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Managerial Overconfidence and Corporate Investment Decisions of Listed Firms in The Nairobi Securities Exchange, Kenya: A Theoretical Review

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Abstract

Firms listed on the Nairobi Securities Exchange play a significant role in Kenya's economic development. Despite their strategic importance, many listed firms have exhibited inconsistent investment patterns, characterized by underinvestment in profitable projects, fluctuating capital expenditure levels, and declining financial growth over the past 6 years (2020 – 2025). These challenges have been attributed to factors such as high borrowing costs, macroeconomic volatility, limited access to long-term financing, and structural inefficiencies within the capital market. Consequently, concerns have emerged regarding the efficiency of corporate investment decisions among firms listed on the Nairobi Securities Exchange and the factors that influence their investment behavior. The study's general objective is to investigate the relationship between managerial overconfidence and corporate investment decisions of listed firms in the Nairobi Securities Exchange, Kenya. Specifically, the study will determine the relationship between earnings forecast bias and corporate investment decisions; assess the relationship between investment-cash flow sensitivity and corporate investment decisions; establish the relationship between CEO stock option exercise behavior and corporate investment decisions; establish the relationship between debt financing behavior and corporate investment decisions, and to determine the moderating effect of firm size on the relationship between managerial overconfidence and corporate investment decisions of listed firms in the Nairobi Securities Exchange, Kenya. The study will be guided by the pecking order theory, behavioral finance theory, agency theory, prospect theory (Kahneman & Tversky), and upper echelons theory. The empirical literature review will be drawn from international, regional, and local sources. Recent research studies in Kenya, African countries, and international markets will be investigated**.**

Keywords: *Managerial Overconfidence, Corporate Investment Decisions, Earnings Forecast Bias, Investment Cash Flow Sensitivity, CEO Stock Option Exercise Behavior, Debt Financing Behavior, and Firm Size*

1.1 Introduction

Corporate investment decisions are fundamental to firm growth, value creation, and long-term competitiveness, particularly within emerging capital markets such as the Nairobi Securities Exchange (NSE). While traditional financial theories assume that managers act rationally in allocating resources, contemporary insights from behavioral finance demonstrate that managerial decision-making is often influenced by cognitive biases, notably managerial overconfidence. Overconfident managers tend to overestimate expected returns, underestimate risks, and exhibit excessive optimism, leading to distorted capital allocation and inefficient investment decisions (Onderi & Miroga, 2025). Over the past decade, corporate investment decisions, especially within emerging markets and the NSE, have been increasingly constrained by structural and institutional challenges. These include limited access to external financing due to information asymmetry and high cost of capital, weak corporate governance frameworks characterized by poor enforcement and political interference, and market volatility driven by fluctuating foreign investor participation and macroeconomic instability (Goyal & Selarka, 2025; Kimani, 2025; Mwashumbe et al., 2025). Additionally, the NSE has experienced low initial public offering (IPO) activity, declining retail investor participation, and delisting of key firms, all of which have reduced market liquidity and constrained firms' ability to undertake optimal investment projects (Cliffe Dekker Hofmeyr, 2025; Mwakilishi, 2025).

Globally, corporate investment decisions and management overconfidence highlight the pervasive impact of cognitive bias on company financial decisions as well as the context-specific factors that shape these impacts across markets (Marzouki and Ben Amar 2024). Similarly, studies carried out in Latin American contexts show that overconfident management qualities are associated with riskier and more resource-intensive investment strategies, particularly in settings with high levels of institutional volatility and market uncertainty (Bouzgarrou & Navatte, 2020). All of this evidence points to the need for integrated behavioral and governance perspectives in corporate investment research because, although managerial overconfidence may appear differently in different parts of the world, its impact on corporate decisions, including investment and related financial behaviors, is both robust and shaped by institutional context, governance quality, and market development.

Overconfidence in managers is a cognitive bias in which executives excessively overestimate their ability to yield returns or forecast results. Due to limited access to external financing in Kenya's capital markets, internal cash flows are a key source of business (Wafula, 2019). This atmosphere makes it easy for overconfident managers to have a big say in business investment decisions, especially when robust governance frameworks are not there. Several companies listed on the NSE lack a solid governance structure to monitor board and investor activity effectively, and overconfident managers take advantage of the situation to undertake excessive and high-risk investment ventures (Mwangi, 2023; Shahid & Shahid, 2020). Furthermore, Kenya's institutional uncertainties and macroeconomic instability intensify the likelihood of overconfident managers to undertake unrealistic investment decisions; consequently, executive managers play a key part in explaining investment inefficiencies. (Ndung'u & Onyuma, 2024). This emphasizes how urgently the executive level needs more robust governance procedures to counter managerial overconfidence and ensure accountability for their behavior.

Executives' perceptions of risk and return are often distorted by managerial overconfidence, a behavioral trait that significantly influences corporate investment decisions. Overconfident

managers tend to overestimate future cash flows, underestimate investment risks, and perceive their firms as undervalued, leading to inappropriate capital allocation or overinvestment (Ben-David, Graham, & Harvey, 2013). In emerging markets, including Kenya, many listed firms rely heavily on internal financing, which amplifies the impact of such behavioral biases (Wafula, 2019). Overconfident executives may aggressively pursue expansion projects regardless of actual firm performance or market conditions. Weak corporate governance frameworks, including limited board independence and minimal investor scrutiny, further allow managers to make unchecked investment decisions (Mwangi, 2023). Empirical studies indicate that firms with overconfident CEOs typically engage in disproportionately large capital investments, particularly when internal cash is abundant (Shahid & Shahid, 2020). Therefore, managerial overconfidence is a significant predictor of corporate investment behavior and often results in misaligned investments and reduced shareholder value.

