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Impact of Financial Leverage, Investment and Dividend Payments on Likelihood of Financial Distress in Emerging Markets

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ABSTRACT

Financial distress poses a significant challenge for companies around the globe, often resulting from a complex interplay of financial decisions. Understanding the factors that contribute to this risk is crucial for firms seeking to navigate the complexities of financial management. This research explores how these key financial decisions (Financial leverage, investment rate and dividend payment ratio) impact a company's likelihood of experiencing financial distress. The study initially considered 65 firms listed on the Nairobi Securities Exchange (NSE) as of December 2021. Applying specific inclusion and exclusion criteria, the research narrowed this down to 45 firms that were operational throughout the study period from 2008 to 2021, resulting in 630 firm-year observations in total. The study utilized secondary data from annual financial reports and employed descriptive and inferential statistical methods. The study used panel logistic regression to test hypotheses, providing a robust understanding of the data. The study results specifically indicate a positive and significant effect of financial leverage ($\beta = 0.238, p < 0.05$) and investment rate ($\beta = 2.199, p < 0.05$) on the likelihood of financial distress, while dividend payout policy had a negative and significant effect ($\beta = -1.852, p < 0.05$) on the likelihood of financial distress. Specifically, the results suggest that high financial leverage and high investment rate significantly elevate this risk, while the dividend payout ratio reduces it. Ultimately, this study highlights the need for companies to align their financial decisions with long-term sustainability goals to ensure their ongoing stability and success.

INTRODUCTION

Around the world, many publicly traded companies have faced financial challenges, evident in their defaults on financial obligations, shrinking assets, economic restructuring, and, in some cases, being placed under receivership before eventually being delisted from stock markets (Shahwan & Habib, 2020). Technological advancements and rapid changes in the business environment are transforming how corporate entities and other businesses operate (Chen *et al.*, 2020). These companies are now in a highly dynamic environment marked by increased competition and reduced profitability, affecting liquidity and potentially leading to bankruptcy and receivership (Pindado & Rodrigues, 2005). Furthermore, this situation was exacerbated by the COVID-19 pandemic outbreak in late 2019, which originated in China and spread globally, impacting both people and businesses. Consequently, corporate entities must continually strategize to stay competitive, enhance performance, minimize financial distress, and maximize shareholders' wealth (Teymouri & Sadeghi, 2020). In such a setting, decision-making needs to be more strategic than ever, or firms risk declining performance, leading to financial distress, bankruptcy, and receivership (Chen *et al.*, 2020).

Financial distress occurs when a company is unable to meet its financial obligations as they fall due, a situation often linked to poor cash generation and liquidity issues

(Geng *et al.*, 2015; Mariano *et al.*, 2021; Ninh *et al.*, 2018). Studies highlight that financial distress is primarily caused by liquidity problems, insufficient equity, high debt, and the inability to meet current obligations (Younas *et al.*, 2021; Khurshid *et al.*, 2019a; Kohli & Saha, 2008). Factors such as uncontrolled growth, poor cash flow forecasting, and excessive financial leverage also contribute to corporate failures (Pindado & Rodrigues, 2005; Younas *et al.*, 2021). Managers often avoid disclosing distress until bankruptcy is imminent (Pindado & Rodrigues, 2005), with operational issues, financing sources, and inadequate current assets frequently cited as causes (Whitaker, 1999; Turetsky & McEwen, 2001; Yazdanfar, 2011). Some studies also link distress to external factors, such as natural disasters or questionable internal practices like extended credit lines or insider trading (Chen *et al.*, 2020; Yazdanfar & Öhman, 2020).

Research documents that companies facing distress often exhibit poor operating performance, including high debt ratios, low return on assets (ROA), and declining net income (Zaki *et al.*, 2011; Khurshid *et al.*, 2019a; Chen *et al.*, 2020). Additionally, factors such as a company's reputation, leverage, earnings volatility, and collateral, as well as broader economic conditions, influence financial distress (Zaki *et al.*, 2011; Chen *et al.*, 2020). Despite the many causes of financial distress, financial decisions remain critical in assessing its likelihood (Chen *et al.*, 2020). Financial distress has been a global issue, with major

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corporations across the US, Europe, and Asia facing challenges, often exacerbated by economic shocks such as the 2008 financial crisis and the COVID-19 pandemic (Shahwan & Habib, 2020; Furceri & Mourougane, 2009; Mukoma, 2020).

