# Firm Specific Factors and Financial Performance of Real Estate Firms Listed at the Nairobi Securities Exchange In Kenya

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**ABSTRACT**

This study sought to find the effect of selected firm specific factors on real estate firm financial performance. Financial performance was measured by return on assets (ROA) and return on equity (ROE). The objectives of the study were to; determine the effect of liquidity on financial performance; assess the effect of leverage on financial performance; and examine the effect of firm size on financial. The study was based on the Trade-off theory, Shiftable theory and Liquidity preference theory. The study used descriptive survey research design in an attempt to investigate the effect of selected firm specific factors on firm financial performance. The population of this study comprised the five (5) real estate firms listed under the investment subsector of the Nairobi Securities Exchange (NSE). The study used data covering a period of ten years from 2008 to 2017. The data was collected from published audited financial annual reports of the four (4) real estate firms listed in the Nairobi Securities Exchange. One was not studied due to unavailability of financial statements for the whole period of the study. The secondary data was collected using a data collection sheet. To describe profiles of the firms and research variables, means, standard deviations and coefficient of variation were used; and Pearson's correlation was used to examine relationships. The diagnostic tests done were normality and autocorrelation tests. The researcher used SPSS software to assist in analyzing the data. The results revealed significant negative relationship between liquidity and financial performance. The results also showed insignificant positive relationship between leverage and financial performance. The results also showed insignificant positive relationship between firm size and financial performance. Further, the results evidenced that all the variables combined had a statistically significant effect on the financial performance. The study recommends further research on other firm specific factors not included in the study to determine whether they have a significant effect on financial performance of real estate in Kenya or not.

**Background of the Study**

Real estate development has become a significant issue and an emerging question in the minds of Kenyans is how the housing situation will look like in the future. Real estate is most likely to be an important engine of economic growth and will spur the interest of key investors. Employees of many companies setting up offices in Kenya are anticipated to cause a great demand for housing according to Architectural Association of Kenya (Architectural Association of Kenya, 2011). It's unlucky that this private sector is driven by profit to provide housing for the upper-middle and upper-income households, which has in turn led to rapid increase in the number of slums and other informal settlements that provide housing for poor dwellers (UN-Habitat report, 2011).

Generally all over the world real estate prices have been escalating. This can be seen as in the case of the UK whose prices have been rising, but buying property remains 13 per cent more cost-effective than renting. Since the inception of the UK derivative market, growth in the real estate market has made tremendous growth (Zoopla, 2012). UN-Habitat (2011) shows that the real estate development in Africa's most emerging economies is placed between a rock and a hard place resulting from the lack of adequately finance urban shelter, not to mention huge demand for housing.

To show how property prices have increased in Kenya, data by property index and management firm Hass Consult (2012) has explained that the average worth of a property in Nairobi, in the year 2000 was to the tune of sh7 million and in the year 2007 the exactly similar property was at an average of sh24 million this explains clearly that Property values have gone up 3.38 times since 2000. As of 2012, Kenyan Population growth is roughly calculated to be at 4.2% per annum. According to this growth and the rate of people moving from the rural to urban areas, the yearly increase in demand for housing in Kenya is of 206,000 units' annually and of this 82,000 is in urban areas. In 2011, the ministry of housing estimated that the construction of houses in the market attained was 50,000 creating a deficit of 156,000 houses which builds on to the 2 Million units existing backlog. In 2012, it was roughly calculated that another 85,000 units were to increase that year's backlog (CAHF 2011; CAHF 2012).

In the recent past property prices have been on the increase raising the question as to whether this status will hold even in the long run. Property consultants Knight Frank (2013) have explained that Nairobi's elite suburbs' rent rose by the greatest margins beating 15 other cities in Africa, Asia, Middle East and Europe. This is due to the fact that Nairobi is a regional hub and attracts many transnational corporations who are causing the rent to escalate. These multi-nationals include Nestle, Google, General Electric, Tullow, Pepsi, Bank of India, HSBC and Foton Automobiles according to Knight Frank's Prime Global Rental Index (KFPGRI, 2013). According to the index rent rose as follows; Nairobi 17.9 %, Dubai 14.3%, and Beijing 8.5 %. Overall worldwide, rent escalated by an average of 5.1% in 2012 which shows the Nairobi rate of rent increase was more than three times the global average (KFPGRI, 2013) during the same period the rate of interest rates kept on fluctuating.

## Statement of the Problem

To establish a clear understanding on the effect of firm specific factors and financial performance of a firm, research has been undertaken by various researches. For example, in examining the effect of firm characteristics on financial performance of firms listed in the agricultural sector at the NSE, Mahfoudh (2013) concluded that there exists a small positive effect of leverage and firm size on firm performance though not statistically significant but a moderate positive effect of liquidity on firm financial performance which was statistically significant. Sanghani (2014) investigated the effect of liquidity on the financial performance of non-financial companies listed at the NSE and found that liquidity positively affect the financial performance.

On the contrary however, Abdul (2012) conducted a research to determine the effect of capital structure decisions and the performance of firms in Pakistan and found that financial leverage has a significant negative relationship with firm's performance, measured by return on assets (ROA). Nduati (2018) for example carried out a study to determine the effect of firm specific factors on financial performance of insurance companies in Kenya and found a negative effect of leverage and firm size on financial performance and a positive insignificant effect of liquidity on financial performance. Her study however focused on return on asset as a measure of financial performance. Also Banchuenvijit (2012) did a study on determinants of firm performance of vietnam listed companies and found a negative relation between firm size and profitability.

