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**THE EFFECT OF FINANCING SOURCES ON REAL ESTATE  
DEVELOPMENT IN KENYA**

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## THE EFFECT OF FINANCING SOURCES ON REAL ESTATE DEVELOPMENT IN KENYA

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### **Abstract**

**Purpose:** The purpose of this study was to establish the sources of financing real estate in Kenya. In specific terms the study reviewed whether financing in the real estate originates from; mortgage financing, savings, venture capital and equity financing.

**Materials and methods:** This study employed descriptive survey design. The population of this study was all the real estate firms in Nairobi. This study used secondary data for five years. Data was analyzed using Statistical Package for Social Sciences (SPSS) and results were presented in frequency tables and charts. The data was then analyzed in terms of descriptive statistics like frequencies, means and percentages.

**Results:** The findings indicated that mortgage financing is the most used source of financing, with equity and venture capital being the least source of financing used. The findings also indicated that there is a significantly positive relationship between mortgage financing and real estate development.

**Recommendations:** The study recommended that to increase use of equity and venture capital as a source of financing will require businesses to sell their ideas to people who have money to invest. Equity and venture capital financing can be a good source of financing but with combining them with other sources of financing. Further research should be on the effects of sources of financing in unsuitable economic conditions, political instability and a global economic crisis and internal and external factors that affect the decision on sources of financing for real estate firms in Kenya.

**Keywords:** *financing sources, real estate development*

## 1.0 INTRODUCTION

### 1.1 Background of the Study

The development of the housing sector is widely recognized as an integral part of economic development. In addition to the large share that the housing sector occupies in the economy, its importance also arises from the positive externalities and spillover effects, and its impact on the social and political climate, issues of particular importance in developing countries. In most countries, and increasingly so in emerging economies, housing represents a large proportion of a household's expenditure and takes up a substantial part of lifetime income. Usually, it is the largest asset owned by households. The backward and forward linkages to land markets, durable goods manufacturing and development of labor markets with depth and mobility further underscore the significance of this sector, particularly in the process of economic transition (Bardhan & Edelstein, 2007).

According to Zhu (2006) it is also widely understood that the provision of housing services depends upon a well functioning housing finance system. Indeed, without a properly functioning housing finance system that operates in an allocation and operationally efficient manner, the —real housing market would be sub-optimal. Moreover, similarly to the housing markets, the housing finance system has beneficial spillover effects on the entire financial system with farreaching consequences for economic development. Increasing emphasis is therefore being placed in developing and transitioning countries on the reform of real estate finance and mortgage markets.

#### 1.1.1 Financing sources

Mortgage is a loan secured by real property through the use of a mortgage note which evidences the existence of the loan and the encumbrance of that realty through the granting of a mortgage which secures the loan. A mortgage market is important for the process of capital accumulation in a developing economy, and is critical to enhancing the depth and reach of the financial markets. Since housing is the primary tangible asset of a developing or transitioning economy, it can then also be used as collateral to borrow funds in order to carry out productive capital investment. Mortgage debt accounts for a large proportion of household debt and, through secondary markets and securitization, supports the efficient functioning of financial markets. Housing finance, as well as other real estate finance, are vital elements both in the development of a dynamic housing sector as well as a growing and deepening financial sector. In addition to creation of more lending channels, more investment channels are opened up as well for both institutional and individual investors, leading to more complete and efficient markets (Goodhart, 2003).

Sources of financing corporate real estate and the utilization, techniques and motivations involved in leasing real estate by manufacturing and service corporations have been investigated by Redman and Tanner. These researchers found out that significant sources of funds to acquire real assets for production and distribution were operating cash flows rather than external sources. Leasing was a common technique to finance and acquire assets, allowing for managerial flexibility and tax-sheltering benefits and creating off-balance sheet financing (Redman & Tanner, 1989).

Funds for real estate development in Ghana are acquired through diverse sources. Some are obtained through the debt finance with some relatively few banks in the country giving financial support to real estate developers provided all requirements are fulfilled. Surveys throughout the country also indicate the persistence of informal financing methods such as the use of

homeowners' own sweat equity, barter arrangements and remittances from abroad (Debrah, 2002 & Erguden, 2002). The loans acquired are given on short, medium and long terms repayment period with interest rates charged on them. There are various forms of funding that can be considered by real estate firms in Ghana. Some of these are bonds, mortgage facilities stocks investment trusts, merchant and commercial banks and mortgage companies. Moreover, there are other forms of financial relieve that are being enjoyed by real estate developers. Trade crediting involves the delay of payment of creditors beyond the normal period; high purchasing system enables a company to enjoy a full use of goods or equipment but avoids initial full sum payment.