In developing and emerging economies, financial distress varies with market cycles, as seen in Germany and Egypt, where nonperforming loans and financial difficulties among firms fluctuated over time (Outecheva, 2007; Shahwan & Habib, 2020). In Africa, companies like ESKOM and South African Airways in South Africa, Arik Airlines in Nigeria, and Kenya Airways in Kenya have faced significant financial distress (Shahwan & Habib, 2020). Previous research underscores the importance of corporate finance decisions—such as debt usage, investment in long-term projects, and dividend payout policies—in determining a firm’s likelihood of financial distress (Eldomiatiy *et al.*, 2019). These decisions, if poorly communicated or managed, can signal instability in the market and increase distress risk (Aras & Yildirim, 2018; Shahwan & Habib, 2020). The COVID-19 pandemic has intensified this risk, particularly for companies with excessive payout policies, which tend to face higher distress and slower growth (Andriosopoulos *et al.*, 2021).

Statement of The Problem

In recent decades, numerous companies, both in developed and developing economies have faced financial distress. This is evidenced by many companies that have undergone financial restructuring, been removed from the exchange market, entered receivership, and ultimately liquidated due to financial difficulties. This phenomenon has crippled companies’ ability to meet their short-term and even long-term obligations. Enron, Worldcom, Nokia, Parmalat, and Pacific Gas & Electric are examples of notable firms in developing countries that have experienced financial distress (Habib *et al.*, 2013). In developing and emerging economies, there are significant fluctuations in the likelihood of financial distress and bankruptcy. For instance, 33.3% and 37.3% of firms in Egypt had financial issues in 2014 and 2015, respectively (Shahwan & Habib, 2020).

In Kenya, a list of 20 companies (30.77%) were published in 2019 by Soko directory, (Research mapping, tracking your investments) to be in financial distress. Firms such as South African Airways, Ghana Co-operative Bank, Uganda Steel Rolling Mills, Civil Engineering and Construction Company (CIVICON), and many others underwent financial challenges in Africa (Beatty *et al.*, 2012; Mukoma, 2020; Shahwan & Habib, 2020). Empirical evidence indicates that a company’s financial decisions greatly affect its ability to avoid or recover from financial distress, even when accounting for other factors such as economic shocks, technology changes, consumer preferences, competition, inefficiencies, and disasters. (Yahanpath & Joseph, 2011). Evidence shows that large corporate payouts resulting from financial decisions deplete cash reserves, reduce investment, and increase

risk and instability in listed firms, especially during an economic downturn like the one caused Covid-19 pandemic. Despite its importance, financial distress is seldom disclosed by managers and is typically only revealed upon bankruptcy, (Pindado & Rodrigues, 2005) (Khurshid *et al.*, 2019b; Eldomiatiy *et al.*, 2019).

Numerous studies have investigated corporate financial distress among companies trading in the stock market. (Gaurav & Jitendra, 2022) empirically examine how the voluntary formation of a specialized investment committee affects financial distress risk. The authors document that firms with separate Investment Committees have a lower likelihood of financial distress. Mina and Wael (2021) and Fatima *et al.* (2022) examined how dividend policy influences the sustainability of distressed companies and found that those distributing dividends after loss periods maintain sustainability, improve shareholder wealth, and send positive market signals. Lucky *et al.* (2019) Explored the influence of leverage on the likelihood of financial distress of quoted manufacturing companies in Nigeria and found a positive relationship between debt ratio and distress. Abdullah and Ahmed (2016) Studied the relationship between the likelihood of financial distress and company performance in Malaysia and found a significant negative impact of distress on performance. Boumediene and Khababa (2018) Explored the bankruptcy prediction model and identified key predictors of financial distress, such as liquidity, profitability, leverage, and size. Liu *et al.* (2020), explored how financial distress affects firm growth in the US and found a significant negative impact, especially for smaller firms and those with higher debt levels. Lee *et al.* (2017) explored the link between financial leverage and distress, they found that leverage positively affects financial distress. Muigai and Muriithi (2017) and Fredrick (2018) explored how a company’s size affects the link between its capital structure and financial distress among non-financial firms in Kenya, they found a negative impact of capital structure on distress. Yegon and Koske (2018) Assessed the impact of trading activity on the relationship between financial leverage and the likelihood of financial distress among listed firms in Kenya. The study found a positive and significant effect of financial leverage on distress, with trading activity moderating this relationship. While financial decisions are important factors in predicting the likelihood of financial distress, there remains a significant gap in the existing literature, especially within developing economies like Kenya. Therefore, this study sought to determine the role of financial decisions and accounting conservatism on the likelihood of financial distress.

