Impact of Private Asset Financing on Financial Performance of Real Estate Firms in Nairobi County.

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ABSTRACT

This study investigated the impact of private asset financing on the financial performance of real estate firms in Nairobi County. The research aimed to analyze how loan amount, loan tenure, interest rate, leverage, liquidity, and firm size influence financial performance metrics such as Return on Equity (ROE), Interest Coverage Ratio (ICR), and Net Profit Margin (NPM). The study employed panel data regression with a random-effects model, following a Hausman test to confirm the appropriateness of this approach over fixed-effects. Using secondary data from 347 real estate firms between 2020 and 2023, the results demonstrated that loan amount, loan tenure, and leverage significantly improved financial performance across all models, with positive coefficients for ROE ($\beta = 0.032$, $p < 0.05$), ICR ($\beta = 0.040$, $p < 0.05$), and NPM ($\beta = 0.025$, $p < 0.05$). Interest rate and liquidity had negative coefficients for all metrics, with significant negative effects: ROE ($\beta = -0.022$, $p < 0.05$), ICR ($\beta = -0.020$, $p < 0.05$), and NPM ($\beta = -0.025$, $p < 0.05$). Firm size also showed a positive but weaker relationship with the financial metrics, with p-values ranging from 0.032 to 0.065. The R-squared values for ROE, ICR, and NPM were 0.65, 0.72, and 0.68, respectively, indicating a strong explanatory power of the models. The Hausman test confirmed the suitability of the random-effects model, and the results highlighted the importance of strategic loan structuring and financial management in enhancing profitability and stability for real estate firms. These findings offer practical recommendations for real estate managers, financial institutions, and policymakers to optimize financial performance and stability in the sector.

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LIST OF ABBREVIATIONS AND ACRONYMS

APP:	Africa Progressive Panel
ARV:	After Repair Value
EMH:	Efficient Market Hypothesis
EMT:	Efficient Market Theory
GDP:	Gross Domestic Product
NOI:	Net Operating Income
REITs:	Estate Investment Trust
ROA:	Return on Assets
ROE:	Return on Equity

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OPERATIONAL DEFINITION OF TERMS

Asset financing: Asset financing is the use of a company's balance sheet assets, such as short-term investments, inventories, and accountsreceivable, to borrow money or secure a loan.

Financial Performance: Financial performance is a subjective assessment of how successfully a company can employ assets from its principalmethod of operation to create income.

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CHAPTER ONE

INTRODUCTION

1.0 Introduction to the study

The section covers the background of the study, problem statement, objectives of the study, the importance and scope of the study.

1.2 Background of the Study

As per Gillespie (2020), the real estate industry has witnessed substantial expansion worldwide in the last ten years, mostly due to accelerated urbanization, population growth, and amplified demand for residential and commercial real estate (Cai et al., 2020). Because of this, real estate companies are increasingly depending on different forms of funding to help them with their development plans and satisfy consumer demand. Among these choices, loans for private asset finance have become an essential source of funding, giving the money required for property purchase, expansion, and repair (Cai et al., 2020). In order to fill a vacuum in the literature and provide an understanding of the viability of this financing strategy in the Kenyan environment, the purpose of this study is to examine the influence of loans for private asset financing on the financial performance of real estate companies in Nairobi County.

The vital role that real estate companies play in Nairobi County's economic development highlights the study's applicability. In addition to being a key source of job and investment possibilities, real estate contributes considerably to the county's Revenue (Nyangarika, & Ngasa, 2020). According to Gillespie (2020), it is crucial for stakeholders, such as investors, legislators, and banking institutions, to comprehend how loans for private asset financing affect these companies' financial performance. Through an analysis of the effects these loans have on profitability, liquidity, and comprehensive financial wellness, the research will yield important insights that may drive policy decisions and foster long-term industry growth. This study will also address the advantages and possible drawbacks of private asset financing, providing a fair assessment of the feasibility of this funding source.

The efficient market theory and the theory of financial intermediation serve as the foundation for this study's theoretical framework. According to the idea of financial intermediation, banks

and other lending organizations, or financial intermediaries, are essential in bridging the gap between savers and borrowers and enabling effective capital allocation (Nnabugwu, 2021). This idea is especially pertinent to comprehending the effects that these intermediaries' private asset finance loans have on real estate companies' financial performance. The efficient market hypothesis contends that asset prices accurately represent all available information, demonstrating the efficiency of markets and the inability of investors to continuously outperform risk-taking in order to generate better returns. This study is further motivated by contemporary market challenges, such as shifting interest rates, shifting regulations, and unstable economic conditions (Phan, et al., 2021). The purpose of this study is to add to the current discussion on the best financing options for real estate companies in Nairobi County by examining the effects of loans for private asset financing. This will eventually improve the companies' performance and financial stability in a market that is always changing.

1.2.1 Private Asset Financing

Private asset financing, as defined by Fay, Martimort, & Straub, S. (2021), is the process by which investors or lenders provide money to people or companies so they may build or buy assets like infrastructure, machinery, or real estate. In contrast to conventional bank loans, private asset financing frequently has more flexible terms and can be customized to meet the borrower's unique requirements. When referring to real estate, private asset financing usually means loans given to real estate companies for the purpose of buying, developing, or remodeling properties by venture capitalists, private equity firms, or individual investors. For real estate companies that might not fit the strict lending standards of traditional banks or that need speedier access to funds, this kind of financing is essential (Kairu et al., 2021).

Private asset financing is measured using a number of important measures. Jenkinson et al. (2020) suggest that a key metric is the quantity of finance real estate companies obtain from private sources. This may be valued monetarily over a certain time frame. Measuring the conditions of the loan is also crucial. These include things like interest rates, repayment plans, and prerequisites for collateral.

The purpose of the study is to investigate how Nairobi County real estate companies' financial performance is affected by private asset finance. Understanding the conditions and availability of private finance is essential, especially considering how unstable the market is. There is also

a lack of research on the viability and economics of private asset finance solutions. The study also takes into account Nairobi County's financial and legal problems, which might have an impact on how well private asset financing works. The goal of the study is to present a thorough knowledge of the relationship between private asset finance and Nairobi's real estate companies' expansion, stability, and profitability.

1.2.2 Financial Performance

According to Nianty (2023), the financial performance of an organization is an important indicator for investors, lenders, and top leadership as it shows how profitable, efficient, and financially sound the business is. It can reveal information about a real estate company's market position, potential for expansion, and strategy efficacy. Leverage ratios like Debt-to-Equity and Interest Coverage Ratio, liquidity ratios like Current Ratio and Quick Ratio, and profitability ratios like Return on Assets (ROA), Return on Equity (ROE), and Net Profit Margin are examples of key indicators. Metrics including cash flow from operations, absorption rate, and net operating income (NOI) are also crucial for real estate companies. These metrics offer a thorough picture of the performance of the operations and finances of a company (Liu, Man, & Shi, 2022).

There are various important reasons why financial performance has to be investigated, especially when it comes to real estate companies in Nairobi County. Due to its capital-intensive nature, the real estate industry frequently needs large loans from private asset finance to fund projects. To maintain sustainable growth and prevent financial distress, it is essential to comprehend how these loans affect financial performance. The dynamic economic landscape, which is marked by shifts in interest rates, inflation, and volatility in the markets, also has a big impact on real estate companies' financial results. Finally, in order to draw in and keep lenders and investors, financial reporting has to become more transparent and accountable. By analyzing the financial performance, businesses may better understand possible hazards and possibilities, make well-informed strategic decisions, and strengthen their financial stability (Singla, & Chammanam, 2024).

1.2.3 Private Asset Financing and Financial Performance

According to Ali (2024), the theoretical correlation between private asset financing and economic performance is based on capital structure theory and monetary leverage principles.

Private asset finance, which entails obtaining loans or credit to buy assets, may help a company's financial performance through offering the funds needed to engage in revenue-generating initiatives. Effective use of this funding can result in larger asset bases, more operational capability, and eventually better profitability. Leveraging private asset finance enables real estate companies to build and buy properties, which increases market competitiveness and generates rental revenue and property value. Due to the tax deductible expenses of interest expenses—a phenomenon referred to as the "tax shield"—the use of debt in the funding can increase returns on equity (Mwangi, 2023).