### **1.1.2 Real Estate Development**

Direct new expenditures in the construction industry or in other real estate related industries stimulate the economy and generate jobs. Since a substantial portion of generated income is plowed back into the economy, there is an additional multiplier effect. This is true of any industry. However, since the real estate industrial sector cluster is largely a non-tradable industry (i.e. most of the output and inputs associated with the industry stay, and are from within the confines of the domestic economy), there is little leakage out of the country. The localized and domestic nature of real estate therefore leads to a much larger multiplier effect than would be expected for more tradable sectors. While construction, home maintenance and repairs, power and transportation directly affect the economy, the extensive nature of downstream and upstream linkages of real estate, from the finance sector to the furniture/consumer goods sector, from infrastructure (roads, bridges, public works) to superstructure (commercial space/retail, industrial, etc.) further impact the national economy. A given amount of expenditure in the real estate industry (vis-à-vis other sectors) tends to support larger numbers of jobs in the economy (Jaffee & Levonian, 2008).

Though real estate is considered a —local business activity, the national residential and nonresidential/ commercial real estate markets are essential for the development of nationally integrated economic markets in general. A national economic market implies a free flow of capital, labor and resources within the borders of a nation-state, and the development of a national market for housing and other real estate resources is critical in facilitating national markets in goods, services and factors. The experience of several countries shows that regional disparities and distorted development are the norm if real estate markets are regionally segregated and segmented. Whether firms respond to investment opportunities in various parts of the country or whether people follow jobs, a rapidly responsive market in commercial construction and support services, in the development of hotels, rental housing and homes for sale, can lead to a more efficient and geographically mobile labor market (Bardhan & Edelstein, 2007).

### **1.1.3 Effects of Financing Sources on Real Estate Development in Kenya**

In some countries the purchase of an entry-level home, often subsidized in some form, has served as a stepping stone for upward social and economic mobility. As observed by Bardhan, Datta, Edelstein and Kim (2003), the Singapore housing market, for example, is characterized by the coexistence of a dominant public sector and a small, growing private sector with relatively higher quality housing. While accounting for the impact of the former on the latter, they find that an increase in the rate of change of public housing resale prices has an important and significant positive impact on the sales of private residential units. The underlying mechanism for this effect is that occupants of the subsidized public sector flats are allowed to sell their flats after a certain



period, subject to some restrictions, and capital gains from the sale proceeds provide a substantial portion of the down payment in the purchase of new, more expensive, private apartments. This tandem of private-public activity lends a helping hand to upwardly mobile households, and the larger social and economic value created far outweighs the resources expended in the public sector housing subsidies (Bardhan, Datta, Edelstein & Kim, 2003).

#### **1.1.4 Real Estate Sector in Kenya**

According to KIM journal (Nov-Dec 2007) vision 2030, it is estimated that over 80% of Kenyan population will have migrated from rural areas, meaning that that shelter is one of their basic needs. Presently, slum dwellers are 1/3 of the urban dwellers population whereby Kenya's Kibera slum is one of the largest dwelling in Africa yet only approximately three million people are urban dwellers. Hence as more rural urban migration occurs more houses, well constructed must be built to combat slum uprising problem.

The real estate industry must be supported and it will have to grow at a faster pace that it currently does. The Kenya industry is benefiting from economic growth of the country and the inflow of foreign aid is being regarded as a very promising venture. The government is also heavily investing in this industry in various ways such as the inclusion of the ministry of housing in the government body, availing of funds to the housing ministry; enforcement of laws to do urban planning, regulatory laws in license permits (Homes Expo Kenya, 2012).

#### **1.2 Research Problem**

In recent years the population of Kenya has steadily increased, resulting to the urban population in Nairobi to a record of 3 million, whereby all these people need shelter, hence the real estate industry is doing well and contributing to the economy (Nuri, Erbas & Nothaft, 2002). Despite recent indication that the real estate business in Kenya is performing well, there is evidence that certain challenges still persist. These include amongst others, social, economic, cultural, legal and personal factors. This has led to stalled projects and unoccupied complete properties. This being an important industry that makes enormous contribution to the Kenyan economy, there are some gaps in the literature that ought to be filled, these includes: the available literature has not indicated ways in which real estate enterprises can be empowered to compete on equal levels with established businesses and also where the booming housing development in the city has been sourcing its financing (Mwangi, 2002)

A studies conducted by Nieuwerburgh (2005) and Kamau (2011) indicate that there is growing competition for funding of real estate development due to competing needs for using the same funds to finance other productive sectors of the economy. The studies indicate the existence of shortage of long term funds which are mainly required to finance housing projects due to banks preferring short term financing. The Central Bank Supervision report of 2012 indicates long term funding mismatch which further complicates the funding mechanisms of long term projects in the real estate sector (CBK, 2012).