In summary, studies on the effect of firm specific factors and financial performance have yielded mixed results. Further, prior studies have focused on return on assets as a measure of financial performance. This study has combined ROA with return on equity bearing in mind that the firms being studies are listed firms and thus ROE is key to investors since it assists them to ascertain if there is any income associated with investment. The conflicting findings and the use of one measure of financial performance reported in the literature requires further studies. This is part of the reason for this study which sought to answer the question: What is the effect of selected firm specific factors on the financial performance of real estate firms in Kenya.

## Objective of the Study.

To determine the combined effect liquidity, leverage and firm size on the financial performance of real estate firms in Kenya

$H_0$: Liquidity, leverage and firm size have no significant effect on financial performance of real estate firms in Kenya.

**Literature Review**

**Theoretical Literature Review**

**Trade-Off Theory**

Modigliani and Miller (1950) were the proponents of this theory that considered a balance between the dead-weight costs of bankruptcy including the agency cost and the tax saving benefits of debt. This theory postulates that a company chooses how much debt finance and how much equity finance to use by balancing the costs and benefits. Interest expenses on debt are tax deductible and as such it may be used to reduce the taxable income which will consequently reduce tax liability.

The relevance of this theory to this study is that the use of debt financing also increases financial risk to a company which may consequently lead it to financial distress. Niu (2008) observes that managers of companies regard debt-equity decisions as tradeoff between interest tax shield of debt and associated leverage costs such as bankruptcy, agency costs and loss of non-debt tax shield. This theory contends that the firm sets a target leverage ratio which it gradually moves towards it. Trade-off theory predicts that highly profitable firms that have more debt servicing capacity and more taxable income to shield will have higher debt ratios and firms that have high growth opportunities should have low debt ratios because they borrow less to avoid losing value in financial distress and will mostly rely on equity financing.

**Shiftable Theory**

This theory was originated in the USA by Moulton (1918). According to this theory, the problem of liquidity is not a problem but shifting of assets without any material loss. Moulton specified, "to attain minimum reserves, relying on maturing bills is not needed but maintaining quantity of assets which can be shifted to other banks whenever necessary. It must fulfill the attributes of immediate transferability to others without loss. In case of requirement, there is no need to depend on maturities.

Therefore the relevance of this theory to the study is for an asset to be perfectly shiftable, it must be directly transferable without any capital loss when there is a need for liquidity. This is specifically used for short term market investments, like treasury bills and bills of exchange which can be directly sold whenever there is need to raise funds by banks. In case of general liquidity crisis, bank should maintain liquidity by possessing assets which can be shifted to the Central Bank". Thus, as development took place the Commercial Loan Theory lost ground in favor of Shiftability Theory. During depression, the whole industry would be in crisis. The shares and debentures of well reputed companies would fail to attract buyers and cost of shifting of assets would be high. Blue chip securities will also lose their shiftability character. Thus, both Commercial Loan as well as Shiftability Theory failed to distinguish liquidity of an individual bank as well as the banking industry.

**Liquidity Preference Theory**

Liquidity preference theory is basically demand for money, this is regarded as liquidity. This theory was developed from the works of John Maynard Keynes, written in his book titled "The General Theory of Employment, Interest and Money "in 1936. This book explained how interest rate was determined through demand and supply for money. Demand for money as an asset was hypothesized to rely on the forgone interest by failure to hold bonds. In this case, bonds also represent stocks among other assets that are less liquid including government bonds. Keynes (1964) argues that interest rates is not a reward that is got from saving because if an individual hoards his savings in cash terms he will not get any interest, even though he has not ceased from utilizing his current incomes. Instead of getting a reward for saving, interest, Keynesians opines that it is a reward that one gets because of parting with liquidity. Keynes argues that interest rate is determined by liquidity preference.

**Financial Performance**

Financial performance is the ability of a firm to efficiently and effectively use its resources with the intention of achieving and accomplishing the firm's objectives and goals. It can also be defined as the firm's capacity to operate with minimal wastages, maximize profits, achieve growth and continue to exist in the long run. Financial performance is the process of determining the outcome of a firm's policies and operations in financial terms. It indicates the financial position of a firm by identifying relationships between the items of the financial position

and income statement. Profitability, return on equity and liquidity ratios among others gives valuable tools to stakeholders to determine the past and present financial performance of a firm (Erasmus, 2008).

According to Barbosa and Louri (2005), the evaluation of financial performance of a firm is determined using the return on investment, residual income, earnings per share, dividend yield, price/earnings ratio, growth in sales and market capitalization. The assessment of performance is subject to the information introduced in the measurement system and the instruments operated. The long established types of indicators used in the process of financial analysis have been the return on investment, leverage, capital efficiency, liquidity, cash flow, inventory turnover and receivable turnover ratio. Over and above these factors are the modern value creation indicators as indicated by Vernimmen (2009), earnings per share, Return On Assets (ROA) and Return On Equity (ROE), economic value added (EVA), Cash Flow Return on Investment (CFROI) and Net Present Value (NPV).

Currently, performance is determined using value creation, clearly explained under the goal of sustainable development (Tudose, 2012). Aftab (2012) assert that a firm's performance can be measured in terms of its profitability and market performance. Typically, profitability is measured in terms of return on the capital invested in the business or return on the revenues generated during a given period. On the other hand, market performance is measured in terms of market indicators such as share price and dividend yield ratio. There are various measures of financial performance. For example return on sales (ROS) explains how much a firm earns in relation to the sales its making, return on assets (ROA) shows the ability of a firm to efficiently use of the assets it has and return on equity (ROE) shows the return the investors will receive for their investments (Almajali, 2012) . A firm's performance can be measured in three aspects. The first aspect is a firm's ability to process inputs into outputs efficiently. The second aspect is the level of which a firm's earnings are greater than its costs. The third aspect is the level at which a firm's market value exceeds its book value (Walker, 2001).