The association between corporate investment decisions and managerial overconfidence can be moderated by firm size. Larger companies mitigate the impact of overconfidence on investing behavior due to transparent disclosure procedures, more accessible capital, and more structured governance systems (Chen et al, 2011). Conversely, smaller businesses have limited resources and are not well established, which gives room for overconfident managers greater freedom and control over strategic choices. Weak internal control systems and centralized decision-making in smaller businesses, the managerial overconfidence effect on corporate investment is frequently more noticeable (Ben-David et al, 2013). Developing size-specific governance initiatives requires an understanding of this moderating role. The severity and repercussions of such decisions frequently rely on organizational scale, resource availability, and monitoring efficacy, even if overconfidence can result in overinvestment in businesses of all sizes. (Shahid & Shahid, 2020).

In Kenya, overconfidence is a growing focus. Mwangi (2023) revealed that biased decision-making affects investment patterns among institutional investors, while Wafula (2019) and Ndung'u & Onyuma (2024) observed that the consequences of management overconfidence on the investment behavior of listed corporations are amplified by inadequate governance and a lack of available financing options. Regionally in South Africa, Jordaan & Kyriakou (2021) examined CEO behavioral traits, including overconfidence, in JSE-listed companies and found that overconfident CEOs were more likely to undertake aggressive investment strategies, especially in firms with low board independence. Globally in Europe, Marzouki and Ben Amar (2024) noted that overconfident managers, particularly in unethical settings, manipulate earnings and make aggressive investments.

1.1.1 Managerial Overconfidence

Managerial overconfidence is a behavioral bias in which corporate executives overestimate their abilities, judgment, and prospects for success, often leading them to overestimate expected returns and underestimate risks when making strategic decisions (Kim et al., 2022). In corporate finance, overconfident managers typically display excessive optimism about future cash flows and investment outcomes, which can distort capital allocation and investment choices (Al-Hadi et al., 2023). In emerging markets, such as firms listed on the Nairobi Securities Exchange, the influence of managerial overconfidence on corporate investment decisions is particularly significant due to variations in governance quality, financing constraints, and market development compared to advanced economies. Understanding this bias enables reconciliation of behavioral finance theories with actual corporate investment practices. Because managerial overconfidence is inherently

unobservable, it is typically proxied using behavioral, financial, and textual indicators that capture systematic optimism and miscalibration (Kim et al., 2022). Managerial overconfidence measures in the study will be earnings forecast bias, investment cash flow sensitivity, CEO share option exercise behavior, and debt financing behavior.

According to Huang et al. (2020) and Ahmed & Duellman (2018), earnings forecast bias is the systematic propensity of managers to issue earnings estimates that continuously exceed realized outcomes, showing persistent optimism and overestimation of corporate performance. Investment–cash flow sensitivity measures the propensity of overconfident managers to rely excessively on internal funds for investment, resulting in overinvestment relative to optimal capital allocation (Bouzgarrou & Navatte, 2020; Chen, Ho, & Yeh, 2021).

Delayed exercise of share options indicates overestimation of future firm performance and managerial skill, and CEO share option exercise behavior functions as a revealed-preference proxy (Huang et al., 2020; Kim, Wang, & Zhang, 2022). Finally, debt financing behavior is the tendency of firms to use borrowed funds such as bank loans, bonds, and other credit instruments to finance business operations, investment projects, or expansion activities (Amugada & Mwangi, 2025).

1.1.2 Corporate Investment Decisions

The process by which businesses commit resources to long-term initiatives or assets in the hopes of reaping future financial rewards is referred to as corporate investment decisions. These decisions often entail deciding among capital projects such as expansion of production facilities, acquisition of property, plant, and equipment, research and development, and other kinds of fixed-asset investment that influence a firm's growth, profitability, and value over time (Farooq et al., 2022). In corporate finance, investment decisions are the outcomes of optimizing projected returns compared to costs and risks under limitations such as internal funds, financing costs, and managerial attitudes. Corporate investment measures include Capital Expenditure (CAPEX), Investment Rate, Tobin's Q, Investment–Cash Flow Sensitivity, and Return on Invested Capital (ROIC).

According to Farooq, Tabash, Al Naimi, and Drachal (2022), capital expenditure (CAPEX) is a direct metric that represents real spending on productive assets. It is frequently scaled by total assets or sales to enable cross-firm comparison. The investment rate allows for comparisons across businesses of various sizes and normalizes investment intensity. It is computed as net investment relative to assets or sales (Farooq et al., 2022). Tobin's Q, a market-based measure, identifies investment opportunities by comparing the firm's market value to the replacement cost of its assets; a higher Q suggests a more profitable investment opportunity (Farooq et al., 2022).