Michuki (2010) did a study on the existence of Real Estate Investment Trusts (REITS) needs by institutional investors at the Nairobi Securities Exchange and concluded that investors would invest in REITs if they were to be introduced at the exchange and therefore confirming that REITs needs do exist among institutional investors at the NSE. Wahome (2010) conducted a study to establish the effects of mortgage financing on performance of the firms and concluded that mortgage financing is influenced by market and financial factors which includes increase

investment and improve profitability of the firm, improvement of risk management, attraction' of more customers ,promotion of innovations, market penetration, diversification of investment and encountering competitions in the market lowering of interest on Treasury bond, Kenya financial laws require bank to have less cash in reserve and high interest from mortgage, creating of wealth and Improving savings. The objective of the study was to establish the relationship between factor influencing mortgage financing and performance of mortgage institutions in Kenya. This has left limited finance for long term projects and hence the need to investigate the financing source of the current growth of real estate in Kenya. Based on this well informed research gap, this study, therefore, examines the sources of real estate financing in Kenya.

### **1.3 Research Objective**

The key objective of this study was to establish the source of financing real estate in Kenya. In specific terms the study reviewed whether financing in the real estate originates from; mortgage financing, savings, venture capital and equity financing.

## **2.0 LITERATURE REVIEW**

### **2.1 Theoretical Review**

#### **2.1.1 Simulation theory**

The theory was developed by Laibson (1998) and examines the extent to which markets enable the provision of housing finance across a wide range of countries. Housing is a major purchase requiring long-term financing, and the factors that are associated with well-functioning housing finance systems are those that enable the provision of long-term finance.

The theory further states that countries with stronger legal rights for borrowers and lenders (through collateral and bankruptcy laws), deeper credit information systems, and a more stable macroeconomic environment have deeper housing finance systems. These same factors also help explain the variation in housing finance across emerging market economies such as Kenya. Across developed countries, which tend to have low macroeconomic volatility and relatively extensive credit information systems, variation in the strength of legal rights helps explain the extent of housing finance.

To a certain extent, a statistical comparison of the loan-to-value and loan-to-income ratios can provide a good indication of the risks that owner-occupiers run in financing their own home. At the same time, this kind of comparison ignores the causes of the risks, namely the volatility or uncertainty of future interest rates, house prices and changes in income. It also disregards the main mortgage characteristics, the cost of taking out a mortgage, and the direct and indirect subsidies, including interest deductibility, factors that have a big influence on the real costs and risks for homeowners.

#### **2.1.2 Structural Form theory**

This theory was formulated by Pottow (2007). It documents the evolution of mortgage finance in SSA (Sub- Saharan Africa) to determine what steps need to be taken to extend it to the middleclass, to enable them to address their housing needs to the extent of their affordability. The theory revealed that that there have been a number of problems when it came to the delivery of formal housing finance amongst most, if not all the countries,

These problems are a record of macroeconomic instability, an adverse institutional, legal and regulatory environment which has resulted in inefficient, collateralization of housing assets, a poor record of public sector housing banks, building societies and other specialist housing lenders in that most have been destroyed due to poor management and a lack of funds and limited availability of long-term funding sources to carry out intermediation that would spread the cost of a house over a relatively long period of time.

Arising out of this dismal history is a move to revive and introduce mortgage lending into a number of countries. Moreover, as part of the move to straighten out financial markets, a number of consultants have been sent into SSA countries to begin documenting the specific problems of each country as well as to make recommendations on how to address them. Development agents, in particular, are also putting forth recommendations on what is required to ensure financial market development and capital market investment necessary to entice the private sector into the delivery of housing finance.

## **2.2 Empirical Review**

Housing is for many households around the world both the largest expense and the most important asset. For all household it is an important determinant of quality of life. For the majority in developed countries, and for some in emerging market economies, housing is adequate. But a significant proportion of the world's population does not have access to adequate and affordable housing. According to UN-Habitat (2005), roughly one billion people, or onethird of the world's urban population, live in slums. And a well-functioning housing market influences not only shelter concerns. At a basic level, a country's housing sector can improve public health (by reducing the likelihood of outbreaks of disease), stimulate economic growth (through its own job creation, but also as workplaces for home-based entrepreneurs), and have important social consequences (by influencing crime reduction and citizenship). The best housing sectors should enable the adequate provision of shelter across all segments of the population.

While there are many aspects to the housing market (discussed below), it can be argued that the provision of housing finance is a binding constraint that must be addressed before the market can sustainably provide adequate housing. Even in the best of environments, housing is a major purchase—average home prices typically ranging from 4 times annual income in developed countries to 8 times annual income in emerging economies (Ball, 2003)—that is affordable only when payments can be spread out over time. Absent a well-functioning housing finance system, for many the market-based provision of formal housing will be neither adequate nor affordable.