There are several benefits that come with a firm determining its financial performance. These include assisting in development of a strategic plan, evaluating effectiveness of firm objectives, monitoring the overall growth and direction of a firm and many other (Yabs, 2015). Return on assets (ROA) is widely used by financial analysts to measure financial performance of a firm, as it measures the efficiency and effectiveness of assets in producing income. The most used accounting measures of financial performance are Return on Assets (ROA) (Clarkson, 2008), Return on Equity (ROE), and Return on Sales (ROS) (Omondi, 2013). Thus, the study will use return on equity (ROE) and return on assets (ROA) to measure financial performance. The advantages of financial measures are the easiness of calculation and that definitions are agreed worldwide (Tangen, 2003).

**Real Estate Investment in Kenya**

Real Estate investment comprises of great amount of wealth which can be clearly evidenced by the extremely large number of real estate investors in Kenya. In spite of these great returns in term of wealth creation, the real estate industry in Kenya has repeatedly failed to achieve this major role. This is because of the different factors in the real estate sector that affects investment in that sector. In the past years, Kenya's real estate investment has evidently increased. This has been influenced by the different competing reasons like as: desire to own houses, rural to urban migration, increase in foreign investors, the increased remittances from people in the diaspora, improvement in Kenya's infrastructure developments among others. These reasons have caused property prices in the urban areas to hikes especially in major cities like Nairobi. Real estate includes land, buildings on it and other natural resources like minerals and crops and minerals which are not movable. Real estate investment comprises different activities ranging from management, ownership, purchase, rental land or sale of real estate for profit (Okumu, 2017).

The real estate industry is unique because of the distinct features which are not directly interchangeable. Because of this, identifying and locating properties to invest in involves a lot of work. Because information on viable properties is not symmetrical, the decision to buy individual properties may be highly different. Information asymmetry is the norm in the real estate markets due to the huge numbers of property brokers and agents. Therefor this leads to increase in transaction costs and risks but at the same time, many opportunities are provided to investors causing them acquire properties at bargain prices. To estimate the value of properties, investors use several appraisal and analytical techniques. These techniques help them determine properties value before making a purchase decision (Sirya, 2017).

The real estate industry in Kenya has continued to be an immensely attractive and lucrative sector for many investors due to its great size and value. Elements such as demand and supply in this business sector have had a

great impact on the real estate business sector. This investor confidence has been evidenced in a number of ways including Old Mutual Property's recent investment in the Two Rivers Mall. The country real estate sector has also witnessed investments from the Delta Africa Property Fund, Retail Africa and Abland – all from South Africa. AVIC International Holding Corporation of China is also expected to invest over US$ 200M in constructing their Africa Headquarters in Nairobi. The multi-user development has been reported to contain the highest office block in East Africa and will undoubtedly reshape Nairobi's skyline. All these investments are attributed to the vibrant and ever growing real estate sector in Kenya (Sirya, 2017).

**Factors Influencing Real Estate Performance**

There are several factors which affect financial performance of firms. They include liquidity, leverage, firm size, firm age, dividend policy, business diversification, geographical diversification, corporate governance, growth, profitability, board size, capitalization/asset structure and net investment. The study will major on liquidity, leverage and firm since they are financial in nature. These three are discussed below.

**Liquidity**

Liquidity refers to investment in current assets and current liabilities which are liquidated within one year or less and is therefore crucial for firm's day to day operations (Kesimli & Gunay, 2011). It is usually measured by the current assets to current liabilities (current ratio). Liquidity is very closely related to working capital which is the money needed to finance the daily revenue generating activities of the firm. According to Vahid, Mohsen and Mohammadreza (2012) working capital management plays a significant role in determining success or failure of firm in business performance due to its effect on firm's profitability. Business success depends heavily on the ability of financial managers to effectively manage the components of working capital (Filbeck & Krueger, 2005). A firm may adopt an aggressive or a conservative working capital management policy to achieve this goal.

Liquidity reveals a firm's ability to meet its short-term obligations and quickness in converting an asset into cash at its fair market value (Scott, 1999). Good liquidity management can improve operating results and enhance firm performance, whereas poor liquidity management can lead to weak operating profits and hurt firm performance in the capital market (Moyer, McGuigan, & Kretlow 2001). Therefore, the objective of liquidity management is to find an optimal balance between liquid and illiquid assets to minimize operating costs and hence improve firm performance. Some empirical studies supported a positive relationship between liquidity and firm performance (Chathoth & Olsen, 2007; Opler, 1999); others revealed a negative correlation (Shin & Soenen, 1998).

A firm should balance the cost of liquidity and cost of illiquidity at equilibrium (Pandey, 2011). The mechanisms that explain why liquidity can suddenly evaporate operate through the interaction of funding illiquidity due to maturity mismatches and market illiquidity. As long as a financial institution's assets pay off whenever its debt is due, it cannot suffer from funding liquidity problems even if it is highly levered. However, nonfinancial firms typically have an asset-liability maturity mismatch and hence are exposed to funding liquidity risk. A funding shortage arises when it is prohibitively expensive both to borrow more funds (low funding liquidity) and sell off its assets (low market liquidity). In short, problems only arise if both funding liquidity dries up high margins/haircuts, restrained lending) and market liquidity evaporates fire sale discounts (Muganga, 2010).