LITERATURE REVIEW

Theoretical review

Agency Theory

Michael Jensen and William Meckling developed this theory through the publication of a seminal paper in 1976. They documented that the interests of the

company's managers and its shareholders are not perfectly aligned therefore resulting in a conflict of interest. The conflict between managers and shareholders, on account of the separation of ownership and control, arises as managers tend to maximize their utility rather than the value of the firm and maximize shareholders' wealth. In this particular study, potential conflicts may arise when managers, who are agents of shareholders, make financial decisions that affect the company's financial performance and ultimately affect the firm's liquidity. According to this theory, managers may make financial decisions that prioritize their interests over those of shareholders, such as pursuing risky investments, financing unproductive projects using debt and even paying huge dividends to shareholders for personal gain but increase the likelihood of financial distress. This conflict of interest can result in suboptimal financial decisions that increase the risk of financial distress. Agency theory suggests that accounting conservatism can moderate the relationship between financial decisions and financial distress by reducing the potential for managers to engage in earnings management or other forms of financial reporting manipulation that could prioritize their interests over those of the owners leading to financial distress (Bhatt & Bhatt, 2017).

Managers often engage in higher investments using the firm's funds into investments that enhance their benefits against the shareholder's interest which increases the firm's likelihood of financial distress (McGuire, 1988). Similarly, firm managers are reluctant to relinquish control of the company and often resist liquidation even when it is in the shareholders' best interests (Harris & Raviv, 1988). Managers may engage in risky investments or finance unproductive projects that serve their interests rather than those of shareholders (Jensen & Meckling, 1976). For instance, managers might pursue projects with negative net present value (NPV) for personal prestige or empire-building (Baumol, 1959; Mitnick, 2019). This behavior can lead to inefficient resource allocation, increased agency costs, and heightened financial distress risks (Bhatt & Bhatt, 2017). Essentially, the agency costs associated with outside ownership reflect the value lost when professional managers prioritize their utility over the firm's value. The theory proposes that selecting an appropriate capital structure can help reduce these agency costs (Olson, 2000). According to the agency costs hypothesis, high leverage or a low equity-to-asset ratio diminishes the agency costs of outside equity and enhances firm value by compelling or motivating managers to align more closely with shareholders' interests.

Since the landmark paper by (Jensen & Meckling, 1976), extensive literature has explored agency theory explanations for capital structure (Harris & Raviv, 1988; Myers, 2001). Increased financial leverage can impact managers and reduce agency costs by creating the threat of liquidation, which results in personal losses such as salary, reputation, and benefits (Grossman & Hart, 1982; Williams, 1987), and by applying pressure to generate cash flow for interest payments (Jensen, 1986). Higher

leverage can address conflicts between shareholders and managers over investment decisions (Guney & Ozkan, 2005), risk levels (Jensen & Meckling, 1976; Lobo *et al.*, 2020), liquidation conditions (Harris & Raviv, 1990), and dividend policies (Stulz, 1990). The agency problem has attracted significant attention from scholars across various fields, including economics, management, and finance. A key issue contributing to the disconnect between CEOs and equity holders is information access difference, where CEOs may provide incomplete information about different aspects of the business, either intentionally or unintentionally (Akerlof, 1970). Corporate finance decisions, such as those related to capital structure, additional investments, and dividend payouts, can serve as signals to participants of the stock market. However, information asymmetry can distort the intended message behind these decisions. Researchers have demonstrated that the presence of information asymmetry can influence these financial choices (Li & Zhao, 2008; Morellec & Schürhoff, 2011). Empirical research reveals that using debt in a firm's capital structure can reduce agency costs by compelling or motivating managers to align more closely with shareholder interests. This regulation extends to investment choices (Myers, 1977), the level of risk assumed (Jensen & Meckling, 1976), and the circumstances under which a firm may consider liquidation (Ambarish *et al.*, 1987; Grossman & Hart, 1982; Harris & Raviv, 1990). Therefore, increasing leverage can lower agency costs, enhance profitability, and improve overall firm performance. Empirical studies support this positive link between debt levels and firm performance. For instance, (Taub, 1975) explores the factors affecting debt-equity ratios in US companies and finds a significant positive relationship between debt and profitability. Similarly, (Grossman & Hart, 1982; Williams, 1987) demonstrate that higher leverage reduces agency costs and boosts firm value by incentivizing managers to act in the best interest of equity holders. Roden and Lewellen (1995) also report a significant positive correlation between profitability and total debt in their analysis of leveraged buyouts. Similar findings are documented by other studies. Roden and Lewellen (1995) for a set of companies in the US and (de Mesquita & Lara, 2003) in the case of Brazilian companies. Margaritis and Psillaki (2010) investigate the relationship between efficiency, leverage, and ownership structure using a sample of French manufacturing firms and find that higher leverage is associated with improved efficiency over the entire range of observed data.