Other housing or housing finance solutions are possible such as subsidies and the outright provision of public housing but these can be unsustainable (Quigley, 2006)

While housing finance is a vital component of a well-functioning housing system, to date there has not been a systematic analysis of the depth of housing finance across a broad set of countries. In fact, as far as we know, no formal cross-country study of the size of the housing finance market exists. Existing international housing finance studies tend to be descriptive and highly informative, but lack any formal empirical analysis and often focus on one or more country case studies. Diamond and Lea (2002) evaluate the housing finance systems of five countries. Chiquier et al. (2004) include case studies of eight emerging market economies. Low et al. (2003), the Mercer Oliver Wyman study, focus on eight countries in Europe. Hegedus and Struyk (2005) present case studies on seven transition economies and Germany and tabulate housing finance statistics. Chiuri and Jappelli (2003) analyze 14 developed countries (with an emphasis on loan-to-value ratios).

Allen (2004) includes a short section on mortgage markets in 17 developed countries. Renaud (2005) includes a presentation of data on 45 countries, the broadest set of countries available. All of these studies are important, but none formally studies why some countries have larger mortgage markets than others and none includes formal empirical analysis.

Chinese commercial real estate financing meet the same problem as that of real estate, but the problem is more complicated. As commercial real estate differentiates real estate in the characteristics that commercial real estate needs long development period, large investment, long payback time, high-stake and high-return, the financing of commercial real estate is much more difficult. Nowadays, the primary options of commercial real estate financing are bank loans and self-financing only takes a small share in contrast. However, based on risk consideration, banks stipulate strict rules of loans both in amount and time to commercial real estate developers. According to some relevant statistics, it shows that 70%-80% capital of Chinese commercial real estate developers comes from bank loans, and in some cities it even reaches 90% (Han, 2007). According to an investigation of China business association in 2006, more than 80% of the investment capital of shopping mall of all whole countries comes from banks. Therefore, in development of commercial real estate, the financing channels are limited, which meanwhile results in substantial risk on banks.

In the 1940s, there was already commercial real estate in America. With several decades' development, American commercial real estate has become mature in the whole process like inviting investment, financing and operating. In America, the developers of commercial property not only consider the sale of the properties, but also the operation of the properties, they would have detailed plan about the development, operation, management and so on. Most developers would choose to possess the properties after they develop them, which can reduce the risk of investors because the developers of commercial real estate would not only consider development of these properties, but also the operation (Jiang, 2007). This is different from China's commercial real estate. In China, the developers usually develop to sell, not to possess because to develop commercial real estate needs large amount of money and the current financing system of China cannot let developers possess the properties too long, their 70%-80% capital come from banks and these loans are usually short-term, they need to get the funds back as soon as possible. In America, 10% of the capital for developing commercial real estate comes from banks, 90% of the capital comes from the developers' own fund and other funds from investors. The low proportion of bank financing and high proportion of other funds financing reduce the risk of developers (Jiang, 2007). The financing of US commercial property market is different from that of real estate market in aspects of participants, financing structure, securitization ratio or the quality of bank loans. According to Moody, up to 2007, the market value of American commercial real estate was 5.3 trillion US Dollars; the proportion of market value of commercial properties is 36.6% for offices, 24% for apartments, 22.1% for retail, 15.3% for industrial properties, 2% for hotels and so on. According to Deloitte, the financing structure of American commercial real estate is 50% for bank loans, 25% for CMBS (commercial mortgaged-based securities) issuing, 10% of loans from insurance companies and 15% from other sources.

Compared to real estate financing, American commercial real estate financing has the following characteristics. Firstly, the main participants are institutional investors, the main source of capital comes from the institutional investors like banks, insurance companies, pension funds, and the borrowers are developers, builders and investors. However, for residential real estate, the borrowers are the main individuals who will buy the houses. Secondly, the leverage is high. According to RREEF and ULT (urban lands interest), up to the end of 2008, the whole leverage of



commercial real estate was about 60%. Thirdly, the developers of commercial real estate would re-finance when the debt becomes due. As the development and the operation of commercial real estate need a long time, so more financing is needed to satisfy the need for capital (Ge, 2010).

In big aspects, the financing of American commercial real estate is divided into debt financing and equity financing (Ge, 2010). For equity financing, there are private equity, which means that individuals have the equity of the listed real estate companies; and public equity, which is REITs. According to the estimation of ULI, up to the end of 2008, the proportion of the two equity financing is 80% and 20% separately. REITs financing develops very well in America, so far there are more than 200 trust companies trading in the exchanges. In America, there are 85% equity REITs, 15% mortgage REITs and 5% hybrid REITs (Yang, 2009). In America, REITs is always in the form of stock company, the company issue stocks to attract the money of investors and then they will hire specialized institutions to manage the products and money, the institutions will get the interest of real estate investment indirectly and the management fee of REITs.

