wood (2009) and Shin (2009) in discussing the Northern Rock situation highlighted problems in the regulatory framework of the British Financial System. Few of the identified problems include: inadequate role of government in responding to financial market distress and ambiguity in regard to the distinction between liquidity and solvency issues in banks. Llewellyn (2008) suggested that in any regulatory / supervisory regime, four areas that need to be addressed include prudential regulation of the financial firms; management and systemic stability; lender-of-last resort function and conduct of regulation and supervision business.

The lack of adequate regulation has resulted in lending behaviour of financial intermediaries being out of tune with economic realities. This has resulted in the lending standard being disconnected from economic fundamentals Markowitz (2009); Jones and Watkins (2009) and the banks failing with great speed exposing flaws in the regulatory system designed to identify failing institutions The Wall Street Journal (2009). Also, Scholtens and van Wensveen (2000 & 2003) are of the opinion that there is imperfection in the market when information is not flowing freely (information asymmetries). In the absence of information asymmetries, due to deregulation and deepened financial market, improvement in information technology and reduction in transaction cost, which are attributes of the financial markets in the development economies, the relevance of financial intermediaries reduces greatly.

While transaction cost highlights role of these intermediaries in the distribution function, the emphasis on the information asymmetries revolves around the origination and servicing function Merton (1989); Allen & Santomero (1998). This is due to the fact that these institutions are considered as information sharing coalitions Leland & Pyle (1997) and they can achieve economies of scale and act as delegated monitors on behalf of their customers Diamond (1984); Scholtens & van Wensveen (2003). Therefore, they can deal with individuals and transact business with their dynamic strategies at minimum cost than individuals doing their businesses which might result in high transaction cost. The transaction cost is not limited to foreign exchange and cost of borrowing Tobin (1963); Towey (1974); Fischer (1983), it also includes costs of auditing and monitoring, search costs etc which are high in most of the emerging economies. The transaction costs in these economies are high because of implicit and explicit costs of doing business which ultimately reflects on the cost of borrowing for property acquisition. Pagliari (2007) noted that in acquisition and disposition of privately held real estate, transactions cost are high which reduces returns on that type of investment. The transaction cost in this type of investment includes cost of traveling in the course of acquiring and disposing the real estate, legal fees, due diligence costs, brokerage commissions and transfer taxes depending on where the transaction is taking place.

The argument goes further from the observation made by Levine (1997) that informational asymmetries and transaction costs reduces liquidity and increases liquidity risk. These asymmetric information and other credit market frictions has various effects in the financial markets. These shortcomings, observes Levine (1997) create the incentives for the establishment of institutions that augments liquidity with the intentions of increasing their profitability. Chiuri and Jappelli (2003) were of the opinion that in the quest of the financial intermediaries to accumulate savings in form of liquid wealth, the lenders (financial intermediaries) requests potential borrowers to make down-payments in arranging funds for property acquisition. This down-payment is becoming a unique factor in determining when most first time buyers start climbing the property ladder. In the US studies, Duca & Rosenthal (1994); Haurin et al (1997) observed that the down-payment drives mortgage availability and the timing of property acquisition by first time buyers. Ortala - Magne and Rady (1998 & 1999) examines the economic impact of down payment.

In the financial systems, the bank-based model has the attributes to acquire information about firms, thereby improving corporate allocations Diamond (1984); Ramakrishinan & Thakor (1984), manage cross-sectional, inter-temporal and liquidity risk in an effort to enhance investment efficiency and economic growth Allen & Gale (2000); Bencivenga & Smith (1991). In attracting projects with high returns to an economy, there should be capital to fund it Levine (1997) and at the right price. As it was argued by Vatnick (2008), a lower cost of capital is important for economic growth because it induces rising investment and higher rate of capital accumulation for faster economic growth. Therefore, the financial intermediaries are expected to be liquid to provide funds for the projects, it translates to the fact that there is linkage between liquidity and economic development.

The literature on finance reveals that there are only two broad types of finance available: debt and equity finance. Financing of a project either by debt or equity depends on the characteristics of assets being financed and transaction cost reasoning suggests the use of debt to finance re-deployable assets and equity used to finance non re-deployable assets Williamson (1988). Furthermore, Jensen and Meckling (1976) in the study of theory of

firms argue that debts are utilized if the ability to exploit potentially profitable investment opportunities is limited by the resources of the owner. Debt finance yields a fixed return to its suppliers in states when the firm is not bankrupt (that is, the firm has sufficient funds to make the fixed payment) Edwards and Fischer (1994). Bank lending as a form of debt can be categorized into two: either as asset specific or corporate loans Crosby et al (2000). Again, the debt can be either secured or unsecured.

However, equity finance gives its suppliers the right to the firm's residual returns after payments to the suppliers of debt finance, and in addition, the right to vote on decisions concerning the firm's operation in states when a firm is not bankrupt. When the firm goes bankrupt, limited liability provisions mean that suppliers of equity receive nothing. In such state, they even loose the right to make decisions about the firm's operations in such states. In situation of non-bankruptcy, suppliers of equity finance have the right to the firm's residual return; they do not have the right to receive a fixed payment in every period which may be yearly or half-yearly Edwards and Fischer (1994); Toby (2006). On the other hand, Cranston (2002) and Tirole (2006) classify debt finance into short-term and long-term. Short-term debt finance instruments includes bank overdraft, commercial papers and short-term trade credit and long-term debt finance instruments includes housing loans, mortgages and other forms of informal credit transactions. In the context of the developing world, debt finance can be obtained from formal financial institutions like banks, micro-finance arrangements, indigenous moneylenders, family members, employers and government Nubi (2005). Heffernan (2003) and Tirole (2006) argued that financial instruments vary widely according to the characteristic of term to maturity. Sight deposits at banks have zero term to maturity, as they can be withdrawn on demand. Consequently, equity has no redemption date and therefore possesses an infinite term to maturity.

One of the biggest problems faced by the banking sector is lack of information about the promoters and the projects to be financed with the bank facilities Guzman (2000); Djankov et al (2007), to determine whether the borrowers will be able to pay the principal and interest when they fall due. Altman and Saunders (1998) highlighted the array of information on various borrowers' details to include their character (reputation), capital

(leverage), capacity (volatility of earnings) and collateral. However, Mints (2006) limited the borrowers required information to "the three C's of lending" which are collateral factor, capacity factor and credit factor, which are all relevant to lending in both developed and emerging economies.

The current theory of financial intermediation concentrates on transaction cost and asymmetric information and they are considered to be inadequate as tools to explain the fundamentals of financial intermediation, which is risk management. Therefore, their contributions are being classified as traditional and old. Moreover, there are two aspects to the lending operations of the financial institutions. The ability of the financial institutions to lend determined by the strength of their balance sheets and the willingness of these institutions to lend as risk managers.

In the banking literature, capital adequacy is one of the five key variables identified in measuring bank balance sheet strength while others are asset quality, management, earnings and liquidity Rojas-Suarez (2002); Hefernan (2003); Buckle and Thompson (2005). The capital adequacy regulatory rules have impact on the bank behaviours Dewatripont and Tirole (1994); Freixas and Rochet (1997); Chiuri et al (2002). It is argued that there are two ways by which these rules affect bank behaviours. Firstly, it is known that capital adequacy regulatory rules strengthen bank capital and improves the resilience of a bank to negative shocks and secondly, capital adequacy affects banks in risk taking and management behaviour.

It has also been argued by various authors Allen (2004); Pan (2008) that capital adequacy rules like Basel II may impact the banking system's ability to extend loans and advances to the productive sector of the economy. When capital requirement arises and with capital constraints in most countries of the emerging market due to lack of depth in their capital markets; the banks adopt a risk-shifting model as means of risk management. Risk management is about managing a mismatch between supply of funds and the demand for investments and these risks could be credit risk, liquidity risk, systemic risk, mismatch risk or interest rate risk Odenbach (2002); Heffernan (2003); van Order (2005); Mints (2006) and Akinwunmi et al (2007) & (2008a). With risk management being the core

business of the financial intermediaries, Dewatripont & Maskin (1995); van Thadden (1995) opinionated that financial institutions operating in a market-based financial system, due to competition, will have their inefficiencies associated with banking activities reduced and thereby promote economic growth.

Saunders (2002) analyses a risk-shifting model as a process whereby financial institutions, banks in particular, in an effort to meet up with new capital requirements moves away from low-yielding loans to high risk loans in expectation of high earnings. Furthermore, Caprio Jr. et al (2008) argue that risk-shifting takes place at every stage of financial engineering. If these loans eventual pay off, banks meet up with their higher capital requirements from loan profits, otherwise they are liquidated.

2.4 Determinants of Supply of Housing

The role of a housing finance system does not stop at the provision of shelter, it is also very important to the mobilization of domestic savings, shelter being one of the first priorities of households and a leading reason for savings. Therefore, the literature contends that the housing finance sector can and should play a central role in the mobilization of resources by households Renaud 1984; Renaud (2008). In Asia, according to UN-Habitat's state of the World's cities 2006-7 report, 73 percent of urban dwellers live in non-permanent housing. The housing sector is severely constrained by lack of an adequate and appropriate housing finance system, in which Asian Development Bank study says that Asia's mortgage sector is the least developed in the world UNCHS (2007). The situation in SSA is similar, characterized by the lack of housing finance.

The stock of housing finance in Namibia and South Africa comes to 18-20 percent of GDP, for other countries for which data are available had about 2 percent (Nigeria, Mali, Morocco, Senegal) Roy (2007). In Asia, many countries mortgage financing per year is less than 2 percent of GDP compared to 88 percent in the United Kingdom (UNCHS (2007) and 15-21 percent in Chile, Malaysia and Thailand Honohan and Beck (2007). In societies where social housing is not on the priority list of government, the affordability

would have to be looked at from the point of view of the individual's own ability to raise money needed to meet the cost or price of housing needs. Generally, the first source of funding for the individual is their income because it does not involve payment of interest. Many countries in the emerging economy have nascent and weak financial markets. The participation of financial markets in financing housing has been limited and the majority of low-income households are also excluded from the formal financial services industry UNCHS (2007). This resulted in 70 to 80 percent of housing finance in emerging economies being raised from the informal market Okpala (1994); Buckley et al (1994); Saravanan (2007) and Tiwari & Debata (2008). These informal markets are made up of loans from relatives, employers and money lenders that supplement savings and current income for housing finance Renaud (1985); Kim (1997).

However, formal housing finance supply in emerging economies is operated through both policy-driven and the market-oriented housing finance channels Deng and Fei (2008). The policy-driven housing finance is mainly through Housing Funds Schemes, which are mandatory housing savings scheme while the market-oriented housing finance is characterized by commercial loans from financial institutions. In the developed economies, commercial mortgages are referred to as collateralized lending to property developers whereas in the emerging economies, commercial loans are basically mortgages raised from financial institutions.

With the magnitude of housing needs in most of the countries in the emerging economy, Buckley and Kalarickal (2004), Hassler (2005) and Merrill (2006) argued that there are requirements that emerging economies must embrace, if they are going to move forward in terms of delivering housing finance. The requirements include stable macroeconomic conditions, a legal framework for property rights, mortgage market infrastructure and funding sources to promote financial intermediation and each will now be discussed.

2.4.1 Macroeconomic conditions

Macroeconomic policies are impacts of exogenous interventions at the aggregate or economy-wide levels Burda and Wyplosz (1997); Hammond (2006) and Roy (2007).

Macroeconomic instability and its corollary of high and volatile domestic interest rates, erratic monetary and exchange rate policies coupled with weaknesses in the financial systems of many emerging market countries Bhattacharya et al (1997); Irving and Manroth (2009), have a disproportionate impact on long-term mortgage finance. Various factors contributes to greater macroeconomic volatility in emerging markets, the most important is that their production structure is typically much less diversified than that of developed countries and often dependent on primary commodities.

The macroeconomic policies might be adopted to affect (decrease/increase) the nominal interest rate, or volatility of inflation, which has affected the efficiency of housing finance. In differentiating between housing affordability and housing finance affordability, Buckley et al (1994) argued that housing finance affordability arises when inflation makes housing unaffordable at the market rates of interest. This resulted in indexation as means of addressing the housing finance affordability problem especially in the Latin America and a few African countries like Ghana. Therefore, the objective of and redesigning mortgage contract is to eliminate financial constraints that impede the affordability housing and provide a financing vehicle so that those who can afford to, and so desire, can purchase homes Buckley et al (1993). This assertion has been argued by Buckley (1996) and Kim (1997) that indexation of deposits and mortgage products can only deal with moderate inflation.

A sound macroeconomic policy framework is one that promotes growth by keeping inflation low, the budget deficit small and the current account sustainable Fischer (2004); Hale (2007). Therefore, the financial regulatory authorities (central banks) in most emerging market economies have used policies like the cash reserve requirement and liquidity ratio as instruments of monetary control. Cash reserve requirement is the percentage of the banks cash asset to be kept in an account with the central bank. This policy is adopted to control volume of funds available for financial institutions to invest in granting loans and advances.

2.4.2 Financial Development and Liberalization

In most of the emerging market economies, the financial sub sector is generally shallow relative to the sizes of these economies. The shallowness of these institutions results in limited access to financial services, with the low-income earners and even medium income earners mostly discriminated against in the financial market. This form of discrimination comes in the form of being denied credit facilities due to their inability to meet the stringent requirements of suppliers of finance Roy (2007); Renaud (2008). In terms of liberalization, there has been a relative efficiency in the credit markets of the emerging economies due to the adoption of market discipline and risk-based capital guidelines. Almost all countries in the emerging economies are moving away from rigid.

2.4.3 Financial Infrastructure and Incomplete Financial Systems

The financial infrastructure of a country shapes the structure, organization and performance of the finance industry and the process of capital formation, and therefore the mortgage market development strategies Renaud (2008); Boleat (2008). This is done when attempts are made to increase the depth and breadth of their financial markets. One of the indicators for measuring financial deepness of an economy is the total deposits within a financial system as a percentage of GDP Vatnick (2008). The organization and structure of the financial system also plays an important causal role in the quality and rate of economic growth Bhattacharya (1997); Levine et al (2000); World Bank (2001).

2.5 Chapter Summary

It has been identified through various studies that the financial infrastructure of a nation shapes the structure, organization and performance of the finance industry and the process of capital formation and the mortgage market development strategies in both developed and emerging economies. Specifically, housing and housing finance in emerging market economies has been subjected to various limitations like inadequacy of legal and regulatory infrastructure, macroeconomic volatility, high transaction costs associated with the lack of adequate loan management practices and infrastructures for mortgage processing.

Despite the orthodox view that a secure supply of land with a good title (registered land) is a pre-requisite for effective housing finance system, efforts to get land registered and governments to be the sole custodian of land has been a disaster in most emerging economies. The idea of land registration has slowed down the process of housing finance disbursement and eventual supply. It can further be argued that the underdevelopment of mortgage lending to individual households can be explained by lack of demand for mortgage lending which might be due to high credit risks, lack of financial depth which translates into high interest rates on mortgage loans, the limited long-term credit resources of originating banks resulting from failure to develop secondary market financing. This anomaly has hitherto been tackled in the developed economies through the introduction of stable funding source and asset-liability management tools like securitization, credit derivatives, collateralized debt obligations and mortgage covered bonds. For most of the emerging economies, a combination of economic and social factors, such as low domestic savings rate, high price-to-income ratios and a general culture and social predisposition towards homeownership, suggests that the common problem facing them lies in the provision of housing finance services that can allocate untapped resources.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter describes the research design, population and sampling design, the data collection method, the research procedures and data analysis methods that was used in the course of the research. This section also indicates the research tools used to collect data, the data collection and the analysis procedures.

3.2 Research Design

The research adopted a descriptive research design. Accroding to Cooper and Schindler, (2001), descriptive study is used when one needs to determine characteristics associated with a subject population which this study is actually concerned with.

3.3 Hypothesis and Model to be tested

Using loan to housing (housing finance supply) as the dependent variable, it could be deduced at a point, that interest levels, income levels, loan security, value of property and government regulations being independent variables do significantly affect supply of loans to housing.

The basic model is as shown below:

$$\mathbf{Y = \beta o + \beta 1x1 + \beta 2x2 + \beta 3x3 + \ldots\ldots\ldots\ldots\ldots\ldots + \beta kxk + e \quad \ldots\ldots\ldots\ldots\ldots\ldots 1}$$

Where:

x1, x2, x3.....xk are the independent variables.

e the difference between the predicted and observed value of Y for the *i*th subject.

bo is the constant term

b1, b2, b3.....bk are the regression coefficients to be estimated.

The empirical model is therefore derived as:

$$\mathbf{SHF=\alpha_0+\alpha_1 IR+\alpha_2 IL+\alpha_3 LS + \alpha_4 VP + \alpha_5 GR \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots 2}$$

Where;

SHF = Supply of Housing Finance

α_O = Coefficient of the independent variable to SHF

IR = Interest rates

IL = Income level

LS = Loan Security

VP = Value of property

GR = Government regulations

3.4 Research population

The target population was all real estate developers, real estate owners and financiers operating in Kenya as at 31st December 2011.

3.5 Sample size

The target respondents were selected using purposive sampling. In this case respondents were chosen deliberately on assumption that they have valid information regarding the problem under study. The sampling frame was all real estate developers and home owners who have engaged in development business in Nairobi, however due to nature of their work, we did not find all of them in Nairobi City. It was important that the respondents are targeted based on the locations where was easy to locate them so as to save cost and time in the course of the research. Hence, this proposal focused on the respondents at their places of work. The sample size composed of 30 real estate developers, 30 home owners and 10 housing financiers.

3.5 Data collection

Qualitative and quantitative research approaches were used in this study. For quantitative, the data was obtained from the housing finance publications and other publications in the real estate sector. Qualitative research methodologies were designed to provide the researcher with the perspective of target audience members through immersion in a culture or situation and direct interaction with the people under study. The advantage of using qualitative methods was that they generate rich, detailed data that leave the

participants' perspectives intact and provide a context for health behaviour. Qualitative methods of data collection used in this study were questionnaires.

3.6 Data analysis

The researcher edited the collected data centrally Coppers and Schindller, (2000) assert that editing is done in order to detect errors and omission, ensure data is accurate, uniformly entered, complete, consistent with intent of the question and other information in the study and arranged to simplify coding and tabulation. Alpha numeric data coding was carried out to assign numbers and other symbols to the questions, which Coopers and Schindler (2000) explain is done in order to group the respondents to a limited number of classes or categories that facilitate efficient analysis. Coded data was tabulated in Statistical Package for Social Scientist (SPSS).

3.6.1 Correlation

Pearson product-moment correlation (r), as an example of correlation coefficient, gives the numerical summary of the direction and strength of the linear relationships between two variables. Since explanation needs to be given for the possible relationship between the dependent and independent variables, the statistical association between the variables has to be measured. The Pearson Product-Moment Correlation (r) is the most commonly applied correlation coefficient used in measuring a linear association and it was therefore adopted in this study to build the framework of the conceptual model.

3.6.2 Multi-collinearity

Another important issue in multiple regression analysis is the presence of multicollinearity. There is no precise definition of collinearity firmly established in the literature Mason and Pierreault (1991). Collinearity is agreed to be present if there is an approximate linear relationship among some of the predictor variables in the data. This refers to the relationship among the independent variables and it exists when the independent variables are highly correlated (r = 0.9 and above) Pallant (2007);

Tabachnick & Fidell (2007). Multicollinearity makes it difficult to determine the contribution of each independent variable Hair et al (1998).

3.7 Data validity and reliability

Data obtained from the primary source was considered authentic and could therefore be relied upon for deriving conclusions. Such data was also considered credible and free from error or any bias. Data was moved from the field only by the researcher to ensure confidentiality and reliability was observed, discussion and clarification were sought from the organizations targeted to ensure reliability, remains confidential and used only for the purpose of this study.

CHAPTER FOUR

DATA ANALYSIS AND PRESENTATION O FINDINGS

4.1 Introduction

The main objective of this study was to establish determinants of supply of real estate finance in Kenya. A total of 70 questionnaires were sent out, of which 44 were satisfactorily filled and returned, this formed 63% response rate. The collected data was analyzed using the statistical package for social scientist. The chapter starts with the analysis of results and concludes with giving the summary and interpretation of the findings.

4.2 Data presentation and explanation

4.2.1 Descriptive Statistics

Table 4.1: Descriptive statistics for measures of performance

	N	Minimum	Maximum	Mean	Std. Deviation
Housing Finance Supply	44	13.00	85.00	27.5000	28.29664
Interest Rates	44	13.00	96.00	31.1667	31.99635
Income Level	44	14.00	117.00	38.0000	39.18673
Loan Security	44	17.00	145.00	47.1667	48.53212
Value Of Property	44	23.00	165.00	53.6667	55.07328
Government Regulations	44	24.00	193.00	62.8333	64.37831
Valid N (listwise)	44				

The Descriptive Statistics table provides summary statistics for continuous, numeric variables. Summary statistics include measures of central tendency such as the mean. Measures of dispersion (spread of the distribution) such as the standard deviation. The minimum for housing finance supply and interest rates was 13 respectively, 14 for income level, 17 for loan security, 23 for value of property while 24 for government regulations. The maximum was 85 for housing finance supply, 96 for interest rates, 117 for income level, 145 for loan security, 165 for value of property while 193 for government regulations. The mean for housing finance supply was 27.5, 31.1 for interest rates, 38 for income level, 47.1 for loan security, 53.7 for value of property and 62.8 for

government regulations. The std deviation for housing finance supply was 28.3, 31.9 for interest rates, 39.1 for income level, 48.5 for loan security, 55 for value of property and 64.4 for government regulations

4.2.2 Correlation

Table 4.2: Correlation between measures of performance

		Housing Finance Supply	Interest Rates	Income Level	Loan Security	Value Of Property	Government Regulations
Housing Finance Supply	Pearson Correlation	1	.999(**)	.997(**)	.997(**)	.998(**)	.998(**)
	Sig. (2-tailed)		.000	.000	.000	.000	.000
	N	44	44	44	44	44	44
Interest Rates	Pearson Correlation	.999(**)	1	.998(**)	.998(**)	.999(**)	.998(**)
	Sig. (2-tailed)	.000		.000	.000	.000	.000
	N	44	44	44	44	44	44
Income Level	Pearson Correlation	.997(**)	.998(**)	1	1.000(**)	.999(**)	.998(**)
	Sig. (2-tailed)	.000	.000		.000	.000	.000
	N	44	44	44	44	44	44
Loan Security	Pearson Correlation	.997(**)	.998(**)	1.000(**)	1	.999(**)	.997(**)
	Sig. (2-tailed)	.000	.000	.000		.000	.000
	N	44	44	44	44	44	44
Value Of Property	Pearson Correlation	.998(**)	.999(**)	.999(**)	.999(**)	1	.999(**)
	Sig. (2-tailed)	.000	.000	.000	.000		.000
	N	44	44	44	44	44	44
Government Regulations	Pearson Correlation	.998(**)	.998(**)	.998(**)	.997(**)	.999(**)	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	
	N	44	44	44	44	44	44

** Correlation is significant at the 0.01 level (2-tailed).

The correlations table displays Pearson correlation coefficients, significance values, and the number of cases with non-missing values. Pearson correlation coefficients assume the data are normally distributed. The Pearson correlation coefficient is a measure of linear association between two variables. The values of the correlation coefficient range from -1 to 1. The sign of the correlation coefficient indicates the direction of the relationship (positive or negative). The absolute value of the correlation coefficient indicates the

strength, with larger absolute values indicating stronger relationships. The correlation coefficients on the main diagonal are always 1.0, because each variable has a perfect positive linear relationship with itself.

The significance of each correlation coefficient is also displayed in the correlation table. The significance level (or p-value) is the probability of obtaining results as extreme as the one observed. If the significance level is very small (less than 0.01) then the correlation is significant and the two variables are linearly related. If the significance level is relatively large (for example, 0.2) then the correlation is not significant and the two variables are not linearly related.

The study showed positive relationship for all the measures of performance, with a strong significance level for all the measures of performance i.e. Interest Rates, government regulations, income level, value of property and loan security.

4.2.3 Empirical Model

Table 4.3: Collinearity Diagnostics

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions			
				(Constant)	Government Regulations	Loan Security	Interest Rates
1	1	3.723	1.000	.00	.00	.00	.00
	2	.261	3.779	.00	.01	.00	.13
	3	.011	18.077	1.00	.08	.06	.47
	4	.005	27.425	.00	.91	.93	.39

a Dependent Variable: Housing Finance Supply

This table displays statistics that help you determine if there are any problems with collinearity. Collinearity (or multicollinearity) is the undesirable situation where the correlations among the independent variables are string. Eigenvalues provide an indication of how many distinct dimensions there are among the independent variables. When several eigenvalues are close to zero, the variables are highly intercorrelated and small changes in the data values may lead to large changes in the estimates of the coefficients. Condition indices are the square roots of the ratios of the largest eigenvalue

to each successive eigenvalue. A condition index greater than 15 indicates a possible problem and an index greater than 30 suggests a serious problem with collinearity. The variance proportions are the proportions of the variance of the estimate accounted for by each principal component associated with each of the eigenvalues. Collinearity is a problem when a component associated with a high condition index contributes substantially to the variance of two or more variables.

4.3 Qualitative analysis

Housing and residential construction are considered to be central importance for determination of both the level of welfare in a society and the level of aggregate economic activities. Housing is the largest asset owned by most households and is nearly always financed, in the sense that owners of housing capital must pay for their units over a period of years. It is therefore imperative for Kenya to appreciate benefits to be derived from having a well-functioning mortgage markets despite various economic issues being tackled with limited resources. The large external benefits to the national economy were highlighted to include capital market development, efficient real estate development, construction sector employment, easier labour mobility, more efficient resources allocation and lower macroeconomic volatility.

It has been identified through various studies that the financial infrastructure of a nation shapes the structure, organisation and performance of the finance industry and the process of capital formation and the mortgage market development strategies in Kenya. Specifically, housing and housing finance in Kenya has been subjected to various limitations like inadequacy of legal and regulatory infrastructure, macroeconomic volatility, high transaction costs associated with the lack of adequate loan management practices and infrastructures for mortgage processing.

Despite the orthodox view that a secure supply of land with a good title (registered land) is a pre-requisite for effective housing finance system, efforts to get land registered and governments to be the sole custodian of land has been a disaster in Kenya. The idea of land registration has slowed down the process of housing finance disbursement and eventual supply. It is further be argued that the underdevelopment of mortgage lending to

individual households can be explained by lack of demand for mortgage lending which is due to high credit risks, lack of financial depth which translates into high interest rates on mortgage loans, the limited long-term credit resources of originating banks resulting from failure to develop secondary market financing. This anomaly has hitherto been tackled in the developed economies through the introduction of stable funding source and asset-liability management tools like securitization, credit derivatives, collateralized debt obligations (CDOs) and mortgage covered bonds (MCB).

For Kenya, a combination of economic and social factors, such as low domestic savings rate, high price-to-income ratios and a general culture and social predisposition towards homeownership, suggests that the common problem facing them lies in the provision of housing finance services that can allocate untapped resources. Some of these untapped resources could be identified as the innovative sources of funding housing finance which are peculiar to their situations like diaspora bonds, migrant remittances and pension funds.

4.4 Summary and Interpretation of the findings

The Descriptive Statistics table provides summary statistics for continuous, numeric variables. Summary statistics include measures of central tendency such as the mean. Measures of dispersion (spread of the distribution) such as the standard deviation. The minimum for housing finance supply and interest rates was 13 respectively, 14 for income level, 17 for loan security, 23 for value of property while 24 for government regulations. The maximum was 85 for housing finance supply, 96 for interest rates, 117 for income level, 145 for loan security, 165 for value of property while 193 for government regulations. The mean for housing finance supply was 27.5, 31.1 for interest rates, 38 for income level, 47.1 for loan security, 53.7 for value of property and 62.8 for government regulations. The std deviation for housing finance supply was 28.3, 31.9 for interest rates, 39.1 for income level, 48.5 for loan security, 55 for value of property and 64.4 for government regulations

The correlations table displays Pearson correlation coefficients, significance values, and the number of cases with non-missing values. Pearson correlation coefficients assume the data are normally distributed. The Pearson correlation coefficient is a measure of linear association between two variables. The values of the correlation coefficient range from -1 to 1. The sign of the correlation coefficient indicates the direction of the relationship (positive or negative). The absolute value of the correlation coefficient indicates the strength, with larger absolute values indicating stronger relationships. The correlation coefficients on the main diagonal are always 1.0, because each variable has a perfect positive linear relationship with itself.

The significance of each correlation coefficient is also displayed in the correlation table. The significance level (or p-value) is the probability of obtaining results as extreme as the one observed. If the significance level is very small (less than 0.01) then the correlation is significant and the two variables are linearly related. If the significance level is relatively large (for example, 0.2) then the correlation is not significant and the two variables are not linearly related.

The study showed positive relationship for all the measures of performance, with a strong significance level for all the measures of performance i.e. Interest Rates, government regulations, income level, value of property and loan security.

The multiple correlation coefficient is the correlation between the observed and predicted values of the dependent variable. The values of R for models produced by the regression procedure range from 0 to 1. Larger values of R indicate stronger relationships. R squared is the proportion of variation in the dependent variable explained by the regression model. The values of R squared range from 0 to 1. Small values indicate that the model does not fit the data well. The sample R squared tends to optimistically estimate how well the models fit the population. Adjusted R squared attempts to correct R squared to more closely reflect the goodness of fit of the model in the population. Choose a model with a high value of R squared that does not contain too many variables. Models with too many variables are often over fit and hard to interpret.

The model summary for this study was found to be 1.000 for R value, 0.999 for R square, 0.997 for adjusted R square, 435.775 for F change, 3 for df1, 1 for df2, 0.035 for sig. F change while the Durbin-Watson was 3.405

The output for Regression displays information about the variation accounted for by your model. The output for Residual displays information about the variation that is not accounted for by your model. And the output for Total is the sum of the information for Regression and Residual. Model with a large regression sum of squares in comparison to the residual sum of squares indicates that the model accounts for most of variation in the dependent variable. Very high residual sum of squares indicate that the model fails to explain a lot of the variation in the dependent variable, and you may want to look for additional factors that help account for a higher proportion of the variation in the dependent variable. The mean square is the sum of squares divided by the degrees of freedom. The F statistic is the regression mean square divided by the residual mean square. The regression degrees of freedom is the numerator df and the residual degrees of freedom is the denominator df for the F statistic. The total number of degrees of freedom is the number of cases minus 1. If the significance value of the F statistic is small (smaller than say 0.05) then the independent variables do a good job explaining the variation in the dependent variable. If the significance value of F is larger than say 0.05 then the independent variables do not explain the variation in the dependent variable.

The sum of squares for regression was 4001.753, df 4, mean square 1000.438, F 572.725 while the Sig. was 0.031 while for the residual values, sum of squares was 1.747, df was 1 while the mean square was 1.747.

Collinearity (or multicollinearity) is the undesirable situation where the correlations among the independent variables are string. Eigenvalues provide an indication of how many distinct dimensions there are among the independent variables. When several eigenvalues are close to zero, the variables are highly intercorrelated and small changes in the data values may lead to large changes in the estimates of the coefficients. Condition indices are the square roots of the ratios of the largest eigenvalue to each successive eigenvalue. A condition index greater than 15 indicates a possible problem

and an index greater than 30 suggests a serious problem with collinearity. The variance proportions are the proportions of the variance of the estimate accounted for by each principal component associated with each of the eigenvalues. Collinearity is a problem when a component associated with a high condition index contributes substantially to the variance of two or more variables.

The previous study found out that low income level affects the housing finance Roy (2007). Further in the literature, one of the biggest problems faced by the banks in financing for real estate is value of property and the projects to be financed with the bank facilities Jones & Maclennan (1987); Altman & Saunders (1998); Byamugisha (1999); Guzman (2000) and Mints (2006). Even with the identified importance of effective regulations of financial institutions, Llewellyn (2008), Milnes & Wood (2009) and Shin (2009) in discussing the Northern Rock situation highlighted problems in the regulatory framework of as the impediment in real estate financing. Further Llewellyn (2008) suggested that in any regulatory / supervisory regime, four areas that need to be addressed include prudential regulation of the financial firms; management and systemic stability; lender-of-last resort function and conduct of regulation and supervision business. However the findings of this study indicate value of property, government regulation, income level, interest rates and loan security all affect the financing of real estate in Kenya.

CHAPTER FIVE

SUMMARY, CONCLUSION & RECOMMENDATIONS

5.1 Summary

In lending, financial institutions give out loans in consideration of interest to be charged on the loans and the riskiness of the loan. The demand and supply of housing finance are determined by various factors. The ability of financial institutions to lend for housing (supply of housing finance) determines the quantity of housing finance that could be supplied for house acquisitions. If the identified factors, value of property, government regulation, income level, interest rates and loan security are dwindling, the availability of housing finance will be reduced.

Interest Rates: Since interest rate is considered as the rate of return on investment, when the rate of interest is low on mortgage lending maybe due to government regulations, there is the tendency for the financial institutions to look for an alternative investment outlet in order to make good profit. Apart from the ability of the financial institutions to lend, the other aspect is the willingness of the financial institutions to lend towards mortgage acquisition. The factors consider by them includes criteria of security, income, price of the property, price of alternative goods and services and household characteristics (age, marital status etc).

Criteria of Security: With a favourable reserve and liquidity position, financial institutions in Kenya do not necessarily lend to all applicants that approach them for banking facilities, even if the prevailing interest rate is acceptable to the borrower. Loans are secured on specific property and necessary steps are taken in avoiding default on repayment or depreciation of the security below the book value of the debt. There are various ways by which the lenders determine the ability of the borrower to repay and the suitability of the property as security.

Income: The income being earned by a borrower determines the ability to repay the money borrowed. The total sum advanced therefore is usually restricted to some multiple of two to three times the applicant's salary. This means that the applicant shall have

secure prospects of a continuing income. However, in the recent past in the developed economies, it is considered that average home prices range from three to four times of annual income (Warnock & Warnock 2008). In Kenya, because wages are low and construction cost is high, average home prices are usually about eight times of annual income and to make it affordable, repayments have to be spread over a very long period of time. Thus a positive relationship exists between housing construction cost and building materials price, property price, foreign exchange rates because imported building materials are used for construction, labour cost and national disposable income.

Value of property: In some cases, control of lending is also exercised by avoiding advances on the security of properties which might deteriorate. Financial institutions prefer lending on properties which are relatively modern and also prefer houses to flats. As a property is becoming old-fashioned, the less is the willingness of financial institutions to lend based on the collateral of the property. This policy affects the distribution of house prices, since it would be difficult to raise a loan on a particular property. As a result of these constraints demand is always rationed and it is difficult to assess what the real demand for mortgage is while the supply constraints in the form of the reserve and liquidity ratios are easier to observe.

Loan to Income Ratio: Financial Institutions would like to know what percentage of his total income is already committed to payment of all. In some cases, bank might not lend to individuals that would commit more than 40 per cent of his income on settling debts.

5.2 Conclusion

This study investigated factors determining housing finance supply in Kenya. Housing finance is a major factor determining the quality and tenure of housing consumption, the overall financial portfolio of the public and the stability and effectiveness of the financial system. In Kenya, the government has intervened in the markets by setting up institutions characterized by a significant degree of regulation and segmentation from the rest of the financial markets and very often with governments providing subsidized housing finance.

Additional instruments in form of questionnaire, for the sectorial allocation of loans and advances by these financial institutions were employed to gather information from Corporate Banking / Loans and Advances Managers coupled with unstructured interviews. Supplementary questionnaires were directed to the users of housing finance at the household level as control for validity to the research findings.

Applying a multiple regression approach, the model identified that housing finance supply in Kenya is significantly driven by clusters of factors related to value of property, government regulation, income level, interest rates and loan security. It is closely observed that housing finance models in the developed economies, which are largely financed by deposit liabilities, cannot be wholly adopted in the Kenyan economy. The implication for practice therefore is that financial institutions in Kenya must adequately increase their capital base for effective housing finance supply and introduce mortgage products with long-term tenure to actively mobilize resources for mortgage lending.

5.3 Policy Recommendations

The largest hitches to the development of the real estate segment of Kenya are government regulations, interest rate, loan security, value of property and income level as suggested by most of the respondents in the interviews. Changes brought in these segments can ensure a better rate of growth for the market and a relatively more attractive opportunity for the consumers and investors.

As discussed in the project, Real Estate in Kenya has a potent demand backed growth. Demand due to population increase, higher allocation to savings in real estate, actualization of mortgaging by consumers and bridging the gap of the current housing deficit will be a trigger for sustained growth.

The efforts by the government to ensure faster clearances for active real estate development would enable developers in a great way. The researcher recommends that the government should set up a separate real estate division with the objective of single

window clearance of all required paper work and clearances. Single window essentially means that the developers will need to approach only one department for the clearances required in checking the title of the land, the water treatment plant, electricity and water utility connections, permission for construction and labour related issues such as facilities and wages. Also the government should establish a housing loan guarantee scheme run by existing government housing corporations to assess risks in some real estate development and the applicant's credit scores then giving guarantees to the developers and financiers so as to encourage financiers to lend more and at affordable interest rates. The builders should be given support in ensuring that the land they own and hold is free of encroachment from slums. Also, free hold land should be released to developers with proper title clearances to the land quickly. Some litigation processes take years for clearances, which should be put onto a fast track.

5.4 Limitations of the Study

Every research has certain drawbacks. It is therefore necessary to incorporate them in the project to obtain a true perspective of the research topic. The following are a few drawbacks the researcher faced during my research study.

The study makes use of qualitative analysis, which is interview and questionnaire based in order to find out the determinants of housing finance in Kenya. However quantitative approach has not been used as it would have prolonged the study. Hence financial statements such as Balance Sheet and Profit and Loss of Real estate listed companies have not been analyzed to arrive at the growth prospects of the sector in quantitative terms.

Also due to difference in valuation methods adopted by different countries and limited relevant data; comparison of Kenyan real estate companies to international real estate companies operating in Kenya has not been possible.

Another drawback was getting through to companies for the purpose of an interview. Limited number of interviewees induced the researcher to collect further information through a questionnaire survey.

Further, there was a possibility of a biased research being carried out due to all interviewees being Nairobi-based. Therefore the researcher increased the sample size to adequately include companies from all parts of Kenya to get a clear national perspective of the real estate market.

However, the research aim was to provide a broad overview and give valuable prospects to the participants of this industry as well as to investors seeking to invest in the Kenyan real estate sector.

5.5 Suggestions for further studies

For academic world. This research Result is expected to become a valuable input in study related to housing finance for real estate. This Research has not yet expressed all variables that can influence housing finance, then in order to increase science/knowledge development, other researchers who are interested in similar problems are suggested to conduct a continuation research by adding further determinants of housing finance

The study was done for the companies and real estates in Nairobi, a suggestion is made that a similar study be done for companies and real estate developers beyond Nairobi and results be compared.

The study was done for Kenya i.e. real estate companies operating in Kenya, it is suggested that a cross sectional study be done for the other East African real estate developers.

REFERENCES

Akinwunmi, A., Gameson, R., Hammond, F. and P. Olomolaiye (2007) – Mortgage Insurance and Housing Finance in Emerging Economies- in Boyd, D.(Ed)- Proceedings of 23rd Annual ARCOM Conference, 3-5 September 2007, University of Ulster, Belfast-UK, Association of Researchers in Construction Management,

Akinwunmi, A., Gameson, R., Hammond, F. and P. Olomolaiye (2008) – The Effect of Macroeconomic Policies on Project (Housing) Finance in Emerging Economies – in Lodi,

Alhashimi, H.and Dwyer, W (2004) Is there such an entity as a housing market? Paper presented at the 10th Annual Pacific Rim Real Estate Conference, Bangkok

Allen, F. and D. Gale (1988) – Optimal Security Design, Review of Financial Studies Fall 1988 pp 229-268.

Allen, F. and D. Gale (1994) - Financial Innovation and Risk Sharing, Cambridge, Massachusetts: MIT Press

Altman, E.T. and Saunders, A. (1998) – Credit risk measurement: Developments over the last 20 years, Journal of Banking and Finance, 21(1998), pp 1721-1742.

Arnott, R. and Stiglitz, J. (1991) – Moral Hazard and Non-Market Institutions: Dysfunctional Crowding out after monitoring, American Economic Review 81, pp 179-190.

Benston, G.J. and C.W. Smith Jr (1976) – A Transaction Cost Approach to the theory of Financial Intermediation, Journal of Finance May 1976, Vol. 31 No 2, pp 215-231.

Berger, A.N., Herring, R.J. and G.P. Szego (1995) – The Role of Capital in Financial Institutions, Journal of Banking and Finance 19, pp 393-430.

Bhattacharya, A., Montiel, P.J. and S. Sharma (1997) – How Can Sub-Saharan Africa Attract More Private Capital Inflows? Finance and Development June 1997, Vol. 34 No 2 pp 3-6.