Another view on liquidity was explained by (Liargovas & Skandalis, 2008) argues that firm can use liquid assets to finance its activities and investments when external finance is not available. On the other hand, higher liquidity can allow a firm to deal with unexpected contingencies and to cope with its obligations during periods of low earnings. Almajali (2012) found that firm liquidity had significant effect on financial performance of insurance companies. The result suggested that the insurance companies should increase the current assets and decrease current liabilities because the positive relationship between the liquidity and financial performance.

**Leverage**

Leverage refers to the proportion of debt to equity in the capital structure of a firm. It is measured by the ratio of total debt to equity (debt/equity ratio). The financing or leverage decision is a significant managerial decision because it influences the shareholder's return and risk and the market value of the firm. The ratio of debt-equity has implications for the shareholders' dividends and risk, this affect the cost of capital and the market value of the

firm (Tikkiwal & Pandey, 2007). Gupta and Zeithaml (2006) cited some studies showing contradictory results about the relationship between increased uses of debt and financial performance.

Financial leverage measures a firm's capital structure (debt versus equity) and reflects a firm's ability to meet its long-term obligations exposed to financial risk. According to Moyer, McGuigan, and Kretlow (2001) the optimal capital structure theory holds that an inverted U-shape relationship exists between debt usage and firm value as reflected in the capital market. The optimal debt level is reached when the costs of debt just offset the benefits of debt. Research by Cheong (2009) studied the behavior of interest rates and stock market prices and examined their sensitivity and importance; their study found that interest rates and market changes drive property securities price movements. Generally, borrowing by companies gives a tax shelter for taxable income through the interest payment because the interest is paid and deducted from revenue before arriving at taxable income. It therefore reduces the tax burden of a company.

Zeitun and Tian (2010) found a significantly negative relationship between financial structure and corporate performance. In other words, firms can take advantage of debt to make a better return on equity and measure leverage by the debt ratio calculated by the total liabilities divided by total assets (Nazir & Afza, 2008; Chiou, Cheng & Wu, 2006). Apphumani (2008) measured leverage as total long-term debt capital divided by equity. In this study, debt level (DEBT) will be measured as long term debt divided by total assets.

## Firm Size

One of the firm characteristic that is constantly associated to firm performance is firm size commonly measured by either natural logarithm of assets, or sales or employees. Larger firms are associated with having more diversification capabilities, ability to exploit economies of scale and scope and also being highly formalized in terms of procedures. One school of thought argues that there is a positive relationship between firm size and firm performance (Penrose, 1959; Majumdar, 1997). It argues that bigger firms have more competitive power and also have a bigger market share which positions them to profit more. Moreover, bigger firms can seize a profitable opportunity that comes in their way since they have bigger capital resources than smaller sized firms. Another school of thought argues that due to organizational rigidity brought about by bigger firm size and a lot of unnecessary bureaucracies, profitable opportunities that may want urgent attention will easily pass the firm and thus making them less profitable in relative terms and thus negatively impact on firm performance (Leibenstein, 1976; Shepherd, 1986; Banchuenvijit, 2012; Goddard, 2005).
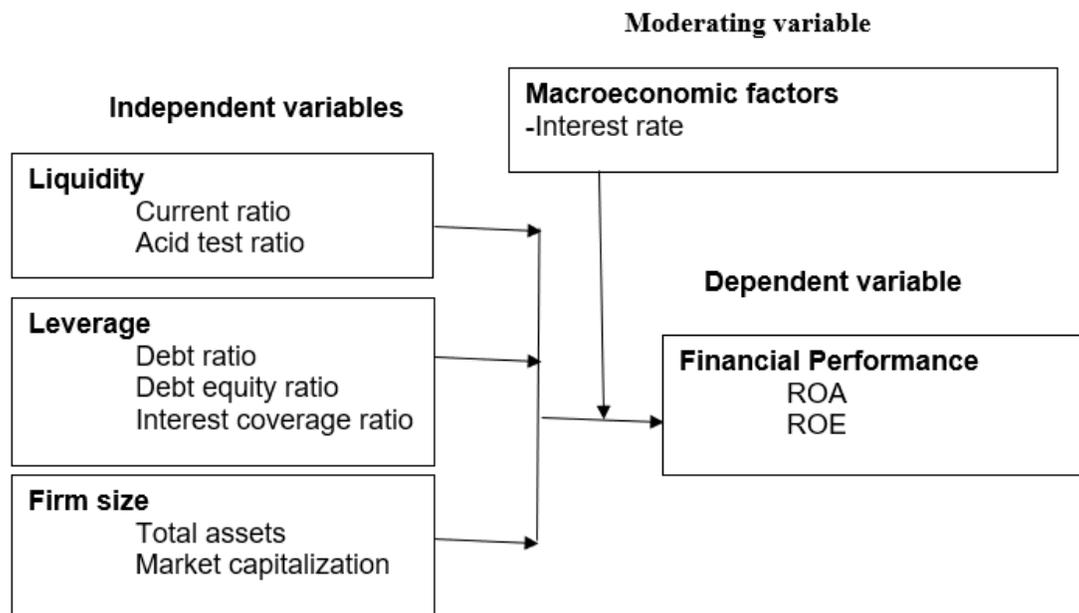
Financiers are not willing to offer small firms capital, or the price of the offered capital is too high for small firms (Ferri & Jones, 2009). Another reason, which makes small firms reluctant to use outside financing, is the market access limitations. In many cases, the minimum volume of capital is required in order to raise external fund (Cassar & Holmes, 2003). This idea is supported by empirical evidence that concludes SMEs are often forced to use internal source, and then short-term debt contracts due to the limited access to the long term financing (Osteryoung, 2002; Chittenden, 2006; Michaelas, 2009). Many authors have suggested a positive relationship between a firm leverage and its size (Fama & French, 2002). Warner (2007) and (Ang, 2012) stressed out, that when the value of the firm increases; the ratio of direct bankruptcy costs to the firm value would decrease. The effect of these expected bankruptcy costs might be little on large firms' borrowing decisions, which empower them to take on more leverage (Rajan & Zingales, 2005). On the other side, smaller firms face a different reality in raising the long term debt.