For debt financing, according the statistics of Federal Deposit Insurance Corporation, up to the end of 2009, the total amount of debt for American commercial real estate is 3.4 trillion dollars, 50.3% for commercial banks and saving institutions, 20.7% for CMBS, CDO, and the other for other institutional investors. The debt financing is divided into private debt, which is bank loans, and public debt, which is CMBS. Bank loans accounts about 50% of the debt of commercial real estate. There are some characteristics that are different from loans for residential houses. Firstly, most loans are from regional and community banks or institutions.

Secondly, the rate of violation is usually lower than that of residential mortgages (Ge, 2010). The CMBS financing is frequently used in the financing of commercial real estate, the advantages of CMBS make it very popular in the commercial real estate financing. Firstly, the complexity is lower compared to RMBS (residential mortgage backed securitization), commercial real estate loan can always avoid the risk of advanced repayment (It is always about 10 years.). Secondly, the securitization rate is lower compared to residential real estate. Thirdly, the degree of scatter is lower compared to RMBS (Ge, 2010)

Since the Asia financial crisis, ABS has had great development in some Asian countries, especially in Hong Kong. ABS can transfer the illiquid real estate to liquid securities and then sell to investors, the investors own creditors' rights of securities instead of owning the right of real estate. This is very useful for real estate development as real estate is an illiquid, the investment is huge, the development cycle is long, the liquidity is poor, the securitization of real estate can change the situation, real estate securities can exchange in the stock market. In Hong Kong, the transformation of capital and assets is very smooth, the financial market and the real estate promote mutually (Wang & Hu, 2004).

Bank loans are the main source of real estate developers. In the whole capital chain, bank loan account for at least 55%, some even more than 90% (Han, 2008). Bank loans almost go through every part of the development process, including land reserve, real estate developing, selling and buying.

The mezzanine debt is senior to the original equity but junior to the bank, hence, viewed to reside in the middle. Mezzanine financing is generally used to fill the gap between low-risk collateralized debt obtained from traditional lenders and higher-risk equity interests. Unlike a traditional bank loan, a mezzanine lender does not hold real assets of a company as collateral but instead has an indirect link to the company's equity in the case of default. In other words, mezzanine lenders most

often gain an equity ownership in real estate or the financed project, if borrowers default (Bean, 2008).

Mezzanine financing is well-developed in developed countries. It is estimated that there are more than 100 billion dollars investing in mezzanine fund (Liu & Song, 2007). The main investors were insurance companies in the early stage, and gradually mainly with fund companies and commercial banks. Fund companies account for 70% and commercial banks 20% (Sun, 2005). Many banks like Goldman, Deutsche Bank and Bank of America Merrill Lynch have set up mezzanine investment fund. As mezzanine financing products have good liquidity and low fluctuation, it has great attraction to the institution investors like insurance companies, commercial banks, investment banks, hedge fund and pension fund. Mezzanine financing is a mature asset class. In the alternative assets class of institution investors, mezzanine asset accounts for 5%, and the current interest is 12%, the total annual average return rate of investment is 18-20%, the mortgage period is 5-7 years.

Mezzanine financing has been widely used in emerging market. FMO has been providing mezzanine financing for small and medium companies for developing countries such as China, Indonesia, Thailand and Brazil. Also Value Partner has invested more than 100 small and medium enterprises in China (Liu & Song, 2007). There is great potential in Asia market. The economic development, enterprises upgrade and market reform increases the demand for venture capital, which creates a good opportunity for the development of mezzanine financing. The main demand in mezzanine financing focuses on infrastructure, industrial and commercial areas. The small and medium enterprises have great demand for mezzanine capital for the development.

There is a positive relationship between operating assets (fixed assets) and long-term debt in Ghana. Ghanaian banks with a higher proportion of operating assets are financed by long-term debt capital, (Amidu, 2007). This could be due to the fact that higher proportions of banks' operating assets denote less operating risk; therefore, the banks may not be exposed to more risk from the use of more long-term debt capital. There is also a negative relationship between size and long-term debt, (Amidu, 2007). This suggests that smaller banks, due to their limited access to equity capital market tend to rely on long-term debt for their financing requirements. However, long-term debt structure is positively and statistically related to operating assets (Amidu, 2007). More than 87 per cent of the Ghanaian banks' assets are financed by debts, of this, short-term debts appear to constitute more than three quarters of the capital of the banks (Amidu, 2007). This highlights the importance of short-term debt over the long-term debt in

Ghanaian banks' financing. Empirical evidence suggests that profitability, corporate tax, growth, asset structure and bank size are important variables that influence banks' capital structure. Better corporate frameworks benefit firms through greater access to financing; lower cost of capital, better performance and more favorable treatment of all stakeholders Claessens et al. (2002). Firms with well-established corporate governance structures are able to gain easier access to debt financing at lower cost since such firms are able to repay their debt on time (Abor, 2007). This suggests that the ability of the firm to access debt capital at lower cost could be dictated to a large extent by how the market gauges its corporate governance system. Easier access to debt capital at lower cost, ultimately leads to improved company performance.