Boleat, M. (2008) – Housing Development and Housing Finance in Britain – Some lessons for emerging markets, Housing Finance International March 2008, Vol. 22 Issue 3, pp 53

Burda, M. and C. Wyplosz (1997) – Macroeconomic: A European Text, 2nd Edition, N.Y; Oxford University Press.

Buckle, M and J Thompson (1998) The UK Financial System: Theory and Practice (3rdEdition), N Y : Manchester University Press.

Buckley, R M (1996) Housing Finance in Developing Countries. N.Y: Macmillan.

Byamugisha, F. (1999) – The effects of land registration on Financial Development and Economic Growth: A Theoretical and Conceptual Framework, Policy Research Working Paper 2240, Washington DC: World Bank.

Caprio Jr, G., Demirguc-Kunt, A. and E.J. Kane (2008) – The 2007 Meltdown in Structured Securitisation: Searching for Lessons, Not Scapegoats, Finance and Private Sector Team, Development Research Group - October 2008, World Bank: Washington DC.

Chiuri, M.C. and T. Jappelli (2003) – Financial Market imperfections and home ownership: a comparative study, European Economic Review Vol.47 Issue 5, pp 857-875.

Chiuri, M.C., G. Ferri and G. Majnani (2002) – The Macroeconomic Impact of Bank Capital Requirement in Emerging Economics: Past Evidence to Assess the Future, Journal of Banking and Finance 26, pp 881-904.

Cho, M. (2007) – 180 Years' Evolution of the US Mortgage Banking System: Lessons for Emerging Mortgage Markets, International Real Estate Review, Vol. 10 No 1 pp 171-212.

Coase, R.H. (1960) – The Problem of Social Cost, Law and Economics, 3, pp 1-44

Crosby, N., French, N. and Oughton (2000) – Bank lending valuations on Commercial property: Does European mortgage lending value add anything to the process? Journal of Property Investment & Finance Vol.18 No 1, 2000, pp 66-83.

Dasan M. B. (1996) – Analysis of factors which influence supervisor's motivation in a building in Kenya in the construction industry. African Competitiveness Report 1996.

Deng, Y. and Fei, P. (2008) – The Emerging Mortgage Markets in China – in Ben-Shahar, D., Yui Leung, C.K. and S.E. Ong (Eds) – Mortgage Markets Worldwide, pp 1-33, Chichester -West Sussex, United Kingdom: John Wiley and Sons Ltd

Dewatripont, M. and E. Maskin (1995) – Credit and efficiency in centralized and decentralized economies, Review of Economic Studies October 1995, Vol. 62 Issue 213, pp 541-555.

Dewatripont, M. and J. Tirole (1994) – The Prudential Regulation of Banks, Cambridge, MA: MIT Press.

Diamond, D.W. and P. Dybvig (2000) – Bank runs, deposit insurance and liquidity, The Federal Reserve Bank of Minneapolis Quarterly Review Winter 2000, Vol.24 No 1

Diamond, D.W. (1984) – Financial Intermediation and delegated monitoring, Review of Economic Studies 51, pp 393-414

Djankov, S., McLiesh, C. and A. Shleifer (2007) – Private credit in 129 countries, Journal of Financial Economics 84(2007) pp 299-329

Edwards, J and K. Fischer (1994) – Banks, Finance and Investment in Germany, Centre for Economic Policy Research, Cambridge University Press.

Elliot, J.W. (1984) – Money, Banking and Financial Markets, New York: West Publishing Co.

Fischer, S. (2004) – IMF Essays from a time of Crisis: The International Financial System,Stabilization and Development, Cambridge, MA: MIT Press, 2004.

Fischer, S. (1984) – A framework for monetary and banking analysis, Economic Journal 93, pp 1-16

Follain, J. and P. Zorn (2000) – The unbundling of residential mortgage finance, Journal of Housing Research 1(1), pp 63-89.

Fry, M.J. (1988) – Money, Interest and Banking in Economic Development, Baltimore: John Hopkins University Press

Guzman, M.G.(2000) – The Economic Impact of Bank Structure: A Review of Recent Literature, Federal Reserve Bank of Dallas, Economic and Financial Review, 2nd Quarter 2000, pp 11-25.

Hair, J.F., Anderson, R.E., Tatham, R.L. and W.C. Black (1998) – Multivariate Data Analysis (5th Edition), New Jersey: Prentice Hall.

Hale, G. (2007) – Sound Policies for Emerging Markets Financial Stability, International Finance Vol. 10 No 1 pp 101-114.

Hammond, F.N. (2006) – The Economic Impacts of Sub-Saharan African Urban Real Estate Policies, Unpublished PhD Thesis, School of Engineering and the Built Environment, University of Wolverhampton, UK.

Haurin, D.R., Hendershott, P.H. and S.W. Watcher (1997) – Borrowing constraints and the tenure choice of young households, Journal of Housing Research 8, pp 137-154.

Heffernan, S. (2003) Modern Banking in Theory and Practice, March 2003, Chichester-West Sussex: John Wiley and Sons.

Hurwics, W.P. (1973) – The Design of Mechanisms for Resource Allocation, American Economic Review 63, pp 1-30.

Irving, J. and A. Manroth (2009) – Local Sources of Financing for Infrastructure in Africa, Policy Research Working Paper 4878, African Sustainable Development Front Office, World Bank: Washington D.C.

Jensen, M.C. and Meckling, W.H. (1976) – Theory of the firm: Managerial behaviour, agency costs and ownership structure, Journal of Financial Economics 3.

Jaffee, D.M. and Renaud, B. (1997) Strategies to develop mortgage markets in transition economies. In: J. Doukas, V.Murinde and C. Wihlborg (eds) Financial Sector Reform and Privatization in Transition Economies.Ch.4, Amsterdam: Elsevier Science Publishers.

Jones, C. and C. Watkins (2009) – Housing Markets and Planning Policy, Wiley-Blackwell, 224pp, October 2009

Kim, K-H (1997) – Housing Finance and Urban Infrastructure Finance, Urban Studies Vol. 34 No 10, pp 1597-1620.

Kogiku, K.C. (1971) – Microeconomic Models, N.Y.: Harper and Row.

Leyland, H.E. and D.H. Pyle (1977) – Informational asymmetries, financial structure, and financial intermediation, Journal of Finance 32 pp 371-387

Levine, R. (1997) – Financial development and economic growth: views and agenda, Journal of Economic Literature 35, pp 688-726.

Levine, R., Loayza N. and T Beck (2000) – Financial intermediation and Growth: Causality and Causes, Journal of Monetary Economics, Vol. 46 No 1 pp 31-77.

Llewellyn, D.T. (2008) – The Northern Rock Crisis: A Multi-Dimensional Problem Waiting to Happen, Journal of Financial Regulation and Compliance 2008 Vol. 16 Issue 1pp 35-58.

Mandere A.N. (2006) – A survey of QM practices in the large Kenyan building construction firms. Africa Private Sector Group, Kenya, 2006.

Markowitz, H.M. (2009) – Proposals Concerning the Current Financial Crisis, Financial Analysts Journal Jan / Feb. 2009, Vol. 65 Issue 1, pp 25-27.

Mason, C.H. and N.D. Perreault (1991) – Collinearity, Power and Interpretation of Multiple Regression Analysis, Journal of Marketing Research 28, August 1991 pp 268-80.

Merrill, S. and Tomlinson, M. (2006) – Housing Finance, Microfinance and Informal Settlement Upgrading: An assessment of Ghana. Paper prepared for African Union of Housing Finance and USAID, The Urban Institute, Washington DC. June 2006.

Malpezzi, S (1999) Economic Analysis of housing markets in developing and transition economies. In: Cheshire, P. and Mills, E.D. (eds) Handbook of Regional and Urban Economics Applied Urban Economics, 3, 1791-1864.

Marete D, (2011) – The determinants of real estate property prices in Kiambu Municipality in Kenya. Unpublished Masters paper, School of Business, University of Nairobi, 2011.

Merton, R.C. and Z. Bodie (1995) – A Conceptual Framework for Analyzing the Financial Environment- in Crane, D.B., K.A. Froot, S.P. Mason, A.F. Perold, R.C. Merton, E.R.Sirri and P. Tufano (Eds) – The Global Financial System: A Functional Perspective, pp 3-32, Harvard Business School Press, Cambridge: MA.

Merton, R.C. (1989) – On the application of the continuous-time theory of finance to financial intermediation and insurance. Geneva Papers on Risk and Insurance Theory 14, pp 225-261.

Milne, A. and G. Wood (2009) – Shattered on the Rock? British Financial Stability from 1866 to 2007, Journal of Banking Regulation (2009), Vol.10 No 2 pp 89-127.

Mints, V. (2006) – Specifics of Credit Risk Assessment in Mortgage Lending-Sample of Russia, Housing Finance International September 2006, Vol.21 Issue1 pp 14-21.

Njiru (2003) The performance of real estate markets in Kenya, KEPLOTRADE Research Paper No 2/2004. December 2003.

North, D.C. (1994) – The Evolution of Efficient Markets in History – in James, J.A. and M. Thomas (eds)- Capitalism in context, Chapter 11 pp 257-264, Chicago: University of Chicago Press.

Nubi, T.O.(2005) – Housing Finance in Nigeria- Need for Re-Engineering (Unpublished Reports)-www.housingfinance.org/pdfstorage/Africa

Nubi, T.O. (2008) – Affordable Housing Delivery in Nigeria, Paper presented at The Southern African Housing Foundation International Conference and Exhibition, 12-15 October 2008 – Cape Town, South Africa.

Omufira A.N. (2001) – Extent of TQM implementation in the construction industry, AICD Background Paper 13, Africa Region, World Bank, Washington, DC

Olotuah, A O (2000) The challenge of Housing in Nigeria Effective Housing in 21st Century Nigeria. In: Akinbamijo, O.B. et al. (eds) Environmental Forum, Federal University of Technology, Akure-Nigeria, 16-21.

Olotuah, A O and Aiyetan, A.O.(2006) Sustainable low-cost housing provision in Nigeria: a bottom-up participatory approach. In: Boyd, D. (ed) Proceeds of 22nd Annual

ARCOM Conference, 4-6 September 2006, Birmingham, UK, Association of Researchers in Construction Management, 633-639.

Pagliari, J. L. (2007) – The Pricing of Non-Core Real Estate Ventures: Estimating the net expected risk-adjusted return, The Journal of Portfolio Management Vol.34 (Autumn 2007), Special Real Estate Issue, pp 119-133.

Pallant, J. (2007) – SPSS Survival Manual: A Step by Step Guide to Data Analysis Using SPSS Version 15 (3rd Edition), Berkshire-England: Open University Press.

Pilbeam, K. (2005) – Finance and Financial Markets (2nd ed.), Basingstoke: Palgrave Macmillan.

Poole, W (2003) Housing in the Macroeconomy. Federal Reserve Bank of St Louis, Economic Review May/June 2003, 1-8.

Ramakrishinan, R.T.S. and A.V. Thakor (1984) – Information reliability and a theory of financial intermediation, Review of Economic Studies Vol. 51 Issue 166.

Renaud, B.M. (2008) – Mortgage Finance in Emerging Markets: Constraints and Feasible Development Paths- in Ben-Shahar, D., Yui Leung, C.K. and Ong, S.E. (Eds) – Mortgage Markets Worldwide, pp 253-288, Chichester - West Sussex, United Kingdom: John Wiley and Sons Ltd.

Ritter, L. S. and W. L. Silber (1986) – Principles of Money, Banking and Financial Markets, New York: Basic Book Inc.

Roy, F. (2007) – Expanding housing finance systems in Africa and Asia-how far Central and Eastern European models are replicable? Paper presented at APNHR 2007

Conference in Transformation in Housing, Urban Life and Public Policy, Seoul-Korea, 30 August-1 September.

Saravanan, P. (2007) – Recent Experiences in the Housing Finance Sector – A study with Reference to India, Housing Finance International September 2007, Vol.22 Issue 1.

Scholtens, B. and D. van Wensveen (2003) – The theory of Financial Intermediation: An Essay on what it Does (Not) Explain, Vienna: The European Money and Finance Forum (SUERF Studies 2003/1).

Schumpeter, J.A. (1912) – The Theory of Economic Development, Cambridge-Massachusetts: Harvard University Press.

Sikasa C. (2004), Customer perception of change management practices in the mortgage industry. Africa Private Sector Group, Kenya, 2004.

Shin, H.S. (2009) – Reflections on Northern Rock: the bank run that heralded the global financial crisis, Journal of Economic Perspective Winter 2009, Vol. 23 Issue 1 pp 101-124.

Soyibo, A. (1996) – Financial Linkage and development in Sub-Saharan Africa: The role of financial institutions in Nigeria, Working Paper 88, London: Overseas Development Institute

Stiglitz, J.E. (2000) – The Contributions of the Economics of Information to Twentieth century Economics, Quarterly Journal of Economics 115, pp 1441-1478.

Tirole, J. (2006) – The theory of Corporate Finance, New Jersey: Princeton University Press.

Tiwari, P and Moriizumi, O (2003) Efficiency of Housing Finance: A comparative Study of Mortgage instruments in Japan. European Journal of Housing Policy, 3(3).

Toby, A J (2006) Empirical study of the Liquidity Management Practices of Nigerian Banks Journal of Financial Management and Analysis, 19(1), 57-70.

UNCHS-Habitat (2007) – Improving the Performance of National Finance Institutions in Shelter Delivery, UNCHS: Nairobi-Kenya.

Van Order, R. (2005) – Risk Management and mortgage portfolios: some applications for emerging markets – in Hegedus, J. and R.J. Struyk (Eds) – Housing Finance: New and Old Models in Central Europe, Russia and Kazahkstan. Local Government and Public Service Reform Initiative, Open Society Institute, Budapest

Vatnick, S. (2008) – Financial Reforms and Emerging Markets, Financial Markets, Institutions and Instruments February 2008, Vol.17 Issue 1, pp 109-120.

Williamson, O.E. (1985) – The Economic Institutions of Capitalism, New York: The Free Press.

APPENDIX A – QUESTIONNAIRE

DETERMINANTS OF HOUSING FINANCE IN KENYA

[The following information is required for a Masters of Business Administration thesis. Kindly complete the questionnaire as per the instructions given being rest assured that the information provided will be used strictly for project purposes]

QUESTIONNAIRE TO HOUSE OWNERS

A. GENERAL BACKGROUND

1. What is your Marital Status? (Tick one box)
   a) Single
   b) Married
   c) Divorced
   d) Widow
   e) Widower

2. What is your Age? (Tick one box)
   a) 1-29
   b) 30-39
   c) 40-49
   d) 50-59
   e) 60+

3. What is the highest form of formal education that you have achieved? (Tick one box)
   a) None
   b) Primary
   c) Secondary
   d) Vocational / Technical
   e) Polytechnic / University

4. What is your current employment status? (Tick one box)
   a) White collar job (Civil Servant)
   b) White collar job (Private company)
   c) Blue collar job (Bricklayers etc)
   d) Self Employed (Specify)
   e) Other (Please specify)…….

5. What is your type of family? (Tick one box)
   a) Nuclear
   b) Joint / Extended

Others (Please specify)…….

B. SECURITY

6. What is the tenure of the house? (Tick one box)
   a) Own
   b) Rent
   c) Part Own / Part Rent
   d) Others (Please specify)…….

7. What is the form of ownership? (Tick one box)
   a) Inheritance
   b) Bought
   c) Built
   d) Others (Please specify)……..

If Answer to Q 7 is 3, go to Q 8
If Answer to Q 7 is 1, 2 or 4, go to Q 13

8. IF BUILT, did you? (Tick one box)
   a) Buy the plot
   b) Inherit the plot
   c) Others (Please specify)…….

9. IF BUILT, who carried out the construction? (Tick one box)
   a) Self-Built
   b) Contractor with material
   c) Contractor without material
   d) Others (Please specify)……..

10. If you have a loan, what security was given for the loan (Tick all that apply)
   a) The Property
   b) Another Property
   c) Agricultural Land
   d) Others (Please specify)…….

11. What kind of security can you offer for a loan? (Tick all that apply)
   a) The house itself
   b) Any other property
   c) Agricultural land
   d) Others (Please specify)…….

C. VALUE OF PROPERTY

12. When housing is to be acquired, it is either constructed from scratch or a fully erected building is purchased. If constructed from scratch, how much did the plot cost? Kshs……

13. How much did you spend on construction? Kshs.……

12. Can you give value of the property on completion?
Kshs. …….

14. If a fully erected building was purchased, what was the value?
Kshs……

15. What is the Present Value of your property? (Tick one box)
    a) Less than Kshs. 1000, 000
    b) Kshs. 1000,001- Ksh. 5000,000
    c) Kshs. 5000,001- Kshs. 10,000,000
    d) Above Kshs. 10,000,000
    e) Don't know

D. INTEREST RATE

16. Whether a house is constructed from the scratch or a fully erected building is purchased, how did you finance your house acquisition? (Tick one or more boxes as applicable)
    a) Mortgage Institution
    b) Commercial Bank
    c) Relatives and Friends
    d) Personal Savings
    e) Money from abroad
    f) Loan from employer
    g) Sold another house
    h) Private lender
    i) Other (Please specify)……..

17. If you borrowed, what was the rate of interest at the beginning of the transaction …….....

18. What is the rate of interest presently or on completion? …….....

19. If you have obtained a loan, how do you intend to repay it? (Tick all that apply)
    a) Extra work
    b) Employment income
    c) Reducing household expenditure
    d) Sale of valuables
    e) Other sources (Please specify)……

20. What is the repayment period for the loan? (Tick one box)
    a) Less than 24 months
    b) 25-48 months
    c) 49-96 months
    d) 97-144 months
    e) Others (Please specify)…….

21. Are you up to date with your loan repayments?
    a) Yes
    b) No

22. If No, How many months are you behind? (Tick one box)
    a) 3-6 months
    b) 7-12 months
    c) Over 12 months
    d) Others (Please specify)……..

23. What is the reason(s) for default in loan repayment? (Tick one box)
    a) Loss of Income
    b) Higher financial commitment
    c) Excessive Interest charges
    d) Others (Please specify)…….

24. If a loan was available, would you be willing to borrow to buy another house? (Tick one box)
    a) Yes
    b) No
    c) Don't know

E. GOVERNMENT REGULATION

25. The processing of loan applications with the financial institutions usually go through a long process, were you satisfied with the time taken to process? (Tick one box)
    a) Very satisfied
    b) Satisfied
    c) Dissatisfied
    d) Very Dissatisfied

26. On application, what percentage of the loan requested did you get? (Tick one box)
    a) 50%
    b) 60%
    c) 70%
    d) 80%
    e) 90%
    f) 100%
    g) Other (Please specify)……

27. Where did you obtain the remainder of the funds needed for your house acquisition? (Tick all that apply)
    a) From friends and families
    b) Private lenders
    c) Employer
    d) Others (Please specify)…….

28. Before applying for the loan, were you satisfied with the process and requirements? For example production of title deed, survey and architectural requirements

a) Very satisfied
b) Satisfied
c) Dissatisfied
d) Very Dissatisfied

F. INCOME LEVEL

29. How much do you save per month? (Tick one box)

a) Nothing
b) Kshs. 0 - Kshs. 10,000
c) Kshs. 10,000 – Kshs. 100,000
d) Above Kshs.100,000

30. What are your Total Household savings at present? (Tick one box)

a) Nothing
b) Kshs. 0 – Kshs. 10,000
c) Kshs. 10,000 – Kshs. 100,000
d) Above Kshs. 100,000

31. Where do you save? (Tick all that apply)

a) Commercial Bank
b) Cooperative society
c) Mortgage Institution
d) (Traditional Contributions)
e) Other (Please specify)……

32. What is your personal income per month? (Tick one box)

a) Kshs. 0 – 100, 000
b) Kshs. 100,000 – 200,000
c) Kshs. 200,000 – 300,000
d) Kshs. 300,000 – Kshs. 500,000
e) Above Kshs. 500,000

Thank you for participating in this Research. Please return questionnaire

APPENDIX B – QUESTIONNAIRE

DETERMINANTS OF HOUSING FINANCE IN KENYA

[The following information is required for a Masters of Business Administration thesis. Kindly complete the questionnaire as per the instructions given being rest assured that the information provided will be used strictly for project purposes]

QUESTIONAIRE TO PROPERTY DEVELOPERS

Name: _____
Age: ____
Company Name: _____
Position at work: _____

1. How significant do you think is Kenyans position as an investment destination for real estate at present from the point of view of both foreign and domestic investors? Please tick the appropriate box.

a) Very Significant
b) Increasingly gaining Significance
c) Minimal Significance

2. What importance does investment in real estate hold for you as an individual in contributing to your net worth? Please tick the appropriate box

a) Very Important
b) Increasingly becoming important
c) Not so important

3. What according to you is/will be the most preferred avenue for investment for an individual/ company in the real estate sector? Please tick the appropriate box.

a) Direct Investment in land/property
b) Investment in Listed Real Estate Company shares
c) Joint Venture with Realty Developer
d) Others (Please Specify)

4. Do you think the sudden surge in property prices across Kenya over the last two years is justified? Please tick the appropriate box.

a) Yes (Boom)
b) No (Bubble)
c) Cant Say

5. What according to you is the key problem faced by this sector? Please tick the appropriate box.

a) Lack of Infrastructural facilities
b) Ownership issues, unclear titles and abnormally high stamp duties

c) Rising Interest Rates dampening affordability
d) Others (Please specify)

6. Which segment according to you has the greatest scope for improving profits (IRR) – residential, commercial, retail or SEZ's (Special Economic Zones)?
How much return do you think it generates? Please tick the appropriate box

Segment _____

a) 5 – 10 %
b) 10 – 20 %
c) More than 20%

7. How do you see the real estate sector 10 years from now? Please tick the appropriate box

a) A stabilized sector
b) A risk- perceived sector
c) A high growth sector
d) Can't say

8. Which of the following sources of capital is most tapped by you? Please rank in order of preference: 1 being the most preferred and 3 being the least preferred

a) Bank loans
b) Foreign Direct Investment (FDI)
c) Capital Markets – IPOs (Initial Public Offer)

9. Do you think the Government of Kenya has taken adequate measures for the development of the real estate sector in recent years? Please tick the appropriate box

a) Yes
b) No
c) Don't Know

Thank You for your time and help!

APPENDIX C – QUESTIONNAIRE

DETERMINANTS OF HOUSING FINANCE IN KENYA

[The following information is required for a Masters of Business Administration thesis. Kindly complete the questionnaire as per the instructions given being rest assured that the information provided will be used strictly for project purposes]

QUESTIONAIRE TO HOUSING FINANCIERS

1. Why has Kenya become one of the most favoured destinations for investment in the real estate sector in the past 3 years?

……
……

2. What are the reasons for the sudden surge in property prices across Kenya? Could you throw light on whether you think this is a boom or a bubble?

……
……

3. What is the scope for the real estate segment in Kenya? Can you suggest the demand/supply dynamics for the sector?

……
……

4. What according to you are the key risks/ problems this sector will/ is facing? Could you recommend any solutions to the above problems?

……
……
……

5. What are the various approvals and regulations needed to be adhered to for the acquisition, development and completion of a project?

……
……
……

6. What are the different avenues for investment for an individual/ company in the real estate sector?

……
……
……

7. What are the different sources of capital available to a real estate developer?

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8. Which segment according to you has the greatest scope for improving profits (IRR) - residential, commercial, retail or SEZ's (Special Economic Zones)?

……
……

9. What role according to you has the Government played in the development of the real estate sector?

……
……

10. Where do you see the real estate sector 10 years from now?

……
……

Thank You for your time and help!

DETERMINANTS OF SUPPLY OF REAL ESTATE FINANCE IN KENYA

BY

PHILIP MUNYWOKI MUTHUNGU

REG NO: D61/P/8459/2006

A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE A WARD OF THE DEGREE OF MASTER OF BUSINESS ADMINISTRATION (MBA), SCHOOL OF BUSINESS, UNIVERISTY OF NAIROBI

OCTOBER 2012

DECLARATION

This Research Project is my own original work and has not been presented for a Degree Qualification in any other University or Institution of learning.

SIGNED …… DATE **…….**

PHILIP MUNYWOKI MUTHUNGU
D61/P/8459/2006

This Research Project has been submitted for Examination with my approval as the University Supervisor.

SIGNED: …… DATE: …….

DR. JOSIAH ADUDA
School of Business
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DEDICATION

This paper is dedicated to my parents for their guidance and persistence and for being a source of inspiration and support in the course of my studies

ACKNOWLEDGEMENT

The MBA programme has been a long, taxing and challenging journey and the successful completion has been as a result of support received from many people. I am indebted not only to people who gave me the inspiration, support and encouragement to purse MBA programme but also to everybody who gave me the guidance and assistance on what has been reported in this project.

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Above all, special thanks to the Almighty God for the gift of life and good health, lack of which I would not have made it this far.

ABSTRACT

The purpose of the study was to investigate the factors affecting real estate finance supply. It was important to verify the reasons why housing finance are not being supplied by the financial intermediaries readily. Could it be that potential borrowers are not approaching the financial institutions to source for housing finance or is it that the lender's requirements are so stringent that individual's cannot meet up with this lender's requirements. The study was carried out as a survey of real estate developers, real estate owners and financiers operating in Kenya as of 31st December 2011. The sample size was made up of 30 real estate developers, 30 home owners and 10 housing financiers. It was considered necessary and important to obtain information using questionnaire in extracting information from users of real estate finance in Kenya at the time. The data collected by means of the questionnaire survey, was analysed and conclusions were used in discussing all factors that affecting supply of real estate financing in Kenya.

There were revelations about the situation in the supply of housing finance in Kenya. In lending, financial institutions give out loans in consideration of interest to be charged on the loans and the riskiness of the loan. The ability of financial institutions to lend for housing (supply of housing finance) determines the quantity of housing finance that could be supplied for house acquisitions. The research identified these factors; value of property, government regulation, income level, interest rates and loan security do affect the availability and supply of housing finance will be reduced. The efforts by the government to ensure faster clearances for active real estate development would enable developers in a great way. The researcher recommends that the government should streamline the various real estate policies in different ministries into a single guide and to set up a separate real estate division within the ministry with the objective of running a single window clearance of all required paper work and clearances. Also the government should establish a housing loan guarantee scheme run by existing government housing corporations to assess risks in some real estate development and the applicant's credit scores then giving guarantees to the developers and financiers so as to encourage financiers to lend more and at affordable interest rates.

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ABBREVIATIONS

AfDB	African Development Bank
ANOVA	Analysis of Variance
CBK	Central Bank of Kenya
CDC	Commonwealth Development Corporation
CRR	Cash Reserve Requirement
EABS	East African Building Society
GDP	Gross Domestic Product
HFIs	Housing Finance Institutions
HFCK	Housing Finance Company of Kenya
KBS	Kenya Building Society
KNBS	Kenya National Bureau of Statistics
LTV	loan-to-value
MFI	Micro Finance Institutions
NBFIs	Non-bank financial institutions
NGO	Non-Governmental Institutions
NNE	New Neoclassical Economics
NSE	Nairobi Stock Exchange
NSSF	National Social Security Fund
OMO	Open Market Operations
PLS	Partial Least Squares
S&L	Savings and Loan
SSA	Sub-Saharan Africa
TQM	Total Quality Management
USDHUD	United States Department of Housing and Urban Development
UNCHS	United Nations Centre for Human Settlements (Habitat)

CHAPTER ONE

INTRODUCTION AND BACKGROUND TO THE STUDY

1.1 Background Information

In the year's immediately preceding independence in 1963, the housing finance sector was marked by instability as a result of political uncertainty. In the event, HFI deposits plunged from KSh 208 million in 1959 to KSh 90 million in 1962. However, this period soon gave way to a phase of consolidation and the mortgage industry expanded substantially from 1964 onwards. The principal HFIs were the Housing Finance Company of Kenya, Kenya Building Society (KBS), and Savings and Loan (S&L). HFCK was incorporated in 1965 as a joint venture between government and the Commonwealth Development Corporation (of the United Kingdom), taking over the assets of First Permanent of East Africa and those of KBS. S&L, the largest HFI at the time, experienced substantial setbacks around the time of independence and was taken over, initially by Pearl Assurance and, in 1970, by Kenya Commercial Bank, a parastatal. East African Building Society, a relatively small HFI which had opened for business in 1959, weathered the political uncertainties of the day and expanded rapidly in the years that followed.

HFCK, EABS and S&L, the principal HFIs, achieved fast growth during the 1970s. Between 1975 and 1980, for instance, HFCK deposits increased at an annual average rate of 20% and those of the EABS by 24%. In mid-1981, following a general decline in the growth of deposits, tax-free housing development bonds were introduced to enable HFCK and S&L to attract additional savings. These institutions also benefited from deposits by the National Social Security Fund (NSSF) and from loans by the government. Starting in the mid-1980's the mortgage industry witnessed major changes and upheavals. By 1986, the number of HFIs had grown to about 36, comprising four limited liability companies and 32 building societies but only 15 of the latter were active. Taking into account that the country had for many years been served by only one building society, the growth in numbers of this type of HFI had been nothing short of dramatic. Gardner et al. (1986) have advanced two reasons for this growth. The first is that the coffee price boom of 1976-77 provided the financial impetus for the rapid increase in the number of such

institutions. Second, licensing of financial institutions under the Banking Act was tightened in 1985 following the collapse of a financial company. Thus, building societies remained the principal avenue for the entry of firms into the financial sector. Notwithstanding the proliferation of HFIs, the industry continued to be dominated by HFCK, EABS and S&L. Still, the newer institutions competed aggressively for savings.

In 1984, the country experienced its first post-independence failure of a financial institution, that of the Rural and Urban Credit Finance Company. In response, the government tightened the regulatory and supervisory regime. More specifically, a number of steps were taken via an amendment to the Banking Act (Cap. 488). First, stricter conditions were imposed on the level of paid-up capital, as well as that of unimpaired reserves relative to deposit liabilities. For instance, paid-up capital for local non-bank financial institutions (NBFIs) was raised from Ksh 5 million to Ksh.7.5 million. Second, NBFIs were prohibited from owning shares in commercial banks. Third, a Deposit Protection Fund was created at the Central Bank.

These measures notwithstanding, a group of financial institutions, several building societies among them, failed in due course. A combination of factors led to this failure, some political, others management-related. First, a good number of building societies had invested heavily in property development, an activity that was considered more profitable but which naturally carried a higher risk. A notable example was Pioneer Building Society which collapsed largely because of delayed house sales. Second, major institutional investors, such as the NSSF, withdrew their deposits from the new building societies, partly out of the need to comply with political directives but also as a result of genuine concern for the security of their deposits. Third, the number of building societies had expanded too rapidly relative to the volume of available deposits. Fourth, the regulatory and supervisory regime was weak and potential problems could therefore not be arrested in time. In particular, the Registrar of Building Societies did not possess the staff needed to assure effective supervision. Government intervened and re-organized some of the failed institutions under the umbrella of a new bank, the Consolidated Bank of Kenya. Potential crises were averted in the years that followed but, in the first half of

1993, a number of financial institutions were placed under receivership including one HFI.

In spite of these setbacks, the mortgage industry registered some expansion. HFCK saw its public deposits grow, in nominal terms, from Ksh.1.89 billion in 1987 to Ksh.3.4 billion (USD 120.9 million) in 1992. However, in real terms that is, after making adjustments for inflation growth was marginal. As for mortgage lending, advances increased from Ksh.204.5 million in 1984 to Ksh.614.0 million in 1992 (USD 21.8 million). Even so, there was stagnation between 1986 and 1988 but lending rebounded in 1989 and 1990 registering nominal growth rates of 34.2% and 52.3%, respectively. Stagnation set in once again in 1991. With some variations, EABS and S&L shared a similar experience. Arguably the most important historical development was the freeing of interest rates in July, 1991, a measure taken to ensure a more efficient allocation of resources. Although interest rates had hitherto been controlled by the Central Bank they had nevertheless remained positive in the years leading up to 1990. However, the liberalization of interest rates was overshadowed by the very high rate of inflation in 1993, conservatively estimated to have averaged around 40% but to have peaked at roughly 100% during the year. Since HFIs are not able to lend at nominal rates exceeding 30% -- because there is little demand at that level -- real interest rates turned sharply negative. The response of HFIs was to suspend new mortgage lending altogether, choosing instead to invest in high yielding treasury bills.

Although inflation fell substantially in subsequent years, and with it interest rates, mortgage interest rates remained above 20% per annum for the rest of the decade. Towards the end of the 1990s, the housing finance market in Kenya went through a transformation from being predominantly public-sector oriented, to a more market-driven enterprise. With interest rate decontrol and privatization, those institutions that were previously controlled and sheltered by government, became exposed to market forces.

Housing demand, commonly referred to as effective demand, seeks to measure the willingness and ability of households to pay for housing. It is a function of many factors: household income, the price (or rent) of a dwelling, financing arrangements (including

interest rate and the loan term), and household preferences for different attributes of a dwelling, such as location. There is empirical evidence that households are willing to spend more on housing if they are buying their own house than if they are renting. Housing demand is often contrasted with housing need, a socially derived concept that measures the number of dwellings required to house a population above an arbitrarily determined standard or norm, with no regard for the ability to pay.

In microeconomic terms, the housing finance market is considered as the interaction between a supply matrix of housing finance quantity classified by characteristics such as pricing / volume and a demand matrix of households classified by their characteristics, preferences and constraints Follain et al (1980). The market allocates housing finance on the basis of the price (interest rate) and the number of households that are willing to pay the bid prices in consideration that they have their preferences and constraints. It is argued that there is disequilibrium in the housing finance market when the price does not adjust fast enough to clear the market. On the supply side of the housing finance market in the developed economies, the lenders structures remain national in nature; common developments include a reduction of credit restrictions. Developments include increased loan-to-value (LTV) ratio, which is defined as the ratio of bank lending to property value, a wider array of loan contracts offered to borrowers and a move towards greater reliance on capital market funding via securitization of housing loans CGFS (2006). It is important to note that most housing finance markets that have historically relied more on fixed rate products have experienced an increased demand for, and use of adjustable rate mortgages as well as loan types combining features from both fixed and adjustable rate mortgages.

1.2 Statement of the Problem

The rise in household income is slowly percolating into growing urbanization causing a change in lifestyle trend. Urbanization has resulted in the nuclear family structure from the traditional joint-family system which is likely to create huge demand for urban housing leading to further expansion of the city's sub-urban regions. The above fundamentals in turn have created a huge demand supply gap in all sectors of the housing market, commercial, residential, retail and hospitality. The fact that more than half of the 40 million households in Kenya still live in temporary or semi-permanent structures suggest that housing has a huge potential demand in both the middle-income and high-income segments.

The housing sector in Kenya has seen tremendous growth in the recent years with property prices soaring and the number and scale of projects increasing. Developers have been looking at new sources of raising funds such as from investors, both domestic and foreign, through avenues such as listings on Nairobi Stock Exchange (NSE), private equity participation and the setting up of joint ventures. Recognizing the need for foreign funding, the government has allowed foreign direct investment. As a result, foreign investors are permitted to invest in wholly owned subsidiaries or in joint ventures with Kenyan real estate companies as long as minimum capitalization requirements are met within six months of the commencement of operations and the capital remains locked in the project for three years thereafter. (Financial Times, 2007). Entry of foreign retailers is accelerating demand for mall space.

A study by Dasan (1996) looked at analysis of factors which influence supervisor's motivation in Kenya's building and construction industry. Omufira (2001) observed the extent of TQM implementation in the construction industry. A case study of the Kenyan building industry by Njiru (2003) looked at the performance of real estate markets. The case of Central Business District of Nairobi by Sikasa C. (2004) looked at customer perception of change management practices in the mortgage industry. The case of HFCK by Mandere A.N. (2006) looked at a survey of QM practices in the large Kenyan building construction firms. Mutuku (2006) observed the factors influencing the development of

secondary mortgage market in Kenya with special emphasis on mortgage backed securities while Matara (2008) looked at a survey of sources of finance for building construction firms in Kenya. Marete D, (2011), reviewed the determinants of real estate property prices in Kiambu Municipality in Kenya. None of the local studies in the university focused on the determinants of supply of real estate in Kenya.

1.3 Objective of the study

The objective of the study was to investigate determinants of supply of real estate finance in Kenya.

1.3.1 The specific objectives were:

1. To find out if the economic model of providing housing finance in developed economies can be adopted in the Kenyan economy.
2. To evaluate the key factors that have contributed to the operational efficiencies and inefficiencies of supply of real estate financing in Kenya.

1.5 Significance of the study

The environment in which real estate developers conduct their daily routines is composed of factors which ultimately determine their success. Discovery and subsequent recommendation for elimination of any problems could improve performance of these businesses. The study therefore will contribute to business management and practice by providing an understanding on how to boost performance real estate developers. The various stakeholders will therefore understand the links between the necessary incentives for the growth and performance of the targeted businesses. Researchers who might be interested in this topic could find the results opening up new avenues for further re search. The study will also be of benefit to other researchers who may feel the need to further research on the same problem in their areas of specialization.

CHAPTER TWO

LITERATURE REVIEW

2.1 Financial institutions' role in housing finance

If the funding of mortgage loans is left primarily to the deposit-taking institutions, they can only supply mortgage loans through deposit mobilized which are short-tenured. As a consequence of the high proportion of short-term liabilities in their deposits, they tend to lend short according to the commercial bank loan theory and the real bill doctrine. The theory stipulates that bank loans should be short-term and self-liquidating because commercial banks usually have short-term deposits. According to the theory, banks should not grant long-term loans such as housing / real estate loans or loans for financing purchase of plant and machinery because they are considered too illiquid Elliot (1984); Ritter & Silber (1986) as cited by Soyibo (1996).

A large percentage of financial institutions in the emerging economies are still adopting the business model used in the era of market-making (1970s-1980s) in the US relying on short-term deposits liabilities to fund long-term mortgages assets USDHUD (2006); Cho (2007), which are contradictory to the tenets of the commercial bank loan theory. This model had a unique shortcoming under volatile interest rate environment where lenders are borrowing short-term and lending on long-term basis at high interest rates that results in dampened housing finance demand. A well-functioning primary mortgage market requires adequate funding sources and variety of lenders in the primary market to promote further development. This includes savings mobilization and simple mortgage-backed debt instruments to offer lenders funding alternatives Roy (2007). Lenders in the primary market would include non-depository mortgage specialists, non-governmental organizations (NGOs), microfinance institutions (MFIs) and contractual savings systems Follain and Zorn (2000); Warnock and Warnock (2008). In Asia, the financial sectors in countries such as China, South Korea, Malaysia, Singapore, India and Indonesia are large and well developed UNCHS (2007). Whereas, domestic debt markets in most SSA countries (except South Africa) are in the developing stage and others in their infancy stage. SSA has 15 organized securities markets and the region's financial sectors are

characterized with a limited range of investment instruments particularly for longer tenors except the Johannesburg Stock Exchange Roy (2007); Irving & Manroth (2009).

Scale issues in equities have been mirrored in the bond market, where only a limited number of private bonds have been listed and there is little secondary market trading Merrill and Tomlinson (2000); Roy (2007). The major reason for the smallness of the securities market is lack of investors; in that insurance companies and pension funds are too small to act as major institutional investors. Despite the fact that insurance companies are allowed by statute to invest in real estate, they lack the necessary long-term funds for investment Roy (2007).

2.2 Review of theories

The driving force of economic growth and development as enunciated by Schumpeter (1921) which include mobilization of savings, efficient capital allocation, effective risk management, ease of transactions with advancing technologies are lacking. In an effort to provide housing and subsidized housing finance, various central governments have established institutions to provide housing finance. Even with the establishment of these institutions, their management has been affected by political and other negative factors that are not favourable for business survival. Therefore, the theoretical framework of this study is based on the New Neoclassical Economics (NNE) which is an integration of Neoclassical Economics and Transaction Cost Economics.

2.2.1 Theory One: Mass Psychology and Irrational Exuberance

The dominant explanations of the housing finance to date have been demand-side explanations. Robert Shiller has argued that the demand is driven by consumers' irrational exuberance and belief that real estate prices would continue to appreciate, stoking the demand for housing finance.

We do not question the existence of irrational consumer expectations and behavior. There is undoubtedly a great deal of irrational or misguided consumer behavior in real estate

investment. But this behavior required readily available financing. Shiller's demand-side theory cannot explain the movement in yield spreads during the bubble and is, therefore, a necessarily incomplete explanation. Credit relationships are two-sided relationships, and the evidence from PLS spreads indicates that any increase in housing finance demand was outstripped by an increased in housing finance supply.

2.2.2 Theory Two: Consumers' Inability to Anticipate Inflation

An alternative psychological theory has been presented by Markus Brunnermeir and Christian Julliard. Brunnermeir and Julliard argue that consumers are incapable of sorting between real and nominal changes in interest rates and rents. Therefore, consumers account for low nominal rates when making mortgage decisions, but fail to account for future appreciation of prices and rents falling commensurately with anticipated inflation. The result is that consumers overestimate the value of real estate when inflation is declining.