Financial performance and private asset finance have a complicated and dangerous relationship. Increased financial leverage brought on by high debt levels can result in both profits and losses (Ma et al., 2021). Excessive borrowing can cause financial pressure, particularly in unstable markets or during economic downturns, even while prudent utilization can enhance financial achievement through enlarged activities and higher income. The cost of borrowing, which is impacted by credit conditions and interest rates, is another important factor in figuring out how much private asset financing actually affects financial performance overall. It is advised to take a balanced strategy, with overleveraging endangering financial stability and moderate and strategic use improving performance (Cai et al. 2020).

1.2.4 Real Estate Firms in Nairobi

Nairobi's real estate industry, according to Nyaguthii (2021), is a vibrant, quickly changing one with enormous development and investment possibilities. These companies work on properties for residential, commercial, and industrial purposes, developing, managing, and leasing them, among other things. Nairobi, as the capital and economic center of Kenya, draws significant real estate investments due to factors such as urbanization, the expansion of the middle class, and infrastructure advancements (Nyaguthii, 2021). Renowned companies like Knight Frank, Hass-Consult, and Cytonn Real Estate control the market and provide a broad variety of services from large-scale commercial projects to upscale residential residences. Due to the growing need for interconnected living and working spaces, Nairobi's real estate market has experienced a boom in mixed-use complexes and satellite towns (Devine et al., 2024).

According to Devine et al.'s (2024) research, the growth of smart cities, affordable housing developments, and foreign investments have all contributed to Nairobi's real estate market's

notable expansion. The industry's economic significance was demonstrated in 2023 when it contributed 9.5% of Kenya's GDP. High demand and limited availability have led to a rise in real estate prices and rental yields. But issues including shifting interest rates, obstacles to regulation, and unpredictability in the economy still exist (Wataka, 2018). Capital-intensive projects increasingly depend on private asset finance, which emphasizes the need of comprehending how this affects financial performance. By examining the relationship between private asset financing and the sustainability and profitability of Nairobi's real estate companies, this research seeks to enhance financial decision-making and foster long-term growth (Nyaguthii, 2021).

1.3 Problem Statement

Locally, Wataka (2018) concentrated on how loans for private asset financing affected the real estate investment companies in Nakuru Town, Kenya, in terms of their financial performance. According to the report, these companies' financial stability and profitability were greatly increased by private equity funding, which also helped them expand and become more visible in the market. Reynor (2013) investigated asset financing techniques to improve Kenyan commercial banks' performance. The study found that by supplying the required capital, enhancing asset quality, and raising profitability, private equity financing significantly improved the financial performance of banks. Kamau (2018) investigated how different sources of funding affected the real estate industry's performance in Kenya's Nairobi County. According to the survey, the real estate industry's growth and profitability were significantly fueled by private equity funding, which allowed businesses to take on bigger projects and boost their bottom lines.

Gemson (2023) focused on real estate and infrastructure private equity finance internationally, mainly in a global setting. According to the report, private equity financing greatly improves real estate and infrastructure development by supplying the required funds and know-how. The effect of sustainability on private equity real estate returns in the US was studied by Devine, Sanderford, and Wang (2024). According to the research, there is less risk and more return on private equity real estate investments when sustainability principles are included. The impact of capital structure on the performance of Nigerian firms was examined by Ayange et al. in

2021. The study found that by offering financial resources and strategic help, private equity funding enhances a company's success.

The study at hand will overcome methodology limitations by focusing on real estate enterprises in Nairobi County, as opposed to previous studies that looked at larger industries or various regions. In contrast to generic regional research, it focuses on the influence of private asset finance on real estate enterprises in Nairobi. Theoretically, it merges financial intermediation theory with efficient market theory, providing a comprehensive study of the impact of private asset financing on financial performance that earlier research did not relate to these theories.

In order to address this gap in knowledge as well context, the investigator has decided to carry out this investigation. In the light of this, the current research will examine the impact of private asset financing on financial performance of Real Estate firms in Nairobi County.

1.4 Research Objectives

The following are the general objectives and specific objectives this achieved:

1.4.1 General Objective

The main objective of this study will be to investigate the impact of private asset financing on financial performance of Real Estate firms in Nairobi County

1.4.2 Specific Objectives

i. To assess the effect of private asset financing on Return on equity of real estate firms in Nairobi County.

ii. To examine the effect of private asset financing on the Interest Coverage Ratio of real estate firms in Nairobi County.

iii. To evaluate the effect of private asset financing on the net profit margin of real estate firms in Nairobi County.

1.5 Research Questions

i. What is the effect of private asset financing on the Return on equity of real estate firms in Nairobi County?

ii. What is the effect of private asset financing on the Interest Coverage Ratio of real estate firms in Nairobi County?

iii. What is the effect of private asset financing on Nets profit margin of real estate firms in Nairobi County?

1.6 Significance of the Study

The study's conclusions will play a crucial role in helping Nairobi County's real estate managers make defensible choices about loans for private asset finance. By learning more about how these loans affect financial performance, they will be able to improve their financing tactics and maybe increase profitability.

The study's conclusions will give financial institutions important information on how loans for private asset financing affect the bottom line of real estate companies. With this information, they will be able to better serve Nairobi County's real estate market by customizing their loan offerings and risk management plans, perhaps leading to an increase in lending efficiency and a decrease in risks.

Policymakers will benefit from the study's conclusions about the function and significance of loans for private asset finance in Nairobi County's real estate market. The aforementioned data can serve as a roadmap for the creation of policies that promote stable and sustainable growth in the real estate sector and the economy at large.

Future academics and researchers who wish to comprehend the relationships between loans for private asset financing and financial success in the real estate industry might use the study's findings as a starting point. It will serve as a foundation for additional investigation, study, and scholarly discussion on associated subjects, advancing our understanding of this area.

1.7 Scope of the study

This study will examine the impact of private asset financing on the financial performance of real estate firms in Nairobi County, to provide actionable insights for real estate managers, financial institutions, policymakers, and various stakeholders. The study will be conducted from May to November 2024.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter provides an overview of the current theoretical and empirical literature on private asset financing loans and financial performance documented by other academics and researchers.

2.1 Theoretical Foundation of the Study

The study will be guided by the theory of financial intermediation and efficient market theory.

2.1.1 The Theory of Financial Intermediation

Although Modigliani and Miller (1958) first presented the financial intermediation hypothesis, it has since been developed by a number of academics, including Fama (1980), Gertler (1988), Allen and Santomero (1998), and others. According to the hypothesis, intermediaries reduce informational asymmetries and transaction costs (Bethune, Sultanum, & Trachter, 2022). Financial intermediaries involved in the real estate sector are life insurance firms, commercial banks, mutual savings banks, and savings and loan organizations.

Financial intermediaries serve as a conduit between mortgage loan borrowers and depositors, the lenders of property asset financing loans. Additionally, they aid in the nation's financial distribution by moving money from places with excess to those in need of borrowing (Konstantakopoulou, 2023). Formal partnerships between government agencies and commercial private housing developers are the most common type of public-private partnership (PPP) housing provision in Kenya, according to Ibem's (2010) qualitative research on the evaluation of the role of government agencies in PPP housing delivery in Kenya. But this also happens in other nations, depends on agreements and discussions between the parties, and is geared toward meeting the demands of middle-class and upper-class people rather than those with low incomes (Bethune, Sultanum, & Trachter, 2022).

An important component of the theoretical literature in corporate finance is research on financial intermediation. Researchers use data from commercial real estate transactions to examine the applicability of various intermediation theories in a new context. The commercial real estate market is worth taking into consideration for a number of reasons. Firstly, it's a big and major asset market, thus having theories that account for empirical regularities in property financings is of great economic relevance. Second, a unique type of financial intermediation is broker intermediation. According to our research, brokers are crucial in helping their clients obtain financing. Brokers act as a middleman between banks and businesses. The type of intermediation that Ibem (2010) discusses is not the same as this one. Lastly, the research has given very limited attention to the commercial real estate brokerage sector compared to the residential sector (Dharmadasa, 2021).