## Interest Rate

Although it is difficult to prove the direction of the relationship between interest rates and profitability, interest rates instability generally has an effect with financial performance. High interest rates will lead to increased commercial banks interest income but also lead to low demand for the loans and hence crowding out the increased interest income. Without interest rates stability, domestic and foreign investors will stay away and resources will be diverted elsewhere. In fact, econometric evidence of investment behavior indicates that in addition to conventional factors (past growth of economic activity, real interest rates, and private sector credit), private investment is significantly and negatively influenced by uncertainty and macroeconomic instability (Sayedi, 2013). In addition to low (and sometimes even negative) growth rates, other aspects of macroeconomic instability can place a heavy burden on the firms leading to reduced profitability (Gilchris, 2013).

## Conceptual Framework

A conceptual framework is a hypothesized model that graphically portrays the relationships (Mugenda & Mugenda, 2003). The conceptual framework for this study is illustrated in Figure 2.1 below. According to this framework, financial factors are the independent variable whereas financial performance is the dependent variable.



**Figure 2.1 Conceptual framework of firm specific factors on financial performance**

This is a framework that explains the relationship between liquidity, leverage and firm size with the financial performance of real estate firms in Kenya. It consists of the independent, intervening and dependent variables. The independent variables are liquidity, leverage and firm size. Liquidity was measured using current and acid test ratios. Leverage was measured using debt, debt equity and interest coverage ratios. Firm size was measured using total assets and market capitalization. The financial performance was measured using return on assets and return on equity. The study conceptualized that the financial performance is affected by liquidity, leverage and firm size. The intervening variable is interest rate.

## Research Methodology

The study employed descriptive research design. Descriptive research design was used since the data to be obtained on the elements and the variables was for a given time period. This design is appropriate for acquiring information on the variables dealt with in this study and the relationship between them. The target population for this study included firms listed in the Nairobi Securities Exchange (NSE) that deal with real estate investments. These firms are listed under the investment subsection of the listed companies in the NSE.

Since the population of the study is small, a census survey was adopted where secondary data was collected from the five (5) firms. Census survey is the appropriate data collection design for a small heterogeneous population. Since the sample frame for the study is small and heterogeneous, census survey was adopted. According to Kothari (2008) the larger the sample size for a small population, the more accurate the results are likely to be and hence the choice of the census technique in the proposed study. The study used secondary data. The data collection sheet was designed based on the objectives of the study. Secondary data was collected from audited financial statements of the target firms listed in the Nairobi Securities Exchange (NSE) for the period (2008-2017) from the NSE Website, CMA website and respective firm's website. This was a period of ten (10) years. This period was

chosen because it offers current observation. From the financial statements, the researcher collected information on level of current assets, current liabilities, total debt, total equity, profit after tax and total assets.

The following multiple regression model was used :

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$$

Where,

Y = Financial Performance (Dependent Variable)

$X_1$ = Leverage

$X_2$ = Liquidity

$X_3$ = Firm Size

$\beta_1, \beta_2, \beta_3$: Regression coefficients for independent variables

$\beta_0$ = regression Constant

$\varepsilon$ = error term assumed to be normally distributed

| Variables | Variable Definition | Measurement |
|---|---|---|
| Financial Performance | Firms ability to efficiently and effectively use its resources to accompl its objectives and goals | ROA=After Tax Profit/Total Assets ROE =After Tax Profit/Total Equity |
| Leverage | Degree to which a business is utilizing borrowed money | Debt Ratio=Total Debt/Total Assets Debt Equity ratio=Total Debt/Total Equity Interest coverage ratio=EBIT/ Interest Expense |
| Liquidity | Firms ability to meet short term obligations by quickly converting assets to cash | Current Ratio=Current Assets/ Current Liabilities Acid test ratio=Current Assets-Stock/Current Liabilities |
| Firm Size` | Firm characteristic measured by Either natural logarithm of assets or sales employees | Natural Log of Total Assets Market Capitalization=Shares outstanding*MPS |

## Results and Discussion

**Descriptive Statistics**

**Selected Firm Specific Factors**

The following selected firm specific factors were used in the study: Liquidity, leverage and firm size. Table 4.3 shows the overall descriptive statistics of the selected firm specific factors over 10 years of study.