### **3.0 RESEARCH METHODOLOGY**

This study employed descriptive survey design. The population of this study was all the real estate firms registered by Kenya Property Developers Association (KPDA). The real estate developers

registered by Kenya Property Developers Association (KPDA) are sixty nine in number. The study sample comprised of all real estate firms registered by Kenya Property Developers Association (KPDA). This means that a census was employed in order to include all 69 real estate firms. The sample was drawn from the offices of the 69 firms in Kenya. Secondary data was utilised in this study. This means that all the study variables utilised quantitative data. Data for real estate development was secondary data which was sourced from the Kenya economic survey of year 2013. This included the number of houses built in the span of five years (2008- 2012). Data for the independent variables was gathered from the banks' annual report. To compile the data, a secondary data collection template was used. SPSS was used to produce frequencies, descriptive and inferential statistics which helped to derive conclusions and generalizations regarding the population. Multiple linear regression model was used to analyze the data using statistical package for the social sciences (SPSS) version 20. A linear multiple regression model was used to measure the relationship between the independent variables and the dependent variable which are explained in the model.

#### **4.0 DATA ANALYSIS, RESULTS AND DISCUSSION**

##### **4.1 Descriptive Results**

This section presents the descriptive results where the measures of central tendency and trend analysis are presented.

##### **4.1.1 Measures of Central Tendency**

Results in table 1 indicate that the lowest number of real estate units developed by the firms was 6 while the maximum was 29. The average number of units developed throughout the years was 16.66. The analysis also show that the lowest percentage amount of mortgage financing by the real estate firms was 0.30 and the highest percentage amount of mortgage used for financing was at 0.82. On average the percentage mortgage financing used by real estate firms through years; 2008 to 2011 was 0.63.

Savings incorporated for financing of real estate's indicated a minimum percentage of 0.05 and a maximum of 0.42. The average percentage amount of savings used for financing was at 0.186. Results indicate that 0.000 was the minimum percentage amount of venture capital used in financing real estates and 0.20 was the maximum venture capital used. The average presented a 0.036 use of venture capital financing. Financing through equity capital represent a minimum percentage amount of 0.00 equity used and a maximum of 0.53 equity used. The firms used an average percentage amount of 0.12 equity capital financing.

**Table 1: Descriptive Statistics for Real Estate Financing**

Financing Type	Minimum	Maximum	Mean	Std. Deviation
Real Estate Development Units	6	29	16.66	5.436
Mortgage (Debt Financing)	0.3	0.82	0.6382	0.09463
Savings	0.050	0.42	0.1867	0.06837
Venture Capital	0	0.2	0.0537	0.04752
Equity Capital		0.53	0.1238	0.07926

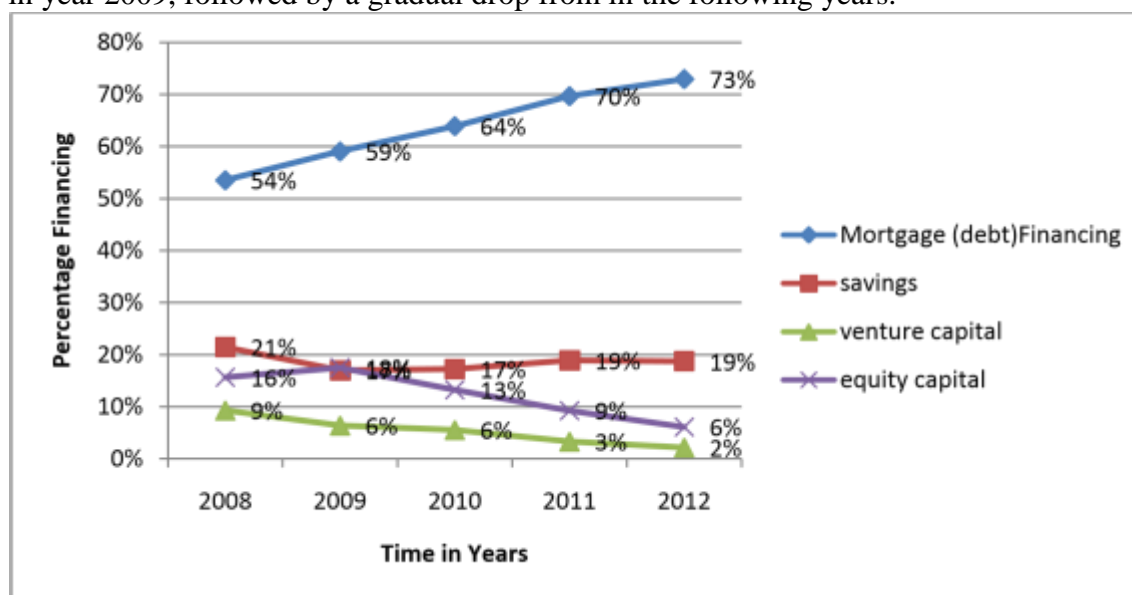
#### 4.1.1 Annual Trends of the financing options

Figure 1 indicates that debt as a source of financing for real estate firms have gradually increased from year 2008 to 2012. The increase may be explained by low interest rates charged and fair terms and conditions on borrowing.