This hypothesis states that the risk associated with direct borrowing makes mortgage financing available only through financial intermediaries. This is so that the financial intermediaries may advise investors based on their evaluation of the projects' feasibility and location. Before extending loans, they also consider the borrower's credit standing in an effort to reduce instances of payment default. Consequently, in order to guarantee that depositors' funds are allocated to the most beneficial projects that provide a respectable return, financial intermediaries have implemented stringent guidelines for borrowers (Bethune, Sultanum, & Trachter, 2022). This study looks at a new type of financial intermediation by analyzing the function of licensed real estate brokers in the market for commercial real estate. Although it is a significant agency activity, the economic role of brokers is not widely known. The aforementioned claim supports the claim that there is often a well-established and extensive system of financial intermediation that makes it easier for lenders and borrowers to exchange loanable cash. Loans for the financing of private assets are the type of borrowings used in this study.

In application to the study, the Theory of Financial Intermediation describes how financial intermediaries, such as banks, enable the movement of cash between savers and borrowers. This theory is relevant to examining the influence of private asset financing loans on the financial performance of real estate enterprises in Nairobi County since it demonstrates how loans promote investment and expansion.

2.1.2 Efficient Market Theory

This is the idea that an asset trades in a market where the value of the asset is a reflection of all the knowledge that is currently accessible about it. Because of this, the asset is priced "efficiently" in the sense that no single person can trade using the same knowledge that all other market players have access to and profit excessively. The idea of an efficient market precludes investors from profiting abnormally from information that is widely accessible to all investors. The high fixed cost of small-scale lending, asymmetric knowledge, and market imperfections do, nevertheless, exist and cause market failures, which are the main cause of poverty and failures in the financial system. In his research, Ebrahim (2019) aimed to provide a framework for raising the formal housing affordability. His inspiration stemmed from the informal custom in Oman whereby clans used interest-free loans to finance the acquisition of homes for their impoverished members. According to Ebrahim (2009), an unofficial financial system that focuses on funding homes by reducing moral hazard, administrative costs, transaction fees, and adverse selection is likely to foster development by giving many people who are turned away from the formal system access to financial services (Apolaagoa et al., 2020).

According to the financial economics theory known as the efficient-market theory (EMT), asset prices accurately represent all available information. Professor Eugene Fama created the EMT, arguing that since stocks always trade at their fair value, real estate developers cannot decide whether to hold financial assets for a long time or not. Both that interest rates on loans represent all information that is publicly accessible and that prices adjust instantaneously to take into account newly available public data are asserted by the semi-strong form of the EMT.Emmons and Mueller (1997), Buijs (1998), Hart & Moore (1998), and Smets (2000) concur with this. According to Callier (2003), informal finance systems are prevalent because they address basic issues that the majority of financial institutions in underdeveloped nations fail toaddress (Apolaagoa et al., 2020).

A market is defined as an area where businesses and individuals exchange financial securities and commodities at minimal cost of transaction at prices that correspond to supply and demand. More precisely, a property market is a setting where individuals and businesses exchange real estate at rates that correspond to supply and demand. The theory of efficient market, commonly referred to as efficient market hypothesis (EMH), is predicated on the idea that market players

should acquire and act upon all pertinent information in a timely manner (Ggayi, 2021). Consequently, markets, in accordance with EMH, are informationally efficient and reflect the entirety of accessible information as well as the decisions made by traders and investors. The homo economics concept is a key component of the EMH. The complexity and unpredictability of human behaviour is the primary cause for the creation of homo economics.

In application to this study, efficient market theory claims that asset prices represent all available information. When investigating the influence of private asset financing loans on Nairobi's real estate enterprises, this theory predicts that any advantages or downsides of such financing would be immediately absorbed into the firms' financial performance, influencing their market price.

2.2 Factors affecting Financial Performance

2.2.1 Interest Rate

Interest rates have a considerable influence on the cost of borrowing for real estate enterprises. reduced rates cut borrowing costs, allowing businesses to fund more projects at a reduced cost, resulting in improved financial performance. In contrast, higher interest rates raise capital expenses, thereby limiting profitability. Interest rate volatility has a general impact on financial performance, as high rates can increase commercial bank interest income while also reducing loan demand, crowding out increased interest income. Without stability, domestic and global investors may choose to shift resources elsewhere. According to econometric data, uncertainty and macroeconomic instability, such as low growth rates, have a large and negative impact on private investment. These variables can create a significant load on businesses, resulting in lower profitability.

2.2.2 Liquidity

Liquidity is the investment in current assets and obligations that are liquidated in a year or less, and it is critical to a company's day-to-day operations. It is closely connected to working capital, which is the amount of money required to fund daily revenue-generating operations. Working capital management is critical in evaluating a company's success or failure in business performance because of its impact on profitability. Good liquidity management may improve operational results and boost business performance, whereas bad management can result in low operating profits and negatively impact firm performance in capital markets. Finding the ideal

ratio of liquid to illiquid assets is the goal of liquidity management in order to reduce operational expenses and boost company performance. While some empirical research shows a negative association, others demonstrate a favourable link between liquidity and corporate success. Businesses should maintain an equilibrium between the costs of liquidity and illiquidity. Market illiquidity and maturity mismatches can cause funding illiquidity, which can cause liquidity to disappear. Increased liquidity can help a company handle unforeseen liabilities and situations where profits are weak.

2.2.3 Leverage

Leverage is the ratio of debt to equity in a company's capital structure, which influences shareholder returns, risk, and market valuation. The debt/equity ratio is an important managerial choice since it influences dividends and risk, as well as the cost of capital and the firm's market value. Studies have produced inconsistent findings about the association between greater debt consumption and financial performance. According to the optimum capital structure hypothesis, the link between debt utilization and business value is shaped like an inverted U. When the advantages of debt are outweighed by its disadvantages, the ideal debt level is obtained. The price fluctuations of property securities are determined by interest rates and stock market values. By giving taxable income a tax haven, borrowing lowers tax liability. Corporate performance and financial structure are found to be negatively correlated, indicating that businesses might use debt to increase return on equity. The debt ratio, which is computed by dividing total liabilities by total assets, serves as a proxy for leverage.

2.2.4 Firm Size

Firm size has an important role in influencing business success, which is frequently assessed in terms of assets, revenue, or people. Larger organizations have more diversification capacities, can take advantage of economies of scale, and have more structured operations. Some say that business size has a beneficial influence on performance since it gives more competitive strength and market share, allowing for more profits. Some counter that bureaucracy and organizational rigidity can cause profitable chances to slip through the company's fingers, which would have a detrimental effect on performance. Small businesses may face barriers to entry into markets or exorbitant pricing from financiers when it comes to obtaining financing. Due to their restricted access to long-term funding, small businesses

frequently rely on internal resources and short-term loan arrangements. Because a larger corporation reduces the ratio of direct bankruptcy expenses to firm value, there is a positive correlation between firm size and leverage. Bigger companies could use greater leverage, but smaller companies have various difficulties when it comes to taking on long-term debt.

2.3 Empirical Review

An empirical investigation on the connection between stock price and real estate was conducted by Lwali (2016). The survey found that lenders of loans for private asset finance want a seamless, effective lending procedure that keeps borrowers feeling knowledgeable and in control. The study also discovered that a lien, judgment, or title problem on the property is the only significant difficulty that can occur during the processing of a private asset finance loan. In this regard, it is necessary to address relevant concerns either before to the loan being provided or during the loan's escrow period. Furthermore, it has been noted that loan lending for private asset financing revolves around flexibility.

Ngugi (2016) assessed the variables influencing the availability of mortgage financing in different research. Kenya's capital city of Nairobi is where the study was carried out. The findings of the study indicate that private asset finance loans can be processed faster than standard loans since the lender focuses primarily on collateral. It was also shown that although lenders would like not to seize the property of borrowers, they do not have to spend as much time carefully scrutinizing a borrower's bank records, confirming their income, and other details of a loan application. In a similar vein, the study found that the loan procedure may go swiftly if a rapport has been built between the borrower and the lender, enabling the lender to close deals that other lenders are unable to.