Investment–cash flow sensitivity examines the extent to which a firm's investment responds to internal cash flows, with high sensitivity frequently reflecting reliance on internal funding or behavioral biases such as managerial overconfidence (Dash & Sethi, 2025). Last but not least, return on invested capital (ROIC) assesses the effectiveness of capital deployment and reflects the caliber of investment choices by showing how well invested capital produces profits (Farooq et al., 2022). When combined, these metrics offer a thorough evaluation of corporate investment decisions' scope and efficacy across businesses and time periods. Capital expenditure (CAPEX) will be the measure of corporate investment decisions.

1.2 Statement of the Problem

Listed firms in the Nairobi Securities Exchange have experienced inconsistent investment patterns in capital expenditure, asset expansion, and strategic acquisitions characterized by underinvestment in profitable projects, fluctuating capital expenditure levels, and uneven financial growth in the recent 6 years (2020 – 2025). NSE growth Index for the respective last 6 years (100, 95,92,90, 120, and 135) was on a downward trajectory from 2020 to 2023, followed by a recovery in the last 2 years. Over the last 6 years (2020 - 2025), several NSE-listed firms have experienced declining profitability, reduced market capitalization, and slow growth in investment activities. This trend has raised concerns among investors, regulators, and policymakers regarding the efficiency of corporate investment decisions among listed companies (Shikumo *et al*., 2023).

During this period, the Kenyan corporate sector has faced significant economic and financial challenges, including high borrowing costs, exchange rate volatility, rising inflation, and tightening liquidity in financial markets. These macroeconomic conditions have increased the cost of capital and constrained firms' ability to finance long-term investment projects. At the same time, the capital market has experienced reduced trading activity, limited new listings, and declining investor participation, which have weakened firms' ability to raise equity financing through the stock market (Muhia *et al.*, 2024). Despite the importance of corporate investment in driving firm growth, many listed firms have exhibited inconsistent investment patterns, including underinvestment in profitable projects and, in some cases, inefficient allocation of financial resources. These investment inefficiencies are not only driven by external economic conditions but also by internal managerial factors that influence corporate decision-making processes (Zhang *et al*., 2025).

Although previous studies in Kenya have examined factors such as capital structure, corporate governance, and firm performance among Nairobi Securities Exchange (NSE)-listed firms, limited research has addressed managerial behavioral attributes that influence corporate investment decisions. In particular, managerial overconfidence, where executives overestimate their ability to generate returns from investment projects, has been identified in corporate finance literature as a key determinant of investment behavior (Ben-David, Graham, & Harvey, 2013). However, empirical evidence on how such behavioral biases affect corporate-level investment decisions in Kenya is scarce. Unique institutional features of the Kenyan market, including concentrated ownership, information asymmetry, and macroeconomic volatility, are likely to amplify the impact of overconfident managerial behavior on investment outcomes (Ndung'u & Onyuma, 2024). Prior local studies have explored related areas, such as the effect of behavioral finance factors on mutual fund decisions (Wafula, 2018), investor confidence and REIT growth (Mwangi, 2023), and overconfidence in personal investment choices (Ndung'u & Onyuma, 2024), but none have directly examined corporate-level capital investment decisions. This study seeks to fill this gap by investigating how managerial overconfidence influences corporate investment decisions among NSE-listed firms over the period 2020–2025, and by exploring how firm size may moderate this relationship. Understanding this dynamic is critical for reconciling behavioral finance theory with real-world investment practices in emerging markets.

1.3 Objectives of the Study

The study will be guided by the following general and specific objectives.

1.3.1 General Objective

The general objective of the study is to investigate the relationship between managerial overconfidence and corporate investment decisions of listed firms in the Nairobi Securities Exchange, Kenya.

1.3.2 Specific Objectives

i. To determine the relationship between earnings forecast bias and corporate investment decisions of listed firms in the Nairobi Securities Exchange, Kenya.
ii. To assess the relationship between investment-cash flow sensitivity and corporate investment decisions of listed firms in the Nairobi Securities Exchange, Kenya.
iii. To establish the relationship between CEO stock option exercise behavior and corporate investment decisions of listed firms in the Nairobi Securities Exchange, Kenya.
iv. To find out the relationship between debt financing behavior and corporate investment decisions of listed firms in the Nairobi Securities Exchange, Kenya.
v. To determine the moderating effect of firm size on the relationship between managerial overconfidence and corporate investment decisions of listed firms in the Nairobi Securities Exchange, Kenya.

1.4 Research Hypotheses

The following null hypotheses will be tested in the study.

i. **H_{01}**: Earnings forecast bias does not have a significant effect on corporate investment decisions of listed firms in the Nairobi Securities Exchange, Kenya.
ii. **H_{02}**: Investment-cash flow sensitivity does not have a significant effect on corporate investment decisions of listed firms in the Nairobi Securities Exchange, Kenya.
iii. **H_{03}**: CEO share option exercise behavior does not have a significant effect on corporate investment decisions of listed firms in the Nairobi Securities Exchange, Kenya.
iv. **H_{04}**: Debt financing behavior does not have a significant effect on corporate investment decisions of listed firms in the Nairobi Securities Exchange, Kenya.
v. **H_{06}**: Firm size does not have a significant moderating effect on the relationship between managerial overconfidence and corporate investment decisions of listed firms in the Nairobi Securities Exchange, Kenya.