Brunnermeir and Julliard's theory may well be correct, but it too cannot explain the movement in yield spreads during the bubble. Therefore, their theory, like Shiller's, is at best an incomplete explanation of the bubble, as the yield spread movement shows that any growth in demand was exceeded by a growth in supply.

2.2.3 Theory Three: Inelastic Housing Supply

A third demand-side quasi-hypothesis for the housing finance, presented by urban economists Edward Glaeser, Joseph Gyourko and Albert Saiz, emphasizes the geographic variation in the housing bubble. There was considerable regional and local variance; some metropolitan areas, such as Detroit and Cleveland, did not experience a bubble, while others experienced bubbles of greater or lesser size. Glaeser, Gyourko and Saiz explain the variation based in part on variations in the elasticity of housing supply. In some parts of the country, local regulations and urban growth have been on a collision course for several decades. In these cases, with the inability of supply to expand, increased demand for real estate only resulted in higher prices.

In other words, Glaeser, Gyourko and Saiz contend that in inelastic housing markets, the housing demand curve shifted rightwards. And because most consumers finance the purchase of their homes, the rightward shift in the housing demand curve would have also resulted in a rightward shift in the mortgage finance demand curve. Glaeser, Gyourko and Saiz do not present supply constraints as the explanation for the bubble, although others do. At most, Glaeser, Gyourko and Saiz see supply inelasticity as affecting variations in how the bubble played out regionally. They argue that supply inelastic regions are more likely to experience greater price volatility and bubbles and that the extent of the bubble was determined to some degree by housing supply inelasticity.

2.3 Review of emperical studies

The neoclassical economics perspective looked into the dynamics of prices and quantities though largely an institution-free perspective in which only function matters Merton & Bodie (1995); North (1994), as cited by Merton & Bodie (1995). Thereafter, Williamson (1985 p.16 and 1988) in discussing the New Institutional Economics highlights the functional perspective of the financial system. The basis of economic theory is that commercial transactions are the prime drivers of economic growth such that the more frequently transactions take place, the higher the potential of economic growth. For economic growth and development, Schumpeter (1912) argues that financial intermediaries like banks and other financial institutions mobilize savings, allocate capital, manage risk, ease transactions and monitor firms. It is in this process of lending that financial intermediaries are considered to be utilizing resources and contributing to economic growth and development and there are evidences to support Schumpeter's view that financial institutions promote development Fry (1988); King and Levine (1993); Benhabib and Siegel (2000); Arestis et al (2001); Wachtel (2001) and Scholtens & Wensveen (2003).

Further in the literature, one of the biggest problems faced by the banks is lack of information about the promoters and the projects to be financed with the bank facilities

Jones & Maclennan (1987); Altman & Saunders (1998); Byamugisha (1999); Guzman (2000) and Mints (2006). Therefore, the economics of information, which has been a great contributor to the standard Neoclassical Economics since the late 1970s' is considered to be relevant to this study. The New Neoclassical Economies (NNE) is an integration of Neoclassical Economics (NE) and Transaction Cost Economics (TCE), with a primary role for NE but without losing sight of TCE. Among the presentations that assume part of the role of TCE in the framework of NE, is the information economics survey by Stiglitz (2000). The new information economics, he claimed, not only showed that institutions mattered, and explain why the institutions arose and the forms they took, but showed why they mattered. He noted that Arnott and Stiglitz (1991) showed that non-market institutions could even exacerbate the consequences of market failure, which was earlier articulated by Coase (1960).

Coase (1960) argued that if the costs of handling through the market are high and if the net costs are lower, only then may government regulations be relevant. However, the design of appropriate government interventions can be problematic to the extent that on occasions it brings into serious questioning the suitability of government interventions as the only option in correcting market failures Hammond (2006a & 2006b). The mere failure of private industry, when left from public interference, to maximize national dividend does not itself warrant intervention; for this might make things worse. When issue of accountability is not on the agenda, governments in most of the emerging economies monopolizes resources and power, and this monopoly is often worse than that of the private sector in the sense that the former entails larger TC and hence much more social costs relative to the latter. Hurwics (1973) noted that whenever information is imperfect and/or markets are incomplete, competitive markets do not obey the Pareto optimality efficiency criterion. Also, in NE literature, Kogiku (1971) noted that a competitive equilibrium ceases to produce Pareto-optimality when there are externalities that affect the system. However, Stiglitz (2000 p.1458) concluded without taking cognizance of associated TC, that "Government interventions, in form of, say taxes or subsidies on commodities – will lead to Pareto improvements". In line with the discussions and conclusion above on transaction cost, the next section then examines transaction cost and the theory of financial intermediation.

The current theory of financial intermediation concentrates on transaction costs and asymmetric information, but is inadequate in explaining the current complex financial transactions. It is therefore, referred to as traditional approach to financial intermediation. The financial intermediaries were considered as institutions being used to execute government monetary policies Benson and Smith Jr. (1976), without contributing to economic growth and development. The assertions might be right in the case of financial intermediaries in the emerging economies, due to the level of their economic growth. The financial intermediaries in the developed economies have gone through stages of development and by their functioning and operation they are contributing to the economic growth of their domiciled environment. The success in the theory of financial intermediation can only be appreciated when a financial market is not perfect. As noted by Berger et al (1995), a large percentage of past research on financial institutions has identified assumed imperfections like taxes, costs of financial distress, transaction costs, asymmetric information and importantly regulation.

In terms of regulation, which can either be structural or prudential, the government regulates the financial market to ensure financial stability as well as addressing problems of asymmetric information and moral hazard. While structural regulation limits the degree of risk that an institution can take in order for government to protect investor's funds and exposure limits of the financial institutions Pilbeam (2005), prudential regulation takes care of disclosure requirements, capital adequacy and liquidity requirements. Even with the identified importance of effective regulations of financial institutions, Llewellyn (2008), Milnes & Wood (2009) and Shin (2009) in discussing the Northern Rock situation highlighted problems in the regulatory framework of the British Financial System. Few of the identified problems include: inadequate role of government in responding to financial market distress and ambiguity in regard to the distinction between liquidity and solvency issues in banks. Llewellyn (2008) suggested that in any regulatory / supervisory regime, four areas that need to be addressed include prudential regulation of the financial firms; management and systemic stability; lender-of-last resort function and conduct of regulation and supervision business.

The lack of adequate regulation has resulted in lending behaviour of financial intermediaries being out of tune with economic realities. This has resulted in the lending standard being disconnected from economic fundamentals Markowitz (2009); Jones and Watkins (2009) and the banks failing with great speed exposing flaws in the regulatory system designed to identify failing institutions The Wall Street Journal (2009). Also, Scholtens and van Wensveen (2000 & 2003) are of the opinion that there is imperfection in the market when information is not flowing freely (information asymmetries). In the absence of information asymmetries, due to deregulation and deepened financial market, improvement in information technology and reduction in transaction cost, which are attributes of the financial markets in the development economies, the relevance of financial intermediaries reduces greatly.

While transaction cost highlights role of these intermediaries in the distribution function, the emphasis on the information asymmetries revolves around the origination and servicing function Merton (1989); Allen & Santomero (1998). This is due to the fact that these institutions are considered as information sharing coalitions Leland & Pyle (1997) and they can achieve economies of scale and act as delegated monitors on behalf of their customers Diamond (1984); Scholtens & van Wensveen (2003). Therefore, they can deal with individuals and transact business with their dynamic strategies at minimum cost than individuals doing their businesses which might result in high transaction cost. The transaction cost is not limited to foreign exchange and cost of borrowing Tobin (1963); Towey (1974); Fischer (1983), it also includes costs of auditing and monitoring, search costs etc which are high in most of the emerging economies. The transaction costs in these economies are high because of implicit and explicit costs of doing business which ultimately reflects on the cost of borrowing for property acquisition. Pagliari (2007) noted that in acquisition and disposition of privately held real estate, transactions cost are high which reduces returns on that type of investment. The transaction cost in this type of investment includes cost of traveling in the course of acquiring and disposing the real estate, legal fees, due diligence costs, brokerage commissions and transfer taxes depending on where the transaction is taking place.

The argument goes further from the observation made by Levine (1997) that informational asymmetries and transaction costs reduces liquidity and increases liquidity risk. These asymmetric information and other credit market frictions has various effects in the financial markets. These shortcomings, observes Levine (1997) create the incentives for the establishment of institutions that augments liquidity with the intentions of increasing their profitability. Chiuri and Jappelli (2003) were of the opinion that in the quest of the financial intermediaries to accumulate savings in form of liquid wealth, the lenders (financial intermediaries) requests potential borrowers to make down-payments in arranging funds for property acquisition. This down-payment is becoming a unique factor in determining when most first time buyers start climbing the property ladder. In the US studies, Duca & Rosenthal (1994); Haurin et al (1997) observed that the down-payment drives mortgage availability and the timing of property acquisition by first time buyers. Ortala - Magne and Rady (1998 & 1999) examines the economic impact of down payment.

In the financial systems, the bank-based model has the attributes to acquire information about firms, thereby improving corporate allocations Diamond (1984); Ramakrishinan & Thakor (1984), manage cross-sectional, inter-temporal and liquidity risk in an effort to enhance investment efficiency and economic growth Allen & Gale (2000); Bencivenga & Smith (1991). In attracting projects with high returns to an economy, there should be capital to fund it Levine (1997) and at the right price. As it was argued by Vatnick (2008), a lower cost of capital is important for economic growth because it induces rising investment and higher rate of capital accumulation for faster economic growth. Therefore, the financial intermediaries are expected to be liquid to provide funds for the projects, it translates to the fact that there is linkage between liquidity and economic development.

The literature on finance reveals that there are only two broad types of finance available: debt and equity finance. Financing of a project either by debt or equity depends on the characteristics of assets being financed and transaction cost reasoning suggests the use of debt to finance re-deployable assets and equity used to finance non re-deployable assets Williamson (1988). Furthermore, Jensen and Meckling (1976) in the study of theory of

firms argue that debts are utilized if the ability to exploit potentially profitable investment opportunities is limited by the resources of the owner. Debt finance yields a fixed return to its suppliers in states when the firm is not bankrupt (that is, the firm has sufficient funds to make the fixed payment) Edwards and Fischer (1994). Bank lending as a form of debt can be categorized into two: either as asset specific or corporate loans Crosby et al (2000). Again, the debt can be either secured or unsecured.

However, equity finance gives its suppliers the right to the firm's residual returns after payments to the suppliers of debt finance, and in addition, the right to vote on decisions concerning the firm's operation in states when a firm is not bankrupt. When the firm goes bankrupt, limited liability provisions mean that suppliers of equity receive nothing. In such state, they even loose the right to make decisions about the firm's operations in such states. In situation of non-bankruptcy, suppliers of equity finance have the right to the firm's residual return; they do not have the right to receive a fixed payment in every period which may be yearly or half-yearly Edwards and Fischer (1994); Toby (2006). On the other hand, Cranston (2002) and Tirole (2006) classify debt finance into short-term and long-term. Short-term debt finance instruments includes bank overdraft, commercial papers and short-term trade credit and long-term debt finance instruments includes housing loans, mortgages and other forms of informal credit transactions. In the context of the developing world, debt finance can be obtained from formal financial institutions like banks, micro-finance arrangements, indigenous moneylenders, family members, employers and government Nubi (2005). Heffernan (2003) and Tirole (2006) argued that financial instruments vary widely according to the characteristic of term to maturity. Sight deposits at banks have zero term to maturity, as they can be withdrawn on demand. Consequently, equity has no redemption date and therefore possesses an infinite term to maturity.

One of the biggest problems faced by the banking sector is lack of information about the promoters and the projects to be financed with the bank facilities Guzman (2000); Djankov et al (2007), to determine whether the borrowers will be able to pay the principal and interest when they fall due. Altman and Saunders (1998) highlighted the array of information on various borrowers' details to include their character (reputation), capital

(leverage), capacity (volatility of earnings) and collateral. However, Mints (2006) limited the borrowers required information to "the three C's of lending" which are collateral factor, capacity factor and credit factor, which are all relevant to lending in both developed and emerging economies.

The current theory of financial intermediation concentrates on transaction cost and asymmetric information and they are considered to be inadequate as tools to explain the fundamentals of financial intermediation, which is risk management. Therefore, their contributions are being classified as traditional and old. Moreover, there are two aspects to the lending operations of the financial institutions. The ability of the financial institutions to lend determined by the strength of their balance sheets and the willingness of these institutions to lend as risk managers.

In the banking literature, capital adequacy is one of the five key variables identified in measuring bank balance sheet strength while others are asset quality, management, earnings and liquidity Rojas-Suarez (2002); Hefernan (2003); Buckle and Thompson (2005). The capital adequacy regulatory rules have impact on the bank behaviours Dewatripont and Tirole (1994); Freixas and Rochet (1997); Chiuri et al (2002). It is argued that there are two ways by which these rules affect bank behaviours. Firstly, it is known that capital adequacy regulatory rules strengthen bank capital and improves the resilience of a bank to negative shocks and secondly, capital adequacy affects banks in risk taking and management behaviour.

It has also been argued by various authors Allen (2004); Pan (2008) that capital adequacy rules like Basel II may impact the banking system's ability to extend loans and advances to the productive sector of the economy. When capital requirement arises and with capital constraints in most countries of the emerging market due to lack of depth in their capital markets; the banks adopt a risk-shifting model as means of risk management. Risk management is about managing a mismatch between supply of funds and the demand for investments and these risks could be credit risk, liquidity risk, systemic risk, mismatch risk or interest rate risk Odenbach (2002); Heffernan (2003); van Order (2005); Mints (2006) and Akinwunmi et al (2007) & (2008a). With risk management being the core

business of the financial intermediaries, Dewatripont & Maskin (1995); van Thadden (1995) opinionated that financial institutions operating in a market-based financial system, due to competition, will have their inefficiencies associated with banking activities reduced and thereby promote economic growth.

Saunders (2002) analyses a risk-shifting model as a process whereby financial institutions, banks in particular, in an effort to meet up with new capital requirements moves away from low-yielding loans to high risk loans in expectation of high earnings. Furthermore, Caprio Jr. et al (2008) argue that risk-shifting takes place at every stage of financial engineering. If these loans eventual pay off, banks meet up with their higher capital requirements from loan profits, otherwise they are liquidated.

2.4 Determinants of Supply of Housing

The role of a housing finance system does not stop at the provision of shelter, it is also very important to the mobilization of domestic savings, shelter being one of the first priorities of households and a leading reason for savings. Therefore, the literature contends that the housing finance sector can and should play a central role in the mobilization of resources by households Renaud 1984; Renaud (2008). In Asia, according to UN-Habitat's state of the World's cities 2006-7 report, 73 percent of urban dwellers live in non-permanent housing. The housing sector is severely constrained by lack of an adequate and appropriate housing finance system, in which Asian Development Bank study says that Asia's mortgage sector is the least developed in the world UNCHS (2007). The situation in SSA is similar, characterized by the lack of housing finance.

The stock of housing finance in Namibia and South Africa comes to 18-20 percent of GDP, for other countries for which data are available had about 2 percent (Nigeria, Mali, Morocco, Senegal) Roy (2007). In Asia, many countries mortgage financing per year is less than 2 percent of GDP compared to 88 percent in the United Kingdom (UNCHS (2007) and 15-21 percent in Chile, Malaysia and Thailand Honohan and Beck (2007). In societies where social housing is not on the priority list of government, the affordability

would have to be looked at from the point of view of the individual's own ability to raise money needed to meet the cost or price of housing needs. Generally, the first source of funding for the individual is their income because it does not involve payment of interest. Many countries in the emerging economy have nascent and weak financial markets. The participation of financial markets in financing housing has been limited and the majority of low-income households are also excluded from the formal financial services industry UNCHS (2007). This resulted in 70 to 80 percent of housing finance in emerging economies being raised from the informal market Okpala (1994); Buckley et al (1994); Saravanan (2007) and Tiwari & Debata (2008). These informal markets are made up of loans from relatives, employers and money lenders that supplement savings and current income for housing finance Renaud (1985); Kim (1997).

However, formal housing finance supply in emerging economies is operated through both policy-driven and the market-oriented housing finance channels Deng and Fei (2008). The policy-driven housing finance is mainly through Housing Funds Schemes, which are mandatory housing savings scheme while the market-oriented housing finance is characterized by commercial loans from financial institutions. In the developed economies, commercial mortgages are referred to as collateralized lending to property developers whereas in the emerging economies, commercial loans are basically mortgages raised from financial institutions.

With the magnitude of housing needs in most of the countries in the emerging economy, Buckley and Kalarickal (2004), Hassler (2005) and Merrill (2006) argued that there are requirements that emerging economies must embrace, if they are going to move forward in terms of delivering housing finance. The requirements include stable macroeconomic conditions, a legal framework for property rights, mortgage market infrastructure and funding sources to promote financial intermediation and each will now be discussed.

2.4.1 Macroeconomic conditions

Macroeconomic policies are impacts of exogenous interventions at the aggregate or economy-wide levels Burda and Wyplosz (1997); Hammond (2006) and Roy (2007).

Macroeconomic instability and its corollary of high and volatile domestic interest rates, erratic monetary and exchange rate policies coupled with weaknesses in the financial systems of many emerging market countries Bhattacharya et al (1997); Irving and Manroth (2009), have a disproportionate impact on long-term mortgage finance. Various factors contributes to greater macroeconomic volatility in emerging markets, the most important is that their production structure is typically much less diversified than that of developed countries and often dependent on primary commodities.

The macroeconomic policies might be adopted to affect (decrease/increase) the nominal interest rate, or volatility of inflation, which has affected the efficiency of housing finance. In differentiating between housing affordability and housing finance affordability, Buckley et al (1994) argued that housing finance affordability arises when inflation makes housing unaffordable at the market rates of interest. This resulted in indexation as means of addressing the housing finance affordability problem especially in the Latin America and a few African countries like Ghana. Therefore, the objective of and redesigning mortgage contract is to eliminate financial constraints that impede the affordability housing and provide a financing vehicle so that those who can afford to, and so desire, can purchase homes Buckley et al (1993). This assertion has been argued by Buckley (1996) and Kim (1997) that indexation of deposits and mortgage products can only deal with moderate inflation.

A sound macroeconomic policy framework is one that promotes growth by keeping inflation low, the budget deficit small and the current account sustainable Fischer (2004); Hale (2007). Therefore, the financial regulatory authorities (central banks) in most emerging market economies have used policies like the cash reserve requirement and liquidity ratio as instruments of monetary control. Cash reserve requirement is the percentage of the banks cash asset to be kept in an account with the central bank. This policy is adopted to control volume of funds available for financial institutions to invest in granting loans and advances.

2.4.2 Financial Development and Liberalization

In most of the emerging market economies, the financial sub sector is generally shallow relative to the sizes of these economies. The shallowness of these institutions results in limited access to financial services, with the low-income earners and even medium income earners mostly discriminated against in the financial market. This form of discrimination comes in the form of being denied credit facilities due to their inability to meet the stringent requirements of suppliers of finance Roy (2007); Renaud (2008). In terms of liberalization, there has been a relative efficiency in the credit markets of the emerging economies due to the adoption of market discipline and risk-based capital guidelines. Almost all countries in the emerging economies are moving away from rigid.

2.4.3 Financial Infrastructure and Incomplete Financial Systems

The financial infrastructure of a country shapes the structure, organization and performance of the finance industry and the process of capital formation, and therefore the mortgage market development strategies Renaud (2008); Boleat (2008). This is done when attempts are made to increase the depth and breadth of their financial markets. One of the indicators for measuring financial deepness of an economy is the total deposits within a financial system as a percentage of GDP Vatnick (2008). The organization and structure of the financial system also plays an important causal role in the quality and rate of economic growth Bhattacharya (1997); Levine et al (2000); World Bank (2001).

2.5 Chapter Summary

It has been identified through various studies that the financial infrastructure of a nation shapes the structure, organization and performance of the finance industry and the process of capital formation and the mortgage market development strategies in both developed and emerging economies. Specifically, housing and housing finance in emerging market economies has been subjected to various limitations like inadequacy of legal and regulatory infrastructure, macroeconomic volatility, high transaction costs associated with the lack of adequate loan management practices and infrastructures for mortgage processing.

Despite the orthodox view that a secure supply of land with a good title (registered land) is a pre-requisite for effective housing finance system, efforts to get land registered and governments to be the sole custodian of land has been a disaster in most emerging economies. The idea of land registration has slowed down the process of housing finance disbursement and eventual supply. It can further be argued that the underdevelopment of mortgage lending to individual households can be explained by lack of demand for mortgage lending which might be due to high credit risks, lack of financial depth which translates into high interest rates on mortgage loans, the limited long-term credit resources of originating banks resulting from failure to develop secondary market financing. This anomaly has hitherto been tackled in the developed economies through the introduction of stable funding source and asset-liability management tools like securitization, credit derivatives, collateralized debt obligations and mortgage covered bonds. For most of the emerging economies, a combination of economic and social factors, such as low domestic savings rate, high price-to-income ratios and a general culture and social predisposition towards homeownership, suggests that the common problem facing them lies in the provision of housing finance services that can allocate untapped resources.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter describes the research design, population and sampling design, the data collection method, the research procedures and data analysis methods that was used in the course of the research. This section also indicates the research tools used to collect data, the data collection and the analysis procedures.

3.2 Research Design

The research adopted a descriptive research design. Accroding to Cooper and Schindler, (2001), descriptive study is used when one needs to determine characteristics associated with a subject population which this study is actually concerned with.

3.3 Hypothesis and Model to be tested

Using loan to housing (housing finance supply) as the dependent variable, it could be deduced at a point, that interest levels, income levels, loan security, value of property and government regulations being independent variables do significantly affect supply of loans to housing.

The basic model is as shown below:

$$\mathbf{Y = \beta o + \beta 1x1 + \beta 2x2 + \beta 3x3 + \ldots\ldots\ldots\ldots\ldots\ldots + \beta kxk + e \quad \ldots\ldots\ldots\ldots\ldots\ldots 1}$$

Where:

x1, x2, x3.....xk are the independent variables.

e the difference between the predicted and observed value of Y for the *i*th subject.

bo is the constant term

b1, b2, b3.....bk are the regression coefficients to be estimated.

The empirical model is therefore derived as:

$$\mathbf{SHF=\alpha_0+\alpha_1 IR+\alpha_2 IL+\alpha_3 LS + \alpha_4 VP + \alpha_5 GR \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots 2}$$

Where;

SHF = Supply of Housing Finance

α_O = Coefficient of the independent variable to SHF

IR = Interest rates

IL = Income level

LS = Loan Security

VP = Value of property

GR = Government regulations

3.4 Research population

The target population was all real estate developers, real estate owners and financiers operating in Kenya as at 31st December 2011.

3.5 Sample size

The target respondents were selected using purposive sampling. In this case respondents were chosen deliberately on assumption that they have valid information regarding the problem under study. The sampling frame was all real estate developers and home owners who have engaged in development business in Nairobi, however due to nature of their work, we did not find all of them in Nairobi City. It was important that the respondents are targeted based on the locations where was easy to locate them so as to save cost and time in the course of the research. Hence, this proposal focused on the respondents at their places of work. The sample size composed of 30 real estate developers, 30 home owners and 10 housing financiers.

3.5 Data collection

Qualitative and quantitative research approaches were used in this study. For quantitative, the data was obtained from the housing finance publications and other publications in the real estate sector. Qualitative research methodologies were designed to provide the researcher with the perspective of target audience members through immersion in a culture or situation and direct interaction with the people under study. The advantage of using qualitative methods was that they generate rich, detailed data that leave the

participants' perspectives intact and provide a context for health behaviour. Qualitative methods of data collection used in this study were questionnaires.

3.6 Data analysis

The researcher edited the collected data centrally Coppers and Schindller, (2000) assert that editing is done in order to detect errors and omission, ensure data is accurate, uniformly entered, complete, consistent with intent of the question and other information in the study and arranged to simplify coding and tabulation. Alpha numeric data coding was carried out to assign numbers and other symbols to the questions, which Coopers and Schindler (2000) explain is done in order to group the respondents to a limited number of classes or categories that facilitate efficient analysis. Coded data was tabulated in Statistical Package for Social Scientist (SPSS).

3.6.1 Correlation

Pearson product-moment correlation (r), as an example of correlation coefficient, gives the numerical summary of the direction and strength of the linear relationships between two variables. Since explanation needs to be given for the possible relationship between the dependent and independent variables, the statistical association between the variables has to be measured. The Pearson Product-Moment Correlation (r) is the most commonly applied correlation coefficient used in measuring a linear association and it was therefore adopted in this study to build the framework of the conceptual model.

3.6.2 Multi-collinearity

Another important issue in multiple regression analysis is the presence of multicollinearity. There is no precise definition of collinearity firmly established in the literature Mason and Pierreault (1991). Collinearity is agreed to be present if there is an approximate linear relationship among some of the predictor variables in the data. This refers to the relationship among the independent variables and it exists when the independent variables are highly correlated (r = 0.9 and above) Pallant (2007);

Tabachnick & Fidell (2007). Multicollinearity makes it difficult to determine the contribution of each independent variable Hair et al (1998).

3.7 Data validity and reliability

Data obtained from the primary source was considered authentic and could therefore be relied upon for deriving conclusions. Such data was also considered credible and free from error or any bias. Data was moved from the field only by the researcher to ensure confidentiality and reliability was observed, discussion and clarification were sought from the organizations targeted to ensure reliability, remains confidential and used only for the purpose of this study.

CHAPTER FOUR

DATA ANALYSIS AND PRESENTATION O FINDINGS

4.1 Introduction

The main objective of this study was to establish determinants of supply of real estate finance in Kenya. A total of 70 questionnaires were sent out, of which 44 were satisfactorily filled and returned, this formed 63% response rate. The collected data was analyzed using the statistical package for social scientist. The chapter starts with the analysis of results and concludes with giving the summary and interpretation of the findings.

4.2 Data presentation and explanation

4.2.1 Descriptive Statistics

Table 4.1: Descriptive statistics for measures of performance

	N	Minimum	Maximum	Mean	Std. Deviation
Housing Finance Supply	44	13.00	85.00	27.5000	28.29664
Interest Rates	44	13.00	96.00	31.1667	31.99635
Income Level	44	14.00	117.00	38.0000	39.18673
Loan Security	44	17.00	145.00	47.1667	48.53212
Value Of Property	44	23.00	165.00	53.6667	55.07328
Government Regulations	44	24.00	193.00	62.8333	64.37831
Valid N (listwise)	44				

The Descriptive Statistics table provides summary statistics for continuous, numeric variables. Summary statistics include measures of central tendency such as the mean. Measures of dispersion (spread of the distribution) such as the standard deviation. The minimum for housing finance supply and interest rates was 13 respectively, 14 for income level, 17 for loan security, 23 for value of property while 24 for government regulations. The maximum was 85 for housing finance supply, 96 for interest rates, 117 for income level, 145 for loan security, 165 for value of property while 193 for government regulations. The mean for housing finance supply was 27.5, 31.1 for interest rates, 38 for income level, 47.1 for loan security, 53.7 for value of property and 62.8 for

government regulations. The std deviation for housing finance supply was 28.3, 31.9 for interest rates, 39.1 for income level, 48.5 for loan security, 55 for value of property and 64.4 for government regulations

4.2.2 Correlation

Table 4.2: Correlation between measures of performance

		Housing Finance Supply	Interest Rates	Income Level	Loan Security	Value Of Property	Government Regulations
Housing Finance Supply	Pearson Correlation	1	.999(**)	.997(**)	.997(**)	.998(**)	.998(**)
	Sig. (2-tailed)		.000	.000	.000	.000	.000
	N	44	44	44	44	44	44
Interest Rates	Pearson Correlation	.999(**)	1	.998(**)	.998(**)	.999(**)	.998(**)
	Sig. (2-tailed)	.000		.000	.000	.000	.000
	N	44	44	44	44	44	44
Income Level	Pearson Correlation	.997(**)	.998(**)	1	1.000(**)	.999(**)	.998(**)
	Sig. (2-tailed)	.000	.000		.000	.000	.000
	N	44	44	44	44	44	44
Loan Security	Pearson Correlation	.997(**)	.998(**)	1.000(**)	1	.999(**)	.997(**)
	Sig. (2-tailed)	.000	.000	.000		.000	.000
	N	44	44	44	44	44	44
Value Of Property	Pearson Correlation	.998(**)	.999(**)	.999(**)	.999(**)	1	.999(**)
	Sig. (2-tailed)	.000	.000	.000	.000		.000
	N	44	44	44	44	44	44
Government Regulations	Pearson Correlation	.998(**)	.998(**)	.998(**)	.997(**)	.999(**)	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	
	N	44	44	44	44	44	44

** Correlation is significant at the 0.01 level (2-tailed).

The correlations table displays Pearson correlation coefficients, significance values, and the number of cases with non-missing values. Pearson correlation coefficients assume the data are normally distributed. The Pearson correlation coefficient is a measure of linear association between two variables. The values of the correlation coefficient range from -1 to 1. The sign of the correlation coefficient indicates the direction of the relationship (positive or negative). The absolute value of the correlation coefficient indicates the

strength, with larger absolute values indicating stronger relationships. The correlation coefficients on the main diagonal are always 1.0, because each variable has a perfect positive linear relationship with itself.

The significance of each correlation coefficient is also displayed in the correlation table. The significance level (or p-value) is the probability of obtaining results as extreme as the one observed. If the significance level is very small (less than 0.01) then the correlation is significant and the two variables are linearly related. If the significance level is relatively large (for example, 0.2) then the correlation is not significant and the two variables are not linearly related.

The study showed positive relationship for all the measures of performance, with a strong significance level for all the measures of performance i.e. Interest Rates, government regulations, income level, value of property and loan security.

4.2.3 Empirical Model

Table 4.3: Collinearity Diagnostics

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions			
				(Constant)	Government Regulations	Loan Security	Interest Rates
1	1	3.723	1.000	.00	.00	.00	.00
	2	.261	3.779	.00	.01	.00	.13
	3	.011	18.077	1.00	.08	.06	.47
	4	.005	27.425	.00	.91	.93	.39

a Dependent Variable: Housing Finance Supply

This table displays statistics that help you determine if there are any problems with collinearity. Collinearity (or multicollinearity) is the undesirable situation where the correlations among the independent variables are string. Eigenvalues provide an indication of how many distinct dimensions there are among the independent variables. When several eigenvalues are close to zero, the variables are highly intercorrelated and small changes in the data values may lead to large changes in the estimates of the coefficients. Condition indices are the square roots of the ratios of the largest eigenvalue

to each successive eigenvalue. A condition index greater than 15 indicates a possible problem and an index greater than 30 suggests a serious problem with collinearity. The variance proportions are the proportions of the variance of the estimate accounted for by each principal component associated with each of the eigenvalues. Collinearity is a problem when a component associated with a high condition index contributes substantially to the variance of two or more variables.

4.3 Qualitative analysis

Housing and residential construction are considered to be central importance for determination of both the level of welfare in a society and the level of aggregate economic activities. Housing is the largest asset owned by most households and is nearly always financed, in the sense that owners of housing capital must pay for their units over a period of years. It is therefore imperative for Kenya to appreciate benefits to be derived from having a well-functioning mortgage markets despite various economic issues being tackled with limited resources. The large external benefits to the national economy were highlighted to include capital market development, efficient real estate development, construction sector employment, easier labour mobility, more efficient resources allocation and lower macroeconomic volatility.

It has been identified through various studies that the financial infrastructure of a nation shapes the structure, organisation and performance of the finance industry and the process of capital formation and the mortgage market development strategies in Kenya. Specifically, housing and housing finance in Kenya has been subjected to various limitations like inadequacy of legal and regulatory infrastructure, macroeconomic volatility, high transaction costs associated with the lack of adequate loan management practices and infrastructures for mortgage processing.

Despite the orthodox view that a secure supply of land with a good title (registered land) is a pre-requisite for effective housing finance system, efforts to get land registered and governments to be the sole custodian of land has been a disaster in Kenya. The idea of land registration has slowed down the process of housing finance disbursement and eventual supply. It is further be argued that the underdevelopment of mortgage lending to

individual households can be explained by lack of demand for mortgage lending which is due to high credit risks, lack of financial depth which translates into high interest rates on mortgage loans, the limited long-term credit resources of originating banks resulting from failure to develop secondary market financing. This anomaly has hitherto been tackled in the developed economies through the introduction of stable funding source and asset-liability management tools like securitization, credit derivatives, collateralized debt obligations (CDOs) and mortgage covered bonds (MCB).

For Kenya, a combination of economic and social factors, such as low domestic savings rate, high price-to-income ratios and a general culture and social predisposition towards homeownership, suggests that the common problem facing them lies in the provision of housing finance services that can allocate untapped resources. Some of these untapped resources could be identified as the innovative sources of funding housing finance which are peculiar to their situations like diaspora bonds, migrant remittances and pension funds.

4.4 Summary and Interpretation of the findings

The Descriptive Statistics table provides summary statistics for continuous, numeric variables. Summary statistics include measures of central tendency such as the mean. Measures of dispersion (spread of the distribution) such as the standard deviation. The minimum for housing finance supply and interest rates was 13 respectively, 14 for income level, 17 for loan security, 23 for value of property while 24 for government regulations. The maximum was 85 for housing finance supply, 96 for interest rates, 117 for income level, 145 for loan security, 165 for value of property while 193 for government regulations. The mean for housing finance supply was 27.5, 31.1 for interest rates, 38 for income level, 47.1 for loan security, 53.7 for value of property and 62.8 for government regulations. The std deviation for housing finance supply was 28.3, 31.9 for interest rates, 39.1 for income level, 48.5 for loan security, 55 for value of property and 64.4 for government regulations

The correlations table displays Pearson correlation coefficients, significance values, and the number of cases with non-missing values. Pearson correlation coefficients assume the data are normally distributed. The Pearson correlation coefficient is a measure of linear association between two variables. The values of the correlation coefficient range from -1 to 1. The sign of the correlation coefficient indicates the direction of the relationship (positive or negative). The absolute value of the correlation coefficient indicates the strength, with larger absolute values indicating stronger relationships. The correlation coefficients on the main diagonal are always 1.0, because each variable has a perfect positive linear relationship with itself.

The significance of each correlation coefficient is also displayed in the correlation table. The significance level (or p-value) is the probability of obtaining results as extreme as the one observed. If the significance level is very small (less than 0.01) then the correlation is significant and the two variables are linearly related. If the significance level is relatively large (for example, 0.2) then the correlation is not significant and the two variables are not linearly related.

The study showed positive relationship for all the measures of performance, with a strong significance level for all the measures of performance i.e. Interest Rates, government regulations, income level, value of property and loan security.

The multiple correlation coefficient is the correlation between the observed and predicted values of the dependent variable. The values of R for models produced by the regression procedure range from 0 to 1. Larger values of R indicate stronger relationships. R squared is the proportion of variation in the dependent variable explained by the regression model. The values of R squared range from 0 to 1. Small values indicate that the model does not fit the data well. The sample R squared tends to optimistically estimate how well the models fit the population. Adjusted R squared attempts to correct R squared to more closely reflect the goodness of fit of the model in the population. Choose a model with a high value of R squared that does not contain too many variables. Models with too many variables are often over fit and hard to interpret.

The model summary for this study was found to be 1.000 for R value, 0.999 for R square, 0.997 for adjusted R square, 435.775 for F change, 3 for df1, 1 for df2, 0.035 for sig. F change while the Durbin-Watson was 3.405

The output for Regression displays information about the variation accounted for by your model. The output for Residual displays information about the variation that is not accounted for by your model. And the output for Total is the sum of the information for Regression and Residual. Model with a large regression sum of squares in comparison to the residual sum of squares indicates that the model accounts for most of variation in the dependent variable. Very high residual sum of squares indicate that the model fails to explain a lot of the variation in the dependent variable, and you may want to look for additional factors that help account for a higher proportion of the variation in the dependent variable. The mean square is the sum of squares divided by the degrees of freedom. The F statistic is the regression mean square divided by the residual mean square. The regression degrees of freedom is the numerator df and the residual degrees of freedom is the denominator df for the F statistic. The total number of degrees of freedom is the number of cases minus 1. If the significance value of the F statistic is small (smaller than say 0.05) then the independent variables do a good job explaining the variation in the dependent variable. If the significance value of F is larger than say 0.05 then the independent variables do not explain the variation in the dependent variable.

The sum of squares for regression was 4001.753, df 4, mean square 1000.438, F 572.725 while the Sig. was 0.031 while for the residual values, sum of squares was 1.747, df was 1 while the mean square was 1.747.

Collinearity (or multicollinearity) is the undesirable situation where the correlations among the independent variables are string. Eigenvalues provide an indication of how many distinct dimensions there are among the independent variables. When several eigenvalues are close to zero, the variables are highly intercorrelated and small changes in the data values may lead to large changes in the estimates of the coefficients. Condition indices are the square roots of the ratios of the largest eigenvalue to each successive eigenvalue. A condition index greater than 15 indicates a possible problem

and an index greater than 30 suggests a serious problem with collinearity. The variance proportions are the proportions of the variance of the estimate accounted for by each principal component associated with each of the eigenvalues. Collinearity is a problem when a component associated with a high condition index contributes substantially to the variance of two or more variables.

The previous study found out that low income level affects the housing finance Roy (2007). Further in the literature, one of the biggest problems faced by the banks in financing for real estate is value of property and the projects to be financed with the bank facilities Jones & Maclennan (1987); Altman & Saunders (1998); Byamugisha (1999); Guzman (2000) and Mints (2006). Even with the identified importance of effective regulations of financial institutions, Llewellyn (2008), Milnes & Wood (2009) and Shin (2009) in discussing the Northern Rock situation highlighted problems in the regulatory framework of as the impediment in real estate financing. Further Llewellyn (2008) suggested that in any regulatory / supervisory regime, four areas that need to be addressed include prudential regulation of the financial firms; management and systemic stability; lender-of-last resort function and conduct of regulation and supervision business. However the findings of this study indicate value of property, government regulation, income level, interest rates and loan security all affect the financing of real estate in Kenya.

CHAPTER FIVE

SUMMARY, CONCLUSION & RECOMMENDATIONS

5.1 Summary

In lending, financial institutions give out loans in consideration of interest to be charged on the loans and the riskiness of the loan. The demand and supply of housing finance are determined by various factors. The ability of financial institutions to lend for housing (supply of housing finance) determines the quantity of housing finance that could be supplied for house acquisitions. If the identified factors, value of property, government regulation, income level, interest rates and loan security are dwindling, the availability of housing finance will be reduced.

Interest Rates: Since interest rate is considered as the rate of return on investment, when the rate of interest is low on mortgage lending maybe due to government regulations, there is the tendency for the financial institutions to look for an alternative investment outlet in order to make good profit. Apart from the ability of the financial institutions to lend, the other aspect is the willingness of the financial institutions to lend towards mortgage acquisition. The factors consider by them includes criteria of security, income, price of the property, price of alternative goods and services and household characteristics (age, marital status etc).

Criteria of Security: With a favourable reserve and liquidity position, financial institutions in Kenya do not necessarily lend to all applicants that approach them for banking facilities, even if the prevailing interest rate is acceptable to the borrower. Loans are secured on specific property and necessary steps are taken in avoiding default on repayment or depreciation of the security below the book value of the debt. There are various ways by which the lenders determine the ability of the borrower to repay and the suitability of the property as security.

Income: The income being earned by a borrower determines the ability to repay the money borrowed. The total sum advanced therefore is usually restricted to some multiple of two to three times the applicant's salary. This means that the applicant shall have

secure prospects of a continuing income. However, in the recent past in the developed economies, it is considered that average home prices range from three to four times of annual income (Warnock & Warnock 2008). In Kenya, because wages are low and construction cost is high, average home prices are usually about eight times of annual income and to make it affordable, repayments have to be spread over a very long period of time. Thus a positive relationship exists between housing construction cost and building materials price, property price, foreign exchange rates because imported building materials are used for construction, labour cost and national disposable income.

Value of property: In some cases, control of lending is also exercised by avoiding advances on the security of properties which might deteriorate. Financial institutions prefer lending on properties which are relatively modern and also prefer houses to flats. As a property is becoming old-fashioned, the less is the willingness of financial institutions to lend based on the collateral of the property. This policy affects the distribution of house prices, since it would be difficult to raise a loan on a particular property. As a result of these constraints demand is always rationed and it is difficult to assess what the real demand for mortgage is while the supply constraints in the form of the reserve and liquidity ratios are easier to observe.

Loan to Income Ratio: Financial Institutions would like to know what percentage of his total income is already committed to payment of all. In some cases, bank might not lend to individuals that would commit more than 40 per cent of his income on settling debts.