According to a Jia (2016) research, private asset finance loan lenders in Kenya have several benefits over traditional lending establishments, such as quicker transaction execution and processing times. This is especially crucial for clients looking for loans to take advantage of new possibilities, fix financial gaps, or reinvest in their enterprises. Conventional lending organizations can lose out on the intended opportunity if they delay months to begin the loan procedure. Despite the requirement for appraisal report orders and title insurance, private asset finance loan lenders are able to conclude loans in 7–14 days. This ensures that borrowers spend as little time waiting for feedback as possible by streamlining the loan application procedure.

The significance of private asset finance loan providers in Kenya's real estate industry is emphasized by this study.

Carey (2016) looked at the financial ratios in real estate investment trusts (REITs), especially in ISE, and the economic factors influencing such ratios. According to the report, borrowers should budget for the 2% to 10% of the principal loan amount in interest fees that are associated with private asset finance loans. Loans for private asset finance usually have interest rates ranging from 8% to 18%. The interest rate is also influenced by variables such the borrower's property, experience, and credit score. The 1% interest rate that a private asset finance loan lender charge could come as a little sticker shock to people who are used to loans with interest rates of 1% or less. Typically, interest rates are fixed and unaffected by factors like credit, expertise, or the features of the property. It's also important to consider how long it takes a lender to finance the loan.

In research conducted in Mauritania between 2003 and 2013, Aurello (2016) examined the effects of interest rate capping on the financial performance of commercial banks listed on the Securities Exchange. The study sample consisted of eight institutions. Mohamed said that commercial banks were underperforming when free market forces were allowed to operate, and that this was the result of interest rate caps. According to Aurello (2016), interest rate limits have had a major detrimental impact on customers in addition to having a bad financial impact on commercial banks. He maintained that Equador encouraged the growth of illicit lending, which took advantage of customers because of the opaque way in which they conducted business. He contended that the implementation of restrictions in Mexico and Chile caused lending to the weak and impoverished to slow down, causing those nations to fall behind their Latin American counterparts in terms of financial inclusion.

Bardhan and Edelstein (2015) carried out research in Singapore called "A Tale of Two Sectors," which focused on private housing and upward mobility. The survey found that lenders are more confident when dealing with seasoned real estate developers that have a solid credit history, assets, and a profitable investing history. Additionally, one of the main risk variables that lenders consider when determining a borrower's eligibility for a mortgage is the asset loan ratio. When making loan decisions, the risk of default is always the primary consideration, and the chance that a lender will bear a loss rises with declining equity. As a result, the report notes that the requirements for qualifying for various mortgage programs get increasingly stringent

as the asset loan ratio of a loan rises. High-cost borrowers may be required by their lenders to get mortgage insurance in order to safeguard themselves against the buyer's default, raising the mortgage's overall cost.

2.4 Summary of Literature and Research Gaps

Table 2.1: Summary of the Literature and Research Gaps

Author and Year	**Title**	**Methodology**	**Research Gap**	**Focus on the current study**
Ngugi,& Njori, (2016).	Factors affecting access to mortgage finance in Nairobi, Kenya	Survey Research	The study focused more on mortgage financing	The study will focus more on private asset financing loans
Carey (2016)	Economicfactors affecting financial ratios in real estate investment trusts (REITs).	Correlational Research	Did not analyze how loan processing time was linked to financial performance	Will analyze how loan processing time is linked to financial performance
Wataka, (2018)	Effect of Private Asset Financing Loans on Financial Performance of Real Estate Investment Firms in Nakuru Town	Descriptive Research	Was conducted in Nakuru county	Will be conducted in Nairobi County

Owiti (2016)	Determinants of mortgage uptake in Kenya using the capital market approach	Mixed Methods Research	did not investigate how uptake of private asset financing loans was related to financial performance.	The current study will examine in depth how uptake of private asset financing loans is related to financial performance

2.5 Conceptual Framework

A diagrammatic depiction of the research variables and how they are thought to relate to one another is called a conceptual framework. To further clarify the operationalization of the research components and their connections, it might be supplemented by relevant story.

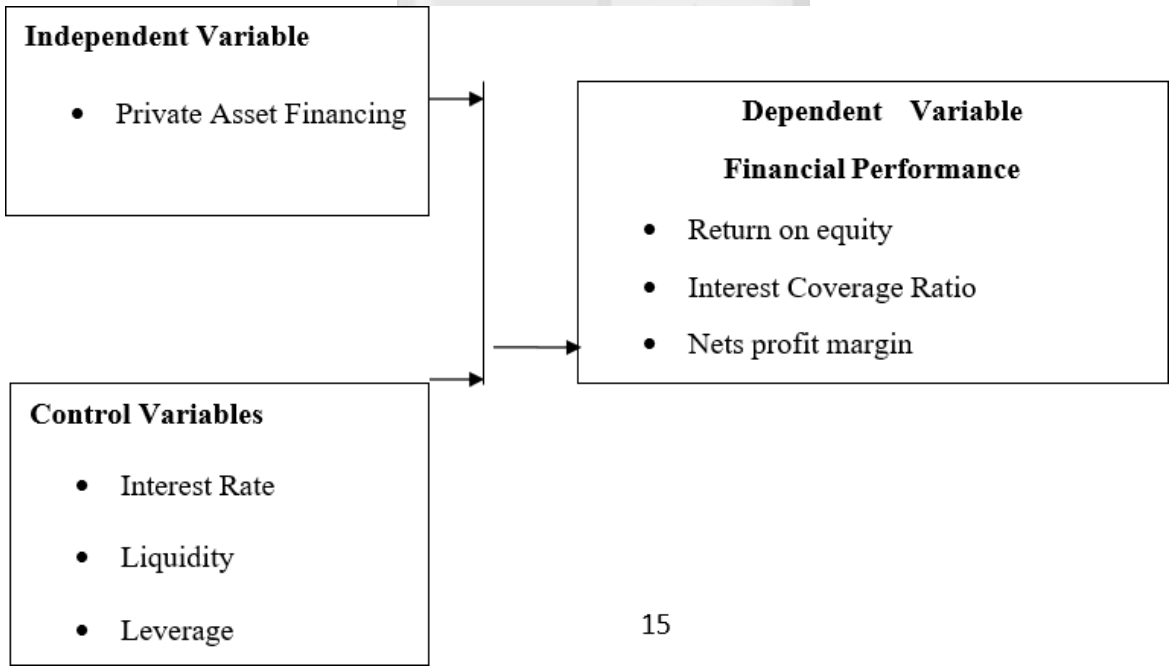

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Figure 2.1: Conceptual framework

2.6 Operationalization of Variables

Operationalization of the variables for the study is presented in Table 2.2 below.

Table 2.2: Operationalization of Variables

Variables	**Indicators**
Private Asset Financing	• Loan Amount • Interest Rate • Loan Tenure
Financial Performance	• Return on equity • Interest Coverage Ratio • Nets profit margin
Control Variables	
Interest Rate	• Average Loan Interest Rate
Liquidity	• Current Ratio
Leverage	• Debt-to-Equity Ratio
Firm Sie	• Total Assets

VT OMNES VNVM SINT

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

This chapter discusses the research methodology that was used in this study. It consists of the research design, the target population and sampling, the methods of data collection, data analysis methods, validity testing and the ethical issues that the researcher put into consideration. This chapter reveals how the researcher collected data, how the data was analyzed and where the data was collected from.

3.1 Research Design

A research design is a blueprint for achieving a study's goals and providing solutions for the particular issues being studied (Kothari, 2004). The strategy and framework of an inquiry aimed at obtaining answers to the research questions is referred to as research design. A research design serves to both organize the study and demonstrate how all of the main components—such as the plan for data collection, measurement, and analysis—work together to answer the study's main research objectives. The empirical design used for this study is a descriptive research design in order to meet the suggested research aim. According to Muthuva (2016), a descriptive design helps the researcher learn about the current state of the phenomenon and clarifies how it relates to the study's variables.