1.5 Scope of the Study

The study will be geographically limited to Kenya, and it will focus on listed firms in the Nairobi Securities Exchange, Kenya. These are firms whose shares are consistently traded in the Securities exchanges and whose financial statements were published for the period of 6 years (2020 – 2025) as documented by the Nairobi Securities Exchange. The study period is considered sufficient to observe variations in managerial behavior and investment decisions while capturing different economic conditions. The choice of listed firms is corporate investment decisions are captured through indicators such as capital expenditure intensity and growth in fixed assets.

1.6 Significance of the Study

This research will be significant to various stakeholders, including policymakers, corporate managers, investors, academics, and regulators. The findings of the study will help top management and boards understand how managerial overconfidence influences corporate investment decisions. For investors and shareholders, the study will provide insights into how

managerial behavioral biases affect capital allocation efficiency. The study will be useful to regulatory bodies such as the Capital Markets Authority (CMA) and the Nairobi Securities Exchange, as it offers empirical evidence that can inform corporate governance policies and disclosure requirements. For scholars, the study contributes to the growing field of behavioral corporate finance, particularly in emerging markets. By focusing on Kenya, it extends empirical evidence beyond developed economies.

2.0 Literature Review

The research study is anchored on behavioral finance theory, agency theory, market timing, pecking order theory, Prospect theory (Kahneman & Tversky), and Upper Echelons theory.

2.1 Theoretical Review

2.1.1 Behavioral Finance Theory

According to Daniel Kahneman and Amos Tversky (1979), most investors tend to base their decisions on subjective criteria rather than choosing the best alternative objectively. A subfield of economics that blends psychology and economics is called behavioral finance. When faced with financial decisions, people frequently act irrationally, which is attributed to several biases and heuristics. The underlying biases at work that might lead to poor decision-making are frequently unknown to people. Institutional behavioral finance makes the assumption that businesses make decisions based on their own goals and limitations instead of presuming that every investor is rational and that all relevant data will be correctly interpreted (Liang & Reiner, 2009).

According to Fama (2021), individual behavior and institutions both influence investment decisions. Particularly, in the listed firms where decision-making authority is heavily concentrated in top management, behavioral traits can influence decision-making by causing skewed projections. Specific biases that affect power initiatives include loss aversion, aversion to ambiguity, anchoring and adjustment, overconfidence, representativeness, and the endorsement effect. In behavioral finance, it is thought that rather than being fully rational and self-controlling, financial participants are psychologically impacted and exhibit generally normal and self-controlling inclinations. The investor's physical and mental well-being are frequently taken into consideration when making financial choices. It is common for an investor's mental state to change as their overall health improves or deteriorates. This influences their decision-making and logical approach to all real-world problems, including financial ones (Jain, Walia, & Gupta, 2020).

2.1.2 Agency Theory

Jensen and Meckling (1976) developed agency theory, which describes the agency relationship that arises when one or more parties (principals) hire an agent to provide services on their behalf and then give the agent decision-making authority. In a conventional corporation, shareholders serve as the principals, whereas executive management acts as the agents. The main justification for agency theory is that principals may be too many to manage a single business, be geographically scattered, or lack the technical expertise to run the company; so, they use agents to do it for them. Problems occur when a principal is unable to monitor every action taken by an agent whose decisions affect both the principal and the agent (Elly, 2012).

If management's overconfidence in earnings prediction, CEO stock option exercise behavior, and management activities result in poor financial performance for the company, they will conflict with shareholders' interests (Kazan, 2016). By clarifying the connection between Managerial Overconfidence and Corporate Investment Decisions of publicly traded Companies in Kenya's Nairobi Stock Exchange, agency theory supports the objectives of the study and suggests solutions for any issues that may arise. To ensure that senior leadership is acting in the business's best interests, shareholders should devise ways to lessen the possibility of conflicts of interest (Wardoyo, Rahmadaniv, & Hanggoro, 2021).

The "agent" side of the "principal and agent dilemma" has been the subject of the majority of research, but positivist agency scholars have noted in their discourse that issues can also occur "on the principal" side. The agency also lacks a solid understanding of a number of practical concerns due to the fact that corporate governance is not a socially isolated event (Panda and Leepsa 2017).

2.1.3 Pecking Order Theory

Myers and Majluf (1984) assert that managers adhere to a hierarchy while evaluating funding sources in accordance with the pecking order hypothesis. Initially, using the company's retained earnings, next, debt, and last, equity financing. The idea of asymmetric information, or when one party has more (better) information than another, leads to an imbalance in transaction power and gives rise to the pecking order theory. Managers of publicly traded companies typically have greater access to data on the company's performance, prospects, risks, and outlook than do external users such as creditors (holders of debt) and investors (shareholders). Therefore, to compensate for information asymmetry, external users seek a higher return to balance the risk they are taking. In essence, because of information asymmetry, external funding sources anticipate a higher rate of return to balance out the increased risk (Ashraf et al 2025).

Pecking Order Theory advocates that organizations' investment in long-term assets is significantly impacted by the availability of internal finances when it comes to capital spending. When internal financing is abundant, firms are more likely to undertake capital-intensive projects. However, when internal funds are constrained, firms may reduce or delay CapEx rather than raise external equity, especially if managers are concerned about negative market reactions. As such, capital expenditure becomes highly sensitive to internal cash flows, particularly for firms that face financing frictions or have limited access to capital markets (Palupi & Rizkianto, 2020).