**Table 1: Selected Firm Specific Factors Overall Results**

| | Mean | Standard Deviation | Kurtosis | Skewness | Minimum | Maximum | Count |
|---|---|---|---|---|---|---|---|
| Liquidity | 1.74 | 3.49 | 32.04 | 5.47 | 0.14 | 22.04 | 39 |
| Leverage | -0.32 | 10.88 | 20.73 | -4.28 | -56.99 | 11.93 | 39 |
| Firm Size | 9888425 | 14776103 | 5.50 | 2.43 | 82202 | 57243477 | 39 |
| Financial Performance | 66.03 | 314.01 | 34.40 | 5.77 | -48.75 | 1921.48 | 39 |

The researcher sought to investigate the descriptive performance of the variables in real estate firms listed in Kenya from 2008 to 2017. From the findings, it can be noted that liquidity recorded a mean of 1.74 with a standard deviation of 3.49 while the kurtosis value recorded for liquidity was 32.04 with a skewness value of 5.47 and minimum and maximum value was 0.14 and 22.04 respectively. The values for asymmetry and kurtosis between -2 and +2 are considered acceptable in order to prove normal univariate distribution (George & Mallery, 2010). Leverage recorded a mean value of -0.32, the standard deviation was 10.88 while kurtosis, skewness and minimum

value was 20.73, -4.28 and -56.99 respectively. This depicts a slight variation between the liquidity and the performance as shown by the standard deviation of 10.88. The firm size recorded a kurtosis value of 5.50 which depicts a positive skewness since the value was more than 2 which is the set threshold. The skewness was 2.43 with a maximum value of 82202 and the maximum value 57243477 with an observation of 39. The financial performance recorded was 66.03 with a standard deviation of 314.01 while the kurtosis value was 34.40 with a maximum value of 1921.48. This implies financial performance was fluctuating as shown by the standard deviation. The findings also revealed that there has been a significant decrease in financial performance during the ten-year period. An analysis of the mean shows extreme cases of profit making companies and loss making companies. The financial statements show a turbulent sector. Therefor some of the firms have financial distress leading to the huge disparity. The results are displayed on table 2.

**Table 2**: Selected Firm Specific Factors Year by Year Mean

| Years\Variable | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
|---|---|---|---|---|---|---|---|---|---|---|
| Liquidity | 2.50 | 6.30 | 1.38 | 0.76 | 1.17 | 2.42 | 0.76 | 0.74 | 0.87 | 0.67 |
| Leverage | 0.90 | 3.97 | 2.97 | 2.57 | 3.31 | 2.57 | -6.42 | 1.64 | -0.11 | -14.26 |
| Firm size | 5271850 | 2776532 | 3898081 | 7379289 | 6369606 | 8950147 | 10752654 | 18054835 | 16959542 | 17317573 |
| Financial Performance | 9.46 | 2.43 | 5.96 | -4.73 | 14.68 | 8.32 | 15.74 | -6.18 | 10.83 | 6.36 |

The researcher also assessed the trends in selected firm specific factors from 2008 to 2017. From the findings, it can be noted liquidity recorded the highest value of 6.30 in the year 2009. It was followed by a liquidity value of 2.50 in the year 2008 and the least liquidity value was registered in the year 2017 with a value of 0.67. This means that the liquidity of the firms across the period was not constant since it recorded various values for the various years, this was as a result of the assets utilizes and debt collections by this real estate firms. Also the election influences was a result of turbulence in the liquidity of the firms. The leverage of the firm also recorded a highest value of 3.97 in the year 2009 and the minimum value of -14.26 in the year 2017. This implies also the firm leverage was not fixed since most of the firms used debt in financing their operations at the time of financial crises but when they have adequate resources to finance their operations they use equity. So the changes in the usage of the debt by the firms were a result of changes in the leverage ratio across the period of study. The firm size was also not fixed since these firms continuously acquired assets and that was why there was an observation of the increase in the firm size of the real estate firms. The firms engage in the investment ventures which increase their asset base. The findings revealed that there has been a significant fluctuation of the financial performance since the highest value recorded was 15.74 in the year 2014 and the minimum value registered was -4.73 in the year 2011. This implies the income for the firms keeps on fluctuating. The results are displayed on table 4.5.

**Trend Analysis**

**Inferential Statistics**

The study used inferential statistics (Pearson correlation and multiple linear regression) to analyses the research objectives.

**Correlation Matrix**

Correlation analysis was carried out to determine whether there were significance associations between the variables. Pearson's product moment correlation coefficient (r) was used to examine the extent of correlation between the variables of study and to show the strength of the linear relationships between the variables. It ranging from -1 (showing a perfect negative linear relationship) to +1 (showing a perfect positive linear relationship), and zero indicating no relationship between the variables (Saunders & Cornett , 2003).

**Table 3: Pearson correlation analysis of liquidity, leverage, firm size and financial performance**

| | | Liquidity | Leverage | Firm Size | ROA | ROE |
|---|---|---|---|---|---|---|
| Liquidity | Pearson Correlation | 1 | | | | |
| | Sig. (1-tailed) | | | | | |
| Leverage | Pearson Correlation | 0.050 | 1 | | | |
| | Sig. (1-tailed) | 0.380 | | | | |
| Firm Size | Pearson Correlation | -0.137 | 0.100 | 1 | | |
| | Sig. (1-tailed) | 0.203 | 0.272 | | | |
| ROA | Pearson Correlation | -0.118 | 0.592 | 0.230 | 1 | |
| | Sig. (1-tailed) | 0.238 | 0.000 | 0.079 | | |
| ROE | Pearson Correlation | -0.087 | -0.934 | -0.010 | -0.427 | 1 |
| | Sig. (1-tailed) | 0.300 | 0.000 | 0.476 | 0.003 | |