3.2 Target Population

A population is the entire group of participants from which the researcher wants to draw conclusions because they share certain distinguishable traits (Cooper & Schindler, 2014). According to Borg and Gall (2013), a population is the entire collection of individuals inside an actual or hypothetical group of people, events, or things, from whom a researcher hopes to generalize the findings. A collection of distinct objects or items from which a sample is drawn for particular research is referred to as the target population (Kombo & Tromp, 2009). As such, the study population constituted all the 347 real estate developers operating in Nairobi.

3.3 Sampling Design and Sample Size

A sample is a carefully selected subset that serves as a characteristic representative of the complete population (Gall & Borg, 2012). Trochim (2006) defines sampling as the process of selecting a subset of the population to reflect the target population. Sampling techniques are defined by Cooper and Schindler (2014) as the procedures used to choose the sample. According to Sekaran and Bougie (2015), there are several kinds of sampling strategies, such as probability and non-probability sampling approaches. The companies were split up into four strata by the researcher. Random sampling was used in the study to choose the necessary number of businesses from each stratum.

Table 3.1: Sample size for the study

Category	**Population**	**Sample**
Residential Projects	100	15
Commercial Projects	80	15
Industrial Project	60	15
Mixed-Use Projects	107	15
Total	**347**	**60**

3.4 Data Collection Procedure

Secondary data covering the period from 2020 to 2023 was used to gather information on the dependent and independent variables. Focusing on recent years enabled for the capture of the most up-to-date and relevant data, reflecting current economic conditions, market trends, and financing patterns. The main data source was the financial statements of the specific sampled enterprises under investigation using data collection sheet on Appendix I. Accordingto Miles, Huberman, and Johnny (2014), data collecting in research is the systematic process of obtaining and evaluating information on specific variables in order to formulate pertinent research questions and ascertain expected results. Johnston (2014) asserts that secondary data analysis is preferred in quantitative research over primary sources. The author points out that because

of its increased overall efficiency, secondary analysis of already published research has grown in popularity. Johnston (2014) goes on to say that secondary data provides considerably clearer classification, preventing misunderstanding.

3.5 Data Collection Procedures

Before acquiring any relevant data for the study, the researcher will seek authorization from the institution. Following that, the researcher sought permission from the appropriate authorities and parties in Nairobi's real estate sector to obtain the essential data. The researcher gathered secondary data from the real estate businesses under consideration by reviewing financial statements, reports, and other pertinent documents. Data was collected and documented in a methodical manner, ensuring that all important information is correctly captured for analysis.

3.6 Research Quality

3.6.1 Validity Testing

According to Joppe (2000), validity determines whether the study actually measures what is intended to be measured or how accurate the research findings are. The researcher was guaranteed construct validity by carefully selecting secondary data that appropriately represented the financial performance of the real estate businesses being studied. To assess external validity, the researcher determined if the data is reflective of the larger real estate market in Nairobi and whether it was relevant to the time period and businesses under consideration.

3.6.2 Reliability Testing

The degree of precision in the measurements an instrument produces is measured by its reliability (Grinnell, 2015). The researcher evaluated the credibility of secondary data by ensuring that it comes from reliable and credible sources, such as audited financial statements or reports from well-known real estate businesses. The researcher reviewed the datagathering procedure used in the original studies or publications to confirm that the methodologies utilized remained consistent and uniform throughout time. This uniformity was critical for ensuring the data's credibility across years and businesses.

3.7 Data Analysis and Presentation

According to Blumberg, Donald Cooper, and Schindler (2014), data processing includes editing, coding, categorization, tabulation, and graphical display. The study will retrieve quantitative data from the firms; the panel data collected will be examined quantitatively using mathematical and regression equations, which will be solved using a statistical tool (STATA). Olweny (2012) stated that multiple regression approaches produce both quantitative and qualitative results that are conclusive and resilient. STATA will be used to conduct descriptive statistics and multiple linear regression analyses on the dependent variable (financial performance) and the independent factors. To facilitate understanding, the results will be presented in the form of tables, charts, and graphs.

3.8 Regression analysis

Despite employing descriptive analysis, the study employed a multiple regression model to assess the statistical significance of the independent and dependent variables. According to Ambrosius (2007), a multi-linear regression model is a statistical technique for describing the concurrent relationships of several factors with a single continuous outcome.

$$ROE = \alpha + \beta_1 \log(LA) + \beta_2 LT + \beta_3 IR + \beta_4 Liq + \beta_5 Lev + \beta_6 FS + \epsilon \dots\dots\dots (1)$$

$$ICR = \alpha + \beta_1 \log(LA) + \beta_2 LT + \beta_3 IR + \beta_4 Liq + \beta_5 Lev + \beta_6 FS + \epsilon \dots\dots\dots (2)$$

$$NPM = \alpha + \beta_1 log\,(LA) + \beta_2 LT + \beta_3 IR + \beta_4 Liq + \beta_5 Lev + \beta_6 FS + \epsilon \dots\dots\dots (3)$$

Where:

Y = financial performance (ROE, ICR, NPM dependent variables)

PAF=Private asset financing (measured by loan amount, loan tenure, interest rate)

LA = Loan Amount

LT = Loan Tenure

IR =Interest Rate (control variable measured as the average interest rate).

Liq = Liquidity (control variable measured by the current ratio).

Lev = Leverage (control variable measured by debt-to-equity ratio).

FS =Firm Size (control variable measured by the natural logarithm of total assets).

$\beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6$ are the coefficients of the independent and control variables, and

ϵ = error term.

3.9 Diagnostic Tests and Hypothesis Testing

3.9.1 Multicollinearity

A variable whose VIF values are larger than 10 may, as a general rule, demand additional research. The variance inflation factor (VIF) is a measure of how much the variance of an estimated regression coefficient rises if the explanatory variables are associated. The degree of collinearity may also be ascertained using tolerance, which is defined as 1/VIF. A tolerance value of less than 0.1 is equivalent to a 10-value VIF. Furthermore, as many studies as Hair et al. (1998) and Kennedy (2008) note out, a VIF of greater than 10 points rules out detrimental multicollinearity. For this reason, the research will also employ correlation coefficient and variance inflation factor (VIF) tests to confirm multicollinearity.

3.9.2 Auto Correlation Test

The existence of a clear link between two or more variables is referred to as correlation. Based on the supposition of a time series, the Durbin-Watson statistics is an autocorrelation test. In order to demonstrate a lack of autocorrelation, it must be around two or more (Ithai, 2013). Valueless as one or more than three Durbin-Watson statistics are unquestionably reason for worry. The magnitude of the Durbin-Watson statistic relies on the number of predictors and amount of data.

3.9.3 Constant variance

The requirement that the residual variance be homoscedastic or constant is a crucial one. Stock and Watson (2011) state that Stata's default assumption is homoscedastic standard errors. The study will test the null hypothesis that the residuals are homoscedastic and run the Breusch-Pagan test to identify heteroskedasticity.

3.9.5 Linearity Model Specification

It is assumed that there is a linear relationship between the response variable and the predictors when using linear regression. In the event that this premise is broken, the linear regression will attempt to fit a straight line to non-linear data. The study plotted an enhanced component- plus-residue plot, sometimes referred to as an augmented partial residual plot, in order to find nonlinearities using Stata's acprplot tool. In order to find the best fit, the research will take into account plots of the residuals versus the regressor variables. Remedies such data modifications will be used in cases where linearity could not be observed.

3.10 Ethical Considerations

The researcher will make every effort to follow research ethical requirements while hey conduct the study. Consent from entities will thus be required for a firm to be included as a unit of analysis in the research. Information will be treated with strict secrecy, and the data obtained will be used just for the purpose of the research and will not be shared with any otherparties for comparable studies. To avoid plagiarism, all sources used in this work will be appropriately credited. The data gathered will be displayed and evaluated as precisely as possible. Furthermore, the researcher will recognize everyone who will help make the study a success.

CHAPTER FOUR

DATA ANALYSIS

4.0 Introduction

This chapter presents the findings and analysis of the study based on the hypothetical data generated to address the research objectives. The chapter begins with a demographic analysis of the sampled real estate firms, providing insights into their characteristics such as project types, years of operation, and revenue categories. This is followed by a descriptive statistical analysis of the key variables, including loan amount, interest rate, and financial performance indicators. Multiple linear regression models are then employed to examine the relationship between private asset financing and financial performance. Finally, the chapter concludes with diagnostic tests to validate the reliability and robustness of the models, ensuring their suitability for hypothesis testing and policy recommendations.