In summary, investment prospects are not the only factor considered when making corporate investment decisions, but are also shaped by firms' internal financial capabilities and their reluctance to issue new equity. Management's overconfidence behavioral tendency can lead to sub-optimal investment outcomes**,** including both underinvestment in valuable projects and overinvestment when internal funds are excessive.

2.1.4 Prospect Theory

According to Kahneman & Tversky (1979), Prospect Theory is the cornerstone of behavioral economics and finance, which challenges traditional, rational models of decision-making, such as Expected Utility Theory. It provides a more psychologically realistic framework for understanding how managers evaluate risk and make choices under uncertainty, especially in economic and financial contexts. Basically, Prospect Theory asserts that managers don't always behave logically. Rather than assessing possible outcomes in absolute terms, they do so in connection with a

reference point, which is frequently the existing condition. The theory's two primary components are the value function and the choice weight function (Pan 2019).

In summary, Kahneman and Tversky's Prospect Theory has deep implications for understanding managers' behavior, corporate decision-making, and financial markets, making it an essential foundation for behavioral finance research.

2.1.5 Upper Echelons Theory

The Upper Echelons Theory (UET), which was put forth by Hambrick and Mason in 1984, contends that the psychological makeup and character attributes of a company's top management leaders have a major influence on its performance results and strategic decisions. According to the theory, listed firms' decisions are a reflection of the values, experiences, and cognitive biases of those at the "upper echelons" of the firm, typically the CEO and senior management. In the context of corporate investment decisions, upper echelons theory provides a framework for explaining how management overconfidence, a cognitive bias where managers overemphasize their judgment and the future performance of their firm, influences capital allocation and strategic investments. Overconfident managers may believe their firm's investments are more likely to succeed than they objectively are, leading to aggressive investment behavior, even in the face of market skepticism or financial constraints (Recendes et al. 2023). In listed firms, the effects of managerial overconfidence are particularly significant due to their scale, stakeholder expectations, and access to capital markets. Upper echelons theory explains heterogeneity in investment behavior across firms, even when external conditions appear similar. It also supports the idea that firm behavior is not fully rational, but instead shaped by the bounded rationality and psychological disposition of management executives (Hao et al. 2023).

In conclusion, Upper Echelons Theory provides a robust theoretical foundation for investigating how managerial overconfidence can lead to biased Corporate Investment Decisions, potentially resulting in overinvestment, resource misallocation, and value destruction in listed firms.

2.2 Empirical Review

This section examines past research on the connection between corporate investment decisions and managerial overconfidence. Studies conducted locally, regionally, and globally will be reviewed.

2.2.1 Earnings Forecast Bias and Corporate Investment Decisions

Yan (2020) examined the effect of managerial overconfidence on corporate investment decisions using firm-level panel data and regression analysis of Listed Companies in China. Management investment behavior choices were examined in relation to mergers and acquisitions that occurred in the Shanghai and Shenzhen Stock Exchanges' A-share market between 2012 and 2013. The study covered a sample size of 1,541 firm-year observations. The study did not incorporate important dimensions such as earnings forecast bias, CEO stock option exercise behavior, and debt financing behavior, nor did it consider moderating factors like firm size. By extending the research period to six years, by incorporating important dimensions such as earnings forecast bias to measure management overconfidence, and conducting the study in Kenya, a developing nation, the present research will close the gaps.

Marzouki & Ben Amar (2024) examined the relationship between CEO overconfidence and corporate corruption risk using a large international sample of 1,396 firms drawn from ESG-

indexed companies over the period 2010–2022 in the Stoxx Europe 600, a developed economy. It applied panel data techniques and feasible generalized least squares (FGLS) regression to enhance estimation efficiency. A total of 246 European companies were chosen as part of the sample size from the Stoxx between 2010 and 2022. The study focused on governance-related outcomes (corruption risk) rather than corporate investment decisions, and did not incorporate key financial behavior proxies such as earnings forecast bias, investment cash flow sensitivity, CEO stock option exercise behavior, and debt financing behavior. By doing research in Kenya, a developing nation, the present study will incorporate earnings forecast bias. It will also extend managerial attention to company investment choices.

Nardi et al (2022) examined together the significance of both financial and cognitive aspects of analysts' accuracy in profit forecasting in 2019. Text analytics and machine-learning models (OLS, random forest, Bayesian classification) were utilized to assess how cognitive and financial variables affect the accuracy of profit forecasts. Publicly traded Brazilian companies, 94 in number, made up the sample size. The study focused on analyst forecasts (rather than managerial decisions), which limits direct inference about managerial overconfidence's impact on corporate investment decisions. The results demonstrated a negative correlation between forecasting and optimism among cognitive biases, while anchoring bias and forecasting had a positive relationship. This study highlights the gap in linking cognitive biases to corporate investment decisions, and it will expand the study period to 6 years and will be carried out in the Kenyan stock exchange in Nairobi.