5.2 Conclusion

This study investigated factors determining housing finance supply in Kenya. Housing finance is a major factor determining the quality and tenure of housing consumption, the overall financial portfolio of the public and the stability and effectiveness of the financial system. In Kenya, the government has intervened in the markets by setting up institutions characterized by a significant degree of regulation and segmentation from the rest of the financial markets and very often with governments providing subsidized housing finance.

Additional instruments in form of questionnaire, for the sectorial allocation of loans and advances by these financial institutions were employed to gather information from Corporate Banking / Loans and Advances Managers coupled with unstructured interviews. Supplementary questionnaires were directed to the users of housing finance at the household level as control for validity to the research findings.

Applying a multiple regression approach, the model identified that housing finance supply in Kenya is significantly driven by clusters of factors related to value of property, government regulation, income level, interest rates and loan security. It is closely observed that housing finance models in the developed economies, which are largely financed by deposit liabilities, cannot be wholly adopted in the Kenyan economy. The implication for practice therefore is that financial institutions in Kenya must adequately increase their capital base for effective housing finance supply and introduce mortgage products with long-term tenure to actively mobilize resources for mortgage lending.

5.3 Policy Recommendations

The largest hitches to the development of the real estate segment of Kenya are government regulations, interest rate, loan security, value of property and income level as suggested by most of the respondents in the interviews. Changes brought in these segments can ensure a better rate of growth for the market and a relatively more attractive opportunity for the consumers and investors.

As discussed in the project, Real Estate in Kenya has a potent demand backed growth. Demand due to population increase, higher allocation to savings in real estate, actualization of mortgaging by consumers and bridging the gap of the current housing deficit will be a trigger for sustained growth.

The efforts by the government to ensure faster clearances for active real estate development would enable developers in a great way. The researcher recommends that the government should set up a separate real estate division with the objective of single

window clearance of all required paper work and clearances. Single window essentially means that the developers will need to approach only one department for the clearances required in checking the title of the land, the water treatment plant, electricity and water utility connections, permission for construction and labour related issues such as facilities and wages. Also the government should establish a housing loan guarantee scheme run by existing government housing corporations to assess risks in some real estate development and the applicant's credit scores then giving guarantees to the developers and financiers so as to encourage financiers to lend more and at affordable interest rates. The builders should be given support in ensuring that the land they own and hold is free of encroachment from slums. Also, free hold land should be released to developers with proper title clearances to the land quickly. Some litigation processes take years for clearances, which should be put onto a fast track.

5.4 Limitations of the Study

Every research has certain drawbacks. It is therefore necessary to incorporate them in the project to obtain a true perspective of the research topic. The following are a few drawbacks the researcher faced during my research study.

The study makes use of qualitative analysis, which is interview and questionnaire based in order to find out the determinants of housing finance in Kenya. However quantitative approach has not been used as it would have prolonged the study. Hence financial statements such as Balance Sheet and Profit and Loss of Real estate listed companies have not been analyzed to arrive at the growth prospects of the sector in quantitative terms.

Also due to difference in valuation methods adopted by different countries and limited relevant data; comparison of Kenyan real estate companies to international real estate companies operating in Kenya has not been possible.

Another drawback was getting through to companies for the purpose of an interview. Limited number of interviewees induced the researcher to collect further information through a questionnaire survey.

Further, there was a possibility of a biased research being carried out due to all interviewees being Nairobi-based. Therefore the researcher increased the sample size to adequately include companies from all parts of Kenya to get a clear national perspective of the real estate market.

However, the research aim was to provide a broad overview and give valuable prospects to the participants of this industry as well as to investors seeking to invest in the Kenyan real estate sector.

5.5 Suggestions for further studies

For academic world. This research Result is expected to become a valuable input in study related to housing finance for real estate. This Research has not yet expressed all variables that can influence housing finance, then in order to increase science/knowledge development, other researchers who are interested in similar problems are suggested to conduct a continuation research by adding further determinants of housing finance

The study was done for the companies and real estates in Nairobi, a suggestion is made that a similar study be done for companies and real estate developers beyond Nairobi and results be compared.

The study was done for Kenya i.e. real estate companies operating in Kenya, it is suggested that a cross sectional study be done for the other East African real estate developers.

REFERENCES

Akinwunmi, A., Gameson, R., Hammond, F. and P. Olomolaiye (2007) – Mortgage Insurance and Housing Finance in Emerging Economies- in Boyd, D.(Ed)- Proceedings of 23rd Annual ARCOM Conference, 3-5 September 2007, University of Ulster, Belfast-UK, Association of Researchers in Construction Management,

Akinwunmi, A., Gameson, R., Hammond, F. and P. Olomolaiye (2008) – The Effect of Macroeconomic Policies on Project (Housing) Finance in Emerging Economies – in Lodi,

Alhashimi, H.and Dwyer, W (2004) Is there such an entity as a housing market? Paper presented at the 10th Annual Pacific Rim Real Estate Conference, Bangkok

Allen, F. and D. Gale (1988) – Optimal Security Design, Review of Financial Studies Fall 1988 pp 229-268.

Allen, F. and D. Gale (1994) - Financial Innovation and Risk Sharing, Cambridge, Massachusetts: MIT Press

Altman, E.T. and Saunders, A. (1998) – Credit risk measurement: Developments over the last 20 years, Journal of Banking and Finance, 21(1998), pp 1721-1742.

Arnott, R. and Stiglitz, J. (1991) – Moral Hazard and Non-Market Institutions: Dysfunctional Crowding out after monitoring, American Economic Review 81, pp 179-190.

Benston, G.J. and C.W. Smith Jr (1976) – A Transaction Cost Approach to the theory of Financial Intermediation, Journal of Finance May 1976, Vol. 31 No 2, pp 215-231.

Berger, A.N., Herring, R.J. and G.P. Szego (1995) – The Role of Capital in Financial Institutions, Journal of Banking and Finance 19, pp 393-430.

Bhattacharya, A., Montiel, P.J. and S. Sharma (1997) – How Can Sub-Saharan Africa Attract More Private Capital Inflows? Finance and Development June 1997, Vol. 34 No 2 pp 3-6.

Boleat, M. (2008) – Housing Development and Housing Finance in Britain – Some lessons for emerging markets, Housing Finance International March 2008, Vol. 22 Issue 3, pp 53

Burda, M. and C. Wyplosz (1997) – Macroeconomic: A European Text, 2nd Edition, N.Y; Oxford University Press.

Buckle, M and J Thompson (1998) The UK Financial System: Theory and Practice (3rdEdition), N Y : Manchester University Press.

Buckley, R M (1996) Housing Finance in Developing Countries. N.Y: Macmillan.

Byamugisha, F. (1999) – The effects of land registration on Financial Development and Economic Growth: A Theoretical and Conceptual Framework, Policy Research Working Paper 2240, Washington DC: World Bank.

Caprio Jr, G., Demirguc-Kunt, A. and E.J. Kane (2008) – The 2007 Meltdown in Structured Securitisation: Searching for Lessons, Not Scapegoats, Finance and Private Sector Team, Development Research Group - October 2008, World Bank: Washington DC.

Chiuri, M.C. and T. Jappelli (2003) – Financial Market imperfections and home ownership: a comparative study, European Economic Review Vol.47 Issue 5, pp 857-875.

Chiuri, M.C., G. Ferri and G. Majnani (2002) – The Macroeconomic Impact of Bank Capital Requirement in Emerging Economics: Past Evidence to Assess the Future, Journal of Banking and Finance 26, pp 881-904.

Cho, M. (2007) – 180 Years' Evolution of the US Mortgage Banking System: Lessons for Emerging Mortgage Markets, International Real Estate Review, Vol. 10 No 1 pp 171-212.

Coase, R.H. (1960) – The Problem of Social Cost, Law and Economics, 3, pp 1-44

Crosby, N., French, N. and Oughton (2000) – Bank lending valuations on Commercial property: Does European mortgage lending value add anything to the process? Journal of Property Investment & Finance Vol.18 No 1, 2000, pp 66-83.

Dasan M. B. (1996) – Analysis of factors which influence supervisor's motivation in a building in Kenya in the construction industry. African Competitiveness Report 1996.

Deng, Y. and Fei, P. (2008) – The Emerging Mortgage Markets in China – in Ben-Shahar, D., Yui Leung, C.K. and S.E. Ong (Eds) – Mortgage Markets Worldwide, pp 1-33, Chichester -West Sussex, United Kingdom: John Wiley and Sons Ltd

Dewatripont, M. and E. Maskin (1995) – Credit and efficiency in centralized and decentralized economies, Review of Economic Studies October 1995, Vol. 62 Issue 213, pp 541-555.

Dewatripont, M. and J. Tirole (1994) – The Prudential Regulation of Banks, Cambridge, MA: MIT Press.

Diamond, D.W. and P. Dybvig (2000) – Bank runs, deposit insurance and liquidity, The Federal Reserve Bank of Minneapolis Quarterly Review Winter 2000, Vol.24 No 1

Diamond, D.W. (1984) – Financial Intermediation and delegated monitoring, Review of Economic Studies 51, pp 393-414

Djankov, S., McLiesh, C. and A. Shleifer (2007) – Private credit in 129 countries, Journal of Financial Economics 84(2007) pp 299-329

Edwards, J and K. Fischer (1994) – Banks, Finance and Investment in Germany, Centre for Economic Policy Research, Cambridge University Press.

Elliot, J.W. (1984) – Money, Banking and Financial Markets, New York: West Publishing Co.

Fischer, S. (2004) – IMF Essays from a time of Crisis: The International Financial System,Stabilization and Development, Cambridge, MA: MIT Press, 2004.

Fischer, S. (1984) – A framework for monetary and banking analysis, Economic Journal 93, pp 1-16

Follain, J. and P. Zorn (2000) – The unbundling of residential mortgage finance, Journal of Housing Research 1(1), pp 63-89.

Fry, M.J. (1988) – Money, Interest and Banking in Economic Development, Baltimore: John Hopkins University Press

Guzman, M.G.(2000) – The Economic Impact of Bank Structure: A Review of Recent Literature, Federal Reserve Bank of Dallas, Economic and Financial Review, 2nd Quarter 2000, pp 11-25.

Hair, J.F., Anderson, R.E., Tatham, R.L. and W.C. Black (1998) – Multivariate Data Analysis (5th Edition), New Jersey: Prentice Hall.

Hale, G. (2007) – Sound Policies for Emerging Markets Financial Stability, International Finance Vol. 10 No 1 pp 101-114.

Hammond, F.N. (2006) – The Economic Impacts of Sub-Saharan African Urban Real Estate Policies, Unpublished PhD Thesis, School of Engineering and the Built Environment, University of Wolverhampton, UK.

Haurin, D.R., Hendershott, P.H. and S.W. Watcher (1997) – Borrowing constraints and the tenure choice of young households, Journal of Housing Research 8, pp 137-154.

Heffernan, S. (2003) Modern Banking in Theory and Practice, March 2003, Chichester-West Sussex: John Wiley and Sons.

Hurwics, W.P. (1973) – The Design of Mechanisms for Resource Allocation, American Economic Review 63, pp 1-30.

Irving, J. and A. Manroth (2009) – Local Sources of Financing for Infrastructure in Africa, Policy Research Working Paper 4878, African Sustainable Development Front Office, World Bank: Washington D.C.

Jensen, M.C. and Meckling, W.H. (1976) – Theory of the firm: Managerial behaviour, agency costs and ownership structure, Journal of Financial Economics 3.

Jaffee, D.M. and Renaud, B. (1997) Strategies to develop mortgage markets in transition economies. In: J. Doukas, V.Murinde and C. Wihlborg (eds) Financial Sector Reform and Privatization in Transition Economies.Ch.4, Amsterdam: Elsevier Science Publishers.

Jones, C. and C. Watkins (2009) – Housing Markets and Planning Policy, Wiley-Blackwell, 224pp, October 2009

Kim, K-H (1997) – Housing Finance and Urban Infrastructure Finance, Urban Studies Vol. 34 No 10, pp 1597-1620.

Kogiku, K.C. (1971) – Microeconomic Models, N.Y.: Harper and Row.

Leyland, H.E. and D.H. Pyle (1977) – Informational asymmetries, financial structure, and financial intermediation, Journal of Finance 32 pp 371-387

Levine, R. (1997) – Financial development and economic growth: views and agenda, Journal of Economic Literature 35, pp 688-726.

Levine, R., Loayza N. and T Beck (2000) – Financial intermediation and Growth: Causality and Causes, Journal of Monetary Economics, Vol. 46 No 1 pp 31-77.

Llewellyn, D.T. (2008) – The Northern Rock Crisis: A Multi-Dimensional Problem Waiting to Happen, Journal of Financial Regulation and Compliance 2008 Vol. 16 Issue 1pp 35-58.

Mandere A.N. (2006) – A survey of QM practices in the large Kenyan building construction firms. Africa Private Sector Group, Kenya, 2006.

Markowitz, H.M. (2009) – Proposals Concerning the Current Financial Crisis, Financial Analysts Journal Jan / Feb. 2009, Vol. 65 Issue 1, pp 25-27.

Mason, C.H. and N.D. Perreault (1991) – Collinearity, Power and Interpretation of Multiple Regression Analysis, Journal of Marketing Research 28, August 1991 pp 268-80.

Merrill, S. and Tomlinson, M. (2006) – Housing Finance, Microfinance and Informal Settlement Upgrading: An assessment of Ghana. Paper prepared for African Union of Housing Finance and USAID, The Urban Institute, Washington DC. June 2006.

Malpezzi, S (1999) Economic Analysis of housing markets in developing and transition economies. In: Cheshire, P. and Mills, E.D. (eds) Handbook of Regional and Urban Economics Applied Urban Economics, 3, 1791-1864.

Marete D, (2011) – The determinants of real estate property prices in Kiambu Municipality in Kenya. Unpublished Masters paper, School of Business, University of Nairobi, 2011.

Merton, R.C. and Z. Bodie (1995) – A Conceptual Framework for Analyzing the Financial Environment- in Crane, D.B., K.A. Froot, S.P. Mason, A.F. Perold, R.C. Merton, E.R.Sirri and P. Tufano (Eds) – The Global Financial System: A Functional Perspective, pp 3-32, Harvard Business School Press, Cambridge: MA.

Merton, R.C. (1989) – On the application of the continuous-time theory of finance to financial intermediation and insurance. Geneva Papers on Risk and Insurance Theory 14, pp 225-261.

Milne, A. and G. Wood (2009) – Shattered on the Rock? British Financial Stability from 1866 to 2007, Journal of Banking Regulation (2009), Vol.10 No 2 pp 89-127.

Mints, V. (2006) – Specifics of Credit Risk Assessment in Mortgage Lending-Sample of Russia, Housing Finance International September 2006, Vol.21 Issue1 pp 14-21.

Njiru (2003) The performance of real estate markets in Kenya, KEPLOTRADE Research Paper No 2/2004. December 2003.

North, D.C. (1994) – The Evolution of Efficient Markets in History – in James, J.A. and M. Thomas (eds)- Capitalism in context, Chapter 11 pp 257-264, Chicago: University of Chicago Press.

Nubi, T.O.(2005) – Housing Finance in Nigeria- Need for Re-Engineering (Unpublished Reports)-www.housingfinance.org/pdfstorage/Africa

Nubi, T.O. (2008) – Affordable Housing Delivery in Nigeria, Paper presented at The Southern African Housing Foundation International Conference and Exhibition, 12-15 October 2008 – Cape Town, South Africa.

Omufira A.N. (2001) – Extent of TQM implementation in the construction industry, AICD Background Paper 13, Africa Region, World Bank, Washington, DC

Olotuah, A O (2000) The challenge of Housing in Nigeria Effective Housing in 21st Century Nigeria. In: Akinbamijo, O.B. et al. (eds) Environmental Forum, Federal University of Technology, Akure-Nigeria, 16-21.

Olotuah, A O and Aiyetan, A.O.(2006) Sustainable low-cost housing provision in Nigeria: a bottom-up participatory approach. In: Boyd, D. (ed) Proceeds of 22nd Annual

ARCOM Conference, 4-6 September 2006, Birmingham, UK, Association of Researchers in Construction Management, 633-639.

Pagliari, J. L. (2007) – The Pricing of Non-Core Real Estate Ventures: Estimating the net expected risk-adjusted return, The Journal of Portfolio Management Vol.34 (Autumn 2007), Special Real Estate Issue, pp 119-133.

Pallant, J. (2007) – SPSS Survival Manual: A Step by Step Guide to Data Analysis Using SPSS Version 15 (3rd Edition), Berkshire-England: Open University Press.

Pilbeam, K. (2005) – Finance and Financial Markets (2nd ed.), Basingstoke: Palgrave Macmillan.

Poole, W (2003) Housing in the Macroeconomy. Federal Reserve Bank of St Louis, Economic Review May/June 2003, 1-8.

Ramakrishinan, R.T.S. and A.V. Thakor (1984) – Information reliability and a theory of financial intermediation, Review of Economic Studies Vol. 51 Issue 166.

Renaud, B.M. (2008) – Mortgage Finance in Emerging Markets: Constraints and Feasible Development Paths- in Ben-Shahar, D., Yui Leung, C.K. and Ong, S.E. (Eds) – Mortgage Markets Worldwide, pp 253-288, Chichester - West Sussex, United Kingdom: John Wiley and Sons Ltd.

Ritter, L. S. and W. L. Silber (1986) – Principles of Money, Banking and Financial Markets, New York: Basic Book Inc.

Roy, F. (2007) – Expanding housing finance systems in Africa and Asia-how far Central and Eastern European models are replicable? Paper presented at APNHR 2007

Conference in Transformation in Housing, Urban Life and Public Policy, Seoul-Korea, 30 August-1 September.

Saravanan, P. (2007) – Recent Experiences in the Housing Finance Sector – A study with Reference to India, Housing Finance International September 2007, Vol.22 Issue 1.

Scholtens, B. and D. van Wensveen (2003) – The theory of Financial Intermediation: An Essay on what it Does (Not) Explain, Vienna: The European Money and Finance Forum (SUERF Studies 2003/1).

Schumpeter, J.A. (1912) – The Theory of Economic Development, Cambridge-Massachusetts: Harvard University Press.

Sikasa C. (2004), Customer perception of change management practices in the mortgage industry. Africa Private Sector Group, Kenya, 2004.

Shin, H.S. (2009) – Reflections on Northern Rock: the bank run that heralded the global financial crisis, Journal of Economic Perspective Winter 2009, Vol. 23 Issue 1 pp 101-124.

Soyibo, A. (1996) – Financial Linkage and development in Sub-Saharan Africa: The role of financial institutions in Nigeria, Working Paper 88, London: Overseas Development Institute

Stiglitz, J.E. (2000) – The Contributions of the Economics of Information to Twentieth century Economics, Quarterly Journal of Economics 115, pp 1441-1478.

Tirole, J. (2006) – The theory of Corporate Finance, New Jersey: Princeton University Press.

Tiwari, P and Moriizumi, O (2003) Efficiency of Housing Finance: A comparative Study of Mortgage instruments in Japan. European Journal of Housing Policy, 3(3).

Toby, A J (2006) Empirical study of the Liquidity Management Practices of Nigerian Banks Journal of Financial Management and Analysis, 19(1), 57-70.

UNCHS-Habitat (2007) – Improving the Performance of National Finance Institutions in Shelter Delivery, UNCHS: Nairobi-Kenya.

Van Order, R. (2005) – Risk Management and mortgage portfolios: some applications for emerging markets – in Hegedus, J. and R.J. Struyk (Eds) – Housing Finance: New and Old Models in Central Europe, Russia and Kazahkstan. Local Government and Public Service Reform Initiative, Open Society Institute, Budapest

Vatnick, S. (2008) – Financial Reforms and Emerging Markets, Financial Markets, Institutions and Instruments February 2008, Vol.17 Issue 1, pp 109-120.

Williamson, O.E. (1985) – The Economic Institutions of Capitalism, New York: The Free Press.

APPENDIX A – QUESTIONNAIRE

DETERMINANTS OF HOUSING FINANCE IN KENYA

[The following information is required for a Masters of Business Administration thesis. Kindly complete the questionnaire as per the instructions given being rest assured that the information provided will be used strictly for project purposes]

QUESTIONNAIRE TO HOUSE OWNERS

A. GENERAL BACKGROUND

1. What is your Marital Status? (Tick one box)
   a) Single
   b) Married
   c) Divorced
   d) Widow
   e) Widower

2. What is your Age? (Tick one box)
   a) 1-29
   b) 30-39
   c) 40-49
   d) 50-59
   e) 60+

3. What is the highest form of formal education that you have achieved? (Tick one box)
   a) None
   b) Primary
   c) Secondary
   d) Vocational / Technical
   e) Polytechnic / University

4. What is your current employment status? (Tick one box)
   a) White collar job (Civil Servant)
   b) White collar job (Private company)
   c) Blue collar job (Bricklayers etc)
   d) Self Employed (Specify)
   e) Other (Please specify)…….

5. What is your type of family? (Tick one box)
   a) Nuclear
   b) Joint / Extended

Others (Please specify)…….

B. SECURITY

6. What is the tenure of the house? (Tick one box)
   a) Own
   b) Rent
   c) Part Own / Part Rent
   d) Others (Please specify)…….

7. What is the form of ownership? (Tick one box)
   a) Inheritance
   b) Bought
   c) Built
   d) Others (Please specify)……..

If Answer to Q 7 is 3, go to Q 8
If Answer to Q 7 is 1, 2 or 4, go to Q 13

8. IF BUILT, did you? (Tick one box)
   a) Buy the plot
   b) Inherit the plot
   c) Others (Please specify)…….

9. IF BUILT, who carried out the construction? (Tick one box)
   a) Self-Built
   b) Contractor with material
   c) Contractor without material
   d) Others (Please specify)……..

10. If you have a loan, what security was given for the loan (Tick all that apply)
   a) The Property
   b) Another Property
   c) Agricultural Land
   d) Others (Please specify)…….

11. What kind of security can you offer for a loan? (Tick all that apply)
   a) The house itself
   b) Any other property
   c) Agricultural land
   d) Others (Please specify)…….

C. VALUE OF PROPERTY

12. When housing is to be acquired, it is either constructed from scratch or a fully erected building is purchased. If constructed from scratch, how much did the plot cost? Kshs……

13. How much did you spend on construction? Kshs.……

12. Can you give value of the property on completion?
Kshs. …….

14. If a fully erected building was purchased, what was the value?
Kshs……

15. What is the Present Value of your property? (Tick one box)
    a) Less than Kshs. 1000, 000
    b) Kshs. 1000,001- Ksh. 5000,000
    c) Kshs. 5000,001- Kshs. 10,000,000
    d) Above Kshs. 10,000,000
    e) Don't know

D. INTEREST RATE

16. Whether a house is constructed from the scratch or a fully erected building is purchased, how did you finance your house acquisition? (Tick one or more boxes as applicable)
    a) Mortgage Institution
    b) Commercial Bank
    c) Relatives and Friends
    d) Personal Savings
    e) Money from abroad
    f) Loan from employer
    g) Sold another house
    h) Private lender
    i) Other (Please specify)……..

17. If you borrowed, what was the rate of interest at the beginning of the transaction …….....

18. What is the rate of interest presently or on completion? …….....

19. If you have obtained a loan, how do you intend to repay it? (Tick all that apply)
    a) Extra work
    b) Employment income
    c) Reducing household expenditure
    d) Sale of valuables
    e) Other sources (Please specify)……

20. What is the repayment period for the loan? (Tick one box)
    a) Less than 24 months
    b) 25-48 months
    c) 49-96 months
    d) 97-144 months
    e) Others (Please specify)…….

21. Are you up to date with your loan repayments?
    a) Yes
    b) No

22. If No, How many months are you behind? (Tick one box)
    a) 3-6 months
    b) 7-12 months
    c) Over 12 months
    d) Others (Please specify)……..

23. What is the reason(s) for default in loan repayment? (Tick one box)
    a) Loss of Income
    b) Higher financial commitment
    c) Excessive Interest charges
    d) Others (Please specify)…….

24. If a loan was available, would you be willing to borrow to buy another house? (Tick one box)
    a) Yes
    b) No
    c) Don't know

E. GOVERNMENT REGULATION

25. The processing of loan applications with the financial institutions usually go through a long process, were you satisfied with the time taken to process? (Tick one box)
    a) Very satisfied
    b) Satisfied
    c) Dissatisfied
    d) Very Dissatisfied

26. On application, what percentage of the loan requested did you get? (Tick one box)
    a) 50%
    b) 60%
    c) 70%
    d) 80%
    e) 90%
    f) 100%
    g) Other (Please specify)……

27. Where did you obtain the remainder of the funds needed for your house acquisition? (Tick all that apply)
    a) From friends and families
    b) Private lenders
    c) Employer
    d) Others (Please specify)…….

28. Before applying for the loan, were you satisfied with the process and requirements? For example production of title deed, survey and architectural requirements

a) Very satisfied
b) Satisfied
c) Dissatisfied
d) Very Dissatisfied

F. INCOME LEVEL

29. How much do you save per month? (Tick one box)

a) Nothing
b) Kshs. 0 - Kshs. 10,000
c) Kshs. 10,000 – Kshs. 100,000
d) Above Kshs.100,000

30. What are your Total Household savings at present? (Tick one box)

a) Nothing
b) Kshs. 0 – Kshs. 10,000
c) Kshs. 10,000 – Kshs. 100,000
d) Above Kshs. 100,000

31. Where do you save? (Tick all that apply)

a) Commercial Bank
b) Cooperative society
c) Mortgage Institution
d) (Traditional Contributions)
e) Other (Please specify)……

32. What is your personal income per month? (Tick one box)

a) Kshs. 0 – 100, 000
b) Kshs. 100,000 – 200,000
c) Kshs. 200,000 – 300,000
d) Kshs. 300,000 – Kshs. 500,000
e) Above Kshs. 500,000

Thank you for participating in this Research. Please return questionnaire

APPENDIX B – QUESTIONNAIRE

DETERMINANTS OF HOUSING FINANCE IN KENYA

[The following information is required for a Masters of Business Administration thesis. Kindly complete the questionnaire as per the instructions given being rest assured that the information provided will be used strictly for project purposes]

QUESTIONAIRE TO PROPERTY DEVELOPERS

Name: _____
Age: ____
Company Name: _____
Position at work: _____

1. How significant do you think is Kenyans position as an investment destination for real estate at present from the point of view of both foreign and domestic investors? Please tick the appropriate box.

a) Very Significant
b) Increasingly gaining Significance
c) Minimal Significance

2. What importance does investment in real estate hold for you as an individual in contributing to your net worth? Please tick the appropriate box

a) Very Important
b) Increasingly becoming important
c) Not so important

3. What according to you is/will be the most preferred avenue for investment for an individual/ company in the real estate sector? Please tick the appropriate box.

a) Direct Investment in land/property
b) Investment in Listed Real Estate Company shares
c) Joint Venture with Realty Developer
d) Others (Please Specify)

4. Do you think the sudden surge in property prices across Kenya over the last two years is justified? Please tick the appropriate box.

a) Yes (Boom)
b) No (Bubble)
c) Cant Say

5. What according to you is the key problem faced by this sector? Please tick the appropriate box.

a) Lack of Infrastructural facilities
b) Ownership issues, unclear titles and abnormally high stamp duties

c) Rising Interest Rates dampening affordability
d) Others (Please specify)

6. Which segment according to you has the greatest scope for improving profits (IRR) – residential, commercial, retail or SEZ's (Special Economic Zones)?
How much return do you think it generates? Please tick the appropriate box

Segment _____

a) 5 – 10 %
b) 10 – 20 %
c) More than 20%

7. How do you see the real estate sector 10 years from now? Please tick the appropriate box

a) A stabilized sector
b) A risk- perceived sector
c) A high growth sector
d) Can't say

8. Which of the following sources of capital is most tapped by you? Please rank in order of preference: 1 being the most preferred and 3 being the least preferred

a) Bank loans
b) Foreign Direct Investment (FDI)
c) Capital Markets – IPOs (Initial Public Offer)

9. Do you think the Government of Kenya has taken adequate measures for the development of the real estate sector in recent years? Please tick the appropriate box

a) Yes
b) No
c) Don't Know

Thank You for your time and help!

APPENDIX C – QUESTIONNAIRE

DETERMINANTS OF HOUSING FINANCE IN KENYA

[The following information is required for a Masters of Business Administration thesis. Kindly complete the questionnaire as per the instructions given being rest assured that the information provided will be used strictly for project purposes]

QUESTIONAIRE TO HOUSING FINANCIERS

1. Why has Kenya become one of the most favoured destinations for investment in the real estate sector in the past 3 years?

……
……

2. What are the reasons for the sudden surge in property prices across Kenya? Could you throw light on whether you think this is a boom or a bubble?

……
……

3. What is the scope for the real estate segment in Kenya? Can you suggest the demand/supply dynamics for the sector?

……
……

4. What according to you are the key risks/ problems this sector will/ is facing? Could you recommend any solutions to the above problems?

……
……
……

5. What are the various approvals and regulations needed to be adhered to for the acquisition, development and completion of a project?

……
……
……

6. What are the different avenues for investment for an individual/ company in the real estate sector?

……
……
……

7. What are the different sources of capital available to a real estate developer?

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8. Which segment according to you has the greatest scope for improving profits (IRR) - residential, commercial, retail or SEZ's (Special Economic Zones)?

……
……

9. What role according to you has the Government played in the development of the real estate sector?

……
……

10. Where do you see the real estate sector 10 years from now?

……
……

Thank You for your time and help!

DETERMINANTS OF SUPPLY OF REAL ESTATE FINANCE IN KENYA

BY

PHILIP MUNYWOKI MUTHUNGU

REG NO: D61/P/8459/2006

A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE A WARD OF THE DEGREE OF MASTER OF BUSINESS ADMINISTRATION (MBA), SCHOOL OF BUSINESS, UNIVERISTY OF NAIROBI

OCTOBER 2012

DECLARATION

This Research Project is my own original work and has not been presented for a Degree Qualification in any other University or Institution of learning.

SIGNED …… DATE **…….**

PHILIP MUNYWOKI MUTHUNGU
D61/P/8459/2006

This Research Project has been submitted for Examination with my approval as the University Supervisor.

SIGNED: …… DATE: …….

DR. JOSIAH ADUDA
School of Business
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DEDICATION

This paper is dedicated to my parents for their guidance and persistence and for being a source of inspiration and support in the course of my studies

ACKNOWLEDGEMENT

The MBA programme has been a long, taxing and challenging journey and the successful completion has been as a result of support received from many people. I am indebted not only to people who gave me the inspiration, support and encouragement to purse MBA programme but also to everybody who gave me the guidance and assistance on what has been reported in this project.

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Above all, special thanks to the Almighty God for the gift of life and good health, lack of which I would not have made it this far.

ABSTRACT

The purpose of the study was to investigate the factors affecting real estate finance supply. It was important to verify the reasons why housing finance are not being supplied by the financial intermediaries readily. Could it be that potential borrowers are not approaching the financial institutions to source for housing finance or is it that the lender's requirements are so stringent that individual's cannot meet up with this lender's requirements. The study was carried out as a survey of real estate developers, real estate owners and financiers operating in Kenya as of 31st December 2011. The sample size was made up of 30 real estate developers, 30 home owners and 10 housing financiers. It was considered necessary and important to obtain information using questionnaire in extracting information from users of real estate finance in Kenya at the time. The data collected by means of the questionnaire survey, was analysed and conclusions were used in discussing all factors that affecting supply of real estate financing in Kenya.

There were revelations about the situation in the supply of housing finance in Kenya. In lending, financial institutions give out loans in consideration of interest to be charged on the loans and the riskiness of the loan. The ability of financial institutions to lend for housing (supply of housing finance) determines the quantity of housing finance that could be supplied for house acquisitions. The research identified these factors; value of property, government regulation, income level, interest rates and loan security do affect the availability and supply of housing finance will be reduced. The efforts by the government to ensure faster clearances for active real estate development would enable developers in a great way. The researcher recommends that the government should streamline the various real estate policies in different ministries into a single guide and to set up a separate real estate division within the ministry with the objective of running a single window clearance of all required paper work and clearances. Also the government should establish a housing loan guarantee scheme run by existing government housing corporations to assess risks in some real estate development and the applicant's credit scores then giving guarantees to the developers and financiers so as to encourage financiers to lend more and at affordable interest rates.

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ABBREVIATIONS

AfDB	African Development Bank
ANOVA	Analysis of Variance
CBK	Central Bank of Kenya
CDC	Commonwealth Development Corporation
CRR	Cash Reserve Requirement
EABS	East African Building Society
GDP	Gross Domestic Product
HFIs	Housing Finance Institutions
HFCK	Housing Finance Company of Kenya
KBS	Kenya Building Society
KNBS	Kenya National Bureau of Statistics
LTV	loan-to-value
MFI	Micro Finance Institutions
NBFIs	Non-bank financial institutions
NGO	Non-Governmental Institutions
NNE	New Neoclassical Economics
NSE	Nairobi Stock Exchange
NSSF	National Social Security Fund
OMO	Open Market Operations
PLS	Partial Least Squares
S&L	Savings and Loan
SSA	Sub-Saharan Africa
TQM	Total Quality Management
USDHUD	United States Department of Housing and Urban Development
UNCHS	United Nations Centre for Human Settlements (Habitat)

CHAPTER ONE

INTRODUCTION AND BACKGROUND TO THE STUDY

1.1 Background Information

In the year's immediately preceding independence in 1963, the housing finance sector was marked by instability as a result of political uncertainty. In the event, HFI deposits plunged from KSh 208 million in 1959 to KSh 90 million in 1962. However, this period soon gave way to a phase of consolidation and the mortgage industry expanded substantially from 1964 onwards. The principal HFIs were the Housing Finance Company of Kenya, Kenya Building Society (KBS), and Savings and Loan (S&L). HFCK was incorporated in 1965 as a joint venture between government and the Commonwealth Development Corporation (of the United Kingdom), taking over the assets of First Permanent of East Africa and those of KBS. S&L, the largest HFI at the time, experienced substantial setbacks around the time of independence and was taken over, initially by Pearl Assurance and, in 1970, by Kenya Commercial Bank, a parastatal. East African Building Society, a relatively small HFI which had opened for business in 1959, weathered the political uncertainties of the day and expanded rapidly in the years that followed.

HFCK, EABS and S&L, the principal HFIs, achieved fast growth during the 1970s. Between 1975 and 1980, for instance, HFCK deposits increased at an annual average rate of 20% and those of the EABS by 24%. In mid-1981, following a general decline in the growth of deposits, tax-free housing development bonds were introduced to enable HFCK and S&L to attract additional savings. These institutions also benefited from deposits by the National Social Security Fund (NSSF) and from loans by the government. Starting in the mid-1980's the mortgage industry witnessed major changes and upheavals. By 1986, the number of HFIs had grown to about 36, comprising four limited liability companies and 32 building societies but only 15 of the latter were active. Taking into account that the country had for many years been served by only one building society, the growth in numbers of this type of HFI had been nothing short of dramatic. Gardner et al. (1986) have advanced two reasons for this growth. The first is that the coffee price boom of 1976-77 provided the financial impetus for the rapid increase in the number of such

institutions. Second, licensing of financial institutions under the Banking Act was tightened in 1985 following the collapse of a financial company. Thus, building societies remained the principal avenue for the entry of firms into the financial sector. Notwithstanding the proliferation of HFIs, the industry continued to be dominated by HFCK, EABS and S&L. Still, the newer institutions competed aggressively for savings.

In 1984, the country experienced its first post-independence failure of a financial institution, that of the Rural and Urban Credit Finance Company. In response, the government tightened the regulatory and supervisory regime. More specifically, a number of steps were taken via an amendment to the Banking Act (Cap. 488). First, stricter conditions were imposed on the level of paid-up capital, as well as that of unimpaired reserves relative to deposit liabilities. For instance, paid-up capital for local non-bank financial institutions (NBFIs) was raised from Ksh 5 million to Ksh.7.5 million. Second, NBFIs were prohibited from owning shares in commercial banks. Third, a Deposit Protection Fund was created at the Central Bank.

These measures notwithstanding, a group of financial institutions, several building societies among them, failed in due course. A combination of factors led to this failure, some political, others management-related. First, a good number of building societies had invested heavily in property development, an activity that was considered more profitable but which naturally carried a higher risk. A notable example was Pioneer Building Society which collapsed largely because of delayed house sales. Second, major institutional investors, such as the NSSF, withdrew their deposits from the new building societies, partly out of the need to comply with political directives but also as a result of genuine concern for the security of their deposits. Third, the number of building societies had expanded too rapidly relative to the volume of available deposits. Fourth, the regulatory and supervisory regime was weak and potential problems could therefore not be arrested in time. In particular, the Registrar of Building Societies did not possess the staff needed to assure effective supervision. Government intervened and re-organized some of the failed institutions under the umbrella of a new bank, the Consolidated Bank of Kenya. Potential crises were averted in the years that followed but, in the first half of

1993, a number of financial institutions were placed under receivership including one HFI.

In spite of these setbacks, the mortgage industry registered some expansion. HFCK saw its public deposits grow, in nominal terms, from Ksh.1.89 billion in 1987 to Ksh.3.4 billion (USD 120.9 million) in 1992. However, in real terms that is, after making adjustments for inflation growth was marginal. As for mortgage lending, advances increased from Ksh.204.5 million in 1984 to Ksh.614.0 million in 1992 (USD 21.8 million). Even so, there was stagnation between 1986 and 1988 but lending rebounded in 1989 and 1990 registering nominal growth rates of 34.2% and 52.3%, respectively. Stagnation set in once again in 1991. With some variations, EABS and S&L shared a similar experience. Arguably the most important historical development was the freeing of interest rates in July, 1991, a measure taken to ensure a more efficient allocation of resources. Although interest rates had hitherto been controlled by the Central Bank they had nevertheless remained positive in the years leading up to 1990. However, the liberalization of interest rates was overshadowed by the very high rate of inflation in 1993, conservatively estimated to have averaged around 40% but to have peaked at roughly 100% during the year. Since HFIs are not able to lend at nominal rates exceeding 30% -- because there is little demand at that level -- real interest rates turned sharply negative. The response of HFIs was to suspend new mortgage lending altogether, choosing instead to invest in high yielding treasury bills.

Although inflation fell substantially in subsequent years, and with it interest rates, mortgage interest rates remained above 20% per annum for the rest of the decade. Towards the end of the 1990s, the housing finance market in Kenya went through a transformation from being predominantly public-sector oriented, to a more market-driven enterprise. With interest rate decontrol and privatization, those institutions that were previously controlled and sheltered by government, became exposed to market forces.

Housing demand, commonly referred to as effective demand, seeks to measure the willingness and ability of households to pay for housing. It is a function of many factors: household income, the price (or rent) of a dwelling, financing arrangements (including

interest rate and the loan term), and household preferences for different attributes of a dwelling, such as location. There is empirical evidence that households are willing to spend more on housing if they are buying their own house than if they are renting. Housing demand is often contrasted with housing need, a socially derived concept that measures the number of dwellings required to house a population above an arbitrarily determined standard or norm, with no regard for the ability to pay.

In microeconomic terms, the housing finance market is considered as the interaction between a supply matrix of housing finance quantity classified by characteristics such as pricing / volume and a demand matrix of households classified by their characteristics, preferences and constraints Follain et al (1980). The market allocates housing finance on the basis of the price (interest rate) and the number of households that are willing to pay the bid prices in consideration that they have their preferences and constraints. It is argued that there is disequilibrium in the housing finance market when the price does not adjust fast enough to clear the market. On the supply side of the housing finance market in the developed economies, the lenders structures remain national in nature; common developments include a reduction of credit restrictions. Developments include increased loan-to-value (LTV) ratio, which is defined as the ratio of bank lending to property value, a wider array of loan contracts offered to borrowers and a move towards greater reliance on capital market funding via securitization of housing loans CGFS (2006). It is important to note that most housing finance markets that have historically relied more on fixed rate products have experienced an increased demand for, and use of adjustable rate mortgages as well as loan types combining features from both fixed and adjustable rate mortgages.

1.2 Statement of the Problem

The rise in household income is slowly percolating into growing urbanization causing a change in lifestyle trend. Urbanization has resulted in the nuclear family structure from the traditional joint-family system which is likely to create huge demand for urban housing leading to further expansion of the city's sub-urban regions. The above fundamentals in turn have created a huge demand supply gap in all sectors of the housing market, commercial, residential, retail and hospitality. The fact that more than half of the 40 million households in Kenya still live in temporary or semi-permanent structures suggest that housing has a huge potential demand in both the middle-income and high-income segments.

The housing sector in Kenya has seen tremendous growth in the recent years with property prices soaring and the number and scale of projects increasing. Developers have been looking at new sources of raising funds such as from investors, both domestic and foreign, through avenues such as listings on Nairobi Stock Exchange (NSE), private equity participation and the setting up of joint ventures. Recognizing the need for foreign funding, the government has allowed foreign direct investment. As a result, foreign investors are permitted to invest in wholly owned subsidiaries or in joint ventures with Kenyan real estate companies as long as minimum capitalization requirements are met within six months of the commencement of operations and the capital remains locked in the project for three years thereafter. (Financial Times, 2007). Entry of foreign retailers is accelerating demand for mall space.