Pecking Order Theory

Pecking Order Theory was first developed by (Donaldson, 1961) and later refined by (Myers & Majluf, 1984). As one of the most influential theories of financial leverage, Pecking Order Theory suggests that firms have a specific preference order when it comes to financing their operations. Due to adverse selection, companies prefer internal financing over external sources. When external funds are required, firms favor debt over equity because

debt issues are associated with lower information costs. Consequently, equity is rarely issued (Myers, 1984).

According to Pecking Order Theory, the capital structure of a firm reflects this hierarchy of financing preferences. (Myers, 1984) proposed that companies aim to finance new projects using internal funds, such as retained earnings. If these funds are insufficient, they turn to debt, utilizing instruments like loans and bonds. Only as a last resort do firms issue equity, as this comes with higher information asymmetry and potential dilution of ownership.

The theory's core tenet is that firms are driven by the desire to minimize the costs associated with external financing, primarily stemming from information asymmetry between managers and investors. This results in a capital structure that heavily relies on debt rather than equity, leading to higher levels of financial leverage.

In the context of financial distress, Pecking Order Theory highlights a critical relationship between financial leverage and the potential for distress. As firms increase their reliance on debt financing, they inherently take on higher financial risk. This increased risk is primarily due to the fixed obligation to make interest payments, regardless of the firm's operational performance.

The theory suggests that firms relying heavily on debt are more susceptible to financial distress, as they face a higher likelihood of defaulting on their debt obligations during periods of economic downturns or operational challenges. As debt levels rise, the firm's financial flexibility decreases, making it more vulnerable to unexpected cash flow shortfalls. This vulnerability can lead to financial distress, where the firm struggles to meet its debt obligations, potentially resulting in bankruptcy or restructuring.

Financial Leverage

According to Chen and Chen (2011), Financial leverage is all about using borrowed money to boost the potential returns on an investment. By strategically using debt, companies can amplify their investment gains. This approach also involves finding the right mix of debt and equity to fund their operations effectively. Essentially, it's about leveraging borrowed funds to get more out of their investments and managing the balance between what they owe and what they own (Fabozzi & Drake, 2009). When a company takes on too much debt, it risks financial distress if it can't generate enough cash flow to meet its debt payments. High debt levels can also lead to larger interest expenses, which can erode profitability and add to the financial strain. If a company has a high debt-to-equity ratio, it might need to retain more of its profits to handle debt repayments or follow debt agreements that require sharing a portion of its profits. All of this effort is aimed at ensuring it can meet its debt obligations (Bhaskar *et al.*, 2017). On the flip side, as a company's leverage (debt-to-equity ratio) goes up, its financial risk tends to increase as well, largely because of how investors view highly leveraged firms. Experts point out that a

high level of corporate debt can reduce a company's financial flexibility, making it more prone to financial distress (the reduced-flexibility hypothesis). Moreover, it's widely recognized that firms with a lot of debt and facing serious financial risk might try to shift wealth from creditors to shareholders by making large, sometimes excessive, payouts (the risk-shifting hypothesis) (Acharya & Shin, 2017; Kaźmierska, 2015; Smith & Warner, 1979). These two theories aren't mutually exclusive and can be connected. For example, engaging in risk-shifting might lead to reduced financial flexibility, and a lack of flexibility could make risk-shifting even worse. Therefore, it's crucial for companies to thoughtfully consider the trade-offs between using debt and equity to find a balance that works for them. By striking the right balance in their capital structure, companies can better manage their risk of financial distress and support their long-term financial health.

Research has shown that a company's financial leverage is a key factor in financial distress. Generally, it's understood that higher leverage can worsen a company's financial challenges (Mandelker & Rhee, 1984; Samuel & Inyada, 2010). According to Brealey and Myers (1984) and Lee *et al.* (2011), having more leverage usually makes a firm riskier because financial markets perceive companies with high debt as more vulnerable to financial trouble, whether these risks are direct or indirect. This viewpoint is widely accepted in hospitality research, where many studies use leverage as a way to gauge a firm's risk or the costs tied to its capital structure. Often, these studies find that higher leverage negatively impacts firm performance, indicating that more debt increases risks for hospitality businesses. Koh *et al.* (2009), Park and Lee (2009), Tsai and Gu (2007) and John (1993) looked into how a firm's leverage directly impacts its risk. Their studies revealed that higher leverage tends to increase a firm's risk, especially in the hospitality sector.