Ndung'u & Onyuma (2024) examined the effect of investor confidence, a behavioral finance construct closely related to overconfidence, on the growth of Real Estate Investment Trusts (REITs) in Kenya using a predictive correlational research design based on primary data collected from fund managers, stockbrokers, investment banks, and property developers. The study employed structural equation modelling (SEM), factor analysis, and regression techniques to analyze the relationship between investor sentiment and REIT performance. The findings revealed a positive and statistically significant relationship between investor confidence and REIT growth, suggesting that behavioral biases play a critical role in shaping investment outcomes within the Kenyan capital market. The current study will cover all sectors in Kenya and will break down managerial overconfidence to include Earnings Forecast Bias. Managerial overconfidence and corporate investment decisions will be examined at the firm level.

2.2.2 Investment Cash Flow Sensitivity and Corporate Investment Decisions

Marzouki & Ben Amar (2024) examined the relationship between CEO overconfidence and corporate corruption risk using a large international sample of 1,396 firms drawn from ESG-indexed companies over the period 2010–2022 in the Stoxx Europe 600, a developed economy. It applied panel data techniques and feasible generalized least squares (FGLS) regression to enhance estimation efficiency. A total of 246 European companies were chosen as part of the sample size from the Stoxx between 2010 and 2022. The study focused on governance-related outcomes (corruption risk) rather than corporate investment decisions, and did not incorporate key financial behavior proxies such as earnings forecast bias, investment cash flow sensitivity, CEO stock option exercise behavior, and debt financing behavior. By doing research in Kenya, a developing nation, the present study will incorporate Investment Cash Flow Sensitivity. It will also extend managerial attention to company investment choices.

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Adu-Ameyaw et al (2024) examined the influence of managerial overconfidence on corporate financial decision-making and firm outcomes. A sample size of 1358 UK public and private firms from 2006 to 2015 in the UK was analysed. Panel data regression techniques on firm-level data were used to capture both cross-sectional and time-series dynamics. Findings were that managerial overconfidence significantly shapes corporate behavior by encouraging aggressive investment and risk-taking decisions. The study primarily focused on aggregate firm outcomes and did not disaggregate specific behavioral channels such as earnings forecast bias, investment cash flow sensitivity, CEO stock option exercise behavior, and debt financing behavior. The current study will be conducted in Kenya, and it will integrate multiple firm-level proxies of managerial overconfidence within a unified framework.

Sun & Liu (2022) examined the relationship between managerial overconfidence, corporate governance, and firm-level investment behavior, specifically focusing on R&D smoothing decisions among technology-based firms of Chinese listed businesses' investments that are made with internally produced capital between 1998 and 2020. Firm-level panel data and fixed-effects regression models were used to capture dynamic investment behavior. A sample including 2415 listed companies was analysed. Investment-cash flow sensitivity showed a declining tendency over time; it was also context-specific (technology firms), limiting its applicability across sectors and emerging markets. The current study will expand the study period to 6 years, and it will be carried out in Kenya, a developing Nation.

2.2.3 CEO Stock Option Exercise Behavior and Corporate Investment Decisions

Yan (2020) examined the effect of managerial overconfidence on corporate investment decisions using firm-level panel data and regression analysis of Listed Companies in China. Management investment behavior choices were examined in relation to mergers and acquisitions that occurred in the Shanghai and Shenzhen Stock Exchanges' A-share market between 2012 and 2013. The study covered a sample size of 1,541 firm-year observations. The study did not incorporate important dimensions such as earnings forecast bias, CEO stock option exercise behavior, and debt financing behavior, nor did it consider moderating factors like firm size. By extending the research period to six years, by incorporating important dimensions such as CEO stock option exercise behavior to measure management overconfidence, and conducting the study in Kenya, a developing nation, the present research will close the gaps.

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Shahid & Shahid (2020) investigated the influence of managerial overconfidence on corporate financial and investment decisions on firm-level data from Pakistan of Pakistani listed companies. Panel regression techniques (fixed and random effects models) were utilised to examine the behavioral impact on firm outcomes. An analysis of 432 non-financial companies that were listed between 2006 and 2018 on the Pakistan Stock Exchange. The results of the study showed that overconfident managers engage in aggressive investment strategies and excessive use of debt financing. Research findings were limited to Pakistan-listed firms. The study did not explicitly incorporate other behavioral channels, such as earnings forecast bias and CEO stock option exercise behavior. The current study will be done in Kenya, and it will integrate CEO Stock Option Exercise Behavior in measuring management behavior.

Ndung'u & Onyuma (2024) examined the effect of investor confidence, a behavioral finance construct closely related to overconfidence, on the growth of Real Estate Investment Trusts (REITs) in Kenya using a predictive correlational research design based on primary data collected from fund managers, stockbrokers, investment banks, and property developers. The study employed structural equation modelling (SEM), factor analysis, and regression techniques to analyze the relationship between investor sentiment and REIT performance. The findings revealed a positive and statistically significant relationship between investor confidence and REIT growth, suggesting that behavioral biases play a critical role in shaping investment outcomes within the Kenyan capital market. The current study will cover all sectors in Kenya, and it will integrate multiple behavioral proxies of managerial overconfidence, including CEO Stock Option Exercise Behavior. Managerial overconfidence and corporate investment decisions will be examined at the firm level.