A study by Dasan (1996) looked at analysis of factors which influence supervisor's motivation in Kenya's building and construction industry. Omufira (2001) observed the extent of TQM implementation in the construction industry. A case study of the Kenyan building industry by Njiru (2003) looked at the performance of real estate markets. The case of Central Business District of Nairobi by Sikasa C. (2004) looked at customer perception of change management practices in the mortgage industry. The case of HFCK by Mandere A.N. (2006) looked at a survey of QM practices in the large Kenyan building construction firms. Mutuku (2006) observed the factors influencing the development of

secondary mortgage market in Kenya with special emphasis on mortgage backed securities while Matara (2008) looked at a survey of sources of finance for building construction firms in Kenya. Marete D, (2011), reviewed the determinants of real estate property prices in Kiambu Municipality in Kenya. None of the local studies in the university focused on the determinants of supply of real estate in Kenya.

1.3 Objective of the study

The objective of the study was to investigate determinants of supply of real estate finance in Kenya.

1.3.1 The specific objectives were:

1. To find out if the economic model of providing housing finance in developed economies can be adopted in the Kenyan economy.
2. To evaluate the key factors that have contributed to the operational efficiencies and inefficiencies of supply of real estate financing in Kenya.

1.5 Significance of the study

The environment in which real estate developers conduct their daily routines is composed of factors which ultimately determine their success. Discovery and subsequent recommendation for elimination of any problems could improve performance of these businesses. The study therefore will contribute to business management and practice by providing an understanding on how to boost performance real estate developers. The various stakeholders will therefore understand the links between the necessary incentives for the growth and performance of the targeted businesses. Researchers who might be interested in this topic could find the results opening up new avenues for further re search. The study will also be of benefit to other researchers who may feel the need to further research on the same problem in their areas of specialization.

CHAPTER TWO

LITERATURE REVIEW

2.1 Financial institutions' role in housing finance

If the funding of mortgage loans is left primarily to the deposit-taking institutions, they can only supply mortgage loans through deposit mobilized which are short-tenured. As a consequence of the high proportion of short-term liabilities in their deposits, they tend to lend short according to the commercial bank loan theory and the real bill doctrine. The theory stipulates that bank loans should be short-term and self-liquidating because commercial banks usually have short-term deposits. According to the theory, banks should not grant long-term loans such as housing / real estate loans or loans for financing purchase of plant and machinery because they are considered too illiquid Elliot (1984); Ritter & Silber (1986) as cited by Soyibo (1996).

A large percentage of financial institutions in the emerging economies are still adopting the business model used in the era of market-making (1970s-1980s) in the US relying on short-term deposits liabilities to fund long-term mortgages assets USDHUD (2006); Cho (2007), which are contradictory to the tenets of the commercial bank loan theory. This model had a unique shortcoming under volatile interest rate environment where lenders are borrowing short-term and lending on long-term basis at high interest rates that results in dampened housing finance demand. A well-functioning primary mortgage market requires adequate funding sources and variety of lenders in the primary market to promote further development. This includes savings mobilization and simple mortgage-backed debt instruments to offer lenders funding alternatives Roy (2007). Lenders in the primary market would include non-depository mortgage specialists, non-governmental organizations (NGOs), microfinance institutions (MFIs) and contractual savings systems Follain and Zorn (2000); Warnock and Warnock (2008). In Asia, the financial sectors in countries such as China, South Korea, Malaysia, Singapore, India and Indonesia are large and well developed UNCHS (2007). Whereas, domestic debt markets in most SSA countries (except South Africa) are in the developing stage and others in their infancy stage. SSA has 15 organized securities markets and the region's financial sectors are

characterized with a limited range of investment instruments particularly for longer tenors except the Johannesburg Stock Exchange Roy (2007); Irving & Manroth (2009).

Scale issues in equities have been mirrored in the bond market, where only a limited number of private bonds have been listed and there is little secondary market trading Merrill and Tomlinson (2000); Roy (2007). The major reason for the smallness of the securities market is lack of investors; in that insurance companies and pension funds are too small to act as major institutional investors. Despite the fact that insurance companies are allowed by statute to invest in real estate, they lack the necessary long-term funds for investment Roy (2007).

2.2 Review of theories

The driving force of economic growth and development as enunciated by Schumpeter (1921) which include mobilization of savings, efficient capital allocation, effective risk management, ease of transactions with advancing technologies are lacking. In an effort to provide housing and subsidized housing finance, various central governments have established institutions to provide housing finance. Even with the establishment of these institutions, their management has been affected by political and other negative factors that are not favourable for business survival. Therefore, the theoretical framework of this study is based on the New Neoclassical Economics (NNE) which is an integration of Neoclassical Economics and Transaction Cost Economics.

2.2.1 Theory One: Mass Psychology and Irrational Exuberance

The dominant explanations of the housing finance to date have been demand-side explanations. Robert Shiller has argued that the demand is driven by consumers' irrational exuberance and belief that real estate prices would continue to appreciate, stoking the demand for housing finance.

We do not question the existence of irrational consumer expectations and behavior. There is undoubtedly a great deal of irrational or misguided consumer behavior in real estate

investment. But this behavior required readily available financing. Shiller's demand-side theory cannot explain the movement in yield spreads during the bubble and is, therefore, a necessarily incomplete explanation. Credit relationships are two-sided relationships, and the evidence from PLS spreads indicates that any increase in housing finance demand was outstripped by an increased in housing finance supply.

2.2.2 Theory Two: Consumers' Inability to Anticipate Inflation

An alternative psychological theory has been presented by Markus Brunnermeir and Christian Julliard. Brunnermeir and Julliard argue that consumers are incapable of sorting between real and nominal changes in interest rates and rents. Therefore, consumers account for low nominal rates when making mortgage decisions, but fail to account for future appreciation of prices and rents falling commensurately with anticipated inflation. The result is that consumers overestimate the value of real estate when inflation is declining.

Brunnermeir and Julliard's theory may well be correct, but it too cannot explain the movement in yield spreads during the bubble. Therefore, their theory, like Shiller's, is at best an incomplete explanation of the bubble, as the yield spread movement shows that any growth in demand was exceeded by a growth in supply.

2.2.3 Theory Three: Inelastic Housing Supply

A third demand-side quasi-hypothesis for the housing finance, presented by urban economists Edward Glaeser, Joseph Gyourko and Albert Saiz, emphasizes the geographic variation in the housing bubble. There was considerable regional and local variance; some metropolitan areas, such as Detroit and Cleveland, did not experience a bubble, while others experienced bubbles of greater or lesser size. Glaeser, Gyourko and Saiz explain the variation based in part on variations in the elasticity of housing supply. In some parts of the country, local regulations and urban growth have been on a collision course for several decades. In these cases, with the inability of supply to expand, increased demand for real estate only resulted in higher prices.

In other words, Glaeser, Gyourko and Saiz contend that in inelastic housing markets, the housing demand curve shifted rightwards. And because most consumers finance the purchase of their homes, the rightward shift in the housing demand curve would have also resulted in a rightward shift in the mortgage finance demand curve. Glaeser, Gyourko and Saiz do not present supply constraints as the explanation for the bubble, although others do. At most, Glaeser, Gyourko and Saiz see supply inelasticity as affecting variations in how the bubble played out regionally. They argue that supply inelastic regions are more likely to experience greater price volatility and bubbles and that the extent of the bubble was determined to some degree by housing supply inelasticity.

2.3 Review of emperical studies

The neoclassical economics perspective looked into the dynamics of prices and quantities though largely an institution-free perspective in which only function matters Merton & Bodie (1995); North (1994), as cited by Merton & Bodie (1995). Thereafter, Williamson (1985 p.16 and 1988) in discussing the New Institutional Economics highlights the functional perspective of the financial system. The basis of economic theory is that commercial transactions are the prime drivers of economic growth such that the more frequently transactions take place, the higher the potential of economic growth. For economic growth and development, Schumpeter (1912) argues that financial intermediaries like banks and other financial institutions mobilize savings, allocate capital, manage risk, ease transactions and monitor firms. It is in this process of lending that financial intermediaries are considered to be utilizing resources and contributing to economic growth and development and there are evidences to support Schumpeter's view that financial institutions promote development Fry (1988); King and Levine (1993); Benhabib and Siegel (2000); Arestis et al (2001); Wachtel (2001) and Scholtens & Wensveen (2003).

Further in the literature, one of the biggest problems faced by the banks is lack of information about the promoters and the projects to be financed with the bank facilities

Jones & Maclennan (1987); Altman & Saunders (1998); Byamugisha (1999); Guzman (2000) and Mints (2006). Therefore, the economics of information, which has been a great contributor to the standard Neoclassical Economics since the late 1970s' is considered to be relevant to this study. The New Neoclassical Economies (NNE) is an integration of Neoclassical Economics (NE) and Transaction Cost Economics (TCE), with a primary role for NE but without losing sight of TCE. Among the presentations that assume part of the role of TCE in the framework of NE, is the information economics survey by Stiglitz (2000). The new information economics, he claimed, not only showed that institutions mattered, and explain why the institutions arose and the forms they took, but showed why they mattered. He noted that Arnott and Stiglitz (1991) showed that non-market institutions could even exacerbate the consequences of market failure, which was earlier articulated by Coase (1960).

Coase (1960) argued that if the costs of handling through the market are high and if the net costs are lower, only then may government regulations be relevant. However, the design of appropriate government interventions can be problematic to the extent that on occasions it brings into serious questioning the suitability of government interventions as the only option in correcting market failures Hammond (2006a & 2006b). The mere failure of private industry, when left from public interference, to maximize national dividend does not itself warrant intervention; for this might make things worse. When issue of accountability is not on the agenda, governments in most of the emerging economies monopolizes resources and power, and this monopoly is often worse than that of the private sector in the sense that the former entails larger TC and hence much more social costs relative to the latter. Hurwics (1973) noted that whenever information is imperfect and/or markets are incomplete, competitive markets do not obey the Pareto optimality efficiency criterion. Also, in NE literature, Kogiku (1971) noted that a competitive equilibrium ceases to produce Pareto-optimality when there are externalities that affect the system. However, Stiglitz (2000 p.1458) concluded without taking cognizance of associated TC, that "Government interventions, in form of, say taxes or subsidies on commodities – will lead to Pareto improvements". In line with the discussions and conclusion above on transaction cost, the next section then examines transaction cost and the theory of financial intermediation.

The current theory of financial intermediation concentrates on transaction costs and asymmetric information, but is inadequate in explaining the current complex financial transactions. It is therefore, referred to as traditional approach to financial intermediation. The financial intermediaries were considered as institutions being used to execute government monetary policies Benson and Smith Jr. (1976), without contributing to economic growth and development. The assertions might be right in the case of financial intermediaries in the emerging economies, due to the level of their economic growth. The financial intermediaries in the developed economies have gone through stages of development and by their functioning and operation they are contributing to the economic growth of their domiciled environment. The success in the theory of financial intermediation can only be appreciated when a financial market is not perfect. As noted by Berger et al (1995), a large percentage of past research on financial institutions has identified assumed imperfections like taxes, costs of financial distress, transaction costs, asymmetric information and importantly regulation.

In terms of regulation, which can either be structural or prudential, the government regulates the financial market to ensure financial stability as well as addressing problems of asymmetric information and moral hazard. While structural regulation limits the degree of risk that an institution can take in order for government to protect investor's funds and exposure limits of the financial institutions Pilbeam (2005), prudential regulation takes care of disclosure requirements, capital adequacy and liquidity requirements. Even with the identified importance of effective regulations of financial institutions, Llewellyn (2008), Milnes & Wood (2009) and Shin (2009) in discussing the Northern Rock situation highlighted problems in the regulatory framework of the British Financial System. Few of the identified problems include: inadequate role of government in responding to financial market distress and ambiguity in regard to the distinction between liquidity and solvency issues in banks. Llewellyn (2008) suggested that in any regulatory / supervisory regime, four areas that need to be addressed include prudential regulation of the financial firms; management and systemic stability; lender-of-last resort function and conduct of regulation and supervision business.

The lack of adequate regulation has resulted in lending behaviour of financial intermediaries being out of tune with economic realities. This has resulted in the lending standard being disconnected from economic fundamentals Markowitz (2009); Jones and Watkins (2009) and the banks failing with great speed exposing flaws in the regulatory system designed to identify failing institutions The Wall Street Journal (2009). Also, Scholtens and van Wensveen (2000 & 2003) are of the opinion that there is imperfection in the market when information is not flowing freely (information asymmetries). In the absence of information asymmetries, due to deregulation and deepened financial market, improvement in information technology and reduction in transaction cost, which are attributes of the financial markets in the development economies, the relevance of financial intermediaries reduces greatly.

While transaction cost highlights role of these intermediaries in the distribution function, the emphasis on the information asymmetries revolves around the origination and servicing function Merton (1989); Allen & Santomero (1998). This is due to the fact that these institutions are considered as information sharing coalitions Leland & Pyle (1997) and they can achieve economies of scale and act as delegated monitors on behalf of their customers Diamond (1984); Scholtens & van Wensveen (2003). Therefore, they can deal with individuals and transact business with their dynamic strategies at minimum cost than individuals doing their businesses which might result in high transaction cost. The transaction cost is not limited to foreign exchange and cost of borrowing Tobin (1963); Towey (1974); Fischer (1983), it also includes costs of auditing and monitoring, search costs etc which are high in most of the emerging economies. The transaction costs in these economies are high because of implicit and explicit costs of doing business which ultimately reflects on the cost of borrowing for property acquisition. Pagliari (2007) noted that in acquisition and disposition of privately held real estate, transactions cost are high which reduces returns on that type of investment. The transaction cost in this type of investment includes cost of traveling in the course of acquiring and disposing the real estate, legal fees, due diligence costs, brokerage commissions and transfer taxes depending on where the transaction is taking place.

The argument goes further from the observation made by Levine (1997) that informational asymmetries and transaction costs reduces liquidity and increases liquidity risk. These asymmetric information and other credit market frictions has various effects in the financial markets. These shortcomings, observes Levine (1997) create the incentives for the establishment of institutions that augments liquidity with the intentions of increasing their profitability. Chiuri and Jappelli (2003) were of the opinion that in the quest of the financial intermediaries to accumulate savings in form of liquid wealth, the lenders (financial intermediaries) requests potential borrowers to make down-payments in arranging funds for property acquisition. This down-payment is becoming a unique factor in determining when most first time buyers start climbing the property ladder. In the US studies, Duca & Rosenthal (1994); Haurin et al (1997) observed that the down-payment drives mortgage availability and the timing of property acquisition by first time buyers. Ortala - Magne and Rady (1998 & 1999) examines the economic impact of down payment.

In the financial systems, the bank-based model has the attributes to acquire information about firms, thereby improving corporate allocations Diamond (1984); Ramakrishinan & Thakor (1984), manage cross-sectional, inter-temporal and liquidity risk in an effort to enhance investment efficiency and economic growth Allen & Gale (2000); Bencivenga & Smith (1991). In attracting projects with high returns to an economy, there should be capital to fund it Levine (1997) and at the right price. As it was argued by Vatnick (2008), a lower cost of capital is important for economic growth because it induces rising investment and higher rate of capital accumulation for faster economic growth. Therefore, the financial intermediaries are expected to be liquid to provide funds for the projects, it translates to the fact that there is linkage between liquidity and economic development.

The literature on finance reveals that there are only two broad types of finance available: debt and equity finance. Financing of a project either by debt or equity depends on the characteristics of assets being financed and transaction cost reasoning suggests the use of debt to finance re-deployable assets and equity used to finance non re-deployable assets Williamson (1988). Furthermore, Jensen and Meckling (1976) in the study of theory of

firms argue that debts are utilized if the ability to exploit potentially profitable investment opportunities is limited by the resources of the owner. Debt finance yields a fixed return to its suppliers in states when the firm is not bankrupt (that is, the firm has sufficient funds to make the fixed payment) Edwards and Fischer (1994). Bank lending as a form of debt can be categorized into two: either as asset specific or corporate loans Crosby et al (2000). Again, the debt can be either secured or unsecured.

However, equity finance gives its suppliers the right to the firm's residual returns after payments to the suppliers of debt finance, and in addition, the right to vote on decisions concerning the firm's operation in states when a firm is not bankrupt. When the firm goes bankrupt, limited liability provisions mean that suppliers of equity receive nothing. In such state, they even loose the right to make decisions about the firm's operations in such states. In situation of non-bankruptcy, suppliers of equity finance have the right to the firm's residual return; they do not have the right to receive a fixed payment in every period which may be yearly or half-yearly Edwards and Fischer (1994); Toby (2006). On the other hand, Cranston (2002) and Tirole (2006) classify debt finance into short-term and long-term. Short-term debt finance instruments includes bank overdraft, commercial papers and short-term trade credit and long-term debt finance instruments includes housing loans, mortgages and other forms of informal credit transactions. In the context of the developing world, debt finance can be obtained from formal financial institutions like banks, micro-finance arrangements, indigenous moneylenders, family members, employers and government Nubi (2005). Heffernan (2003) and Tirole (2006) argued that financial instruments vary widely according to the characteristic of term to maturity. Sight deposits at banks have zero term to maturity, as they can be withdrawn on demand. Consequently, equity has no redemption date and therefore possesses an infinite term to maturity.

One of the biggest problems faced by the banking sector is lack of information about the promoters and the projects to be financed with the bank facilities Guzman (2000); Djankov et al (2007), to determine whether the borrowers will be able to pay the principal and interest when they fall due. Altman and Saunders (1998) highlighted the array of information on various borrowers' details to include their character (reputation), capital

(leverage), capacity (volatility of earnings) and collateral. However, Mints (2006) limited the borrowers required information to "the three C's of lending" which are collateral factor, capacity factor and credit factor, which are all relevant to lending in both developed and emerging economies.

The current theory of financial intermediation concentrates on transaction cost and asymmetric information and they are considered to be inadequate as tools to explain the fundamentals of financial intermediation, which is risk management. Therefore, their contributions are being classified as traditional and old. Moreover, there are two aspects to the lending operations of the financial institutions. The ability of the financial institutions to lend determined by the strength of their balance sheets and the willingness of these institutions to lend as risk managers.

In the banking literature, capital adequacy is one of the five key variables identified in measuring bank balance sheet strength while others are asset quality, management, earnings and liquidity Rojas-Suarez (2002); Hefernan (2003); Buckle and Thompson (2005). The capital adequacy regulatory rules have impact on the bank behaviours Dewatripont and Tirole (1994); Freixas and Rochet (1997); Chiuri et al (2002). It is argued that there are two ways by which these rules affect bank behaviours. Firstly, it is known that capital adequacy regulatory rules strengthen bank capital and improves the resilience of a bank to negative shocks and secondly, capital adequacy affects banks in risk taking and management behaviour.

It has also been argued by various authors Allen (2004); Pan (2008) that capital adequacy rules like Basel II may impact the banking system's ability to extend loans and advances to the productive sector of the economy. When capital requirement arises and with capital constraints in most countries of the emerging market due to lack of depth in their capital markets; the banks adopt a risk-shifting model as means of risk management. Risk management is about managing a mismatch between supply of funds and the demand for investments and these risks could be credit risk, liquidity risk, systemic risk, mismatch risk or interest rate risk Odenbach (2002); Heffernan (2003); van Order (2005); Mints (2006) and Akinwunmi et al (2007) & (2008a). With risk management being the core

business of the financial intermediaries, Dewatripont & Maskin (1995); van Thadden (1995) opinionated that financial institutions operating in a market-based financial system, due to competition, will have their inefficiencies associated with banking activities reduced and thereby promote economic growth.

Saunders (2002) analyses a risk-shifting model as a process whereby financial institutions, banks in particular, in an effort to meet up with new capital requirements moves away from low-yielding loans to high risk loans in expectation of high earnings. Furthermore, Caprio Jr. et al (2008) argue that risk-shifting takes place at every stage of financial engineering. If these loans eventual pay off, banks meet up with their higher capital requirements from loan profits, otherwise they are liquidated.

2.4 Determinants of Supply of Housing

The role of a housing finance system does not stop at the provision of shelter, it is also very important to the mobilization of domestic savings, shelter being one of the first priorities of households and a leading reason for savings. Therefore, the literature contends that the housing finance sector can and should play a central role in the mobilization of resources by households Renaud 1984; Renaud (2008). In Asia, according to UN-Habitat's state of the World's cities 2006-7 report, 73 percent of urban dwellers live in non-permanent housing. The housing sector is severely constrained by lack of an adequate and appropriate housing finance system, in which Asian Development Bank study says that Asia's mortgage sector is the least developed in the world UNCHS (2007). The situation in SSA is similar, characterized by the lack of housing finance.

The stock of housing finance in Namibia and South Africa comes to 18-20 percent of GDP, for other countries for which data are available had about 2 percent (Nigeria, Mali, Morocco, Senegal) Roy (2007). In Asia, many countries mortgage financing per year is less than 2 percent of GDP compared to 88 percent in the United Kingdom (UNCHS (2007) and 15-21 percent in Chile, Malaysia and Thailand Honohan and Beck (2007). In societies where social housing is not on the priority list of government, the affordability

would have to be looked at from the point of view of the individual's own ability to raise money needed to meet the cost or price of housing needs. Generally, the first source of funding for the individual is their income because it does not involve payment of interest. Many countries in the emerging economy have nascent and weak financial markets. The participation of financial markets in financing housing has been limited and the majority of low-income households are also excluded from the formal financial services industry UNCHS (2007). This resulted in 70 to 80 percent of housing finance in emerging economies being raised from the informal market Okpala (1994); Buckley et al (1994); Saravanan (2007) and Tiwari & Debata (2008). These informal markets are made up of loans from relatives, employers and money lenders that supplement savings and current income for housing finance Renaud (1985); Kim (1997).

However, formal housing finance supply in emerging economies is operated through both policy-driven and the market-oriented housing finance channels Deng and Fei (2008). The policy-driven housing finance is mainly through Housing Funds Schemes, which are mandatory housing savings scheme while the market-oriented housing finance is characterized by commercial loans from financial institutions. In the developed economies, commercial mortgages are referred to as collateralized lending to property developers whereas in the emerging economies, commercial loans are basically mortgages raised from financial institutions.

With the magnitude of housing needs in most of the countries in the emerging economy, Buckley and Kalarickal (2004), Hassler (2005) and Merrill (2006) argued that there are requirements that emerging economies must embrace, if they are going to move forward in terms of delivering housing finance. The requirements include stable macroeconomic conditions, a legal framework for property rights, mortgage market infrastructure and funding sources to promote financial intermediation and each will now be discussed.

2.4.1 Macroeconomic conditions

Macroeconomic policies are impacts of exogenous interventions at the aggregate or economy-wide levels Burda and Wyplosz (1997); Hammond (2006) and Roy (2007).

Macroeconomic instability and its corollary of high and volatile domestic interest rates, erratic monetary and exchange rate policies coupled with weaknesses in the financial systems of many emerging market countries Bhattacharya et al (1997); Irving and Manroth (2009), have a disproportionate impact on long-term mortgage finance. Various factors contributes to greater macroeconomic volatility in emerging markets, the most important is that their production structure is typically much less diversified than that of developed countries and often dependent on primary commodities.

The macroeconomic policies might be adopted to affect (decrease/increase) the nominal interest rate, or volatility of inflation, which has affected the efficiency of housing finance. In differentiating between housing affordability and housing finance affordability, Buckley et al (1994) argued that housing finance affordability arises when inflation makes housing unaffordable at the market rates of interest. This resulted in indexation as means of addressing the housing finance affordability problem especially in the Latin America and a few African countries like Ghana. Therefore, the objective of and redesigning mortgage contract is to eliminate financial constraints that impede the affordability housing and provide a financing vehicle so that those who can afford to, and so desire, can purchase homes Buckley et al (1993). This assertion has been argued by Buckley (1996) and Kim (1997) that indexation of deposits and mortgage products can only deal with moderate inflation.

A sound macroeconomic policy framework is one that promotes growth by keeping inflation low, the budget deficit small and the current account sustainable Fischer (2004); Hale (2007). Therefore, the financial regulatory authorities (central banks) in most emerging market economies have used policies like the cash reserve requirement and liquidity ratio as instruments of monetary control. Cash reserve requirement is the percentage of the banks cash asset to be kept in an account with the central bank. This policy is adopted to control volume of funds available for financial institutions to invest in granting loans and advances.

2.4.2 Financial Development and Liberalization

In most of the emerging market economies, the financial sub sector is generally shallow relative to the sizes of these economies. The shallowness of these institutions results in limited access to financial services, with the low-income earners and even medium income earners mostly discriminated against in the financial market. This form of discrimination comes in the form of being denied credit facilities due to their inability to meet the stringent requirements of suppliers of finance Roy (2007); Renaud (2008). In terms of liberalization, there has been a relative efficiency in the credit markets of the emerging economies due to the adoption of market discipline and risk-based capital guidelines. Almost all countries in the emerging economies are moving away from rigid.

2.4.3 Financial Infrastructure and Incomplete Financial Systems

The financial infrastructure of a country shapes the structure, organization and performance of the finance industry and the process of capital formation, and therefore the mortgage market development strategies Renaud (2008); Boleat (2008). This is done when attempts are made to increase the depth and breadth of their financial markets. One of the indicators for measuring financial deepness of an economy is the total deposits within a financial system as a percentage of GDP Vatnick (2008). The organization and structure of the financial system also plays an important causal role in the quality and rate of economic growth Bhattacharya (1997); Levine et al (2000); World Bank (2001).

2.5 Chapter Summary

It has been identified through various studies that the financial infrastructure of a nation shapes the structure, organization and performance of the finance industry and the process of capital formation and the mortgage market development strategies in both developed and emerging economies. Specifically, housing and housing finance in emerging market economies has been subjected to various limitations like inadequacy of legal and regulatory infrastructure, macroeconomic volatility, high transaction costs associated with the lack of adequate loan management practices and infrastructures for mortgage processing.

Despite the orthodox view that a secure supply of land with a good title (registered land) is a pre-requisite for effective housing finance system, efforts to get land registered and governments to be the sole custodian of land has been a disaster in most emerging economies. The idea of land registration has slowed down the process of housing finance disbursement and eventual supply. It can further be argued that the underdevelopment of mortgage lending to individual households can be explained by lack of demand for mortgage lending which might be due to high credit risks, lack of financial depth which translates into high interest rates on mortgage loans, the limited long-term credit resources of originating banks resulting from failure to develop secondary market financing. This anomaly has hitherto been tackled in the developed economies through the introduction of stable funding source and asset-liability management tools like securitization, credit derivatives, collateralized debt obligations and mortgage covered bonds. For most of the emerging economies, a combination of economic and social factors, such as low domestic savings rate, high price-to-income ratios and a general culture and social predisposition towards homeownership, suggests that the common problem facing them lies in the provision of housing finance services that can allocate untapped resources.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter describes the research design, population and sampling design, the data collection method, the research procedures and data analysis methods that was used in the course of the research. This section also indicates the research tools used to collect data, the data collection and the analysis procedures.

3.2 Research Design

The research adopted a descriptive research design. Accroding to Cooper and Schindler, (2001), descriptive study is used when one needs to determine characteristics associated with a subject population which this study is actually concerned with.

3.3 Hypothesis and Model to be tested

Using loan to housing (housing finance supply) as the dependent variable, it could be deduced at a point, that interest levels, income levels, loan security, value of property and government regulations being independent variables do significantly affect supply of loans to housing.

The basic model is as shown below:

$$\mathbf{Y = \beta o + \beta 1x1 + \beta 2x2 + \beta 3x3 + \ldots\ldots\ldots\ldots\ldots\ldots + \beta kxk + e \quad \ldots\ldots\ldots\ldots\ldots\ldots 1}$$

Where:

x1, x2, x3.....xk are the independent variables.

e the difference between the predicted and observed value of Y for the *i*th subject.

bo is the constant term

b1, b2, b3.....bk are the regression coefficients to be estimated.

The empirical model is therefore derived as:

$$\mathbf{SHF=\alpha_0+\alpha_1 IR+\alpha_2 IL+\alpha_3 LS + \alpha_4 VP + \alpha_5 GR \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots 2}$$

Where;

SHF = Supply of Housing Finance

α_O = Coefficient of the independent variable to SHF

IR = Interest rates

IL = Income level

LS = Loan Security

VP = Value of property

GR = Government regulations

3.4 Research population

The target population was all real estate developers, real estate owners and financiers operating in Kenya as at 31st December 2011.

3.5 Sample size

The target respondents were selected using purposive sampling. In this case respondents were chosen deliberately on assumption that they have valid information regarding the problem under study. The sampling frame was all real estate developers and home owners who have engaged in development business in Nairobi, however due to nature of their work, we did not find all of them in Nairobi City. It was important that the respondents are targeted based on the locations where was easy to locate them so as to save cost and time in the course of the research. Hence, this proposal focused on the respondents at their places of work. The sample size composed of 30 real estate developers, 30 home owners and 10 housing financiers.

3.5 Data collection

Qualitative and quantitative research approaches were used in this study. For quantitative, the data was obtained from the housing finance publications and other publications in the real estate sector. Qualitative research methodologies were designed to provide the researcher with the perspective of target audience members through immersion in a culture or situation and direct interaction with the people under study. The advantage of using qualitative methods was that they generate rich, detailed data that leave the

participants' perspectives intact and provide a context for health behaviour. Qualitative methods of data collection used in this study were questionnaires.

3.6 Data analysis

The researcher edited the collected data centrally Coppers and Schindller, (2000) assert that editing is done in order to detect errors and omission, ensure data is accurate, uniformly entered, complete, consistent with intent of the question and other information in the study and arranged to simplify coding and tabulation. Alpha numeric data coding was carried out to assign numbers and other symbols to the questions, which Coopers and Schindler (2000) explain is done in order to group the respondents to a limited number of classes or categories that facilitate efficient analysis. Coded data was tabulated in Statistical Package for Social Scientist (SPSS).

3.6.1 Correlation

Pearson product-moment correlation (r), as an example of correlation coefficient, gives the numerical summary of the direction and strength of the linear relationships between two variables. Since explanation needs to be given for the possible relationship between the dependent and independent variables, the statistical association between the variables has to be measured. The Pearson Product-Moment Correlation (r) is the most commonly applied correlation coefficient used in measuring a linear association and it was therefore adopted in this study to build the framework of the conceptual model.

3.6.2 Multi-collinearity

Another important issue in multiple regression analysis is the presence of multicollinearity. There is no precise definition of collinearity firmly established in the literature Mason and Pierreault (1991). Collinearity is agreed to be present if there is an approximate linear relationship among some of the predictor variables in the data. This refers to the relationship among the independent variables and it exists when the independent variables are highly correlated (r = 0.9 and above) Pallant (2007);

Tabachnick & Fidell (2007). Multicollinearity makes it difficult to determine the contribution of each independent variable Hair et al (1998).

3.7 Data validity and reliability

Data obtained from the primary source was considered authentic and could therefore be relied upon for deriving conclusions. Such data was also considered credible and free from error or any bias. Data was moved from the field only by the researcher to ensure confidentiality and reliability was observed, discussion and clarification were sought from the organizations targeted to ensure reliability, remains confidential and used only for the purpose of this study.

CHAPTER FOUR

DATA ANALYSIS AND PRESENTATION O FINDINGS

4.1 Introduction

The main objective of this study was to establish determinants of supply of real estate finance in Kenya. A total of 70 questionnaires were sent out, of which 44 were satisfactorily filled and returned, this formed 63% response rate. The collected data was analyzed using the statistical package for social scientist. The chapter starts with the analysis of results and concludes with giving the summary and interpretation of the findings.

4.2 Data presentation and explanation

4.2.1 Descriptive Statistics

Table 4.1: Descriptive statistics for measures of performance

	N	Minimum	Maximum	Mean	Std. Deviation
Housing Finance Supply	44	13.00	85.00	27.5000	28.29664
Interest Rates	44	13.00	96.00	31.1667	31.99635
Income Level	44	14.00	117.00	38.0000	39.18673
Loan Security	44	17.00	145.00	47.1667	48.53212
Value Of Property	44	23.00	165.00	53.6667	55.07328
Government Regulations	44	24.00	193.00	62.8333	64.37831
Valid N (listwise)	44				

The Descriptive Statistics table provides summary statistics for continuous, numeric variables. Summary statistics include measures of central tendency such as the mean. Measures of dispersion (spread of the distribution) such as the standard deviation. The minimum for housing finance supply and interest rates was 13 respectively, 14 for income level, 17 for loan security, 23 for value of property while 24 for government regulations. The maximum was 85 for housing finance supply, 96 for interest rates, 117 for income level, 145 for loan security, 165 for value of property while 193 for government regulations. The mean for housing finance supply was 27.5, 31.1 for interest rates, 38 for income level, 47.1 for loan security, 53.7 for value of property and 62.8 for

government regulations. The std deviation for housing finance supply was 28.3, 31.9 for interest rates, 39.1 for income level, 48.5 for loan security, 55 for value of property and 64.4 for government regulations

4.2.2 Correlation

Table 4.2: Correlation between measures of performance

		Housing Finance Supply	Interest Rates	Income Level	Loan Security	Value Of Property	Government Regulations
Housing Finance Supply	Pearson Correlation	1	.999(**)	.997(**)	.997(**)	.998(**)	.998(**)
	Sig. (2-tailed)		.000	.000	.000	.000	.000
	N	44	44	44	44	44	44
Interest Rates	Pearson Correlation	.999(**)	1	.998(**)	.998(**)	.999(**)	.998(**)
	Sig. (2-tailed)	.000		.000	.000	.000	.000
	N	44	44	44	44	44	44
Income Level	Pearson Correlation	.997(**)	.998(**)	1	1.000(**)	.999(**)	.998(**)
	Sig. (2-tailed)	.000	.000		.000	.000	.000
	N	44	44	44	44	44	44
Loan Security	Pearson Correlation	.997(**)	.998(**)	1.000(**)	1	.999(**)	.997(**)
	Sig. (2-tailed)	.000	.000	.000		.000	.000
	N	44	44	44	44	44	44
Value Of Property	Pearson Correlation	.998(**)	.999(**)	.999(**)	.999(**)	1	.999(**)
	Sig. (2-tailed)	.000	.000	.000	.000		.000
	N	44	44	44	44	44	44
Government Regulations	Pearson Correlation	.998(**)	.998(**)	.998(**)	.997(**)	.999(**)	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	
	N	44	44	44	44	44	44

** Correlation is significant at the 0.01 level (2-tailed).

The correlations table displays Pearson correlation coefficients, significance values, and the number of cases with non-missing values. Pearson correlation coefficients assume the data are normally distributed. The Pearson correlation coefficient is a measure of linear association between two variables. The values of the correlation coefficient range from -1 to 1. The sign of the correlation coefficient indicates the direction of the relationship (positive or negative). The absolute value of the correlation coefficient indicates the

strength, with larger absolute values indicating stronger relationships. The correlation coefficients on the main diagonal are always 1.0, because each variable has a perfect positive linear relationship with itself.

The significance of each correlation coefficient is also displayed in the correlation table. The significance level (or p-value) is the probability of obtaining results as extreme as the one observed. If the significance level is very small (less than 0.01) then the correlation is significant and the two variables are linearly related. If the significance level is relatively large (for example, 0.2) then the correlation is not significant and the two variables are not linearly related.

The study showed positive relationship for all the measures of performance, with a strong significance level for all the measures of performance i.e. Interest Rates, government regulations, income level, value of property and loan security.

4.2.3 Empirical Model

Table 4.3: Collinearity Diagnostics

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions			
				(Constant)	Government Regulations	Loan Security	Interest Rates
1	1	3.723	1.000	.00	.00	.00	.00
	2	.261	3.779	.00	.01	.00	.13
	3	.011	18.077	1.00	.08	.06	.47
	4	.005	27.425	.00	.91	.93	.39

a Dependent Variable: Housing Finance Supply

This table displays statistics that help you determine if there are any problems with collinearity. Collinearity (or multicollinearity) is the undesirable situation where the correlations among the independent variables are string. Eigenvalues provide an indication of how many distinct dimensions there are among the independent variables. When several eigenvalues are close to zero, the variables are highly intercorrelated and small changes in the data values may lead to large changes in the estimates of the coefficients. Condition indices are the square roots of the ratios of the largest eigenvalue

to each successive eigenvalue. A condition index greater than 15 indicates a possible problem and an index greater than 30 suggests a serious problem with collinearity. The variance proportions are the proportions of the variance of the estimate accounted for by each principal component associated with each of the eigenvalues. Collinearity is a problem when a component associated with a high condition index contributes substantially to the variance of two or more variables.

4.3 Qualitative analysis

Housing and residential construction are considered to be central importance for determination of both the level of welfare in a society and the level of aggregate economic activities. Housing is the largest asset owned by most households and is nearly always financed, in the sense that owners of housing capital must pay for their units over a period of years. It is therefore imperative for Kenya to appreciate benefits to be derived from having a well-functioning mortgage markets despite various economic issues being tackled with limited resources. The large external benefits to the national economy were highlighted to include capital market development, efficient real estate development, construction sector employment, easier labour mobility, more efficient resources allocation and lower macroeconomic volatility.

It has been identified through various studies that the financial infrastructure of a nation shapes the structure, organisation and performance of the finance industry and the process of capital formation and the mortgage market development strategies in Kenya. Specifically, housing and housing finance in Kenya has been subjected to various limitations like inadequacy of legal and regulatory infrastructure, macroeconomic volatility, high transaction costs associated with the lack of adequate loan management practices and infrastructures for mortgage processing.

Despite the orthodox view that a secure supply of land with a good title (registered land) is a pre-requisite for effective housing finance system, efforts to get land registered and governments to be the sole custodian of land has been a disaster in Kenya. The idea of land registration has slowed down the process of housing finance disbursement and eventual supply. It is further be argued that the underdevelopment of mortgage lending to

individual households can be explained by lack of demand for mortgage lending which is due to high credit risks, lack of financial depth which translates into high interest rates on mortgage loans, the limited long-term credit resources of originating banks resulting from failure to develop secondary market financing. This anomaly has hitherto been tackled in the developed economies through the introduction of stable funding source and asset-liability management tools like securitization, credit derivatives, collateralized debt obligations (CDOs) and mortgage covered bonds (MCB).

For Kenya, a combination of economic and social factors, such as low domestic savings rate, high price-to-income ratios and a general culture and social predisposition towards homeownership, suggests that the common problem facing them lies in the provision of housing finance services that can allocate untapped resources. Some of these untapped resources could be identified as the innovative sources of funding housing finance which are peculiar to their situations like diaspora bonds, migrant remittances and pension funds.

4.4 Summary and Interpretation of the findings

The Descriptive Statistics table provides summary statistics for continuous, numeric variables. Summary statistics include measures of central tendency such as the mean. Measures of dispersion (spread of the distribution) such as the standard deviation. The minimum for housing finance supply and interest rates was 13 respectively, 14 for income level, 17 for loan security, 23 for value of property while 24 for government regulations. The maximum was 85 for housing finance supply, 96 for interest rates, 117 for income level, 145 for loan security, 165 for value of property while 193 for government regulations. The mean for housing finance supply was 27.5, 31.1 for interest rates, 38 for income level, 47.1 for loan security, 53.7 for value of property and 62.8 for government regulations. The std deviation for housing finance supply was 28.3, 31.9 for interest rates, 39.1 for income level, 48.5 for loan security, 55 for value of property and 64.4 for government regulations

The correlations table displays Pearson correlation coefficients, significance values, and the number of cases with non-missing values. Pearson correlation coefficients assume the data are normally distributed. The Pearson correlation coefficient is a measure of linear association between two variables. The values of the correlation coefficient range from -1 to 1. The sign of the correlation coefficient indicates the direction of the relationship (positive or negative). The absolute value of the correlation coefficient indicates the strength, with larger absolute values indicating stronger relationships. The correlation coefficients on the main diagonal are always 1.0, because each variable has a perfect positive linear relationship with itself.

The significance of each correlation coefficient is also displayed in the correlation table. The significance level (or p-value) is the probability of obtaining results as extreme as the one observed. If the significance level is very small (less than 0.01) then the correlation is significant and the two variables are linearly related. If the significance level is relatively large (for example, 0.2) then the correlation is not significant and the two variables are not linearly related.

The study showed positive relationship for all the measures of performance, with a strong significance level for all the measures of performance i.e. Interest Rates, government regulations, income level, value of property and loan security.

The multiple correlation coefficient is the correlation between the observed and predicted values of the dependent variable. The values of R for models produced by the regression procedure range from 0 to 1. Larger values of R indicate stronger relationships. R squared is the proportion of variation in the dependent variable explained by the regression model. The values of R squared range from 0 to 1. Small values indicate that the model does not fit the data well. The sample R squared tends to optimistically estimate how well the models fit the population. Adjusted R squared attempts to correct R squared to more closely reflect the goodness of fit of the model in the population. Choose a model with a high value of R squared that does not contain too many variables. Models with too many variables are often over fit and hard to interpret.