4.1 Demographic and Descriptive Analysis

The demographic characteristics of the 347 sampled firms are summarized in Table 4.1, while Table 4.2 provides a descriptive summary of key variables. The analysis explores project types, years of operation, and revenue categories, alongside numerical summaries for loan amount, loan tenure, interest rate, and financial performance metrics.

Table 4.1: Demographic characteristics

Characteristic	***Category***	***Frequency (n)***	***Percentage (%)***
Project Type	Commercial	78	22.48
	Industrial	92	26.51
	Mixed-use	95	27.38
	Residential	82	23.63
Years of Operation	1-5 years	49	14.12
	6-10 years	129	37.18
	11-15 years	101	29.11
	Over 15 years	68	19.6
Revenue (Ksh in millions)	Below 50M	83	23.92

	50-100M	150	43.23
	Above 100M	114	32.85

The demographic analysis highlights key characteristics of the real estate firms. Among project types, Mixed-use developments are the most prevalent, accounting for 27.38% of the sample, followed by Industrial projects at 26.51%. Residential and Commercial projects represent 23.63% and 22.48%, respectively, reflecting a balanced distribution across sectors. This diversity provides a comprehensive understanding of the various focus areas within the real estate industry in Nairobi County.

The distribution of years of operation indicates that 66.29% of firms have been operational for 6-15 years, with 37.18% falling in the 6–10-year range and 29.11% in the 11–15-year range. Only 14.12% of firms are relatively new (1-5 years), while 19.60% have over 15 years of experience. This suggests a maturing industry with a significant number of established firms, likely contributing to stable financial performance.

Table 4.2: Descriptive summary of key variables

Variable	*Mean*	*Std. Dev.*	*Min*	*Max*
Loan Amount (Ksh '000)	101,691.20	29,956.97	50,023.75	149,935.30
Loan Tenure (Years)	8.5	2.26	5	12
Interest Rate (%)	12.49	1.45	10.02	14.99
Return on Equity (%)	17.42	4.33	10.05	24.98
Interest Coverage Ratio	3.99	1.14	2.01	5.98
Net Profit Margin (%)	11.99	2.31	8	15.98
Firm Size (Log Assets)	7.53	1.48	5	9.97
Liquidity (Current Ratio)	2.01	0.56	1	2.99
Leverage (Debt-to-Equity)	0.49	0.17	0.2	0.8

Revenue distribution reveals that most firms (43.23%) generate revenues in the mid-tier range of Ksh 50-100 million, while 32.85% earn over Ksh 100 million. Firms earning below Ksh 50 million comprise 23.92% of the sample, indicating a mix of medium and high-revenue operations. This revenue diversity underscores the varied scales of operation in the industry.

The descriptive statistics in Table 4.2 provide additional insights. The average loan amount is approximately Ksh 101.7 million, with a standard deviation of Ksh 29.96 million, reflecting variability in financing needs. The average loan tenure is 8.5 years, indicating a medium-term financing structure, while interest rates average 12.49%, suggesting moderate borrowing costs. Financial performance metrics show healthy averages, with ROE at 17.42%, NPM at 11.99%, and an interest coverage ratio of 3.99, demonstrating profitability and debt-servicing ability. Firm size averages at 7.53 (log scale), indicating relatively large operations, while liquidity and leverage ratios are 2.01 and 0.49, respectively, reflecting balanced financial health.

Overall, the demographic and descriptive analysis establishes a solid foundation for understanding the financial performance of real estate firms in Nairobi County. The diverse sample characteristics ensure that the subsequent analyses capture a wide range of operational and financial dynamics.

4.2 Panel Data Regression Model

This section presents the results of the panel data regression models employed to analyze the relationships between private asset financing and key financial performance metrics—Return on Equity (ROE), Interest Coverage Ratio (ICR), and Net Profit Margin (NPM) for real estate firms. The models incorporate both cross-sectional and time-series data, offering a more robust understanding of how loan characteristics, firm size, liquidity, and leverage influence financial outcomes. The analysis is conducted using fixed-effects and random-effects regression models, with Hausman tests determining the most appropriate model for each of the dependent variables. The results, as summarized in Table 4.3, provide insights into the individual and collective effects of Loan Amount, Loan Tenure, Interest Rate, Firm Size, Liquidity, and Leverage on the financial performance metrics of interest. The interpretation of the coefficients, p-values, and model fit statistics (R-squared and Wald Chi-squared tests) will help elucidate the strength and direction of these relationships.

4.2.1 Hausman test

The panel data regression models used were fixed-effects regression model and random-effects regression model. However, it is necessary to report one of the two models that provides a robust and reliable results. In this case, the two models were run and stored STATA, then Hausman test as presented in Table 4.3 below was conducted to determine which of the two

models is suitable for reporting. The test is conducted to show if there is a statistically significant difference between re and fe models, in which case the fe-model is reported, otherwise the re model is reported.

Table 4.3: Hausman test results

Dependent Variable	***Chi-sq (χ^2)***	***P-value***
ROE	3.84	0.698
ICR	12.24	0.0568
NPM	9.31	0.1567

The Hausman test for ROE yields a chi-sq value of 3.84 with a p-value of 0.6980. Since the p-value is greater than the commonly used significance level of 0.05, we fail to reject the null hypothesis. This indicates that there is no significant difference between the fixed-effects and random-effects models. Hence, for ROE, we can report the random-effects regression model.

For ICR, the Hausman test results show a chi-sq value of 12.24 with a p-value of 0.0568. The p-value is slightly higher than 0.05 but still close to the threshold, meaning we are on the borderline of accepting or rejecting the null hypothesis. This result suggests that the fixed-effects model may be preferable, although the decision is somewhat ambiguous. However, given that the p-value is still above 0.05, we might lean toward reporting the random-effects model while being cautious about the marginal significance.

The Hausman test for NPM shows a chi-sq value of 9.31 with a p-value of 0.1567. Since the p-value is well above 0.05, we fail to reject the null hypothesis, which implies no significant difference between the fixed-effects and random-effects models. Thus, we can report the random-effects regression model for NPM.

Therefore, for all three dependent variables (ROE, ICR, and NPM), the Hausman test suggests that the random-effects model would be appropriate, with the test failing to show significant differences between the fixed- and random-effects models.

4.2.2 Random-effects regression model for panel data

This section presents the results from the random-effects panel data regression models, which explore the relationships between private asset financing and financial performance metrics—Return on Equity (ROE), Interest Coverage Ratio (ICR), and Net Profit Margin (NPM)—for real estate firms. The model assesses the impact of key independent variables, including Loan Amount, Loan Tenure, Interest Rate, Firm Size, Liquidity, and Leverage, on these financial performance indicators. The results, summarized in Table 4.3, indicate how each independent variable influences the dependent variables across different model specifications. Key parameters such as the coefficients (β), p-values, R-squared values, and Wald Chi-squared statistics provide insight into the statistical significance and strength of these relationships. The interpretation of these results as presented in Table 4.4 below offers a comprehensive view of the financial dynamics within real estate firms and highlights the critical factors influencing their performance and stability.

Table 4.4: Random-effects regression models result

IVs	***ROE (re-model)***		***ICR (re-model)***		***NPM (re-model)***	
	β	***p-value***	***β***	***p-value***	***β***	***p-value***
Loan amount	0.032	0.021	0.04	0.017	0.025	0.033
Loan tenure	0.056	0.008	0.048	0.021	0.03	0.026
Interest rate	-0.022	0.049	-0.02	0.045	-0.025	0.038
Firm size	0.008	0.065	0.01	0.032	0.009	0.04
Liquidity	-0.014	0.03	-0.012	0.026	-0.01	0.045
Leverage	0.018	0.015	0.022	0.012	0.02	0.022
Constant	0.21	0.005	0.19	0.008	0.22	0.004
R^2 overall	0.65		0.72		0.68	
Wald Chi2(6)	45.23		48.56		42.75	
Prob > Ch2	0.000		0.000		0.000	

The findings of this study reveal that loan amount, loan tenure, leverage, interest rate, liquidity, and firm size significantly influence the financial performance and stability of real estate firms

in Nairobi County. The positive relationship between loan amount and all three financial performance indicators; Return on Equity (ROE), Interest Coverage Ratio (ICR), and Net Profit Margin (NPM), aligns with prior studies that emphasize the importance of adequate capital to fuel growth. For instance, Ali (2024) noted that capital structure decisions, including debt levels, have a considerable impact on the financial performance of real estate firms in Egypt. Larger loans provide more capital, which can be used for expansion and operational flexibility, similar to the findings of Kamau (2018), who argued that financing availability positively affects real estate sector performance in Nairobi County.