Lee, Park & Chen (2023) examined how a CEO's overconfidence and cognitive bias affect a company's real option investments in Korea. In order to capture persistence in investment behavior, panel data was drawn from publicly listed firms in East Asia (notably China and South Korea) over the course of 17 years, from 1997 to 2013, a sample size of 1,778 businesses was examined. Research findings where overconfident managers engage in overinvestment, particularly when firms have access to abundant internal resources, indicating high investment cash flow sensitivity. The study did not explicitly incorporate other behavioral dimensions such as CEO stock option exercise behavior and debt financing behavior as integrated predictors within a unified framework. The current study will be done in a developing nation, Kenya, and it will incorporate CEO stock option exercise behavior as a measure of managerial overconfidence.

2.2.4 Debt Financing Behavior and Corporate Investment Decisions

Yan (2020) examined the effect of managerial overconfidence on corporate investment decisions using firm-level panel data and regression analysis of Listed Companies in China. Management

investment behavior choices were examined in relation to mergers and acquisitions that occurred in the Shanghai and Shenzhen Stock Exchanges' A-share market between 2012 and 2013. The study covered a sample size of 1,541 firm-year observations. The study did not incorporate important dimensions such as earnings forecast bias, CEO stock option exercise behavior, and debt financing behavior, nor did it consider moderating factors like firm size. By extending the research period to six years, by incorporating important dimensions such as CEO stock option exercise behavior to measure management overconfidence, and conducting the study in Kenya, a developing nation, the present research will close the gaps.

Marzouki & Ben Amar (2024) examined the relationship between CEO overconfidence and corporate corruption risk using a large international sample of 1,396 firms drawn from ESG-indexed companies over the period 2010–2022 in the Stoxx Europe 600, a developed economy. It applied panel data techniques and feasible generalized least squares (FGLS) regression to enhance estimation efficiency. A total of 246 European companies were chosen as part of the sample size from the Stoxx between 2010 and 2022. The study focused on governance-related outcomes (corruption risk) rather than corporate investment decisions, and did not incorporate key financial behavior proxies such as earnings forecast bias, investment cash flow sensitivity, CEO stock option exercise behavior, and debt financing behavior. By doing research in Kenya, a developing nation, the present study will incorporate debt financing behavior.

Shahid & Shahid (2020) investigated the influence of managerial overconfidence on corporate financial and investment decisions on firm-level data from Pakistan of Pakistani listed companies. Panel regression techniques (fixed and random effects models) were utilised to examine the behavioral impact on firm outcomes. An analysis of 432 non-financial companies that were listed between 2006 and 2018 on the Pakistan Stock Exchange. The results of the study showed that overconfident managers engage in aggressive investment strategies and excessive use of debt financing. Research findings were limited to Pakistan-listed firms. The current study will analyze debt financing behavior in the context of listed firms in the NSE, Kenya.

Ding, Bhat, and Jebran (2020) examined the relationship between corporate leverage and investment efficiency among listed firms in China using panel data and generalized method of moments estimation. The study found that debt financing significantly influences investment efficiency, with short-term debt improving monitoring and reducing managerial overinvestment. However, the study focused mainly on financial leverage and governance mechanisms and did not incorporate managerial behavioral factors such as managerial overconfidence, leaving a behavioral gap in understanding how managerial traits influence debt-financed investment decisions. The current study will analyse debt financing behavior in relation to NSE listed firms in Kenya

Lee, Park & Chen (2023) examined how a CEO's overconfidence and cognitive bias affect a company's real option investments in Korea. In order to capture persistence in investment behavior, panel data was drawn from publicly listed firms in East Asia (notably China and South Korea) over the course of 17 years, from 1997 to 2013, a sample size of 1,778 businesses was examined. Research findings where overconfident managers engage in overinvestment, particularly when firms have access to abundant internal resources, indicating high investment cash flow sensitivity. The study did not explicitly incorporate other behavioral dimensions such as CEO stock option exercise behavior and debt financing behavior as integrated predictors within a unified framework. The current study will be done in a developing nation, Kenya, and it will incorporate Debt Financing Behavior as a measure of managerial overconfidence.

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2.2.5 Managerial Overconfidence, Firm Size, and Corporate Investment Decisions

Nguyen et al (2020) investigated the impact of managerial overconfidence on corporate investment and financing decisions using panel data from Vietnamese listed firms. Panel regression models (fixed and random effects) were used to examine how behavioral biases influence firm outcomes. From 2014 to 2018, 480 businesses that were listed on the Vietnam Stock Exchange were examined. The findings of the investigation showed overconfident managers engaged in overinvestment. The log of total assets was used to determine the firm size. Market capitalization will be used to determine the business size in the current study, which will be conducted in Kenya.

Zaludin et al (2021) examined the influence of managerial overconfidence on corporate financial and investment decisions using firm level data from Malaysia, employing panel regression techniques (fixed and random effects models) to analyze the relationship between behavioral bias and firm outcomes. Findings of the study was that overconfident managers undertook aggressive investment strategies and higher leverage levels. The natural logarithm of total assets was used to calculate the firm's size. The study concluded that company governance, internal funding, and managerial overconfidence all significantly and favorably influence investment choices. Market capitalization will be used to gauge business size in the current study, which will be carried out in Kenya.

Barno, Cheboi & Muganda, 2020) examined the relationship between behavioral finance factors and investment decisions within the Kenyan context, focusing primarily on firm level and investor related influences using a descriptive and explanatory research design supported by primary data collected through structured questionnaires. The study applied correlation and multiple regression analysis to assess how behavioral biases influence investment decisions. Findings of the study was psychological factors including elements related to overconfidence significantly affect investment choices and performance outcomes. The study primarily focused on investor level decision making rather than managerial behavior at the firm level. Furthermore, moderating variable such as firm size was not explicitly examined. The current study will incorporate moderating effect to provide a more rigorous and comprehensive analysis of corporate investment decisions among NSE-listed firms over the period 2020–2025.