The model summary for this study was found to be 1.000 for R value, 0.999 for R square, 0.997 for adjusted R square, 435.775 for F change, 3 for df1, 1 for df2, 0.035 for sig. F change while the Durbin-Watson was 3.405

The output for Regression displays information about the variation accounted for by your model. The output for Residual displays information about the variation that is not accounted for by your model. And the output for Total is the sum of the information for Regression and Residual. Model with a large regression sum of squares in comparison to the residual sum of squares indicates that the model accounts for most of variation in the dependent variable. Very high residual sum of squares indicate that the model fails to explain a lot of the variation in the dependent variable, and you may want to look for additional factors that help account for a higher proportion of the variation in the dependent variable. The mean square is the sum of squares divided by the degrees of freedom. The F statistic is the regression mean square divided by the residual mean square. The regression degrees of freedom is the numerator df and the residual degrees of freedom is the denominator df for the F statistic. The total number of degrees of freedom is the number of cases minus 1. If the significance value of the F statistic is small (smaller than say 0.05) then the independent variables do a good job explaining the variation in the dependent variable. If the significance value of F is larger than say 0.05 then the independent variables do not explain the variation in the dependent variable.

The sum of squares for regression was 4001.753, df 4, mean square 1000.438, F 572.725 while the Sig. was 0.031 while for the residual values, sum of squares was 1.747, df was 1 while the mean square was 1.747.

Collinearity (or multicollinearity) is the undesirable situation where the correlations among the independent variables are string. Eigenvalues provide an indication of how many distinct dimensions there are among the independent variables. When several eigenvalues are close to zero, the variables are highly intercorrelated and small changes in the data values may lead to large changes in the estimates of the coefficients. Condition indices are the square roots of the ratios of the largest eigenvalue to each successive eigenvalue. A condition index greater than 15 indicates a possible problem

and an index greater than 30 suggests a serious problem with collinearity. The variance proportions are the proportions of the variance of the estimate accounted for by each principal component associated with each of the eigenvalues. Collinearity is a problem when a component associated with a high condition index contributes substantially to the variance of two or more variables.

The previous study found out that low income level affects the housing finance Roy (2007). Further in the literature, one of the biggest problems faced by the banks in financing for real estate is value of property and the projects to be financed with the bank facilities Jones & Maclennan (1987); Altman & Saunders (1998); Byamugisha (1999); Guzman (2000) and Mints (2006). Even with the identified importance of effective regulations of financial institutions, Llewellyn (2008), Milnes & Wood (2009) and Shin (2009) in discussing the Northern Rock situation highlighted problems in the regulatory framework of as the impediment in real estate financing. Further Llewellyn (2008) suggested that in any regulatory / supervisory regime, four areas that need to be addressed include prudential regulation of the financial firms; management and systemic stability; lender-of-last resort function and conduct of regulation and supervision business. However the findings of this study indicate value of property, government regulation, income level, interest rates and loan security all affect the financing of real estate in Kenya.

CHAPTER FIVE

SUMMARY, CONCLUSION & RECOMMENDATIONS

5.1 Summary

In lending, financial institutions give out loans in consideration of interest to be charged on the loans and the riskiness of the loan. The demand and supply of housing finance are determined by various factors. The ability of financial institutions to lend for housing (supply of housing finance) determines the quantity of housing finance that could be supplied for house acquisitions. If the identified factors, value of property, government regulation, income level, interest rates and loan security are dwindling, the availability of housing finance will be reduced.

Interest Rates: Since interest rate is considered as the rate of return on investment, when the rate of interest is low on mortgage lending maybe due to government regulations, there is the tendency for the financial institutions to look for an alternative investment outlet in order to make good profit. Apart from the ability of the financial institutions to lend, the other aspect is the willingness of the financial institutions to lend towards mortgage acquisition. The factors consider by them includes criteria of security, income, price of the property, price of alternative goods and services and household characteristics (age, marital status etc).

Criteria of Security: With a favourable reserve and liquidity position, financial institutions in Kenya do not necessarily lend to all applicants that approach them for banking facilities, even if the prevailing interest rate is acceptable to the borrower. Loans are secured on specific property and necessary steps are taken in avoiding default on repayment or depreciation of the security below the book value of the debt. There are various ways by which the lenders determine the ability of the borrower to repay and the suitability of the property as security.

Income: The income being earned by a borrower determines the ability to repay the money borrowed. The total sum advanced therefore is usually restricted to some multiple of two to three times the applicant's salary. This means that the applicant shall have

secure prospects of a continuing income. However, in the recent past in the developed economies, it is considered that average home prices range from three to four times of annual income (Warnock & Warnock 2008). In Kenya, because wages are low and construction cost is high, average home prices are usually about eight times of annual income and to make it affordable, repayments have to be spread over a very long period of time. Thus a positive relationship exists between housing construction cost and building materials price, property price, foreign exchange rates because imported building materials are used for construction, labour cost and national disposable income.

Value of property: In some cases, control of lending is also exercised by avoiding advances on the security of properties which might deteriorate. Financial institutions prefer lending on properties which are relatively modern and also prefer houses to flats. As a property is becoming old-fashioned, the less is the willingness of financial institutions to lend based on the collateral of the property. This policy affects the distribution of house prices, since it would be difficult to raise a loan on a particular property. As a result of these constraints demand is always rationed and it is difficult to assess what the real demand for mortgage is while the supply constraints in the form of the reserve and liquidity ratios are easier to observe.

Loan to Income Ratio: Financial Institutions would like to know what percentage of his total income is already committed to payment of all. In some cases, bank might not lend to individuals that would commit more than 40 per cent of his income on settling debts.

5.2 Conclusion

This study investigated factors determining housing finance supply in Kenya. Housing finance is a major factor determining the quality and tenure of housing consumption, the overall financial portfolio of the public and the stability and effectiveness of the financial system. In Kenya, the government has intervened in the markets by setting up institutions characterized by a significant degree of regulation and segmentation from the rest of the financial markets and very often with governments providing subsidized housing finance.

Additional instruments in form of questionnaire, for the sectorial allocation of loans and advances by these financial institutions were employed to gather information from Corporate Banking / Loans and Advances Managers coupled with unstructured interviews. Supplementary questionnaires were directed to the users of housing finance at the household level as control for validity to the research findings.

Applying a multiple regression approach, the model identified that housing finance supply in Kenya is significantly driven by clusters of factors related to value of property, government regulation, income level, interest rates and loan security. It is closely observed that housing finance models in the developed economies, which are largely financed by deposit liabilities, cannot be wholly adopted in the Kenyan economy. The implication for practice therefore is that financial institutions in Kenya must adequately increase their capital base for effective housing finance supply and introduce mortgage products with long-term tenure to actively mobilize resources for mortgage lending.

5.3 Policy Recommendations

The largest hitches to the development of the real estate segment of Kenya are government regulations, interest rate, loan security, value of property and income level as suggested by most of the respondents in the interviews. Changes brought in these segments can ensure a better rate of growth for the market and a relatively more attractive opportunity for the consumers and investors.

As discussed in the project, Real Estate in Kenya has a potent demand backed growth. Demand due to population increase, higher allocation to savings in real estate, actualization of mortgaging by consumers and bridging the gap of the current housing deficit will be a trigger for sustained growth.

The efforts by the government to ensure faster clearances for active real estate development would enable developers in a great way. The researcher recommends that the government should set up a separate real estate division with the objective of single

window clearance of all required paper work and clearances. Single window essentially means that the developers will need to approach only one department for the clearances required in checking the title of the land, the water treatment plant, electricity and water utility connections, permission for construction and labour related issues such as facilities and wages. Also the government should establish a housing loan guarantee scheme run by existing government housing corporations to assess risks in some real estate development and the applicant's credit scores then giving guarantees to the developers and financiers so as to encourage financiers to lend more and at affordable interest rates. The builders should be given support in ensuring that the land they own and hold is free of encroachment from slums. Also, free hold land should be released to developers with proper title clearances to the land quickly. Some litigation processes take years for clearances, which should be put onto a fast track.

5.4 Limitations of the Study

Every research has certain drawbacks. It is therefore necessary to incorporate them in the project to obtain a true perspective of the research topic. The following are a few drawbacks the researcher faced during my research study.

The study makes use of qualitative analysis, which is interview and questionnaire based in order to find out the determinants of housing finance in Kenya. However quantitative approach has not been used as it would have prolonged the study. Hence financial statements such as Balance Sheet and Profit and Loss of Real estate listed companies have not been analyzed to arrive at the growth prospects of the sector in quantitative terms.

Also due to difference in valuation methods adopted by different countries and limited relevant data; comparison of Kenyan real estate companies to international real estate companies operating in Kenya has not been possible.

Another drawback was getting through to companies for the purpose of an interview. Limited number of interviewees induced the researcher to collect further information through a questionnaire survey.

Further, there was a possibility of a biased research being carried out due to all interviewees being Nairobi-based. Therefore the researcher increased the sample size to adequately include companies from all parts of Kenya to get a clear national perspective of the real estate market.

However, the research aim was to provide a broad overview and give valuable prospects to the participants of this industry as well as to investors seeking to invest in the Kenyan real estate sector.

5.5 Suggestions for further studies

For academic world. This research Result is expected to become a valuable input in study related to housing finance for real estate. This Research has not yet expressed all variables that can influence housing finance, then in order to increase science/knowledge development, other researchers who are interested in similar problems are suggested to conduct a continuation research by adding further determinants of housing finance

The study was done for the companies and real estates in Nairobi, a suggestion is made that a similar study be done for companies and real estate developers beyond Nairobi and results be compared.

The study was done for Kenya i.e. real estate companies operating in Kenya, it is suggested that a cross sectional study be done for the other East African real estate developers.

REFERENCES

Akinwunmi, A., Gameson, R., Hammond, F. and P. Olomolaiye (2007) – Mortgage Insurance and Housing Finance in Emerging Economies- in Boyd, D.(Ed)- Proceedings of 23rd Annual ARCOM Conference, 3-5 September 2007, University of Ulster, Belfast-UK, Association of Researchers in Construction Management,

Akinwunmi, A., Gameson, R., Hammond, F. and P. Olomolaiye (2008) – The Effect of Macroeconomic Policies on Project (Housing) Finance in Emerging Economies – in Lodi,

Alhashimi, H.and Dwyer, W (2004) Is there such an entity as a housing market? Paper presented at the 10th Annual Pacific Rim Real Estate Conference, Bangkok

Allen, F. and D. Gale (1988) – Optimal Security Design, Review of Financial Studies Fall 1988 pp 229-268.

Allen, F. and D. Gale (1994) - Financial Innovation and Risk Sharing, Cambridge, Massachusetts: MIT Press

Altman, E.T. and Saunders, A. (1998) – Credit risk measurement: Developments over the last 20 years, Journal of Banking and Finance, 21(1998), pp 1721-1742.

Arnott, R. and Stiglitz, J. (1991) – Moral Hazard and Non-Market Institutions: Dysfunctional Crowding out after monitoring, American Economic Review 81, pp 179-190.

Benston, G.J. and C.W. Smith Jr (1976) – A Transaction Cost Approach to the theory of Financial Intermediation, Journal of Finance May 1976, Vol. 31 No 2, pp 215-231.

Berger, A.N., Herring, R.J. and G.P. Szego (1995) – The Role of Capital in Financial Institutions, Journal of Banking and Finance 19, pp 393-430.

Bhattacharya, A., Montiel, P.J. and S. Sharma (1997) – How Can Sub-Saharan Africa Attract More Private Capital Inflows? Finance and Development June 1997, Vol. 34 No 2 pp 3-6.

Boleat, M. (2008) – Housing Development and Housing Finance in Britain – Some lessons for emerging markets, Housing Finance International March 2008, Vol. 22 Issue 3, pp 53

Burda, M. and C. Wyplosz (1997) – Macroeconomic: A European Text, 2nd Edition, N.Y; Oxford University Press.

Buckle, M and J Thompson (1998) The UK Financial System: Theory and Practice (3rdEdition), N Y : Manchester University Press.

Buckley, R M (1996) Housing Finance in Developing Countries. N.Y: Macmillan.

Byamugisha, F. (1999) – The effects of land registration on Financial Development and Economic Growth: A Theoretical and Conceptual Framework, Policy Research Working Paper 2240, Washington DC: World Bank.

Caprio Jr, G., Demirguc-Kunt, A. and E.J. Kane (2008) – The 2007 Meltdown in Structured Securitisation: Searching for Lessons, Not Scapegoats, Finance and Private Sector Team, Development Research Group - October 2008, World Bank: Washington DC.

Chiuri, M.C. and T. Jappelli (2003) – Financial Market imperfections and home ownership: a comparative study, European Economic Review Vol.47 Issue 5, pp 857-875.

Chiuri, M.C., G. Ferri and G. Majnani (2002) – The Macroeconomic Impact of Bank Capital Requirement in Emerging Economics: Past Evidence to Assess the Future, Journal of Banking and Finance 26, pp 881-904.

Cho, M. (2007) – 180 Years' Evolution of the US Mortgage Banking System: Lessons for Emerging Mortgage Markets, International Real Estate Review, Vol. 10 No 1 pp 171-212.

Coase, R.H. (1960) – The Problem of Social Cost, Law and Economics, 3, pp 1-44

Crosby, N., French, N. and Oughton (2000) – Bank lending valuations on Commercial property: Does European mortgage lending value add anything to the process? Journal of Property Investment & Finance Vol.18 No 1, 2000, pp 66-83.

Dasan M. B. (1996) – Analysis of factors which influence supervisor's motivation in a building in Kenya in the construction industry. African Competitiveness Report 1996.

Deng, Y. and Fei, P. (2008) – The Emerging Mortgage Markets in China – in Ben-Shahar, D., Yui Leung, C.K. and S.E. Ong (Eds) – Mortgage Markets Worldwide, pp 1-33, Chichester -West Sussex, United Kingdom: John Wiley and Sons Ltd

Dewatripont, M. and E. Maskin (1995) – Credit and efficiency in centralized and decentralized economies, Review of Economic Studies October 1995, Vol. 62 Issue 213, pp 541-555.

Dewatripont, M. and J. Tirole (1994) – The Prudential Regulation of Banks, Cambridge, MA: MIT Press.

Diamond, D.W. and P. Dybvig (2000) – Bank runs, deposit insurance and liquidity, The Federal Reserve Bank of Minneapolis Quarterly Review Winter 2000, Vol.24 No 1

Diamond, D.W. (1984) – Financial Intermediation and delegated monitoring, Review of Economic Studies 51, pp 393-414

Djankov, S., McLiesh, C. and A. Shleifer (2007) – Private credit in 129 countries, Journal of Financial Economics 84(2007) pp 299-329

Edwards, J and K. Fischer (1994) – Banks, Finance and Investment in Germany, Centre for Economic Policy Research, Cambridge University Press.

Elliot, J.W. (1984) – Money, Banking and Financial Markets, New York: West Publishing Co.

Fischer, S. (2004) – IMF Essays from a time of Crisis: The International Financial System,Stabilization and Development, Cambridge, MA: MIT Press, 2004.

Fischer, S. (1984) – A framework for monetary and banking analysis, Economic Journal 93, pp 1-16

Follain, J. and P. Zorn (2000) – The unbundling of residential mortgage finance, Journal of Housing Research 1(1), pp 63-89.

Fry, M.J. (1988) – Money, Interest and Banking in Economic Development, Baltimore: John Hopkins University Press

Guzman, M.G.(2000) – The Economic Impact of Bank Structure: A Review of Recent Literature, Federal Reserve Bank of Dallas, Economic and Financial Review, 2nd Quarter 2000, pp 11-25.

Hair, J.F., Anderson, R.E., Tatham, R.L. and W.C. Black (1998) – Multivariate Data Analysis (5th Edition), New Jersey: Prentice Hall.

Hale, G. (2007) – Sound Policies for Emerging Markets Financial Stability, International Finance Vol. 10 No 1 pp 101-114.

Hammond, F.N. (2006) – The Economic Impacts of Sub-Saharan African Urban Real Estate Policies, Unpublished PhD Thesis, School of Engineering and the Built Environment, University of Wolverhampton, UK.

Haurin, D.R., Hendershott, P.H. and S.W. Watcher (1997) – Borrowing constraints and the tenure choice of young households, Journal of Housing Research 8, pp 137-154.

Heffernan, S. (2003) Modern Banking in Theory and Practice, March 2003, Chichester-West Sussex: John Wiley and Sons.

Hurwics, W.P. (1973) – The Design of Mechanisms for Resource Allocation, American Economic Review 63, pp 1-30.

Irving, J. and A. Manroth (2009) – Local Sources of Financing for Infrastructure in Africa, Policy Research Working Paper 4878, African Sustainable Development Front Office, World Bank: Washington D.C.

Jensen, M.C. and Meckling, W.H. (1976) – Theory of the firm: Managerial behaviour, agency costs and ownership structure, Journal of Financial Economics 3.

Jaffee, D.M. and Renaud, B. (1997) Strategies to develop mortgage markets in transition economies. In: J. Doukas, V.Murinde and C. Wihlborg (eds) Financial Sector Reform and Privatization in Transition Economies.Ch.4, Amsterdam: Elsevier Science Publishers.

Jones, C. and C. Watkins (2009) – Housing Markets and Planning Policy, Wiley-Blackwell, 224pp, October 2009

Kim, K-H (1997) – Housing Finance and Urban Infrastructure Finance, Urban Studies Vol. 34 No 10, pp 1597-1620.

Kogiku, K.C. (1971) – Microeconomic Models, N.Y.: Harper and Row.

Leyland, H.E. and D.H. Pyle (1977) – Informational asymmetries, financial structure, and financial intermediation, Journal of Finance 32 pp 371-387

Levine, R. (1997) – Financial development and economic growth: views and agenda, Journal of Economic Literature 35, pp 688-726.

Levine, R., Loayza N. and T Beck (2000) – Financial intermediation and Growth: Causality and Causes, Journal of Monetary Economics, Vol. 46 No 1 pp 31-77.

Llewellyn, D.T. (2008) – The Northern Rock Crisis: A Multi-Dimensional Problem Waiting to Happen, Journal of Financial Regulation and Compliance 2008 Vol. 16 Issue 1pp 35-58.

Mandere A.N. (2006) – A survey of QM practices in the large Kenyan building construction firms. Africa Private Sector Group, Kenya, 2006.

Markowitz, H.M. (2009) – Proposals Concerning the Current Financial Crisis, Financial Analysts Journal Jan / Feb. 2009, Vol. 65 Issue 1, pp 25-27.

Mason, C.H. and N.D. Perreault (1991) – Collinearity, Power and Interpretation of Multiple Regression Analysis, Journal of Marketing Research 28, August 1991 pp 268-80.

Merrill, S. and Tomlinson, M. (2006) – Housing Finance, Microfinance and Informal Settlement Upgrading: An assessment of Ghana. Paper prepared for African Union of Housing Finance and USAID, The Urban Institute, Washington DC. June 2006.

Malpezzi, S (1999) Economic Analysis of housing markets in developing and transition economies. In: Cheshire, P. and Mills, E.D. (eds) Handbook of Regional and Urban Economics Applied Urban Economics, 3, 1791-1864.

Marete D, (2011) – The determinants of real estate property prices in Kiambu Municipality in Kenya. Unpublished Masters paper, School of Business, University of Nairobi, 2011.

Merton, R.C. and Z. Bodie (1995) – A Conceptual Framework for Analyzing the Financial Environment- in Crane, D.B., K.A. Froot, S.P. Mason, A.F. Perold, R.C. Merton, E.R.Sirri and P. Tufano (Eds) – The Global Financial System: A Functional Perspective, pp 3-32, Harvard Business School Press, Cambridge: MA.

Merton, R.C. (1989) – On the application of the continuous-time theory of finance to financial intermediation and insurance. Geneva Papers on Risk and Insurance Theory 14, pp 225-261.

Milne, A. and G. Wood (2009) – Shattered on the Rock? British Financial Stability from 1866 to 2007, Journal of Banking Regulation (2009), Vol.10 No 2 pp 89-127.

Mints, V. (2006) – Specifics of Credit Risk Assessment in Mortgage Lending-Sample of Russia, Housing Finance International September 2006, Vol.21 Issue1 pp 14-21.

Njiru (2003) The performance of real estate markets in Kenya, KEPLOTRADE Research Paper No 2/2004. December 2003.

North, D.C. (1994) – The Evolution of Efficient Markets in History – in James, J.A. and M. Thomas (eds)- Capitalism in context, Chapter 11 pp 257-264, Chicago: University of Chicago Press.

Nubi, T.O.(2005) – Housing Finance in Nigeria- Need for Re-Engineering (Unpublished Reports)-www.housingfinance.org/pdfstorage/Africa

Nubi, T.O. (2008) – Affordable Housing Delivery in Nigeria, Paper presented at The Southern African Housing Foundation International Conference and Exhibition, 12-15 October 2008 – Cape Town, South Africa.

Omufira A.N. (2001) – Extent of TQM implementation in the construction industry, AICD Background Paper 13, Africa Region, World Bank, Washington, DC

Olotuah, A O (2000) The challenge of Housing in Nigeria Effective Housing in 21st Century Nigeria. In: Akinbamijo, O.B. et al. (eds) Environmental Forum, Federal University of Technology, Akure-Nigeria, 16-21.

Olotuah, A O and Aiyetan, A.O.(2006) Sustainable low-cost housing provision in Nigeria: a bottom-up participatory approach. In: Boyd, D. (ed) Proceeds of 22nd Annual

ARCOM Conference, 4-6 September 2006, Birmingham, UK, Association of Researchers in Construction Management, 633-639.

Pagliari, J. L. (2007) – The Pricing of Non-Core Real Estate Ventures: Estimating the net expected risk-adjusted return, The Journal of Portfolio Management Vol.34 (Autumn 2007), Special Real Estate Issue, pp 119-133.

Pallant, J. (2007) – SPSS Survival Manual: A Step by Step Guide to Data Analysis Using SPSS Version 15 (3rd Edition), Berkshire-England: Open University Press.

Pilbeam, K. (2005) – Finance and Financial Markets (2nd ed.), Basingstoke: Palgrave Macmillan.

Poole, W (2003) Housing in the Macroeconomy. Federal Reserve Bank of St Louis, Economic Review May/June 2003, 1-8.

Ramakrishinan, R.T.S. and A.V. Thakor (1984) – Information reliability and a theory of financial intermediation, Review of Economic Studies Vol. 51 Issue 166.

Renaud, B.M. (2008) – Mortgage Finance in Emerging Markets: Constraints and Feasible Development Paths- in Ben-Shahar, D., Yui Leung, C.K. and Ong, S.E. (Eds) – Mortgage Markets Worldwide, pp 253-288, Chichester - West Sussex, United Kingdom: John Wiley and Sons Ltd.

Ritter, L. S. and W. L. Silber (1986) – Principles of Money, Banking and Financial Markets, New York: Basic Book Inc.

Roy, F. (2007) – Expanding housing finance systems in Africa and Asia-how far Central and Eastern European models are replicable? Paper presented at APNHR 2007

Conference in Transformation in Housing, Urban Life and Public Policy, Seoul-Korea, 30 August-1 September.

Saravanan, P. (2007) – Recent Experiences in the Housing Finance Sector – A study with Reference to India, Housing Finance International September 2007, Vol.22 Issue 1.

Scholtens, B. and D. van Wensveen (2003) – The theory of Financial Intermediation: An Essay on what it Does (Not) Explain, Vienna: The European Money and Finance Forum (SUERF Studies 2003/1).

Schumpeter, J.A. (1912) – The Theory of Economic Development, Cambridge-Massachusetts: Harvard University Press.

Sikasa C. (2004), Customer perception of change management practices in the mortgage industry. Africa Private Sector Group, Kenya, 2004.

Shin, H.S. (2009) – Reflections on Northern Rock: the bank run that heralded the global financial crisis, Journal of Economic Perspective Winter 2009, Vol. 23 Issue 1 pp 101-124.

Soyibo, A. (1996) – Financial Linkage and development in Sub-Saharan Africa: The role of financial institutions in Nigeria, Working Paper 88, London: Overseas Development Institute

Stiglitz, J.E. (2000) – The Contributions of the Economics of Information to Twentieth century Economics, Quarterly Journal of Economics 115, pp 1441-1478.

Tirole, J. (2006) – The theory of Corporate Finance, New Jersey: Princeton University Press.

Tiwari, P and Moriizumi, O (2003) Efficiency of Housing Finance: A comparative Study of Mortgage instruments in Japan. European Journal of Housing Policy, 3(3).

Toby, A J (2006) Empirical study of the Liquidity Management Practices of Nigerian Banks Journal of Financial Management and Analysis, 19(1), 57-70.

UNCHS-Habitat (2007) – Improving the Performance of National Finance Institutions in Shelter Delivery, UNCHS: Nairobi-Kenya.

Van Order, R. (2005) – Risk Management and mortgage portfolios: some applications for emerging markets – in Hegedus, J. and R.J. Struyk (Eds) – Housing Finance: New and Old Models in Central Europe, Russia and Kazahkstan. Local Government and Public Service Reform Initiative, Open Society Institute, Budapest

Vatnick, S. (2008) – Financial Reforms and Emerging Markets, Financial Markets, Institutions and Instruments February 2008, Vol.17 Issue 1, pp 109-120.

Williamson, O.E. (1985) – The Economic Institutions of Capitalism, New York: The Free Press.

APPENDIX A – QUESTIONNAIRE

DETERMINANTS OF HOUSING FINANCE IN KENYA

[The following information is required for a Masters of Business Administration thesis. Kindly complete the questionnaire as per the instructions given being rest assured that the information provided will be used strictly for project purposes]

QUESTIONNAIRE TO HOUSE OWNERS

A. GENERAL BACKGROUND

1. What is your Marital Status? (Tick one box)
   a) Single
   b) Married
   c) Divorced
   d) Widow
   e) Widower

2. What is your Age? (Tick one box)
   a) 1-29
   b) 30-39
   c) 40-49
   d) 50-59
   e) 60+

3. What is the highest form of formal education that you have achieved? (Tick one box)
   a) None
   b) Primary
   c) Secondary
   d) Vocational / Technical
   e) Polytechnic / University

4. What is your current employment status? (Tick one box)
   a) White collar job (Civil Servant)
   b) White collar job (Private company)
   c) Blue collar job (Bricklayers etc)
   d) Self Employed (Specify)
   e) Other (Please specify)…….

5. What is your type of family? (Tick one box)
   a) Nuclear
   b) Joint / Extended

Others (Please specify)…….

B. SECURITY

6. What is the tenure of the house? (Tick one box)
   a) Own
   b) Rent
   c) Part Own / Part Rent
   d) Others (Please specify)…….

7. What is the form of ownership? (Tick one box)
   a) Inheritance
   b) Bought
   c) Built
   d) Others (Please specify)……..

If Answer to Q 7 is 3, go to Q 8
If Answer to Q 7 is 1, 2 or 4, go to Q 13

8. IF BUILT, did you? (Tick one box)
   a) Buy the plot
   b) Inherit the plot
   c) Others (Please specify)…….

9. IF BUILT, who carried out the construction? (Tick one box)
   a) Self-Built
   b) Contractor with material
   c) Contractor without material
   d) Others (Please specify)……..

10. If you have a loan, what security was given for the loan (Tick all that apply)
   a) The Property
   b) Another Property
   c) Agricultural Land
   d) Others (Please specify)…….

11. What kind of security can you offer for a loan? (Tick all that apply)
   a) The house itself
   b) Any other property
   c) Agricultural land
   d) Others (Please specify)…….

C. VALUE OF PROPERTY

12. When housing is to be acquired, it is either constructed from scratch or a fully erected building is purchased. If constructed from scratch, how much did the plot cost? Kshs……

13. How much did you spend on construction? Kshs.……

12. Can you give value of the property on completion?
Kshs. …….

14. If a fully erected building was purchased, what was the value?
Kshs……

15. What is the Present Value of your property? (Tick one box)
    a) Less than Kshs. 1000, 000
    b) Kshs. 1000,001- Ksh. 5000,000
    c) Kshs. 5000,001- Kshs. 10,000,000
    d) Above Kshs. 10,000,000
    e) Don't know

D. INTEREST RATE

16. Whether a house is constructed from the scratch or a fully erected building is purchased, how did you finance your house acquisition? (Tick one or more boxes as applicable)
    a) Mortgage Institution
    b) Commercial Bank
    c) Relatives and Friends
    d) Personal Savings
    e) Money from abroad
    f) Loan from employer
    g) Sold another house
    h) Private lender
    i) Other (Please specify)……..

17. If you borrowed, what was the rate of interest at the beginning of the transaction …….....

18. What is the rate of interest presently or on completion? …….....

19. If you have obtained a loan, how do you intend to repay it? (Tick all that apply)
    a) Extra work
    b) Employment income
    c) Reducing household expenditure
    d) Sale of valuables
    e) Other sources (Please specify)……

20. What is the repayment period for the loan? (Tick one box)
    a) Less than 24 months
    b) 25-48 months
    c) 49-96 months
    d) 97-144 months
    e) Others (Please specify)…….

21. Are you up to date with your loan repayments?
    a) Yes
    b) No

22. If No, How many months are you behind? (Tick one box)
    a) 3-6 months
    b) 7-12 months
    c) Over 12 months
    d) Others (Please specify)……..

23. What is the reason(s) for default in loan repayment? (Tick one box)
    a) Loss of Income
    b) Higher financial commitment
    c) Excessive Interest charges
    d) Others (Please specify)…….

24. If a loan was available, would you be willing to borrow to buy another house? (Tick one box)
    a) Yes
    b) No
    c) Don't know

E. GOVERNMENT REGULATION

25. The processing of loan applications with the financial institutions usually go through a long process, were you satisfied with the time taken to process? (Tick one box)
    a) Very satisfied
    b) Satisfied
    c) Dissatisfied
    d) Very Dissatisfied

26. On application, what percentage of the loan requested did you get? (Tick one box)
    a) 50%
    b) 60%
    c) 70%
    d) 80%
    e) 90%
    f) 100%
    g) Other (Please specify)……

27. Where did you obtain the remainder of the funds needed for your house acquisition? (Tick all that apply)
    a) From friends and families
    b) Private lenders
    c) Employer
    d) Others (Please specify)…….

28. Before applying for the loan, were you satisfied with the process and requirements? For example production of title deed, survey and architectural requirements

a) Very satisfied
b) Satisfied
c) Dissatisfied
d) Very Dissatisfied

F. INCOME LEVEL

29. How much do you save per month? (Tick one box)

a) Nothing
b) Kshs. 0 - Kshs. 10,000
c) Kshs. 10,000 – Kshs. 100,000
d) Above Kshs.100,000

30. What are your Total Household savings at present? (Tick one box)

a) Nothing
b) Kshs. 0 – Kshs. 10,000
c) Kshs. 10,000 – Kshs. 100,000
d) Above Kshs. 100,000

31. Where do you save? (Tick all that apply)

a) Commercial Bank
b) Cooperative society
c) Mortgage Institution
d) (Traditional Contributions)
e) Other (Please specify)……

32. What is your personal income per month? (Tick one box)

a) Kshs. 0 – 100, 000
b) Kshs. 100,000 – 200,000
c) Kshs. 200,000 – 300,000
d) Kshs. 300,000 – Kshs. 500,000
e) Above Kshs. 500,000

Thank you for participating in this Research. Please return questionnaire

APPENDIX B – QUESTIONNAIRE

DETERMINANTS OF HOUSING FINANCE IN KENYA

[The following information is required for a Masters of Business Administration thesis. Kindly complete the questionnaire as per the instructions given being rest assured that the information provided will be used strictly for project purposes]

QUESTIONAIRE TO PROPERTY DEVELOPERS

Name: _____
Age: ____
Company Name: _____
Position at work: _____

1. How significant do you think is Kenyans position as an investment destination for real estate at present from the point of view of both foreign and domestic investors? Please tick the appropriate box.

a) Very Significant
b) Increasingly gaining Significance
c) Minimal Significance

2. What importance does investment in real estate hold for you as an individual in contributing to your net worth? Please tick the appropriate box

a) Very Important
b) Increasingly becoming important
c) Not so important

3. What according to you is/will be the most preferred avenue for investment for an individual/ company in the real estate sector? Please tick the appropriate box.

a) Direct Investment in land/property
b) Investment in Listed Real Estate Company shares
c) Joint Venture with Realty Developer
d) Others (Please Specify)

4. Do you think the sudden surge in property prices across Kenya over the last two years is justified? Please tick the appropriate box.

a) Yes (Boom)
b) No (Bubble)
c) Cant Say

5. What according to you is the key problem faced by this sector? Please tick the appropriate box.

a) Lack of Infrastructural facilities
b) Ownership issues, unclear titles and abnormally high stamp duties

c) Rising Interest Rates dampening affordability
d) Others (Please specify)

6. Which segment according to you has the greatest scope for improving profits (IRR) – residential, commercial, retail or SEZ's (Special Economic Zones)?
How much return do you think it generates? Please tick the appropriate box

Segment _____

a) 5 – 10 %
b) 10 – 20 %
c) More than 20%

7. How do you see the real estate sector 10 years from now? Please tick the appropriate box

a) A stabilized sector
b) A risk- perceived sector
c) A high growth sector
d) Can't say

8. Which of the following sources of capital is most tapped by you? Please rank in order of preference: 1 being the most preferred and 3 being the least preferred

a) Bank loans
b) Foreign Direct Investment (FDI)
c) Capital Markets – IPOs (Initial Public Offer)

9. Do you think the Government of Kenya has taken adequate measures for the development of the real estate sector in recent years? Please tick the appropriate box

a) Yes
b) No
c) Don't Know

Thank You for your time and help!

APPENDIX C – QUESTIONNAIRE

DETERMINANTS OF HOUSING FINANCE IN KENYA

[The following information is required for a Masters of Business Administration thesis. Kindly complete the questionnaire as per the instructions given being rest assured that the information provided will be used strictly for project purposes]

QUESTIONAIRE TO HOUSING FINANCIERS

1. Why has Kenya become one of the most favoured destinations for investment in the real estate sector in the past 3 years?

……
……

2. What are the reasons for the sudden surge in property prices across Kenya? Could you throw light on whether you think this is a boom or a bubble?

……
……

3. What is the scope for the real estate segment in Kenya? Can you suggest the demand/supply dynamics for the sector?

……
……

4. What according to you are the key risks/ problems this sector will/ is facing? Could you recommend any solutions to the above problems?

……
……
……

5. What are the various approvals and regulations needed to be adhered to for the acquisition, development and completion of a project?

……
……
……

6. What are the different avenues for investment for an individual/ company in the real estate sector?

……
……
……

7. What are the different sources of capital available to a real estate developer?

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8. Which segment according to you has the greatest scope for improving profits (IRR) - residential, commercial, retail or SEZ's (Special Economic Zones)?

……
……

9. What role according to you has the Government played in the development of the real estate sector?

……
……

10. Where do you see the real estate sector 10 years from now?

……
……

Thank You for your time and help!

DETERMINANTS OF SUPPLY OF REAL ESTATE FINANCE IN KENYA

BY

PHILIP MUNYWOKI MUTHUNGU

REG NO: D61/P/8459/2006

A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE A WARD OF THE DEGREE OF MASTER OF BUSINESS ADMINISTRATION (MBA), SCHOOL OF BUSINESS, UNIVERISTY OF NAIROBI

OCTOBER 2012

DECLARATION

This Research Project is my own original work and has not been presented for a Degree Qualification in any other University or Institution of learning.

SIGNED …… DATE **…….**

PHILIP MUNYWOKI MUTHUNGU
D61/P/8459/2006

This Research Project has been submitted for Examination with my approval as the University Supervisor.

SIGNED: …… DATE: …….

DR. JOSIAH ADUDA
School of Business
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DEDICATION

This paper is dedicated to my parents for their guidance and persistence and for being a source of inspiration and support in the course of my studies

ACKNOWLEDGEMENT

The MBA programme has been a long, taxing and challenging journey and the successful completion has been as a result of support received from many people. I am indebted not only to people who gave me the inspiration, support and encouragement to purse MBA programme but also to everybody who gave me the guidance and assistance on what has been reported in this project.

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Above all, special thanks to the Almighty God for the gift of life and good health, lack of which I would not have made it this far.

ABSTRACT

The purpose of the study was to investigate the factors affecting real estate finance supply. It was important to verify the reasons why housing finance are not being supplied by the financial intermediaries readily. Could it be that potential borrowers are not approaching the financial institutions to source for housing finance or is it that the lender's requirements are so stringent that individual's cannot meet up with this lender's requirements. The study was carried out as a survey of real estate developers, real estate owners and financiers operating in Kenya as of 31st December 2011. The sample size was made up of 30 real estate developers, 30 home owners and 10 housing financiers. It was considered necessary and important to obtain information using questionnaire in extracting information from users of real estate finance in Kenya at the time. The data collected by means of the questionnaire survey, was analysed and conclusions were used in discussing all factors that affecting supply of real estate financing in Kenya.

There were revelations about the situation in the supply of housing finance in Kenya. In lending, financial institutions give out loans in consideration of interest to be charged on the loans and the riskiness of the loan. The ability of financial institutions to lend for housing (supply of housing finance) determines the quantity of housing finance that could be supplied for house acquisitions. The research identified these factors; value of property, government regulation, income level, interest rates and loan security do affect the availability and supply of housing finance will be reduced. The efforts by the government to ensure faster clearances for active real estate development would enable developers in a great way. The researcher recommends that the government should streamline the various real estate policies in different ministries into a single guide and to set up a separate real estate division within the ministry with the objective of running a single window clearance of all required paper work and clearances. Also the government should establish a housing loan guarantee scheme run by existing government housing corporations to assess risks in some real estate development and the applicant's credit scores then giving guarantees to the developers and financiers so as to encourage financiers to lend more and at affordable interest rates.

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ABBREVIATIONS

AfDB	African Development Bank
ANOVA	Analysis of Variance
CBK	Central Bank of Kenya
CDC	Commonwealth Development Corporation
CRR	Cash Reserve Requirement
EABS	East African Building Society
GDP	Gross Domestic Product
HFIs	Housing Finance Institutions
HFCK	Housing Finance Company of Kenya
KBS	Kenya Building Society
KNBS	Kenya National Bureau of Statistics
LTV	loan-to-value
MFI	Micro Finance Institutions
NBFIs	Non-bank financial institutions
NGO	Non-Governmental Institutions
NNE	New Neoclassical Economics
NSE	Nairobi Stock Exchange
NSSF	National Social Security Fund
OMO	Open Market Operations
PLS	Partial Least Squares
S&L	Savings and Loan
SSA	Sub-Saharan Africa
TQM	Total Quality Management
USDHUD	United States Department of Housing and Urban Development
UNCHS	United Nations Centre for Human Settlements (Habitat)

CHAPTER ONE

INTRODUCTION AND BACKGROUND TO THE STUDY

1.1 Background Information

In the year's immediately preceding independence in 1963, the housing finance sector was marked by instability as a result of political uncertainty. In the event, HFI deposits plunged from KSh 208 million in 1959 to KSh 90 million in 1962. However, this period soon gave way to a phase of consolidation and the mortgage industry expanded substantially from 1964 onwards. The principal HFIs were the Housing Finance Company of Kenya, Kenya Building Society (KBS), and Savings and Loan (S&L). HFCK was incorporated in 1965 as a joint venture between government and the Commonwealth Development Corporation (of the United Kingdom), taking over the assets of First Permanent of East Africa and those of KBS. S&L, the largest HFI at the time, experienced substantial setbacks around the time of independence and was taken over, initially by Pearl Assurance and, in 1970, by Kenya Commercial Bank, a parastatal. East African Building Society, a relatively small HFI which had opened for business in 1959, weathered the political uncertainties of the day and expanded rapidly in the years that followed.

HFCK, EABS and S&L, the principal HFIs, achieved fast growth during the 1970s. Between 1975 and 1980, for instance, HFCK deposits increased at an annual average rate of 20% and those of the EABS by 24%. In mid-1981, following a general decline in the growth of deposits, tax-free housing development bonds were introduced to enable HFCK and S&L to attract additional savings. These institutions also benefited from deposits by the National Social Security Fund (NSSF) and from loans by the government. Starting in the mid-1980's the mortgage industry witnessed major changes and upheavals. By 1986, the number of HFIs had grown to about 36, comprising four limited liability companies and 32 building societies but only 15 of the latter were active. Taking into account that the country had for many years been served by only one building society, the growth in numbers of this type of HFI had been nothing short of dramatic. Gardner et al. (1986) have advanced two reasons for this growth. The first is that the coffee price boom of 1976-77 provided the financial impetus for the rapid increase in the number of such

institutions. Second, licensing of financial institutions under the Banking Act was tightened in 1985 following the collapse of a financial company. Thus, building societies remained the principal avenue for the entry of firms into the financial sector. Notwithstanding the proliferation of HFIs, the industry continued to be dominated by HFCK, EABS and S&L. Still, the newer institutions competed aggressively for savings.