Results also indicate that trend in savings as a source of financing was inconsistent. From year 2008 to 2009 there was a gradual decrease with an increase in 2010, 2011 and a slight decline in 2012. This may be as a result of real estate firms using mortgage financing more than savings.

Trend in venture capital as a source of financing revealed a gradual decrease from year 2008 to 2012. This can be explained by interest of few venture capital firms to finance real estates.

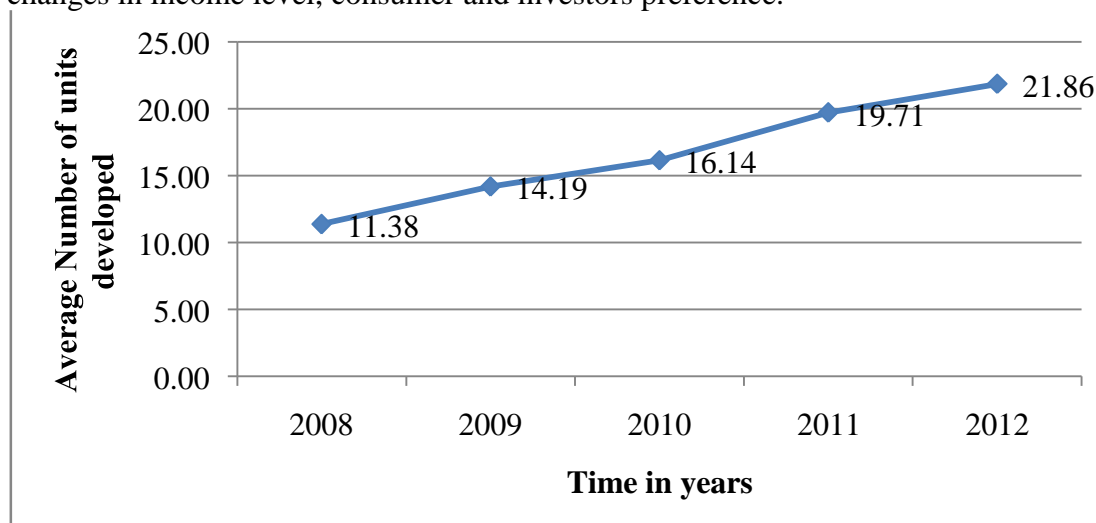
Results in Figure 1 shows that there was a slight increase in equity capital as a source of financing in year 2009, followed by a gradual drop from in the following years.





**Figure 1: Trend analysis in financing**

The trend in units developed by real estate firms indicates an increase throughout the years; 2008 to 2012 .This increase can be as a result of rise in demand for housing which is triggered by changes in income level, consumer and investors preference.



**Figure 2: Trend analysis in Units developed by Real Estate Firms**

#### 4.2 Model Results

This section presented the model results. Result in table 2 indicates that the goodness of fit of the model was adequate. This is reported by an r squared of 0.409 which means that 40.9% of the variation in real estate development is explained by savings, venture capital, mortgage and equity capital are substantial to explain real estates' sources of financing. This further implies that 59.1% of the variation in real estate development units is explained by other factors not captured in the model.

**Table 2: Model Fitness**

Indicator	Coefficient
R	0.64
R Square	0.409
Adjusted R Square	0.386
Std. Error of the Estimate	4.261

An Analysis of Variance (ANOVA) results in table 3 indicates that the overall model was significant. This was supported by a p value of 0.000. The ANOVA results demonstrated that the sources of financing that is equity capital, venture capital, savings and mortgage are good predictors of real estate units' development.

**Table 3: Analysis of variance (ANOVA)**

Indicator	Sum of Squares	df	Mean Square	F	Sig
Regression	1258.464	4	314.616	17.332	0.000
Residual	1815.193	100	18.152		
Total	3073.657	104			

Table 4 presents regression of coefficient results which indicates that is a positive relationship between mortgage financing and real estate units' development. The results also indicate the relationship was significant since the reported p value 0.009 was less than the critical value of 0.05. Results further indicate that all the other sources of finance had an insignificant effect on real estate development.

**Table 4: Regression Coefficients**

Variable	Beta	Std. Error	t	Sig.
Constant	-26.456	21.14	-1.251	0.214
Mortgage Financing	55.98	21.108	2.652	0.009
Savings	21.195	22.311	0.95	0.344
Venture Capital	26.283	22.645	1.161	0.249
Equity Capital	16.21	21.437	0.756	0.451

## 5.0 SUMMARY, CONCLUSION AND RECOMMENDATIONS

### 5.1 Summary

Chapter one discussed the problem statement and the objectives of the study. The study aimed to determine the effect of financing sources on real estate's development in Kenya.