Cherkaoui and Oudrhough (2025) examined the impact of managerial behavioral biases particularly overconfidence on corporate financial and investment decisions using firm level data from North African markets – Morocco. The study used panel data regression techniques, including fixed-effects. Findings of the study was that managerial overconfidence significantly influenced corporate investment decisions which led to tendencies toward overinvestment and inefficient capital allocation, especially in firms with weak monitoring mechanisms. The study highlighted corporate governance (monitoring mechanisms) as a contextual/conditioning factor influencing the relationship between managerial overconfidence and corporate investment decisions. Current study will be carried out in Kenya and it will be moderated by firm size measured by market capitalization

Conceptual Framework

A conceptual framework shows how your independent, dependent, and moderating variables relate to one another. It acts as a graphic representation of the study hypotheses. The link between the independent variable of managerial overconfidence, the dependent variable of corporate investment decisions, and the moderating effect of company size for listed firms on the Nairobi Securities Exchange in Kenya is shown diagrammatically in Figure 1.

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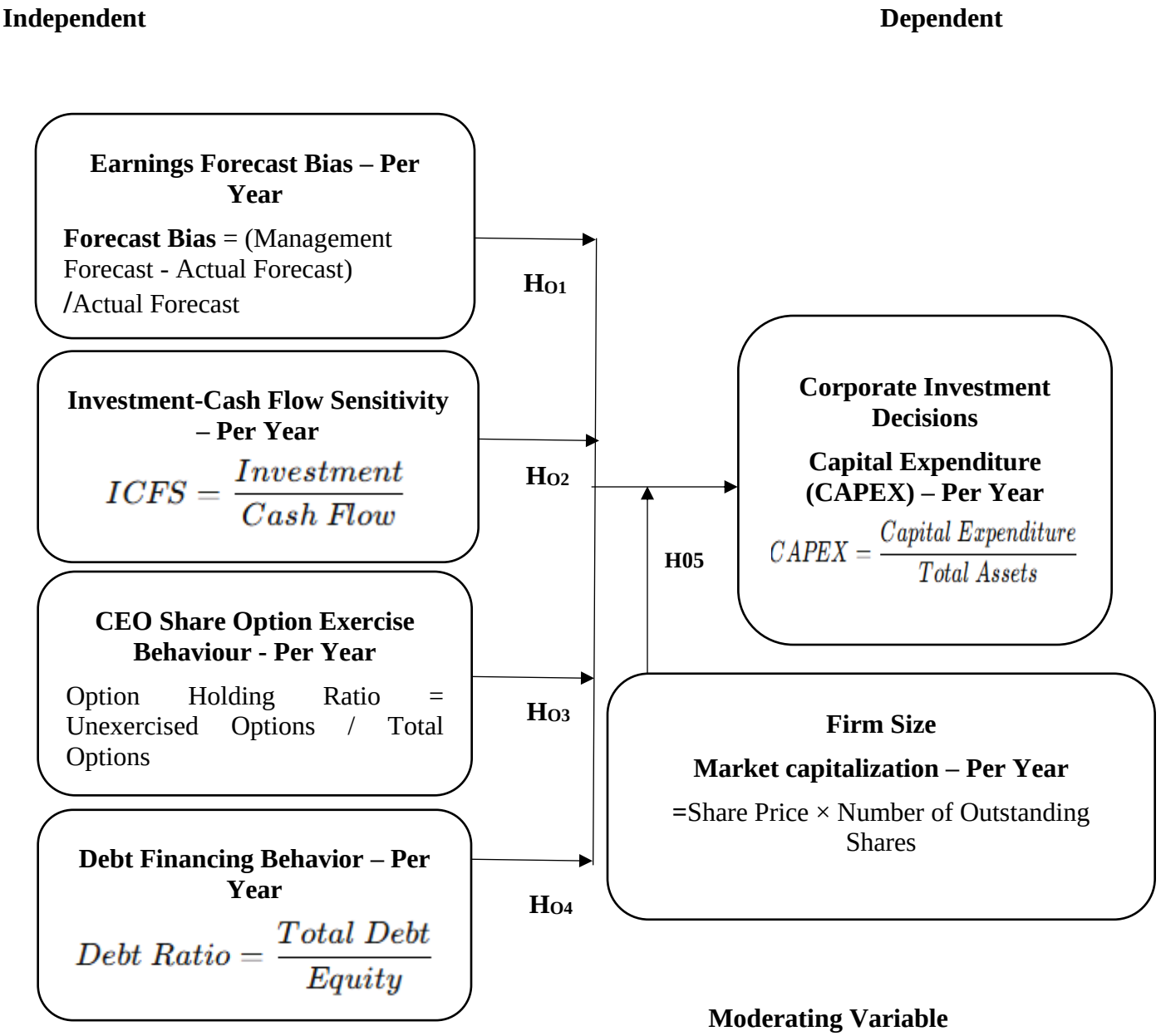

Figure 1: Conceptual Framework

Source: Researcher 2026

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