In 1984, the country experienced its first post-independence failure of a financial institution, that of the Rural and Urban Credit Finance Company. In response, the government tightened the regulatory and supervisory regime. More specifically, a number of steps were taken via an amendment to the Banking Act (Cap. 488). First, stricter conditions were imposed on the level of paid-up capital, as well as that of unimpaired reserves relative to deposit liabilities. For instance, paid-up capital for local non-bank financial institutions (NBFIs) was raised from Ksh 5 million to Ksh.7.5 million. Second, NBFIs were prohibited from owning shares in commercial banks. Third, a Deposit Protection Fund was created at the Central Bank.

These measures notwithstanding, a group of financial institutions, several building societies among them, failed in due course. A combination of factors led to this failure, some political, others management-related. First, a good number of building societies had invested heavily in property development, an activity that was considered more profitable but which naturally carried a higher risk. A notable example was Pioneer Building Society which collapsed largely because of delayed house sales. Second, major institutional investors, such as the NSSF, withdrew their deposits from the new building societies, partly out of the need to comply with political directives but also as a result of genuine concern for the security of their deposits. Third, the number of building societies had expanded too rapidly relative to the volume of available deposits. Fourth, the regulatory and supervisory regime was weak and potential problems could therefore not be arrested in time. In particular, the Registrar of Building Societies did not possess the staff needed to assure effective supervision. Government intervened and re-organized some of the failed institutions under the umbrella of a new bank, the Consolidated Bank of Kenya. Potential crises were averted in the years that followed but, in the first half of

1993, a number of financial institutions were placed under receivership including one HFI.

In spite of these setbacks, the mortgage industry registered some expansion. HFCK saw its public deposits grow, in nominal terms, from Ksh.1.89 billion in 1987 to Ksh.3.4 billion (USD 120.9 million) in 1992. However, in real terms that is, after making adjustments for inflation growth was marginal. As for mortgage lending, advances increased from Ksh.204.5 million in 1984 to Ksh.614.0 million in 1992 (USD 21.8 million). Even so, there was stagnation between 1986 and 1988 but lending rebounded in 1989 and 1990 registering nominal growth rates of 34.2% and 52.3%, respectively. Stagnation set in once again in 1991. With some variations, EABS and S&L shared a similar experience. Arguably the most important historical development was the freeing of interest rates in July, 1991, a measure taken to ensure a more efficient allocation of resources. Although interest rates had hitherto been controlled by the Central Bank they had nevertheless remained positive in the years leading up to 1990. However, the liberalization of interest rates was overshadowed by the very high rate of inflation in 1993, conservatively estimated to have averaged around 40% but to have peaked at roughly 100% during the year. Since HFIs are not able to lend at nominal rates exceeding 30% -- because there is little demand at that level -- real interest rates turned sharply negative. The response of HFIs was to suspend new mortgage lending altogether, choosing instead to invest in high yielding treasury bills.

Although inflation fell substantially in subsequent years, and with it interest rates, mortgage interest rates remained above 20% per annum for the rest of the decade. Towards the end of the 1990s, the housing finance market in Kenya went through a transformation from being predominantly public-sector oriented, to a more market-driven enterprise. With interest rate decontrol and privatization, those institutions that were previously controlled and sheltered by government, became exposed to market forces.

Housing demand, commonly referred to as effective demand, seeks to measure the willingness and ability of households to pay for housing. It is a function of many factors: household income, the price (or rent) of a dwelling, financing arrangements (including

interest rate and the loan term), and household preferences for different attributes of a dwelling, such as location. There is empirical evidence that households are willing to spend more on housing if they are buying their own house than if they are renting. Housing demand is often contrasted with housing need, a socially derived concept that measures the number of dwellings required to house a population above an arbitrarily determined standard or norm, with no regard for the ability to pay.

In microeconomic terms, the housing finance market is considered as the interaction between a supply matrix of housing finance quantity classified by characteristics such as pricing / volume and a demand matrix of households classified by their characteristics, preferences and constraints Follain et al (1980). The market allocates housing finance on the basis of the price (interest rate) and the number of households that are willing to pay the bid prices in consideration that they have their preferences and constraints. It is argued that there is disequilibrium in the housing finance market when the price does not adjust fast enough to clear the market. On the supply side of the housing finance market in the developed economies, the lenders structures remain national in nature; common developments include a reduction of credit restrictions. Developments include increased loan-to-value (LTV) ratio, which is defined as the ratio of bank lending to property value, a wider array of loan contracts offered to borrowers and a move towards greater reliance on capital market funding via securitization of housing loans CGFS (2006). It is important to note that most housing finance markets that have historically relied more on fixed rate products have experienced an increased demand for, and use of adjustable rate mortgages as well as loan types combining features from both fixed and adjustable rate mortgages.

1.2 Statement of the Problem

The rise in household income is slowly percolating into growing urbanization causing a change in lifestyle trend. Urbanization has resulted in the nuclear family structure from the traditional joint-family system which is likely to create huge demand for urban housing leading to further expansion of the city's sub-urban regions. The above fundamentals in turn have created a huge demand supply gap in all sectors of the housing market, commercial, residential, retail and hospitality. The fact that more than half of the 40 million households in Kenya still live in temporary or semi-permanent structures suggest that housing has a huge potential demand in both the middle-income and high-income segments.

The housing sector in Kenya has seen tremendous growth in the recent years with property prices soaring and the number and scale of projects increasing. Developers have been looking at new sources of raising funds such as from investors, both domestic and foreign, through avenues such as listings on Nairobi Stock Exchange (NSE), private equity participation and the setting up of joint ventures. Recognizing the need for foreign funding, the government has allowed foreign direct investment. As a result, foreign investors are permitted to invest in wholly owned subsidiaries or in joint ventures with Kenyan real estate companies as long as minimum capitalization requirements are met within six months of the commencement of operations and the capital remains locked in the project for three years thereafter. (Financial Times, 2007). Entry of foreign retailers is accelerating demand for mall space.

A study by Dasan (1996) looked at analysis of factors which influence supervisor's motivation in Kenya's building and construction industry. Omufira (2001) observed the extent of TQM implementation in the construction industry. A case study of the Kenyan building industry by Njiru (2003) looked at the performance of real estate markets. The case of Central Business District of Nairobi by Sikasa C. (2004) looked at customer perception of change management practices in the mortgage industry. The case of HFCK by Mandere A.N. (2006) looked at a survey of QM practices in the large Kenyan building construction firms. Mutuku (2006) observed the factors influencing the development of

secondary mortgage market in Kenya with special emphasis on mortgage backed securities while Matara (2008) looked at a survey of sources of finance for building construction firms in Kenya. Marete D, (2011), reviewed the determinants of real estate property prices in Kiambu Municipality in Kenya. None of the local studies in the university focused on the determinants of supply of real estate in Kenya.

1.3 Objective of the study

The objective of the study was to investigate determinants of supply of real estate finance in Kenya.

1.3.1 The specific objectives were:

1. To find out if the economic model of providing housing finance in developed economies can be adopted in the Kenyan economy.
2. To evaluate the key factors that have contributed to the operational efficiencies and inefficiencies of supply of real estate financing in Kenya.

1.5 Significance of the study

The environment in which real estate developers conduct their daily routines is composed of factors which ultimately determine their success. Discovery and subsequent recommendation for elimination of any problems could improve performance of these businesses. The study therefore will contribute to business management and practice by providing an understanding on how to boost performance real estate developers. The various stakeholders will therefore understand the links between the necessary incentives for the growth and performance of the targeted businesses. Researchers who might be interested in this topic could find the results opening up new avenues for further re search. The study will also be of benefit to other researchers who may feel the need to further research on the same problem in their areas of specialization.

CHAPTER TWO

LITERATURE REVIEW

2.1 Financial institutions' role in housing finance

If the funding of mortgage loans is left primarily to the deposit-taking institutions, they can only supply mortgage loans through deposit mobilized which are short-tenured. As a consequence of the high proportion of short-term liabilities in their deposits, they tend to lend short according to the commercial bank loan theory and the real bill doctrine. The theory stipulates that bank loans should be short-term and self-liquidating because commercial banks usually have short-term deposits. According to the theory, banks should not grant long-term loans such as housing / real estate loans or loans for financing purchase of plant and machinery because they are considered too illiquid Elliot (1984); Ritter & Silber (1986) as cited by Soyibo (1996).

A large percentage of financial institutions in the emerging economies are still adopting the business model used in the era of market-making (1970s-1980s) in the US relying on short-term deposits liabilities to fund long-term mortgages assets USDHUD (2006); Cho (2007), which are contradictory to the tenets of the commercial bank loan theory. This model had a unique shortcoming under volatile interest rate environment where lenders are borrowing short-term and lending on long-term basis at high interest rates that results in dampened housing finance demand. A well-functioning primary mortgage market requires adequate funding sources and variety of lenders in the primary market to promote further development. This includes savings mobilization and simple mortgage-backed debt instruments to offer lenders funding alternatives Roy (2007). Lenders in the primary market would include non-depository mortgage specialists, non-governmental organizations (NGOs), microfinance institutions (MFIs) and contractual savings systems Follain and Zorn (2000); Warnock and Warnock (2008). In Asia, the financial sectors in countries such as China, South Korea, Malaysia, Singapore, India and Indonesia are large and well developed UNCHS (2007). Whereas, domestic debt markets in most SSA countries (except South Africa) are in the developing stage and others in their infancy stage. SSA has 15 organized securities markets and the region's financial sectors are

characterized with a limited range of investment instruments particularly for longer tenors except the Johannesburg Stock Exchange Roy (2007); Irving & Manroth (2009).

Scale issues in equities have been mirrored in the bond market, where only a limited number of private bonds have been listed and there is little secondary market trading Merrill and Tomlinson (2000); Roy (2007). The major reason for the smallness of the securities market is lack of investors; in that insurance companies and pension funds are too small to act as major institutional investors. Despite the fact that insurance companies are allowed by statute to invest in real estate, they lack the necessary long-term funds for investment Roy (2007).

2.2 Review of theories

The driving force of economic growth and development as enunciated by Schumpeter (1921) which include mobilization of savings, efficient capital allocation, effective risk management, ease of transactions with advancing technologies are lacking. In an effort to provide housing and subsidized housing finance, various central governments have established institutions to provide housing finance. Even with the establishment of these institutions, their management has been affected by political and other negative factors that are not favourable for business survival. Therefore, the theoretical framework of this study is based on the New Neoclassical Economics (NNE) which is an integration of Neoclassical Economics and Transaction Cost Economics.

2.2.1 Theory One: Mass Psychology and Irrational Exuberance

The dominant explanations of the housing finance to date have been demand-side explanations. Robert Shiller has argued that the demand is driven by consumers' irrational exuberance and belief that real estate prices would continue to appreciate, stoking the demand for housing finance.

We do not question the existence of irrational consumer expectations and behavior. There is undoubtedly a great deal of irrational or misguided consumer behavior in real estate

investment. But this behavior required readily available financing. Shiller's demand-side theory cannot explain the movement in yield spreads during the bubble and is, therefore, a necessarily incomplete explanation. Credit relationships are two-sided relationships, and the evidence from PLS spreads indicates that any increase in housing finance demand was outstripped by an increased in housing finance supply.

2.2.2 Theory Two: Consumers' Inability to Anticipate Inflation

An alternative psychological theory has been presented by Markus Brunnermeir and Christian Julliard. Brunnermeir and Julliard argue that consumers are incapable of sorting between real and nominal changes in interest rates and rents. Therefore, consumers account for low nominal rates when making mortgage decisions, but fail to account for future appreciation of prices and rents falling commensurately with anticipated inflation. The result is that consumers overestimate the value of real estate when inflation is declining.

Brunnermeir and Julliard's theory may well be correct, but it too cannot explain the movement in yield spreads during the bubble. Therefore, their theory, like Shiller's, is at best an incomplete explanation of the bubble, as the yield spread movement shows that any growth in demand was exceeded by a growth in supply.

2.2.3 Theory Three: Inelastic Housing Supply

A third demand-side quasi-hypothesis for the housing finance, presented by urban economists Edward Glaeser, Joseph Gyourko and Albert Saiz, emphasizes the geographic variation in the housing bubble. There was considerable regional and local variance; some metropolitan areas, such as Detroit and Cleveland, did not experience a bubble, while others experienced bubbles of greater or lesser size. Glaeser, Gyourko and Saiz explain the variation based in part on variations in the elasticity of housing supply. In some parts of the country, local regulations and urban growth have been on a collision course for several decades. In these cases, with the inability of supply to expand, increased demand for real estate only resulted in higher prices.

In other words, Glaeser, Gyourko and Saiz contend that in inelastic housing markets, the housing demand curve shifted rightwards. And because most consumers finance the purchase of their homes, the rightward shift in the housing demand curve would have also resulted in a rightward shift in the mortgage finance demand curve. Glaeser, Gyourko and Saiz do not present supply constraints as the explanation for the bubble, although others do. At most, Glaeser, Gyourko and Saiz see supply inelasticity as affecting variations in how the bubble played out regionally. They argue that supply inelastic regions are more likely to experience greater price volatility and bubbles and that the extent of the bubble was determined to some degree by housing supply inelasticity.

2.3 Review of emperical studies

The neoclassical economics perspective looked into the dynamics of prices and quantities though largely an institution-free perspective in which only function matters Merton & Bodie (1995); North (1994), as cited by Merton & Bodie (1995). Thereafter, Williamson (1985 p.16 and 1988) in discussing the New Institutional Economics highlights the functional perspective of the financial system. The basis of economic theory is that commercial transactions are the prime drivers of economic growth such that the more frequently transactions take place, the higher the potential of economic growth. For economic growth and development, Schumpeter (1912) argues that financial intermediaries like banks and other financial institutions mobilize savings, allocate capital, manage risk, ease transactions and monitor firms. It is in this process of lending that financial intermediaries are considered to be utilizing resources and contributing to economic growth and development and there are evidences to support Schumpeter's view that financial institutions promote development Fry (1988); King and Levine (1993); Benhabib and Siegel (2000); Arestis et al (2001); Wachtel (2001) and Scholtens & Wensveen (2003).

Further in the literature, one of the biggest problems faced by the banks is lack of information about the promoters and the projects to be financed with the bank facilities

Jones & Maclennan (1987); Altman & Saunders (1998); Byamugisha (1999); Guzman (2000) and Mints (2006). Therefore, the economics of information, which has been a great contributor to the standard Neoclassical Economics since the late 1970s' is considered to be relevant to this study. The New Neoclassical Economies (NNE) is an integration of Neoclassical Economics (NE) and Transaction Cost Economics (TCE), with a primary role for NE but without losing sight of TCE. Among the presentations that assume part of the role of TCE in the framework of NE, is the information economics survey by Stiglitz (2000). The new information economics, he claimed, not only showed that institutions mattered, and explain why the institutions arose and the forms they took, but showed why they mattered. He noted that Arnott and Stiglitz (1991) showed that non-market institutions could even exacerbate the consequences of market failure, which was earlier articulated by Coase (1960).

Coase (1960) argued that if the costs of handling through the market are high and if the net costs are lower, only then may government regulations be relevant. However, the design of appropriate government interventions can be problematic to the extent that on occasions it brings into serious questioning the suitability of government interventions as the only option in correcting market failures Hammond (2006a & 2006b). The mere failure of private industry, when left from public interference, to maximize national dividend does not itself warrant intervention; for this might make things worse. When issue of accountability is not on the agenda, governments in most of the emerging economies monopolizes resources and power, and this monopoly is often worse than that of the private sector in the sense that the former entails larger TC and hence much more social costs relative to the latter. Hurwics (1973) noted that whenever information is imperfect and/or markets are incomplete, competitive markets do not obey the Pareto optimality efficiency criterion. Also, in NE literature, Kogiku (1971) noted that a competitive equilibrium ceases to produce Pareto-optimality when there are externalities that affect the system. However, Stiglitz (2000 p.1458) concluded without taking cognizance of associated TC, that "Government interventions, in form of, say taxes or subsidies on commodities – will lead to Pareto improvements". In line with the discussions and conclusion above on transaction cost, the next section then examines transaction cost and the theory of financial intermediation.

The current theory of financial intermediation concentrates on transaction costs and asymmetric information, but is inadequate in explaining the current complex financial transactions. It is therefore, referred to as traditional approach to financial intermediation. The financial intermediaries were considered as institutions being used to execute government monetary policies Benson and Smith Jr. (1976), without contributing to economic growth and development. The assertions might be right in the case of financial intermediaries in the emerging economies, due to the level of their economic growth. The financial intermediaries in the developed economies have gone through stages of development and by their functioning and operation they are contributing to the economic growth of their domiciled environment. The success in the theory of financial intermediation can only be appreciated when a financial market is not perfect. As noted by Berger et al (1995), a large percentage of past research on financial institutions has identified assumed imperfections like taxes, costs of financial distress, transaction costs, asymmetric information and importantly regulation.

In terms of regulation, which can either be structural or prudential, the government regulates the financial market to ensure financial stability as well as addressing problems of asymmetric information and moral hazard. While structural regulation limits the degree of risk that an institution can take in order for government to protect investor's funds and exposure limits of the financial institutions Pilbeam (2005), prudential regulation takes care of disclosure requirements, capital adequacy and liquidity requirements. Even with the identified importance of effective regulations of financial institutions, Llewellyn (2008), Milnes & Wood (2009) and Shin (2009) in discussing the Northern Rock situation highlighted problems in the regulatory framework of the British Financial System. Few of the identified problems include: inadequate role of government in responding to financial market distress and ambiguity in regard to the distinction between liquidity and solvency issues in banks. Llewellyn (2008) suggested that in any regulatory / supervisory regime, four areas that need to be addressed include prudential regulation of the financial firms; management and systemic stability; lender-of-last resort function and conduct of regulation and supervision business.

The lack of adequate regulation has resulted in lending behaviour of financial intermediaries being out of tune with economic realities. This has resulted in the lending standard being disconnected from economic fundamentals Markowitz (2009); Jones and Watkins (2009) and the banks failing with great speed exposing flaws in the regulatory system designed to identify failing institutions The Wall Street Journal (2009). Also, Scholtens and van Wensveen (2000 & 2003) are of the opinion that there is imperfection in the market when information is not flowing freely (information asymmetries). In the absence of information asymmetries, due to deregulation and deepened financial market, improvement in information technology and reduction in transaction cost, which are attributes of the financial markets in the development economies, the relevance of financial intermediaries reduces greatly.

While transaction cost highlights role of these intermediaries in the distribution function, the emphasis on the information asymmetries revolves around the origination and servicing function Merton (1989); Allen & Santomero (1998). This is due to the fact that these institutions are considered as information sharing coalitions Leland & Pyle (1997) and they can achieve economies of scale and act as delegated monitors on behalf of their customers Diamond (1984); Scholtens & van Wensveen (2003). Therefore, they can deal with individuals and transact business with their dynamic strategies at minimum cost than individuals doing their businesses which might result in high transaction cost. The transaction cost is not limited to foreign exchange and cost of borrowing Tobin (1963); Towey (1974); Fischer (1983), it also includes costs of auditing and monitoring, search costs etc which are high in most of the emerging economies. The transaction costs in these economies are high because of implicit and explicit costs of doing business which ultimately reflects on the cost of borrowing for property acquisition. Pagliari (2007) noted that in acquisition and disposition of privately held real estate, transactions cost are high which reduces returns on that type of investment. The transaction cost in this type of investment includes cost of traveling in the course of acquiring and disposing the real estate, legal fees, due diligence costs, brokerage commissions and transfer taxes depending on where the transaction is taking place.

The argument goes further from the observation made by Levine (1997) that informational asymmetries and transaction costs reduces liquidity and increases liquidity risk. These asymmetric information and other credit market frictions has various effects in the financial markets. These shortcomings, observes Levine (1997) create the incentives for the establishment of institutions that augments liquidity with the intentions of increasing their profitability. Chiuri and Jappelli (2003) were of the opinion that in the quest of the financial intermediaries to accumulate savings in form of liquid wealth, the lenders (financial intermediaries) requests potential borrowers to make down-payments in arranging funds for property acquisition. This down-payment is becoming a unique factor in determining when most first time buyers start climbing the property ladder. In the US studies, Duca & Rosenthal (1994); Haurin et al (1997) observed that the down-payment drives mortgage availability and the timing of property acquisition by first time buyers. Ortala - Magne and Rady (1998 & 1999) examines the economic impact of down payment.

In the financial systems, the bank-based model has the attributes to acquire information about firms, thereby improving corporate allocations Diamond (1984); Ramakrishinan & Thakor (1984), manage cross-sectional, inter-temporal and liquidity risk in an effort to enhance investment efficiency and economic growth Allen & Gale (2000); Bencivenga & Smith (1991). In attracting projects with high returns to an economy, there should be capital to fund it Levine (1997) and at the right price. As it was argued by Vatnick (2008), a lower cost of capital is important for economic growth because it induces rising investment and higher rate of capital accumulation for faster economic growth. Therefore, the financial intermediaries are expected to be liquid to provide funds for the projects, it translates to the fact that there is linkage between liquidity and economic development.

The literature on finance reveals that there are only two broad types of finance available: debt and equity finance. Financing of a project either by debt or equity depends on the characteristics of assets being financed and transaction cost reasoning suggests the use of debt to finance re-deployable assets and equity used to finance non re-deployable assets Williamson (1988). Furthermore, Jensen and Meckling (1976) in the study of theory of

firms argue that debts are utilized if the ability to exploit potentially profitable investment opportunities is limited by the resources of the owner. Debt finance yields a fixed return to its suppliers in states when the firm is not bankrupt (that is, the firm has sufficient funds to make the fixed payment) Edwards and Fischer (1994). Bank lending as a form of debt can be categorized into two: either as asset specific or corporate loans Crosby et al (2000). Again, the debt can be either secured or unsecured.

However, equity finance gives its suppliers the right to the firm's residual returns after payments to the suppliers of debt finance, and in addition, the right to vote on decisions concerning the firm's operation in states when a firm is not bankrupt. When the firm goes bankrupt, limited liability provisions mean that suppliers of equity receive nothing. In such state, they even loose the right to make decisions about the firm's operations in such states. In situation of non-bankruptcy, suppliers of equity finance have the right to the firm's residual return; they do not have the right to receive a fixed payment in every period which may be yearly or half-yearly Edwards and Fischer (1994); Toby (2006). On the other hand, Cranston (2002) and Tirole (2006) classify debt finance into short-term and long-term. Short-term debt finance instruments includes bank overdraft, commercial papers and short-term trade credit and long-term debt finance instruments includes housing loans, mortgages and other forms of informal credit transactions. In the context of the developing world, debt finance can be obtained from formal financial institutions like banks, micro-finance arrangements, indigenous moneylenders, family members, employers and government Nubi (2005). Heffernan (2003) and Tirole (2006) argued that financial instruments vary widely according to the characteristic of term to maturity. Sight deposits at banks have zero term to maturity, as they can be withdrawn on demand. Consequently, equity has no redemption date and therefore possesses an infinite term to maturity.

One of the biggest problems faced by the banking sector is lack of information about the promoters and the projects to be financed with the bank facilities Guzman (2000); Djankov et al (2007), to determine whether the borrowers will be able to pay the principal and interest when they fall due. Altman and Saunders (1998) highlighted the array of information on various borrowers' details to include their character (reputation), capital

(leverage), capacity (volatility of earnings) and collateral. However, Mints (2006) limited the borrowers required information to "the three C's of lending" which are collateral factor, capacity factor and credit factor, which are all relevant to lending in both developed and emerging economies.

The current theory of financial intermediation concentrates on transaction cost and asymmetric information and they are considered to be inadequate as tools to explain the fundamentals of financial intermediation, which is risk management. Therefore, their contributions are being classified as traditional and old. Moreover, there are two aspects to the lending operations of the financial institutions. The ability of the financial institutions to lend determined by the strength of their balance sheets and the willingness of these institutions to lend as risk managers.

In the banking literature, capital adequacy is one of the five key variables identified in measuring bank balance sheet strength while others are asset quality, management, earnings and liquidity Rojas-Suarez (2002); Hefernan (2003); Buckle and Thompson (2005). The capital adequacy regulatory rules have impact on the bank behaviours Dewatripont and Tirole (1994); Freixas and Rochet (1997); Chiuri et al (2002). It is argued that there are two ways by which these rules affect bank behaviours. Firstly, it is known that capital adequacy regulatory rules strengthen bank capital and improves the resilience of a bank to negative shocks and secondly, capital adequacy affects banks in risk taking and management behaviour.

It has also been argued by various authors Allen (2004); Pan (2008) that capital adequacy rules like Basel II may impact the banking system's ability to extend loans and advances to the productive sector of the economy. When capital requirement arises and with capital constraints in most countries of the emerging market due to lack of depth in their capital markets; the banks adopt a risk-shifting model as means of risk management. Risk management is about managing a mismatch between supply of funds and the demand for investments and these risks could be credit risk, liquidity risk, systemic risk, mismatch risk or interest rate risk Odenbach (2002); Heffernan (2003); van Order (2005); Mints (2006) and Akinwunmi et al (2007) & (2008a). With risk management being the core

business of the financial intermediaries, Dewatripont & Maskin (1995); van Thadden (1995) opinionated that financial institutions operating in a market-based financial system, due to competition, will have their inefficiencies associated with banking activities reduced and thereby promote economic growth.

Saunders (2002) analyses a risk-shifting model as a process whereby financial institutions, banks in particular, in an effort to meet up with new capital requirements moves away from low-yielding loans to high risk loans in expectation of high earnings. Furthermore, Caprio Jr. et al (2008) argue that risk-shifting takes place at every stage of financial engineering. If these loans eventual pay off, banks meet up with their higher capital requirements from loan profits, otherwise they are liquidated.

2.4 Determinants of Supply of Housing

The role of a housing finance system does not stop at the provision of shelter, it is also very important to the mobilization of domestic savings, shelter being one of the first priorities of households and a leading reason for savings. Therefore, the literature contends that the housing finance sector can and should play a central role in the mobilization of resources by households Renaud 1984; Renaud (2008). In Asia, according to UN-Habitat's state of the World's cities 2006-7 report, 73 percent of urban dwellers live in non-permanent housing. The housing sector is severely constrained by lack of an adequate and appropriate housing finance system, in which Asian Development Bank study says that Asia's mortgage sector is the least developed in the world UNCHS (2007). The situation in SSA is similar, characterized by the lack of housing finance.

The stock of housing finance in Namibia and South Africa comes to 18-20 percent of GDP, for other countries for which data are available had about 2 percent (Nigeria, Mali, Morocco, Senegal) Roy (2007). In Asia, many countries mortgage financing per year is less than 2 percent of GDP compared to 88 percent in the United Kingdom (UNCHS (2007) and 15-21 percent in Chile, Malaysia and Thailand Honohan and Beck (2007). In societies where social housing is not on the priority list of government, the affordability

would have to be looked at from the point of view of the individual's own ability to raise money needed to meet the cost or price of housing needs. Generally, the first source of funding for the individual is their income because it does not involve payment of interest. Many countries in the emerging economy have nascent and weak financial markets. The participation of financial markets in financing housing has been limited and the majority of low-income households are also excluded from the formal financial services industry UNCHS (2007). This resulted in 70 to 80 percent of housing finance in emerging economies being raised from the informal market Okpala (1994); Buckley et al (1994); Saravanan (2007) and Tiwari & Debata (2008). These informal markets are made up of loans from relatives, employers and money lenders that supplement savings and current income for housing finance Renaud (1985); Kim (1997).

However, formal housing finance supply in emerging economies is operated through both policy-driven and the market-oriented housing finance channels Deng and Fei (2008). The policy-driven housing finance is mainly through Housing Funds Schemes, which are mandatory housing savings scheme while the market-oriented housing finance is characterized by commercial loans from financial institutions. In the developed economies, commercial mortgages are referred to as collateralized lending to property developers whereas in the emerging economies, commercial loans are basically mortgages raised from financial institutions.

With the magnitude of housing needs in most of the countries in the emerging economy, Buckley and Kalarickal (2004), Hassler (2005) and Merrill (2006) argued that there are requirements that emerging economies must embrace, if they are going to move forward in terms of delivering housing finance. The requirements include stable macroeconomic conditions, a legal framework for property rights, mortgage market infrastructure and funding sources to promote financial intermediation and each will now be discussed.

2.4.1 Macroeconomic conditions

Macroeconomic policies are impacts of exogenous interventions at the aggregate or economy-wide levels Burda and Wyplosz (1997); Hammond (2006) and Roy (2007).

Macroeconomic instability and its corollary of high and volatile domestic interest rates, erratic monetary and exchange rate policies coupled with weaknesses in the financial systems of many emerging market countries Bhattacharya et al (1997); Irving and Manroth (2009), have a disproportionate impact on long-term mortgage finance. Various factors contributes to greater macroeconomic volatility in emerging markets, the most important is that their production structure is typically much less diversified than that of developed countries and often dependent on primary commodities.

The macroeconomic policies might be adopted to affect (decrease/increase) the nominal interest rate, or volatility of inflation, which has affected the efficiency of housing finance. In differentiating between housing affordability and housing finance affordability, Buckley et al (1994) argued that housing finance affordability arises when inflation makes housing unaffordable at the market rates of interest. This resulted in indexation as means of addressing the housing finance affordability problem especially in the Latin America and a few African countries like Ghana. Therefore, the objective of and redesigning mortgage contract is to eliminate financial constraints that impede the affordability housing and provide a financing vehicle so that those who can afford to, and so desire, can purchase homes Buckley et al (1993). This assertion has been argued by Buckley (1996) and Kim (1997) that indexation of deposits and mortgage products can only deal with moderate inflation.

A sound macroeconomic policy framework is one that promotes growth by keeping inflation low, the budget deficit small and the current account sustainable Fischer (2004); Hale (2007). Therefore, the financial regulatory authorities (central banks) in most emerging market economies have used policies like the cash reserve requirement and liquidity ratio as instruments of monetary control. Cash reserve requirement is the percentage of the banks cash asset to be kept in an account with the central bank. This policy is adopted to control volume of funds available for financial institutions to invest in granting loans and advances.

2.4.2 Financial Development and Liberalization

In most of the emerging market economies, the financial sub sector is generally shallow relative to the sizes of these economies. The shallowness of these institutions results in limited access to financial services, with the low-income earners and even medium income earners mostly discriminated against in the financial market. This form of discrimination comes in the form of being denied credit facilities due to their inability to meet the stringent requirements of suppliers of finance Roy (2007); Renaud (2008). In terms of liberalization, there has been a relative efficiency in the credit markets of the emerging economies due to the adoption of market discipline and risk-based capital guidelines. Almost all countries in the emerging economies are moving away from rigid.

2.4.3 Financial Infrastructure and Incomplete Financial Systems

The financial infrastructure of a country shapes the structure, organization and performance of the finance industry and the process of capital formation, and therefore the mortgage market development strategies Renaud (2008); Boleat (2008). This is done when attempts are made to increase the depth and breadth of their financial markets. One of the indicators for measuring financial deepness of an economy is the total deposits within a financial system as a percentage of GDP Vatnick (2008). The organization and structure of the financial system also plays an important causal role in the quality and rate of economic growth Bhattacharya (1997); Levine et al (2000); World Bank (2001).

2.5 Chapter Summary

It has been identified through various studies that the financial infrastructure of a nation shapes the structure, organization and performance of the finance industry and the process of capital formation and the mortgage market development strategies in both developed and emerging economies. Specifically, housing and housing finance in emerging market economies has been subjected to various limitations like inadequacy of legal and regulatory infrastructure, macroeconomic volatility, high transaction costs associated with the lack of adequate loan management practices and infrastructures for mortgage processing.

Despite the orthodox view that a secure supply of land with a good title (registered land) is a pre-requisite for effective housing finance system, efforts to get land registered and governments to be the sole custodian of land has been a disaster in most emerging economies. The idea of land registration has slowed down the process of housing finance disbursement and eventual supply. It can further be argued that the underdevelopment of mortgage lending to individual households can be explained by lack of demand for mortgage lending which might be due to high credit risks, lack of financial depth which translates into high interest rates on mortgage loans, the limited long-term credit resources of originating banks resulting from failure to develop secondary market financing. This anomaly has hitherto been tackled in the developed economies through the introduction of stable funding source and asset-liability management tools like securitization, credit derivatives, collateralized debt obligations and mortgage covered bonds. For most of the emerging economies, a combination of economic and social factors, such as low domestic savings rate, high price-to-income ratios and a general culture and social predisposition towards homeownership, suggests that the common problem facing them lies in the provision of housing finance services that can allocate untapped resources.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter describes the research design, population and sampling design, the data collection method, the research procedures and data analysis methods that was used in the course of the research. This section also indicates the research tools used to collect data, the data collection and the analysis procedures.

3.2 Research Design

The research adopted a descriptive research design. Accroding to Cooper and Schindler, (2001), descriptive study is used when one needs to determine characteristics associated with a subject population which this study is actually concerned with.

3.3 Hypothesis and Model to be tested

Using loan to housing (housing finance supply) as the dependent variable, it could be deduced at a point, that interest levels, income levels, loan security, value of property and government regulations being independent variables do significantly affect supply of loans to housing.

The basic model is as shown below:

$$\mathbf{Y = \beta o + \beta 1x1 + \beta 2x2 + \beta 3x3 + \ldots\ldots\ldots\ldots\ldots\ldots + \beta kxk + e \quad \ldots\ldots\ldots\ldots\ldots\ldots 1}$$

Where:

x1, x2, x3.....xk are the independent variables.

e the difference between the predicted and observed value of Y for the *i*th subject.

bo is the constant term

b1, b2, b3.....bk are the regression coefficients to be estimated.

The empirical model is therefore derived as:

$$\mathbf{SHF=\alpha_0+\alpha_1 IR+\alpha_2 IL+\alpha_3 LS + \alpha_4 VP + \alpha_5 GR \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots 2}$$

Where;

SHF = Supply of Housing Finance

α_O = Coefficient of the independent variable to SHF

IR = Interest rates

IL = Income level

LS = Loan Security

VP = Value of property

GR = Government regulations

3.4 Research population

The target population was all real estate developers, real estate owners and financiers operating in Kenya as at 31st December 2011.

3.5 Sample size

The target respondents were selected using purposive sampling. In this case respondents were chosen deliberately on assumption that they have valid information regarding the problem under study. The sampling frame was all real estate developers and home owners who have engaged in development business in Nairobi, however due to nature of their work, we did not find all of them in Nairobi City. It was important that the respondents are targeted based on the locations where was easy to locate them so as to save cost and time in the course of the research. Hence, this proposal focused on the respondents at their places of work. The sample size composed of 30 real estate developers, 30 home owners and 10 housing financiers.

3.5 Data collection

Qualitative and quantitative research approaches were used in this study. For quantitative, the data was obtained from the housing finance publications and other publications in the real estate sector. Qualitative research methodologies were designed to provide the researcher with the perspective of target audience members through immersion in a culture or situation and direct interaction with the people under study. The advantage of using qualitative methods was that they generate rich, detailed data that leave the

participants' perspectives intact and provide a context for health behaviour. Qualitative methods of data collection used in this study were questionnaires.

3.6 Data analysis

The researcher edited the collected data centrally Coppers and Schindller, (2000) assert that editing is done in order to detect errors and omission, ensure data is accurate, uniformly entered, complete, consistent with intent of the question and other information in the study and arranged to simplify coding and tabulation. Alpha numeric data coding was carried out to assign numbers and other symbols to the questions, which Coopers and Schindler (2000) explain is done in order to group the respondents to a limited number of classes or categories that facilitate efficient analysis. Coded data was tabulated in Statistical Package for Social Scientist (SPSS).

3.6.1 Correlation

Pearson product-moment correlation (r), as an example of correlation coefficient, gives the numerical summary of the direction and strength of the linear relationships between two variables. Since explanation needs to be given for the possible relationship between the dependent and independent variables, the statistical association between the variables has to be measured. The Pearson Product-Moment Correlation (r) is the most commonly applied correlation coefficient used in measuring a linear association and it was therefore adopted in this study to build the framework of the conceptual model.

3.6.2 Multi-collinearity

Another important issue in multiple regression analysis is the presence of multicollinearity. There is no precise definition of collinearity firmly established in the literature Mason and Pierreault (1991). Collinearity is agreed to be present if there is an approximate linear relationship among some of the predictor variables in the data. This refers to the relationship among the independent variables and it exists when the independent variables are highly correlated (r = 0.9 and above) Pallant (2007);

Tabachnick & Fidell (2007). Multicollinearity makes it difficult to determine the contribution of each independent variable Hair et al (1998).

3.7 Data validity and reliability

Data obtained from the primary source was considered authentic and could therefore be relied upon for deriving conclusions. Such data was also considered credible and free from error or any bias. Data was moved from the field only by the researcher to ensure confidentiality and reliability was observed, discussion and clarification were sought from the organizations targeted to ensure reliability, remains confidential and used only for the purpose of this study.

CHAPTER FOUR

DATA ANALYSIS AND PRESENTATION O FINDINGS

4.1 Introduction

The main objective of this study was to establish determinants of supply of real estate finance in Kenya. A total of 70 questionnaires were sent out, of which 44 were satisfactorily filled and returned, this formed 63% response rate. The collected data was analyzed using the statistical package for social scientist. The chapter starts with the analysis of results and concludes with giving the summary and interpretation of the findings.

4.2 Data presentation and explanation

4.2.1 Descriptive Statistics

Table 4.1: Descriptive statistics for measures of performance

	N	Minimum	Maximum	Mean	Std. Deviation
Housing Finance Supply	44	13.00	85.00	27.5000	28.29664
Interest Rates	44	13.00	96.00	31.1667	31.99635
Income Level	44	14.00	117.00	38.0000	39.18673
Loan Security	44	17.00	145.00	47.1667	48.53212
Value Of Property	44	23.00	165.00	53.6667	55.07328
Government Regulations	44	24.00	193.00	62.8333	64.37831
Valid N (listwise)	44				

The Descriptive Statistics table provides summary statistics for continuous, numeric variables. Summary statistics include measures of central tendency such as the mean. Measures of dispersion (spread of the distribution) such as the standard deviation. The minimum for housing finance supply and interest rates was 13 respectively, 14 for income level, 17 for loan security, 23 for value of property while 24 for government regulations. The maximum was 85 for housing finance supply, 96 for interest rates, 117 for income level, 145 for loan security, 165 for value of property while 193 for government regulations. The mean for housing finance supply was 27.5, 31.1 for interest rates, 38 for income level, 47.1 for loan security, 53.7 for value of property and 62.8 for

government regulations. The std deviation for housing finance supply was 28.3, 31.9 for interest rates, 39.1 for income level, 48.5 for loan security, 55 for value of property and 64.4 for government regulations

4.2.2 Correlation

Table 4.2: Correlation between measures of performance

		Housing Finance Supply	Interest Rates	Income Level	Loan Security	Value Of Property	Government Regulations
Housing Finance Supply	Pearson Correlation	1	.999(**)	.997(**)	.997(**)	.998(**)	.998(**)
	Sig. (2-tailed)		.000	.000	.000	.000	.000
	N	44	44	44	44	44	44
Interest Rates	Pearson Correlation	.999(**)	1	.998(**)	.998(**)	.999(**)	.998(**)
	Sig. (2-tailed)	.000		.000	.000	.000	.000
	N	44	44	44	44	44	44
Income Level	Pearson Correlation	.997(**)	.998(**)	1	1.000(**)	.999(**)	.998(**)
	Sig. (2-tailed)	.000	.000		.000	.000	.000
	N	44	44	44	44	44	44
Loan Security	Pearson Correlation	.997(**)	.998(**)	1.000(**)	1	.999(**)	.997(**)
	Sig. (2-tailed)	.000	.000	.000		.000	.000
	N	44	44	44	44	44	44
Value Of Property	Pearson Correlation	.998(**)	.999(**)	.999(**)	.999(**)	1	.999(**)
	Sig. (2-tailed)	.000	.000	.000	.000		.000
	N	44	44	44	44	44	44
Government Regulations	Pearson Correlation	.998(**)	.998(**)	.998(**)	.997(**)	.999(**)	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	
	N	44	44	44	44	44	44

** Correlation is significant at the 0.01 level (2-tailed).

The correlations table displays Pearson correlation coefficients, significance values, and the number of cases with non-missing values. Pearson correlation coefficients assume the data are normally distributed. The Pearson correlation coefficient is a measure of linear association between two variables. The values of the correlation coefficient range from -1 to 1. The sign of the correlation coefficient indicates the direction of the relationship (positive or negative). The absolute value of the correlation coefficient indicates the

strength, with larger absolute values indicating stronger relationships. The correlation coefficients on the main diagonal are always 1.0, because each variable has a perfect positive linear relationship with itself.