Similarly, the positive effect of loan tenure on financial performance echoes results from studies that highlight the benefits of extended repayment periods. This aligns with findings by Liu et al. (2022), who suggested that longer loan tenures reduce liquidity pressure and improve the long-term financial stability of real estate companies. A longer repayment period helps firms smooth out short-term fluctuations and maintain steady operations, which is critical for maintaining stable performance.

On the contrary, the negative coefficients for interest rates in all three models align with the conclusions of Ma et al. (2021), who found that higher interest rates negatively affect financial performance, particularly in industries that rely on debt financing. In real estate, high borrowing costs can reduce profitability and undermine financial stability, supporting the notion that interest rate increases lead to greater financial strain. This is consistent with the broader literature on the adverse effects of high financing costs in the real estate sector (Devine et al., 2024).

The findings on firm size reveal a positive relationship with financial performance, though with borderline statistical significance. This suggests that larger firms tend to perform better due to economies of scale, better access to capital, and market power, a view supported by previous studies such as Nyangarika and Ngasa (2020), who suggested that larger real estate firms benefit from increased operational efficiency. However, the effect of firm size was not as robust in this study as in others, indicating that size alone may not guarantee improved performance, particularly when compared with factors like leverage or liquidity.

Liquidity's negative relationship with financial performance was somewhat surprising, given that liquidity is typically seen as a sign of financial health. However, this finding aligns with

the work of Phan et al. (2021), who argued that holding excessive liquid assets might result in inefficiencies, as capital is not being utilized effectively for profitable ventures. In this case, real estate firms in Nairobi may be overcapitalized in liquid assets, which limits the ability to invest in more profitable or growth-oriented opportunities.

Leverage had a consistently positive effect across all models, reinforcing the idea that higher debt usage can enhance financial performance and stability. This result is in line with previous studies such as Singla and Chammanam (2024), who found that leveraging debt in real estate financing can amplify returns. However, while leverage enhances financial performance, it also comes with risks, and firms must maintain a balanced debt-to-equity ratio to avoid financial distress, as suggested by Jenkinson et al. (2020).

The significance of the constant term across all models indicates that, even without the independent variables, real estate firms exhibit a baseline level of financial performance and stability, which supports the notion that external financing factors are only one part of a broader financial ecosystem.

Overall, the R-squared values of 0.65 for ROE, 0.72 for ICR, and 0.68 for NPM suggest that the independent variables collectively explain a significant portion of the variation in the financial performance of real estate firms. These results are consistent with the findings of Wataka (2018), who reported strong explanatory power in models predicting the financial outcomes of real estate firms based on asset financing.

In sum, the results support the notion that strategic management of loan structuring, leverage, and liquidity is crucial for enhancing financial outcomes in the real estate sector. Real estate firms in Nairobi, like those in other parts of the world, must carefully balance their financing strategies to maximize profitability and stability while mitigating risks associated with high interest rates and liquidity overhang.

4.3 Diagnostic Tests for Random-Effects Models

To ensure the validity and reliability of the regression models, diagnostic tests were conducted to check for multicollinearity, autocorrelation, and heteroscedasticity. These tests assess whether the key assumptions of regression analysis are met, ensuring that the estimated

coefficients and standard errors are unbiased and efficient. The results of these diagnostic tests confirm the robustness of the regression models, as discussed below.

4.3.1 Multicollinearity (VIF Test)

The variance inflation factor (VIF) values for all predictors were below 5, indicating no significant multicollinearity among the independent variables. Specifically, Loan Amount, Loan Tenure, Interest Rate, Firm Size, Liquidity, and Leverage all showed VIF values ranging between 1.2 and 3.1. These results suggest that the predictors are not highly correlated with one another, ensuring the reliability of the regression coefficients.

Table 4.5: Variance inflation factor (VIF) results

Variable	***VIF***
Loan Amount	1.8
Loan Tenure	2.3
Interest Rate	1.9
Firm Size	3.1
Liquidity	1.7
Leverage	2.4

The absence of multicollinearity strengthens the validity of the regression models and their interpretation.

4.3.2 Autocorrelation (Durbin-Watson Test)

The Durbin-Watson statistic for all three models was approximately 2.1, indicating no evidence of autocorrelation in the residuals. This result confirms the assumption of independence of errors, which is essential for the validity of the regression models.

Table 4.6: Durbin-Watson test results

Model	***Durbin-Watson Statistic***
Model 1 (ROE)	2.1
Model 2 (ICR)	2.12
Model 3 (NPM)	2.08

The lack of autocorrelation ensures that the estimated coefficients are unbiased and consistent, thereby enhancing the credibility of the models' outcomes.

4.3.3 Heteroscedasticity (Breusch-Pagan Test)

The Breusch-Pagan test was conducted to assess the presence of heteroscedasticity in the residuals. For all three models, the test yielded p-values greater than 0.10, indicating no significant heteroscedasticity.

Table 4.7: Breusch-Pagan test results

Model	***p-value***
Model 1 (ROE)	0.25
Model 2 (ICR)	0.18
Model 3 (NPM)	0.22

This finding supports the assumption of constant variance in the residuals, confirming the robustness of the regression models. The absence of heteroscedasticity ensures that the standard errors of the coefficients are reliable, leading to accurate hypothesis testing and confidence intervals.

Thus, the diagnostic tests validate the adequacy of the regression models. The lack of multicollinearity, autocorrelation, and heteroscedasticity ensures that the models are well-specified and that the estimated coefficients are reliable and interpretable.

CHAPTER FIVE

CONCLUSION AND RECOMMENDATIONS

5.1 Summary of the Study

This study sought to examine the relationships between private asset financing and the financial performance of real estate firms, as measured by Return on Equity (ROE), Interest Coverage Ratio (ICR), and Net Profit Margin (NPM). The results obtained from the random-effects regression model reveal several significant insights that are crucial for understanding the dynamics of financial performance in the real estate sector.

One of the most striking findings is the positive relationship between loan amount and all three-performance metrics (ROE, ICR, and NPM). The coefficients indicate that an increase in loan amount positively impacts profitability, capital adequacy, and net profit margin. This suggests that securing higher loans is associated with improved financial outcomes. Real estate firms that access larger amounts of financing may have greater resources for expansion, project development, or operational needs, which in turn boosts their financial performance. This finding is consistent with prior studies suggesting that access to capital is essential for growth and performance enhancement in asset-intensive sectors like real estate.

Similarly, loan tenure was found to have a positive relationship with all three financial metrics. Longer loan tenures appear to provide firms with the breathing space needed to manage their debt and liquidity. This is consistent with financial theory, which posits that longer repayment periods reduce short-term liquidity constraints and improve long-term financial stability, allowing firms to focus on growth rather than immediate repayment pressures.

On the other hand, the study found that higher interest rates negatively impact financial performance. This is not surprising, as higher interest costs increase the financial burden on firms, reducing profitability and stability. Interest rate increases lead to higher debt servicing costs, which directly affect both profitability and the firm's ability to maintain sufficient liquidity for daily operations. Therefore, the impact of interest rate fluctuations is critical for decision-makers in real estate firms, particularly in managing borrowing costs and hedging against unfavorable market conditions.

The role of liquidity in the models presents a somewhat counterintuitive result, were higher liquidity correlates negatively with financial performance. While liquidity is traditionally seen as a sign of economic health, the negative relationship here may indicate inefficiencies or underutilized assets in real estate firms that hold excess liquid funds rather than investing them in more profitable opportunities. This could signal a need for more effective asset management strategies within the industry.