Chapter two discussed the literature review, that is, the theories supporting the study. The discussed theories were simulation theory and structural form theory with empirical evidence of the study given. Chapter three presented the research methodology. The chapter discussed the type of research design, population, sample, data collection/instruments to be used and data analysis.

Chapter four presented the findings. Regression analysis was carried out to determine the relationship between the different sources of financing to real estate developments in Kenya. Results indicated that there is a positive relationship between mortgage financing and real estate unit's development. The relationship was also significant as mortgage financing was significant in explaining real estate development in Kenya as the reported p value of 0.009 is lower than the critical value of 0.05.

Results also indicate that the goodness of fit was adequate as it reported an  $r$  squared of 0.409 which means that 40.9% of the variations in real estate development units were explained by variables that such as savings, venture capital, mortgage and equity capital are substantial to explain real estates' sources of financing. An Analysis of Variance (ANOVA) indicated that the overall model was significant. This was supported by a  $p$  value of 0.000. The ANOVA results demonstrated that the sources of financing that is equity capital, venture capital, savings and mortgage are good predictors of real estate units' development.

## 5.2 Conclusions

The study concluded that mortgage financing in the years 2008 to 2011 have gradually increased. This may be explained by the variety of products that mortgage firms have and the low interest rates associated with the loans. Housing finance in Kenya has a variety of loans which is flexible to individuals and more especially to real estate firms. For example from their website the project finance, offers a variety of multi development loans which is quite advantageous for developing real estate's firms in Kenya.

Multi development loans include commercial properties where the loan under this approach is tailored to development of building for sale to clients upon completion of construction. The principal amount on the said loan is not payable during the construction period but payable after completion. The repayment is linked to the sale of completed developments. Another product is the build to rent residential, where the loan is available for developers to build many units for rental income. Loan repayment is done after completion of construction and occupation of the rental space over an agreed period of time. From the various advantages listed on mortgage financing it is then prudent to make conclusions from the study that mortgage financing is the most preferred source by most investment firms.

It is also possible to conclude that savings contributes a smaller percentage in financing real estate's development. The advantage of using savings to start up or expand in housing or commercial units for real estate firms is the ability to have control on the business. It is relatively rare for businesses to have sufficient savings to completely finance projects. This has to go with other sources of financing to make the projects development a success.

Venture capitalists consist of individuals or companies with interests to invest in a business with a strong growth potential and high risks. In reality, individuals or informal venture capitalists may be more interested in investing in smaller businesses than institutional venture capitals. In real estate development in Kenya, venture capital is not extensively used as a source of financing. The trend shows that venture capital from year 2009 to 2011 decreased gradually which may be as a result of investment firm owners who do not want to relinquish control over their business in exchange of money for units development. Venture capitalists also look at the risk level of the company before making an investment in the real estate firm, which as evidenced from the standard deviation in the results most real estate firms have a low risk. The declining trend in equity capital as a source of financing is also explained the same way as venture capital financing. The lower the risk the less attracted the investors will be, as high risks presents high potential of a firm thus higher return.

The trend in venture capital and equity capital source of financing can also be explained by liquidity of the investment. If a company is privately owned, selling the stock in that company may be more difficult than selling the shares of a public firm since buyers have to be privately sourced.

In addition real estate's that finally achieve the growth objective tend to raise the price of their stock and take it public in order to let investors cash out. The latter may happen if the company pays very low dividends thus demotivating potential investors in the company. In a nutshell equity and venture capital financing can be a good source of financing but with combining them with other sources of financing.

### **5.3 Policy Recommendations**

To increase use of equity and venture capital as a source of financing requires businesses to sell their ideas to people who have money to invest. Careful planning can help convince potential investors that the company is competent and that there is a high potential in growth in future. Mortgage firms should also increase more products with long term financing incorporated. The study also recommends that owners of real investment firms should relinquish some of their ownership rights to potential investors for them to invest. As when an investor puts his or her money in an investment there is a hard work from their side so as to generate more profits which later increases their dividends. Real estate firms should also increase their dividends as their profits grow to increase investor's motivation and avoid the potential ones moving out of the company.

### **5.5 Suggestions for Further Research**

Suggested areas of study should be on internal and external factors that affect the decision on sources of financing for real estate firms in Kenya. This will analyze critical factors that managers ought to consider in order to make their decision on sources of financing yield successful results. Further studies should also include the effects of sources of financing in unsuitable economic conditions, political instability and a global economic crisis. This study will be able to come up with decisions on the best methods to source for finances during such times. Studies can also be done on corporate bonds to assess whether it is a reliable source of financing for real estate's or other companies in Kenya.



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