The significance of each correlation coefficient is also displayed in the correlation table. The significance level (or p-value) is the probability of obtaining results as extreme as the one observed. If the significance level is very small (less than 0.01) then the correlation is significant and the two variables are linearly related. If the significance level is relatively large (for example, 0.2) then the correlation is not significant and the two variables are not linearly related.

The study showed positive relationship for all the measures of performance, with a strong significance level for all the measures of performance i.e. Interest Rates, government regulations, income level, value of property and loan security.

4.2.3 Empirical Model

Table 4.3: Collinearity Diagnostics

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions			
				(Constant)	Government Regulations	Loan Security	Interest Rates
1	1	3.723	1.000	.00	.00	.00	.00
	2	.261	3.779	.00	.01	.00	.13
	3	.011	18.077	1.00	.08	.06	.47
	4	.005	27.425	.00	.91	.93	.39

a Dependent Variable: Housing Finance Supply

This table displays statistics that help you determine if there are any problems with collinearity. Collinearity (or multicollinearity) is the undesirable situation where the correlations among the independent variables are string. Eigenvalues provide an indication of how many distinct dimensions there are among the independent variables. When several eigenvalues are close to zero, the variables are highly intercorrelated and small changes in the data values may lead to large changes in the estimates of the coefficients. Condition indices are the square roots of the ratios of the largest eigenvalue

to each successive eigenvalue. A condition index greater than 15 indicates a possible problem and an index greater than 30 suggests a serious problem with collinearity. The variance proportions are the proportions of the variance of the estimate accounted for by each principal component associated with each of the eigenvalues. Collinearity is a problem when a component associated with a high condition index contributes substantially to the variance of two or more variables.

4.3 Qualitative analysis

Housing and residential construction are considered to be central importance for determination of both the level of welfare in a society and the level of aggregate economic activities. Housing is the largest asset owned by most households and is nearly always financed, in the sense that owners of housing capital must pay for their units over a period of years. It is therefore imperative for Kenya to appreciate benefits to be derived from having a well-functioning mortgage markets despite various economic issues being tackled with limited resources. The large external benefits to the national economy were highlighted to include capital market development, efficient real estate development, construction sector employment, easier labour mobility, more efficient resources allocation and lower macroeconomic volatility.

It has been identified through various studies that the financial infrastructure of a nation shapes the structure, organisation and performance of the finance industry and the process of capital formation and the mortgage market development strategies in Kenya. Specifically, housing and housing finance in Kenya has been subjected to various limitations like inadequacy of legal and regulatory infrastructure, macroeconomic volatility, high transaction costs associated with the lack of adequate loan management practices and infrastructures for mortgage processing.

Despite the orthodox view that a secure supply of land with a good title (registered land) is a pre-requisite for effective housing finance system, efforts to get land registered and governments to be the sole custodian of land has been a disaster in Kenya. The idea of land registration has slowed down the process of housing finance disbursement and eventual supply. It is further be argued that the underdevelopment of mortgage lending to

individual households can be explained by lack of demand for mortgage lending which is due to high credit risks, lack of financial depth which translates into high interest rates on mortgage loans, the limited long-term credit resources of originating banks resulting from failure to develop secondary market financing. This anomaly has hitherto been tackled in the developed economies through the introduction of stable funding source and asset-liability management tools like securitization, credit derivatives, collateralized debt obligations (CDOs) and mortgage covered bonds (MCB).

For Kenya, a combination of economic and social factors, such as low domestic savings rate, high price-to-income ratios and a general culture and social predisposition towards homeownership, suggests that the common problem facing them lies in the provision of housing finance services that can allocate untapped resources. Some of these untapped resources could be identified as the innovative sources of funding housing finance which are peculiar to their situations like diaspora bonds, migrant remittances and pension funds.

4.4 Summary and Interpretation of the findings

The Descriptive Statistics table provides summary statistics for continuous, numeric variables. Summary statistics include measures of central tendency such as the mean. Measures of dispersion (spread of the distribution) such as the standard deviation. The minimum for housing finance supply and interest rates was 13 respectively, 14 for income level, 17 for loan security, 23 for value of property while 24 for government regulations. The maximum was 85 for housing finance supply, 96 for interest rates, 117 for income level, 145 for loan security, 165 for value of property while 193 for government regulations. The mean for housing finance supply was 27.5, 31.1 for interest rates, 38 for income level, 47.1 for loan security, 53.7 for value of property and 62.8 for government regulations. The std deviation for housing finance supply was 28.3, 31.9 for interest rates, 39.1 for income level, 48.5 for loan security, 55 for value of property and 64.4 for government regulations

The correlations table displays Pearson correlation coefficients, significance values, and the number of cases with non-missing values. Pearson correlation coefficients assume the data are normally distributed. The Pearson correlation coefficient is a measure of linear association between two variables. The values of the correlation coefficient range from -1 to 1. The sign of the correlation coefficient indicates the direction of the relationship (positive or negative). The absolute value of the correlation coefficient indicates the strength, with larger absolute values indicating stronger relationships. The correlation coefficients on the main diagonal are always 1.0, because each variable has a perfect positive linear relationship with itself.

The significance of each correlation coefficient is also displayed in the correlation table. The significance level (or p-value) is the probability of obtaining results as extreme as the one observed. If the significance level is very small (less than 0.01) then the correlation is significant and the two variables are linearly related. If the significance level is relatively large (for example, 0.2) then the correlation is not significant and the two variables are not linearly related.

The study showed positive relationship for all the measures of performance, with a strong significance level for all the measures of performance i.e. Interest Rates, government regulations, income level, value of property and loan security.

The multiple correlation coefficient is the correlation between the observed and predicted values of the dependent variable. The values of R for models produced by the regression procedure range from 0 to 1. Larger values of R indicate stronger relationships. R squared is the proportion of variation in the dependent variable explained by the regression model. The values of R squared range from 0 to 1. Small values indicate that the model does not fit the data well. The sample R squared tends to optimistically estimate how well the models fit the population. Adjusted R squared attempts to correct R squared to more closely reflect the goodness of fit of the model in the population. Choose a model with a high value of R squared that does not contain too many variables. Models with too many variables are often over fit and hard to interpret.

The model summary for this study was found to be 1.000 for R value, 0.999 for R square, 0.997 for adjusted R square, 435.775 for F change, 3 for df1, 1 for df2, 0.035 for sig. F change while the Durbin-Watson was 3.405

The output for Regression displays information about the variation accounted for by your model. The output for Residual displays information about the variation that is not accounted for by your model. And the output for Total is the sum of the information for Regression and Residual. Model with a large regression sum of squares in comparison to the residual sum of squares indicates that the model accounts for most of variation in the dependent variable. Very high residual sum of squares indicate that the model fails to explain a lot of the variation in the dependent variable, and you may want to look for additional factors that help account for a higher proportion of the variation in the dependent variable. The mean square is the sum of squares divided by the degrees of freedom. The F statistic is the regression mean square divided by the residual mean square. The regression degrees of freedom is the numerator df and the residual degrees of freedom is the denominator df for the F statistic. The total number of degrees of freedom is the number of cases minus 1. If the significance value of the F statistic is small (smaller than say 0.05) then the independent variables do a good job explaining the variation in the dependent variable. If the significance value of F is larger than say 0.05 then the independent variables do not explain the variation in the dependent variable.

The sum of squares for regression was 4001.753, df 4, mean square 1000.438, F 572.725 while the Sig. was 0.031 while for the residual values, sum of squares was 1.747, df was 1 while the mean square was 1.747.

Collinearity (or multicollinearity) is the undesirable situation where the correlations among the independent variables are string. Eigenvalues provide an indication of how many distinct dimensions there are among the independent variables. When several eigenvalues are close to zero, the variables are highly intercorrelated and small changes in the data values may lead to large changes in the estimates of the coefficients. Condition indices are the square roots of the ratios of the largest eigenvalue to each successive eigenvalue. A condition index greater than 15 indicates a possible problem

and an index greater than 30 suggests a serious problem with collinearity. The variance proportions are the proportions of the variance of the estimate accounted for by each principal component associated with each of the eigenvalues. Collinearity is a problem when a component associated with a high condition index contributes substantially to the variance of two or more variables.

The previous study found out that low income level affects the housing finance Roy (2007). Further in the literature, one of the biggest problems faced by the banks in financing for real estate is value of property and the projects to be financed with the bank facilities Jones & Maclennan (1987); Altman & Saunders (1998); Byamugisha (1999); Guzman (2000) and Mints (2006). Even with the identified importance of effective regulations of financial institutions, Llewellyn (2008), Milnes & Wood (2009) and Shin (2009) in discussing the Northern Rock situation highlighted problems in the regulatory framework of as the impediment in real estate financing. Further Llewellyn (2008) suggested that in any regulatory / supervisory regime, four areas that need to be addressed include prudential regulation of the financial firms; management and systemic stability; lender-of-last resort function and conduct of regulation and supervision business. However the findings of this study indicate value of property, government regulation, income level, interest rates and loan security all affect the financing of real estate in Kenya.

CHAPTER FIVE

SUMMARY, CONCLUSION & RECOMMENDATIONS

5.1 Summary

In lending, financial institutions give out loans in consideration of interest to be charged on the loans and the riskiness of the loan. The demand and supply of housing finance are determined by various factors. The ability of financial institutions to lend for housing (supply of housing finance) determines the quantity of housing finance that could be supplied for house acquisitions. If the identified factors, value of property, government regulation, income level, interest rates and loan security are dwindling, the availability of housing finance will be reduced.

Interest Rates: Since interest rate is considered as the rate of return on investment, when the rate of interest is low on mortgage lending maybe due to government regulations, there is the tendency for the financial institutions to look for an alternative investment outlet in order to make good profit. Apart from the ability of the financial institutions to lend, the other aspect is the willingness of the financial institutions to lend towards mortgage acquisition. The factors consider by them includes criteria of security, income, price of the property, price of alternative goods and services and household characteristics (age, marital status etc).

Criteria of Security: With a favourable reserve and liquidity position, financial institutions in Kenya do not necessarily lend to all applicants that approach them for banking facilities, even if the prevailing interest rate is acceptable to the borrower. Loans are secured on specific property and necessary steps are taken in avoiding default on repayment or depreciation of the security below the book value of the debt. There are various ways by which the lenders determine the ability of the borrower to repay and the suitability of the property as security.

Income: The income being earned by a borrower determines the ability to repay the money borrowed. The total sum advanced therefore is usually restricted to some multiple of two to three times the applicant's salary. This means that the applicant shall have

secure prospects of a continuing income. However, in the recent past in the developed economies, it is considered that average home prices range from three to four times of annual income (Warnock & Warnock 2008). In Kenya, because wages are low and construction cost is high, average home prices are usually about eight times of annual income and to make it affordable, repayments have to be spread over a very long period of time. Thus a positive relationship exists between housing construction cost and building materials price, property price, foreign exchange rates because imported building materials are used for construction, labour cost and national disposable income.

Value of property: In some cases, control of lending is also exercised by avoiding advances on the security of properties which might deteriorate. Financial institutions prefer lending on properties which are relatively modern and also prefer houses to flats. As a property is becoming old-fashioned, the less is the willingness of financial institutions to lend based on the collateral of the property. This policy affects the distribution of house prices, since it would be difficult to raise a loan on a particular property. As a result of these constraints demand is always rationed and it is difficult to assess what the real demand for mortgage is while the supply constraints in the form of the reserve and liquidity ratios are easier to observe.

Loan to Income Ratio: Financial Institutions would like to know what percentage of his total income is already committed to payment of all. In some cases, bank might not lend to individuals that would commit more than 40 per cent of his income on settling debts.

5.2 Conclusion

This study investigated factors determining housing finance supply in Kenya. Housing finance is a major factor determining the quality and tenure of housing consumption, the overall financial portfolio of the public and the stability and effectiveness of the financial system. In Kenya, the government has intervened in the markets by setting up institutions characterized by a significant degree of regulation and segmentation from the rest of the financial markets and very often with governments providing subsidized housing finance.

Additional instruments in form of questionnaire, for the sectorial allocation of loans and advances by these financial institutions were employed to gather information from Corporate Banking / Loans and Advances Managers coupled with unstructured interviews. Supplementary questionnaires were directed to the users of housing finance at the household level as control for validity to the research findings.

Applying a multiple regression approach, the model identified that housing finance supply in Kenya is significantly driven by clusters of factors related to value of property, government regulation, income level, interest rates and loan security. It is closely observed that housing finance models in the developed economies, which are largely financed by deposit liabilities, cannot be wholly adopted in the Kenyan economy. The implication for practice therefore is that financial institutions in Kenya must adequately increase their capital base for effective housing finance supply and introduce mortgage products with long-term tenure to actively mobilize resources for mortgage lending.

5.3 Policy Recommendations

The largest hitches to the development of the real estate segment of Kenya are government regulations, interest rate, loan security, value of property and income level as suggested by most of the respondents in the interviews. Changes brought in these segments can ensure a better rate of growth for the market and a relatively more attractive opportunity for the consumers and investors.

As discussed in the project, Real Estate in Kenya has a potent demand backed growth. Demand due to population increase, higher allocation to savings in real estate, actualization of mortgaging by consumers and bridging the gap of the current housing deficit will be a trigger for sustained growth.

The efforts by the government to ensure faster clearances for active real estate development would enable developers in a great way. The researcher recommends that the government should set up a separate real estate division with the objective of single

window clearance of all required paper work and clearances. Single window essentially means that the developers will need to approach only one department for the clearances required in checking the title of the land, the water treatment plant, electricity and water utility connections, permission for construction and labour related issues such as facilities and wages. Also the government should establish a housing loan guarantee scheme run by existing government housing corporations to assess risks in some real estate development and the applicant's credit scores then giving guarantees to the developers and financiers so as to encourage financiers to lend more and at affordable interest rates. The builders should be given support in ensuring that the land they own and hold is free of encroachment from slums. Also, free hold land should be released to developers with proper title clearances to the land quickly. Some litigation processes take years for clearances, which should be put onto a fast track.

5.4 Limitations of the Study

Every research has certain drawbacks. It is therefore necessary to incorporate them in the project to obtain a true perspective of the research topic. The following are a few drawbacks the researcher faced during my research study.

The study makes use of qualitative analysis, which is interview and questionnaire based in order to find out the determinants of housing finance in Kenya. However quantitative approach has not been used as it would have prolonged the study. Hence financial statements such as Balance Sheet and Profit and Loss of Real estate listed companies have not been analyzed to arrive at the growth prospects of the sector in quantitative terms.

Also due to difference in valuation methods adopted by different countries and limited relevant data; comparison of Kenyan real estate companies to international real estate companies operating in Kenya has not been possible.

Another drawback was getting through to companies for the purpose of an interview. Limited number of interviewees induced the researcher to collect further information through a questionnaire survey.

Further, there was a possibility of a biased research being carried out due to all interviewees being Nairobi-based. Therefore the researcher increased the sample size to adequately include companies from all parts of Kenya to get a clear national perspective of the real estate market.

However, the research aim was to provide a broad overview and give valuable prospects to the participants of this industry as well as to investors seeking to invest in the Kenyan real estate sector.

5.5 Suggestions for further studies

For academic world. This research Result is expected to become a valuable input in study related to housing finance for real estate. This Research has not yet expressed all variables that can influence housing finance, then in order to increase science/knowledge development, other researchers who are interested in similar problems are suggested to conduct a continuation research by adding further determinants of housing finance

The study was done for the companies and real estates in Nairobi, a suggestion is made that a similar study be done for companies and real estate developers beyond Nairobi and results be compared.

The study was done for Kenya i.e. real estate companies operating in Kenya, it is suggested that a cross sectional study be done for the other East African real estate developers.

REFERENCES

Akinwunmi, A., Gameson, R., Hammond, F. and P. Olomolaiye (2007) – Mortgage Insurance and Housing Finance in Emerging Economies- in Boyd, D.(Ed)- Proceedings of 23rd Annual ARCOM Conference, 3-5 September 2007, University of Ulster, Belfast-UK, Association of Researchers in Construction Management,

Akinwunmi, A., Gameson, R., Hammond, F. and P. Olomolaiye (2008) – The Effect of Macroeconomic Policies on Project (Housing) Finance in Emerging Economies – in Lodi,

Alhashimi, H.and Dwyer, W (2004) Is there such an entity as a housing market? Paper presented at the 10th Annual Pacific Rim Real Estate Conference, Bangkok

Allen, F. and D. Gale (1988) – Optimal Security Design, Review of Financial Studies Fall 1988 pp 229-268.

Allen, F. and D. Gale (1994) - Financial Innovation and Risk Sharing, Cambridge, Massachusetts: MIT Press

Altman, E.T. and Saunders, A. (1998) – Credit risk measurement: Developments over the last 20 years, Journal of Banking and Finance, 21(1998), pp 1721-1742.

Arnott, R. and Stiglitz, J. (1991) – Moral Hazard and Non-Market Institutions: Dysfunctional Crowding out after monitoring, American Economic Review 81, pp 179-190.

Benston, G.J. and C.W. Smith Jr (1976) – A Transaction Cost Approach to the theory of Financial Intermediation, Journal of Finance May 1976, Vol. 31 No 2, pp 215-231.

Berger, A.N., Herring, R.J. and G.P. Szego (1995) – The Role of Capital in Financial Institutions, Journal of Banking and Finance 19, pp 393-430.

Bhattacharya, A., Montiel, P.J. and S. Sharma (1997) – How Can Sub-Saharan Africa Attract More Private Capital Inflows? Finance and Development June 1997, Vol. 34 No 2 pp 3-6.

Boleat, M. (2008) – Housing Development and Housing Finance in Britain – Some lessons for emerging markets, Housing Finance International March 2008, Vol. 22 Issue 3, pp 53

Burda, M. and C. Wyplosz (1997) – Macroeconomic: A European Text, 2nd Edition, N.Y; Oxford University Press.

Buckle, M and J Thompson (1998) The UK Financial System: Theory and Practice (3rdEdition), N Y : Manchester University Press.

Buckley, R M (1996) Housing Finance in Developing Countries. N.Y: Macmillan.

Byamugisha, F. (1999) – The effects of land registration on Financial Development and Economic Growth: A Theoretical and Conceptual Framework, Policy Research Working Paper 2240, Washington DC: World Bank.

Caprio Jr, G., Demirguc-Kunt, A. and E.J. Kane (2008) – The 2007 Meltdown in Structured Securitisation: Searching for Lessons, Not Scapegoats, Finance and Private Sector Team, Development Research Group - October 2008, World Bank: Washington DC.

Chiuri, M.C. and T. Jappelli (2003) – Financial Market imperfections and home ownership: a comparative study, European Economic Review Vol.47 Issue 5, pp 857-875.

Chiuri, M.C., G. Ferri and G. Majnani (2002) – The Macroeconomic Impact of Bank Capital Requirement in Emerging Economics: Past Evidence to Assess the Future, Journal of Banking and Finance 26, pp 881-904.

Cho, M. (2007) – 180 Years' Evolution of the US Mortgage Banking System: Lessons for Emerging Mortgage Markets, International Real Estate Review, Vol. 10 No 1 pp 171-212.

Coase, R.H. (1960) – The Problem of Social Cost, Law and Economics, 3, pp 1-44

Crosby, N., French, N. and Oughton (2000) – Bank lending valuations on Commercial property: Does European mortgage lending value add anything to the process? Journal of Property Investment & Finance Vol.18 No 1, 2000, pp 66-83.

Dasan M. B. (1996) – Analysis of factors which influence supervisor's motivation in a building in Kenya in the construction industry. African Competitiveness Report 1996.

Deng, Y. and Fei, P. (2008) – The Emerging Mortgage Markets in China – in Ben-Shahar, D., Yui Leung, C.K. and S.E. Ong (Eds) – Mortgage Markets Worldwide, pp 1-33, Chichester -West Sussex, United Kingdom: John Wiley and Sons Ltd

Dewatripont, M. and E. Maskin (1995) – Credit and efficiency in centralized and decentralized economies, Review of Economic Studies October 1995, Vol. 62 Issue 213, pp 541-555.

Dewatripont, M. and J. Tirole (1994) – The Prudential Regulation of Banks, Cambridge, MA: MIT Press.

Diamond, D.W. and P. Dybvig (2000) – Bank runs, deposit insurance and liquidity, The Federal Reserve Bank of Minneapolis Quarterly Review Winter 2000, Vol.24 No 1

Diamond, D.W. (1984) – Financial Intermediation and delegated monitoring, Review of Economic Studies 51, pp 393-414

Djankov, S., McLiesh, C. and A. Shleifer (2007) – Private credit in 129 countries, Journal of Financial Economics 84(2007) pp 299-329

Edwards, J and K. Fischer (1994) – Banks, Finance and Investment in Germany, Centre for Economic Policy Research, Cambridge University Press.

Elliot, J.W. (1984) – Money, Banking and Financial Markets, New York: West Publishing Co.

Fischer, S. (2004) – IMF Essays from a time of Crisis: The International Financial System,Stabilization and Development, Cambridge, MA: MIT Press, 2004.

Fischer, S. (1984) – A framework for monetary and banking analysis, Economic Journal 93, pp 1-16

Follain, J. and P. Zorn (2000) – The unbundling of residential mortgage finance, Journal of Housing Research 1(1), pp 63-89.

Fry, M.J. (1988) – Money, Interest and Banking in Economic Development, Baltimore: John Hopkins University Press

Guzman, M.G.(2000) – The Economic Impact of Bank Structure: A Review of Recent Literature, Federal Reserve Bank of Dallas, Economic and Financial Review, 2nd Quarter 2000, pp 11-25.

Hair, J.F., Anderson, R.E., Tatham, R.L. and W.C. Black (1998) – Multivariate Data Analysis (5th Edition), New Jersey: Prentice Hall.

Hale, G. (2007) – Sound Policies for Emerging Markets Financial Stability, International Finance Vol. 10 No 1 pp 101-114.

Hammond, F.N. (2006) – The Economic Impacts of Sub-Saharan African Urban Real Estate Policies, Unpublished PhD Thesis, School of Engineering and the Built Environment, University of Wolverhampton, UK.

Haurin, D.R., Hendershott, P.H. and S.W. Watcher (1997) – Borrowing constraints and the tenure choice of young households, Journal of Housing Research 8, pp 137-154.

Heffernan, S. (2003) Modern Banking in Theory and Practice, March 2003, Chichester-West Sussex: John Wiley and Sons.

Hurwics, W.P. (1973) – The Design of Mechanisms for Resource Allocation, American Economic Review 63, pp 1-30.

Irving, J. and A. Manroth (2009) – Local Sources of Financing for Infrastructure in Africa, Policy Research Working Paper 4878, African Sustainable Development Front Office, World Bank: Washington D.C.

Jensen, M.C. and Meckling, W.H. (1976) – Theory of the firm: Managerial behaviour, agency costs and ownership structure, Journal of Financial Economics 3.

Jaffee, D.M. and Renaud, B. (1997) Strategies to develop mortgage markets in transition economies. In: J. Doukas, V.Murinde and C. Wihlborg (eds) Financial Sector Reform and Privatization in Transition Economies.Ch.4, Amsterdam: Elsevier Science Publishers.

Jones, C. and C. Watkins (2009) – Housing Markets and Planning Policy, Wiley-Blackwell, 224pp, October 2009

Kim, K-H (1997) – Housing Finance and Urban Infrastructure Finance, Urban Studies Vol. 34 No 10, pp 1597-1620.

Kogiku, K.C. (1971) – Microeconomic Models, N.Y.: Harper and Row.

Leyland, H.E. and D.H. Pyle (1977) – Informational asymmetries, financial structure, and financial intermediation, Journal of Finance 32 pp 371-387

Levine, R. (1997) – Financial development and economic growth: views and agenda, Journal of Economic Literature 35, pp 688-726.

Levine, R., Loayza N. and T Beck (2000) – Financial intermediation and Growth: Causality and Causes, Journal of Monetary Economics, Vol. 46 No 1 pp 31-77.

Llewellyn, D.T. (2008) – The Northern Rock Crisis: A Multi-Dimensional Problem Waiting to Happen, Journal of Financial Regulation and Compliance 2008 Vol. 16 Issue 1pp 35-58.

Mandere A.N. (2006) – A survey of QM practices in the large Kenyan building construction firms. Africa Private Sector Group, Kenya, 2006.

Markowitz, H.M. (2009) – Proposals Concerning the Current Financial Crisis, Financial Analysts Journal Jan / Feb. 2009, Vol. 65 Issue 1, pp 25-27.

Mason, C.H. and N.D. Perreault (1991) – Collinearity, Power and Interpretation of Multiple Regression Analysis, Journal of Marketing Research 28, August 1991 pp 268-80.

Merrill, S. and Tomlinson, M. (2006) – Housing Finance, Microfinance and Informal Settlement Upgrading: An assessment of Ghana. Paper prepared for African Union of Housing Finance and USAID, The Urban Institute, Washington DC. June 2006.

Malpezzi, S (1999) Economic Analysis of housing markets in developing and transition economies. In: Cheshire, P. and Mills, E.D. (eds) Handbook of Regional and Urban Economics Applied Urban Economics, 3, 1791-1864.

Marete D, (2011) – The determinants of real estate property prices in Kiambu Municipality in Kenya. Unpublished Masters paper, School of Business, University of Nairobi, 2011.

Merton, R.C. and Z. Bodie (1995) – A Conceptual Framework for Analyzing the Financial Environment- in Crane, D.B., K.A. Froot, S.P. Mason, A.F. Perold, R.C. Merton, E.R.Sirri and P. Tufano (Eds) – The Global Financial System: A Functional Perspective, pp 3-32, Harvard Business School Press, Cambridge: MA.

Merton, R.C. (1989) – On the application of the continuous-time theory of finance to financial intermediation and insurance. Geneva Papers on Risk and Insurance Theory 14, pp 225-261.

Milne, A. and G. Wood (2009) – Shattered on the Rock? British Financial Stability from 1866 to 2007, Journal of Banking Regulation (2009), Vol.10 No 2 pp 89-127.

Mints, V. (2006) – Specifics of Credit Risk Assessment in Mortgage Lending-Sample of Russia, Housing Finance International September 2006, Vol.21 Issue1 pp 14-21.

Njiru (2003) The performance of real estate markets in Kenya, KEPLOTRADE Research Paper No 2/2004. December 2003.

North, D.C. (1994) – The Evolution of Efficient Markets in History – in James, J.A. and M. Thomas (eds)- Capitalism in context, Chapter 11 pp 257-264, Chicago: University of Chicago Press.

Nubi, T.O.(2005) – Housing Finance in Nigeria- Need for Re-Engineering (Unpublished Reports)-www.housingfinance.org/pdfstorage/Africa

Nubi, T.O. (2008) – Affordable Housing Delivery in Nigeria, Paper presented at The Southern African Housing Foundation International Conference and Exhibition, 12-15 October 2008 – Cape Town, South Africa.

Omufira A.N. (2001) – Extent of TQM implementation in the construction industry, AICD Background Paper 13, Africa Region, World Bank, Washington, DC

Olotuah, A O (2000) The challenge of Housing in Nigeria Effective Housing in 21st Century Nigeria. In: Akinbamijo, O.B. et al. (eds) Environmental Forum, Federal University of Technology, Akure-Nigeria, 16-21.

Olotuah, A O and Aiyetan, A.O.(2006) Sustainable low-cost housing provision in Nigeria: a bottom-up participatory approach. In: Boyd, D. (ed) Proceeds of 22nd Annual

ARCOM Conference, 4-6 September 2006, Birmingham, UK, Association of Researchers in Construction Management, 633-639.

Pagliari, J. L. (2007) – The Pricing of Non-Core Real Estate Ventures: Estimating the net expected risk-adjusted return, The Journal of Portfolio Management Vol.34 (Autumn 2007), Special Real Estate Issue, pp 119-133.

Pallant, J. (2007) – SPSS Survival Manual: A Step by Step Guide to Data Analysis Using SPSS Version 15 (3rd Edition), Berkshire-England: Open University Press.

Pilbeam, K. (2005) – Finance and Financial Markets (2nd ed.), Basingstoke: Palgrave Macmillan.

Poole, W (2003) Housing in the Macroeconomy. Federal Reserve Bank of St Louis, Economic Review May/June 2003, 1-8.

Ramakrishinan, R.T.S. and A.V. Thakor (1984) – Information reliability and a theory of financial intermediation, Review of Economic Studies Vol. 51 Issue 166.

Renaud, B.M. (2008) – Mortgage Finance in Emerging Markets: Constraints and Feasible Development Paths- in Ben-Shahar, D., Yui Leung, C.K. and Ong, S.E. (Eds) – Mortgage Markets Worldwide, pp 253-288, Chichester - West Sussex, United Kingdom: John Wiley and Sons Ltd.

Ritter, L. S. and W. L. Silber (1986) – Principles of Money, Banking and Financial Markets, New York: Basic Book Inc.

Roy, F. (2007) – Expanding housing finance systems in Africa and Asia-how far Central and Eastern European models are replicable? Paper presented at APNHR 2007

Conference in Transformation in Housing, Urban Life and Public Policy, Seoul-Korea, 30 August-1 September.

Saravanan, P. (2007) – Recent Experiences in the Housing Finance Sector – A study with Reference to India, Housing Finance International September 2007, Vol.22 Issue 1.

Scholtens, B. and D. van Wensveen (2003) – The theory of Financial Intermediation: An Essay on what it Does (Not) Explain, Vienna: The European Money and Finance Forum (SUERF Studies 2003/1).

Schumpeter, J.A. (1912) – The Theory of Economic Development, Cambridge-Massachusetts: Harvard University Press.

Sikasa C. (2004), Customer perception of change management practices in the mortgage industry. Africa Private Sector Group, Kenya, 2004.

Shin, H.S. (2009) – Reflections on Northern Rock: the bank run that heralded the global financial crisis, Journal of Economic Perspective Winter 2009, Vol. 23 Issue 1 pp 101-124.

Soyibo, A. (1996) – Financial Linkage and development in Sub-Saharan Africa: The role of financial institutions in Nigeria, Working Paper 88, London: Overseas Development Institute

Stiglitz, J.E. (2000) – The Contributions of the Economics of Information to Twentieth century Economics, Quarterly Journal of Economics 115, pp 1441-1478.

Tirole, J. (2006) – The theory of Corporate Finance, New Jersey: Princeton University Press.

Tiwari, P and Moriizumi, O (2003) Efficiency of Housing Finance: A comparative Study of Mortgage instruments in Japan. European Journal of Housing Policy, 3(3).

Toby, A J (2006) Empirical study of the Liquidity Management Practices of Nigerian Banks Journal of Financial Management and Analysis, 19(1), 57-70.

UNCHS-Habitat (2007) – Improving the Performance of National Finance Institutions in Shelter Delivery, UNCHS: Nairobi-Kenya.

Van Order, R. (2005) – Risk Management and mortgage portfolios: some applications for emerging markets – in Hegedus, J. and R.J. Struyk (Eds) – Housing Finance: New and Old Models in Central Europe, Russia and Kazahkstan. Local Government and Public Service Reform Initiative, Open Society Institute, Budapest

Vatnick, S. (2008) – Financial Reforms and Emerging Markets, Financial Markets, Institutions and Instruments February 2008, Vol.17 Issue 1, pp 109-120.

Williamson, O.E. (1985) – The Economic Institutions of Capitalism, New York: The Free Press.

APPENDIX A – QUESTIONNAIRE

DETERMINANTS OF HOUSING FINANCE IN KENYA

[The following information is required for a Masters of Business Administration thesis. Kindly complete the questionnaire as per the instructions given being rest assured that the information provided will be used strictly for project purposes]

QUESTIONNAIRE TO HOUSE OWNERS

A. GENERAL BACKGROUND

1. What is your Marital Status? (Tick one box)
   a) Single
   b) Married
   c) Divorced
   d) Widow
   e) Widower

2. What is your Age? (Tick one box)
   a) 1-29
   b) 30-39
   c) 40-49
   d) 50-59
   e) 60+

3. What is the highest form of formal education that you have achieved? (Tick one box)
   a) None
   b) Primary
   c) Secondary
   d) Vocational / Technical
   e) Polytechnic / University

4. What is your current employment status? (Tick one box)
   a) White collar job (Civil Servant)
   b) White collar job (Private company)
   c) Blue collar job (Bricklayers etc)
   d) Self Employed (Specify)
   e) Other (Please specify)…….

5. What is your type of family? (Tick one box)
   a) Nuclear
   b) Joint / Extended

Others (Please specify)…….

B. SECURITY

6. What is the tenure of the house? (Tick one box)
   a) Own
   b) Rent
   c) Part Own / Part Rent
   d) Others (Please specify)…….

7. What is the form of ownership? (Tick one box)
   a) Inheritance
   b) Bought
   c) Built
   d) Others (Please specify)……..

If Answer to Q 7 is 3, go to Q 8
If Answer to Q 7 is 1, 2 or 4, go to Q 13

8. IF BUILT, did you? (Tick one box)
   a) Buy the plot
   b) Inherit the plot
   c) Others (Please specify)…….

9. IF BUILT, who carried out the construction? (Tick one box)
   a) Self-Built
   b) Contractor with material
   c) Contractor without material
   d) Others (Please specify)……..

10. If you have a loan, what security was given for the loan (Tick all that apply)
   a) The Property
   b) Another Property
   c) Agricultural Land
   d) Others (Please specify)…….

11. What kind of security can you offer for a loan? (Tick all that apply)
   a) The house itself
   b) Any other property
   c) Agricultural land
   d) Others (Please specify)…….

C. VALUE OF PROPERTY

12. When housing is to be acquired, it is either constructed from scratch or a fully erected building is purchased. If constructed from scratch, how much did the plot cost? Kshs……

13. How much did you spend on construction? Kshs.……

12. Can you give value of the property on completion?
Kshs. …….

14. If a fully erected building was purchased, what was the value?
Kshs……

15. What is the Present Value of your property? (Tick one box)
    a) Less than Kshs. 1000, 000
    b) Kshs. 1000,001- Ksh. 5000,000
    c) Kshs. 5000,001- Kshs. 10,000,000
    d) Above Kshs. 10,000,000
    e) Don't know

D. INTEREST RATE

16. Whether a house is constructed from the scratch or a fully erected building is purchased, how did you finance your house acquisition? (Tick one or more boxes as applicable)
    a) Mortgage Institution
    b) Commercial Bank
    c) Relatives and Friends
    d) Personal Savings
    e) Money from abroad
    f) Loan from employer
    g) Sold another house
    h) Private lender
    i) Other (Please specify)……..

17. If you borrowed, what was the rate of interest at the beginning of the transaction …….....

18. What is the rate of interest presently or on completion? …….....

19. If you have obtained a loan, how do you intend to repay it? (Tick all that apply)
    a) Extra work
    b) Employment income
    c) Reducing household expenditure
    d) Sale of valuables
    e) Other sources (Please specify)……

20. What is the repayment period for the loan? (Tick one box)
    a) Less than 24 months
    b) 25-48 months
    c) 49-96 months
    d) 97-144 months
    e) Others (Please specify)…….

21. Are you up to date with your loan repayments?
    a) Yes
    b) No

22. If No, How many months are you behind? (Tick one box)
    a) 3-6 months
    b) 7-12 months
    c) Over 12 months
    d) Others (Please specify)……..

23. What is the reason(s) for default in loan repayment? (Tick one box)
    a) Loss of Income
    b) Higher financial commitment
    c) Excessive Interest charges
    d) Others (Please specify)…….

24. If a loan was available, would you be willing to borrow to buy another house? (Tick one box)
    a) Yes
    b) No
    c) Don't know

E. GOVERNMENT REGULATION

25. The processing of loan applications with the financial institutions usually go through a long process, were you satisfied with the time taken to process? (Tick one box)
    a) Very satisfied
    b) Satisfied
    c) Dissatisfied
    d) Very Dissatisfied

26. On application, what percentage of the loan requested did you get? (Tick one box)
    a) 50%
    b) 60%
    c) 70%
    d) 80%
    e) 90%
    f) 100%
    g) Other (Please specify)……

27. Where did you obtain the remainder of the funds needed for your house acquisition? (Tick all that apply)
    a) From friends and families
    b) Private lenders
    c) Employer
    d) Others (Please specify)…….

28. Before applying for the loan, were you satisfied with the process and requirements? For example production of title deed, survey and architectural requirements

a) Very satisfied
b) Satisfied
c) Dissatisfied
d) Very Dissatisfied

F. INCOME LEVEL

29. How much do you save per month? (Tick one box)

a) Nothing
b) Kshs. 0 - Kshs. 10,000
c) Kshs. 10,000 – Kshs. 100,000
d) Above Kshs.100,000

30. What are your Total Household savings at present? (Tick one box)

a) Nothing
b) Kshs. 0 – Kshs. 10,000
c) Kshs. 10,000 – Kshs. 100,000
d) Above Kshs. 100,000

31. Where do you save? (Tick all that apply)

a) Commercial Bank
b) Cooperative society
c) Mortgage Institution
d) (Traditional Contributions)
e) Other (Please specify)……

32. What is your personal income per month? (Tick one box)

a) Kshs. 0 – 100, 000
b) Kshs. 100,000 – 200,000
c) Kshs. 200,000 – 300,000
d) Kshs. 300,000 – Kshs. 500,000
e) Above Kshs. 500,000

Thank you for participating in this Research. Please return questionnaire

APPENDIX B – QUESTIONNAIRE

DETERMINANTS OF HOUSING FINANCE IN KENYA

[The following information is required for a Masters of Business Administration thesis. Kindly complete the questionnaire as per the instructions given being rest assured that the information provided will be used strictly for project purposes]

QUESTIONAIRE TO PROPERTY DEVELOPERS

Name: _____
Age: ____
Company Name: _____
Position at work: _____

1. How significant do you think is Kenyans position as an investment destination for real estate at present from the point of view of both foreign and domestic investors? Please tick the appropriate box.

a) Very Significant
b) Increasingly gaining Significance
c) Minimal Significance

2. What importance does investment in real estate hold for you as an individual in contributing to your net worth? Please tick the appropriate box

a) Very Important
b) Increasingly becoming important
c) Not so important

3. What according to you is/will be the most preferred avenue for investment for an individual/ company in the real estate sector? Please tick the appropriate box.

a) Direct Investment in land/property
b) Investment in Listed Real Estate Company shares
c) Joint Venture with Realty Developer
d) Others (Please Specify)

4. Do you think the sudden surge in property prices across Kenya over the last two years is justified? Please tick the appropriate box.

a) Yes (Boom)
b) No (Bubble)
c) Cant Say

5. What according to you is the key problem faced by this sector? Please tick the appropriate box.

a) Lack of Infrastructural facilities
b) Ownership issues, unclear titles and abnormally high stamp duties

c) Rising Interest Rates dampening affordability
d) Others (Please specify)

6. Which segment according to you has the greatest scope for improving profits (IRR) – residential, commercial, retail or SEZ's (Special Economic Zones)?
How much return do you think it generates? Please tick the appropriate box

Segment _____

a) 5 – 10 %
b) 10 – 20 %
c) More than 20%

7. How do you see the real estate sector 10 years from now? Please tick the appropriate box

a) A stabilized sector
b) A risk- perceived sector
c) A high growth sector
d) Can't say

8. Which of the following sources of capital is most tapped by you? Please rank in order of preference: 1 being the most preferred and 3 being the least preferred

a) Bank loans
b) Foreign Direct Investment (FDI)
c) Capital Markets – IPOs (Initial Public Offer)

9. Do you think the Government of Kenya has taken adequate measures for the development of the real estate sector in recent years? Please tick the appropriate box

a) Yes
b) No
c) Don't Know

Thank You for your time and help!

APPENDIX C – QUESTIONNAIRE

DETERMINANTS OF HOUSING FINANCE IN KENYA

[The following information is required for a Masters of Business Administration thesis. Kindly complete the questionnaire as per the instructions given being rest assured that the information provided will be used strictly for project purposes]

QUESTIONAIRE TO HOUSING FINANCIERS

1. Why has Kenya become one of the most favoured destinations for investment in the real estate sector in the past 3 years?

……
……

2. What are the reasons for the sudden surge in property prices across Kenya? Could you throw light on whether you think this is a boom or a bubble?

……
……

3. What is the scope for the real estate segment in Kenya? Can you suggest the demand/supply dynamics for the sector?

……
……

4. What according to you are the key risks/ problems this sector will/ is facing? Could you recommend any solutions to the above problems?

……
……
……

5. What are the various approvals and regulations needed to be adhered to for the acquisition, development and completion of a project?

……
……
……

6. What are the different avenues for investment for an individual/ company in the real estate sector?

……
……
……

7. What are the different sources of capital available to a real estate developer?

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8. Which segment according to you has the greatest scope for improving profits (IRR) - residential, commercial, retail or SEZ's (Special Economic Zones)?

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9. What role according to you has the Government played in the development of the real estate sector?

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10. Where do you see the real estate sector 10 years from now?

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Thank You for your time and help!