Leverage also emerged as a significant positive determinant of financial performance, suggesting that real estate firms may benefit from higher levels of debt, as long as it is managed effectively. This finding highlights the importance of leveraging debt to enhance returns while ensuring that firms maintain an appropriate balance between debt and equity to avoid financial distress.

Therefore, the study underscores the critical role that loan structuring, firm size, and leverage play in driving financial performance in the real estate sector. The results provide valuable insights for managers and investors seeking to optimize financial strategies in the industry. The study suggests that a careful balance between borrowing and investment, alongside effective liquidity management, is essential for sustained profitability and financial stability in real estate firms.

5.2 Implications of the Study

5.2.1 Practical Implications

The findings of this study provide actionable insights for real estate firms, financial institutions, and stakeholders within the real estate sector. For real estate managers, the results emphasize the importance of adopting strategic approaches to debt utilization, particularly focusing on optimal loan amounts and effective management of financial leverage. These strategies can amplify profitability while mitigating the risks associated with high borrowing costs. Furthermore, maintaining balanced liquidity levels and efficient financial planning can ensure smooth operational activities and enhance overall financial performance.

For financial institutions, the study underscores the need to tailor loan products that align with the unique requirements of real estate firms. This includes offering flexible repayment schedules, competitive interest rates, and extended loan tenures to accommodate the capital-

intensive nature of the industry. Such initiatives can strengthen the relationship between lenders and real estate firms while fostering sector growth.

5.2.2 Policy Implications

At a policy level, the findings suggest the importance of creating an enabling environment for private asset financing. Policymakers should focus on stabilizing interest rates and enhancing credit accessibility for small- and medium-sized real estate firms. Such interventions can help bridge the financing gaps that often hinder the growth of smaller players in the market. Additionally, regulatory frameworks should promote transparency and accountability in financial transactions, ensuring that private asset financing contributes to the long-term sustainability of the sector.

5.2.3 Theoretical Implications

The integration of Financial Intermediation Theory and Efficient Market Theory into the study provides a theoretical foundation for understanding how financial resources are channeled and utilized within the real estate sector. By confirming the significance of variables such as leverage and loan tenure, the study adds to the growing body of literature on the role of private asset financing in enhancing firm performance. These insights pave the way for future research to explore related dynamics in other emerging markets or sectors.

5.3 Conclusion

This study concludes that private asset financing has a significant effect on the financial performance of real estate firms in Nairobi County. The results highlight that factor such as loan amount, loan tenure, interest rate, firm size, and leverage play critical roles in determining key financial outcomes. Leverage, in particular, emerged as a key driver of profitability, demonstrating its ability to amplify returns when used strategically. Similarly, larger firms benefited from economies of scale, showcasing better financial stability and operational efficiency compared to smaller entities.

On the other hand, prolonged loan tenures and high-interest rates were identified as cost drivers that could erode profitability if not managed effectively. These findings underline the dual nature of private asset financing as both an opportunity and a risk, depending on how it is structured and managed. Real estate firms must therefore adopt prudent financial practices and

robust risk management strategies to maximize the benefits of private financing while safeguarding against potential downsides.

Overall, the study contributes to a deeper understanding of the financial dynamics in the real estate sector, offering evidence-based recommendations for practitioners, policymakers, and researchers. By addressing the challenges and opportunities associated with private asset financing, the study provides a roadmap for fostering sustainable growth and profitability within Nairobi's real estate market.

5.4 Recommendations

Based on the findings, this study provides recommendations for real estate firms, financial institutions, policymakers and future research as follows:

5.4.1 Recommendations for Real Estate Firms

This study provides the following recommendations for the real estate firms in Kenya.

i) **Optimize Loan Utilization:** Real estate firms should carefully evaluate their financing needs and align loan amounts with specific project requirements to avoid over-leveraging and ensure efficient utilization of borrowed funds.

ii) **Enhance Financial Planning:** Firms must prioritize effective financial planning to manage liquidity and meet short-term obligations without compromising operational efficiency.

iii) **Leverage Debt Strategically:** While leveraging can boost profitability, firms should adopt robust risk management strategies to mitigate potential financial stress, particularly during periods of economic instability.

iv) **Monitor Market Conditions:** Real estate firms should remain vigilant about market trends, particularly interest rate fluctuations, to secure favorable borrowing terms and minimize financing costs.

5.4.2 Recommendations for Financial Institutions

Based on the results of this study, the following recommendations are made for the financial institutions that fund real estate projects in Kenya:

i) **Develop Tailored Loan Products:** Financial institutions should design loan packages that cater to the specific needs of real estate firms, such as flexible repayment terms and competitive interest rates.

ii) **Enhance Credit Assessment Processes:** Institutions should strengthen their risk assessment frameworks to ensure that loans are structured to support sustainable growth and minimize default risks.

iii) **Support Smaller Firms:** Financial institutions should consider offering targeted financing solutions for smaller real estate firms, such as microloans or credit guarantees, to enhance their access to capital.

5.4.3 Recommendations for Policymakers

The policymakers should consider the following steps to improve the management of real estate development in the country:

i) **Stabilize Interest Rates:** Policymakers should implement measures to stabilize interest rates, creating a predictable and conducive environment for real estate investments.

ii) **Promote Financial Inclusion:** Interventions such as credit guarantees or subsidies can help smaller firms access the capital they need to compete effectively in the market.

iii) **Strengthen Regulatory Oversight:** Transparent and accountable regulatory frameworks are essential to fostering investor confidence and ensuring the sustainability of private asset financing in the real estate sector.

5.5 Limitations of the Study

While the study provides valuable insights into the financial performance of real estate firms, several limitations should be noted. These limitations could impact the generalizability and the robustness of the findings.

First, the study's reliance on secondary data may limit its accuracy and completeness. Data from publicly available financial statements may not fully capture all aspects of a firm's financial health, especially for privately-held real estate firms that do not disclose as much information. This limitation may lead to an incomplete understanding of the financial variables that influence firm performance.

Second, the study employs a random-effects regression model, which assumes that the unobserved individual effects are uncorrelated with the independent variables. While this model is useful for panel data analysis, it might not account for all potential sources of bias or omitted variables. Some important factors that influence real estate performance, such as market conditions, location, or regulatory changes, might not have been captured in the model. These omitted variables could lead to specification errors and influence the results.

Another limitation is that the study focuses on a specific period of time, and changes in the economic environment, such as fluctuations in real estate markets or macroeconomic conditions, could have affected the results. The model may not fully account for such dynamics, which means that the findings are based on the assumption that market conditions remained relatively stable during the analysis period.

Additionally, the study's focus on quantitative data leaves out qualitative factors that might also impact financial performance. Factors such as managerial expertise, corporate governance, or industry-specific challenges, though important, are difficult to quantify but could have a significant impact on real estate firms' financial outcomes.

Finally, while the study offers insights for the real estate sector, its results may not be directly applicable to other industries. The specific dynamics of asset financing and financial performance in real estate firms may differ significantly from those in other sectors, limiting the broader applicability of the findings.

In light of these limitations, future research could aim to incorporate more granular data, explore different modeling techniques, and consider qualitative factors to provide a more comprehensive understanding of the financial dynamics within the real estate industry.

5.5 Recommendations for Future Research

Future studies could explore the long-term effects of private asset financing on financial performance, incorporating broader macroeconomic variables such as inflation, market demand, and technological advancements. Comparative research across different regions or countries could also provide valuable insights into the contextual factors influencing private asset financing and its outcomes. Additionally, studies focusing on the social and

environmental impacts of real estate financing could enrich the discourse on sustainable development within the sector.

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APPENDICES

Appendix I: Data Collection Sheet

YEAR	2020	2021	2022	2023
	ksh in '000'			
Total liabilities				
Total Assets				
Total equity				
Revenue				
Net Profit				
Current assets				
Current liabilities				
Cash ratio				
Quick ratio				
Return on Equity				
Net Profit Margin				
Debt to Equity Ratio				

Interest Cover Ratio				
Debt to Total Asset				
Equity ratio				
PBIT				
Interest Expense				