Correlation coefficients vary numerically between 0.0 and 1.0; the closer the correlation is to 1.0, the stronger the relationship between the two variables. A positive correlation means that as one variable increases, the other increases, whereas a negative correlation means that when one variable increases, the other decreases. A statistically significant correlation is indicated by a probability value of less than 0.05 (Saunders & Cornett , 2003). The main objective of the study was to determine the effect of selected firm specific factors on financial performance of real estate firms in Kenya. The study used Pearson Correlation analysis to establish the kind of relationship that exists between the variables (liquidity, leverage, firm size and bank performance). Table 4.5 shows the Pearson correlation analysis of the relationship between liquidity, leverage, firm size and financial performance. Correlation results showed that relationship between liquidity and ROA was negative and insignificant (r=-0.118, p>0.05), also liquidity and ROE was negative and insignificant (r=-0.087, p>0.05), leverage and ROA was positive and insignificant (r=0.592, p>0.05), leverage and ROE was negative and insignificant (r=-0.934, p>0.05), firm size and ROA was positive and insignificant (r=0.230, p>0.05). The correlation between the three variables was weak. If two predictor variables indicate a correlation coefficient of more than 0.50, then the problem of multi-collinearity exists and in the table 4.5, none exceeds 0.5 and hence none of them are highly correlated with each other and thus none of them was to be dropped hence, the study sought to analyse the regression analysis to establish further the magnitude of the relationships.

**Multiple Regression**

**Effect of Liquidity, Leverage and Firm Size on the Financial Performance (ROA) of Real Estate firms in Kenya**

**Table 5: Model Summary**

| R | R Square | Adjusted R Square | Std. Error of the Estimate | Change Statistics | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | R Square Change | F Change | df1 | df2 | Sig. F Change |
| .380ᵃ | .144 | .042 | .618 | .144 | 1.406 | 3 | 25 | .264 |

3.1      a. Predictors: (Constant), Firm Size, Leverage, Liquidity
3.2      b. Dependent Variable: ROA

**Table 6 : ANOVA**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 1.613 | 3 | .538 | 1.406 | .264[b] |
| | Residual | 9.560 | 25 | .382 | | |
| | Total | 11.172 | 28 | | | |
| a. Dependent Variable:  ROA | | | | | | |
| b. Predictors: (Constant), Firm size, Leverage, Liquidity | | | | | | |

**Table 7: Coefficients**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. | 95.0% Confidence Interval for B | |
|---|---|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | | Lower Bound | Upper Bound |
| 1 | (Constant) | -1.209 | 1.068 | | -1.132 | .268 | -3.408 | .990 |
| | LIQUIDITY | -.195 | .350 | -.109 | -.558 | .582 | -.917 | .526 |
| | LEVERAGE | .228 | .463 | .093 | .492 | .627 | -.726 | 1.182 |
| | FIRMSIZE | .267 | .162 | .315 | 1.649 | .112 | -.066 | .600 |

In the model summary (Table 5) shows an R squared of 0.144, P value of 0.264 and the variance of analysis (Table 6) shows F statistical of 1. 406.  This implies that the combined effect of liquidity, leverage and firm size influences ROA to the extent of 14.4%. Other factors not included account for 85.6%. The above results are not statistically significant as confirmed by P value of 0.264 being greater than 0.05 and F statistical value of 1.406 being less than F critical value of 3.84.

The coefficients of the model as demonstrated on Table 7 are a constant of -1.209 with gradients of -0.195, 0.228 and 0.267. This is as:
Y = -1.209 - 0.195 Liquidity + 0.228 Leverage + 0.267 Firm size

**Effect of Liquidity, Leverage and Firm Size on the Financial Performance (ROE) of Real Estate firms in Kenya**

**Table 8: Model Summary**

| R | R Square | Adjusted R Square | Std. Error of the Estimate | Change Statistics | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | R Square Change | F Change | df1 | df2 | Sig. F Change |
| .551[a] | .303 | .231 | .725 | .303 | 4.207 | 3 | 29 | .014 |
| 3.3      a. Predictors: (Constant), Firm size, Leverage, Liquidity | | | | | | | | |
| b. Dependent Variable:  ROE | | | | | | | | |

**Table 9: ANOVA**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 6.634 | 3 | 2.211 | 4.207 | .014[b] |
| | Residual | 15.245 | 29 | .526 | | |
| | Total | 21.879 | 32 | | | |
| a. Dependent Variable:  ROE | | | | | | |
| b. Predictors: (Constant), FIRMSIZE, LEVERAGE, LIQUIDITY | | | | | | |

**Table 10: Coefficients**

| Model | Unstandardized Coefficients | | Standardized Coefficients | T | Sig. | 95.0% Confidence Interval for B | |
|---|---|---|---|---|---|---|---|
| | B | Std. Error | Beta | | | Lower Bound | Upper Bound |
| (Constant) | .238 | 1.203 | | .198 | .844 | -2.222 | 2.699 |
| Liquidity | -.956 | .327 | -.469 | -2.92 | .007 | -1.624 | -.287 |
| LEVERAGE | .532 | .516 | .164 | 1.032 | .310 | -.522 | 1.587 |
| FIRMSIZE | .109 | .183 | .093 | .593 | .558 | -.266 | .484 |

In the model summary (Table 8) shows an R squared of 0.303, P value of 0.014 and the variance of analysis (Table 9) shows F statistical of 4. 207. This implies that the combined effect of liquidity, leverage and firm size influences ROE to the extent of 30.3%. Other factors not included account for 69.7%. The above results are statistically significant as confirmed by P value of 0.014 being less than 0.05 and F statistical value of 4.207 being greater than F critical value of 3.84.

The coefficients of the model as demonstrated by Table 10 are a constant of 0.238 with gradients of -0.956, 0.532 and 0.109. This is as:

Y = 0.238 - 0.956 Liquidity + 0.532 Leverage + 0.109 Firm size

**Combined Effect on Overall Financial Performance**

**Table 11: Model Summary**

| R | R Square | Adjusted R Square | Std. Error of the Estimate | Change Statistics | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | R Square Change | F Change | df1 | df2 | Sig. F Change |
| .533[a] | .285 | .211 | .78346 | .285 | 3.844 | 3 | 29 | .020 |

a. Predictors: (Constant), Firm size, Leverage, Liquidity
b. Dependent Variable: Financial Performance

**Table 12: ANOVA**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 7.078 | 3 | 2.359 | 3.844 | .020[b] |
| | Residual | 17.800 | 29 | .614 | | |
| | Total | 24.879 | 32 | | | |

a. Dependent Variable: FINANCIALPERFORMANCE
b. Predictors: (Constant), FIRMSIZE, LEVERAGE, LIQUIDITY

**Table 13: Coefficients**

| Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. | 95.0% Confidence Interval for B | |
|---|---|---|---|---|---|---|---|
| | B | Std. Error | Beta | | | Lower Bound | Upper Bound |
| Constant | -.054 | 1.300 | | -.041 | .967 | -2.71 | 2.605 |
| Liquidity | -1.016 | .353 | -.468 | -2.879 | .007 | -1.73 | -.294 |
| Leverage | .412 | .557 | .119 | .739 | .466 | -.72 | 1.551 |
| Firm size | .135 | .198 | .108 | .681 | .501 | -.27 | .540 |

In the model summary (Table 11) shows an R squared of 0.285, P value of 0.020 and the variance of analysis (Table 12) shows F statistical of 3. 844. This is shown on Table 4.51 and 4.52. This implies that the combined

effect of liquidity, leverage and firm size influences financial performance to the extent of 28.5%. Other factors not included account for 71.5%. The above results are statistically significant as confirmed by P value of 0.02 being less than 0.05 and F statistical value of 3.844 being greater than F critical value of 3.84.

The coefficients of the model as demonstrated on table 4.41 are a constant of 0.238 with gradients of -0.956, 0.532 and 0.109. This is as:
Y = -0.054 - 1.016 Liquidity + 0.412 Leverage + 0.135 Firm size

**$H_0$: Liquidity, leverage and firm size have no significant effect on financial performance of real estate firms in Kenya**
The analysis revealed liquidity, leverage and firm size has no significant effect on ROA of listed real estate firms at 5% significance level. This was evidenced by the *p*-value of p>0.05. Liquidity, leverage and firm size has a significant effect on ROE of listed real estate firms at 5% significance level. This was also evidenced by the *p*-value of p<0.05. Lastly, liquidity, leverage and firm size has a significant effect on financial performance of listed real estate firms at 5% significance level. This was evidenced by the *p*-value of p<0.05. The decision was to reject the null hypothesis with 95% confidence and conclude that liquidity, leverage and firm size had a statistically significant effect on the financial performance of listed real estate firms in Kenya. (f=3.844, p=0.02). .

## Conclusions

Liquidity and financial performance are negatively correlated; the study indicates that there is a statistical significance relationship between liquidity and financial performance Furthermore. These findings differed with those of Mahfoudh (2013) who examines whether selected firm characteristics affect financial performance and found that liquidity and financial performance were positively correlated. The findings are in contrast since the study was conducted on manufacturing firms in the NSE while this study was conducted on real estates. Leverage and financial performance are positively correlated. It also shows that there is no statistical significance relationship between leverage and financial performance. These findings concur with those of Ali (2014), who conducted a study on the impact of financial leverage on financial performance of firms and reveals that there is a positive insignificant relationship between financial leverage and financial performance.

Firm size and financial performance are positively correlated and there is no statistical significance relationship between firm size and financial performance of firms. This finding concur with those of Audax (2018), who examined the factors which affect firm performance of firms and found that leverage and financial performance were positively correlated. Also Liargovas & Skandalis (2008) found that leverage is positively associated with financial performance of firms. The study concludes that liquidity, leverage and firm size has no significant effect on ROA of listed real estate firms. Leverage and firm size has a significant effect on ROE of listed real estate firms and liquidity, leverage and firm size has a significant effect on financial performance of listed real estate firms at.

## Recommendations

The study recommends that real estate firms should also innovate new ways of managing their liquidity with the aim of enhancing its influence on financial performance. In particular, the manager of the listed real estate firms in Kenya should ensure that their firms have adequate liquidity levels to ensure that the can meet any contingencies and to improve their firms' financial performance. But liquidity level should not be too high to lead the firm into missing investment opportunities.

The study recommends that real estate firms be willing to increase their debt level as it is the only way they will become more profitable hence survive in the market. Particularly, the managers of the real estate firms listed at the NSE should employ an optimal debt level which will not increase the firm's performance due to the positive relationship between leverage and financial performance.

Finally, real estate firms in Kenya should invest more of their resources towards increasing their asset base so to ensure they attain desired asset base that would maximize their profitability. Specifically, the managers of the listed real estate firms should focus on growing their firms to ensure that they enjoy the economies of scale associated with large firms, also to attract good management thus to improve their financial performance.

### Recommendations for Further Studies

The scope of this study was limited to listed real estate firms and did not cover unlisted real estate firms; therefore the study recommends further research to be carried out on unlisted real estate firms to enable further understanding of the effects of selected firm specific factors on financial performance of firms. This study looked at the factors affecting financial performance among real estate firms listed in NSE, Kenya. The study focused on three determinants of financial performance namely firm size, leverage, and liquidity which only contributed to 14.4% on financial performance. Thus further research may focus on other determinants of financial performance such as asset structure, firm age among others. The study was limited to the effect of selected firm specific factors on financial performance of real estate firms. The study therefor recommends that further research focuses on other industries.

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