However, Jensen (1989) proposed that there is a tradeoff between the benefits and drawbacks of leverage on financial distress. He argued, using agency theory, that the advantages of leverage can outweigh its costs. Wruck (1990) argued that although cutting a firm's leverage might provide quick relief from financial distress, it might not be the most value-maximizing choice. This is because reducing leverage would mean losing out on tax benefits and the organizational and incentive advantages that come with it. Even with differing opinions on the impact of leverage, many studies have consistently found that higher leverage tends to increase a firm's risk. Research by Jaafar *et al.* (2018), Giarto and Fachrurrozie (2020) and Saputri and Asrori (2019) suggests that leverage has a positive and significant impact on the likelihood of financial distress. This finding stands in contrast to the work of Finishtya (2019), Restianti and Agustina (2018), who found that leverage does not notably affect the likelihood of financial distress. On a different note, Rajan and Zingales (1995) highlighted that decisions about capital structure are key to determining both a

firm's short-term financial performance and its long-term success.

Research has consistently shown that capital structure plays a crucial role in influencing financial distress (Altman *et al.*, 2019; Chinelo & Fredrick, 2017; Muigai, 2016; Muigai & Muriithi, 2017; Ohlson, 1980). For example, (Frank & Goyal, 2008; Baimwera & Muriuki, 2014) found that high financial leverage tends to increase financial risk, which can lead to financial trouble. This supports the idea (Turaboglu, & Topaloglu, 2017) that how a company structures its capital is crucial in determining its risk of financial failure. The high-profile failures of globally renowned companies have been startling and deeply concerning for stockholders, lenders, employees, managers, and even governments. Such failures threaten jobs, damage personal and organizational reputations, and impact livelihoods (Altman *et al.*, 2019). Throughout history, particularly between the 1940s and 1950s, 1989 and 1998, and from 2007 to 2010, numerous banks around the world have collapsed due to issues such as poor capital structure, mismanagement of assets, lack of skilled personnel, and inadequate capital bases (Ailemen, 2003; Osaze & Anao, 1990; Sanusi, 2010). Therefore, the following hypothesis is proposed

H01: Financial leverage does not have a significant impact on the likelihood of financial distress

Investment Rate

Investment rates can also have a significant impact on a company's risk of financial distress. The investment rate refers to the proportion of income or capital that an individual, organization, or economy allocates to investment purposes rather than consumption. It is a key indicator of how resources are being utilized to generate future growth and productivity (Ahmadi & Kordloei, 2018). A company that makes poor investment decisions that lead to overinvestment can have lower cash flows, leading to reduced profitability and increased financial risk. For example, a company that invests more cash in a project that generates lower-than-expected returns may struggle to repay its debt obligations, increasing the risk of financial distress, (Ahmadi & Kordloei, 2018). Additionally, investment rates can also affect a company's capital structure, which can further impact the risk of financial distress. For example, if a company uses debt to finance a new investment, it may increase its debt-to-equity ratio, which can increase the risk of financial distress, (Ahmadi & Kordloei, 2018). Investment decisions are an essential component of a company's risk management strategy, and companies must carefully evaluate the risks and returns of their investment decisions to reduce the risk of financial distress. By making informed investment decisions and maintaining an appropriate capital structure, companies can mitigate the risk of financial distress and improve their long-term financial health, (Garcia, 2018). The Impact of investment on financial distress depends on a variety of factors, including the type of investment,

the financial health of the company, and the economic environment. Companies that make wise investment decisions and manage their debt levels carefully are more likely to avoid financial distress (Ahmadi & Kordloei, 2018). Chad (2011) provides compelling evidence that higher productivity is linked to better corporate survival across different countries, periods, and industries. Nonetheless, investments at the company level present both significant opportunities and risks (López *et al.*, 2015). Using external capital for investments can strain a company's cash flows due to debt repayments, and there may be a significant delay before any productivity gains become apparent. In some cases, investments could even yield negative returns (Ogawa, 2003). Furthermore, investments usually incur higher operational costs related to installing, operating, and maintaining new technology or production equipment (Bassetto & Kalatzis, 2011). Although investments are expected to enhance productivity, competitiveness, and profitability, they can also strain a company's financial position. Being overly cautious can prevent a company from seizing growth opportunities, while excessive optimism might lead to overinvestment and poor or negative returns (Kordestani *et al.*, 2011). Both these issues are market frictions that can potentially be addressed with appropriate policy measures (Ahmadi & Kordloei, 2018).

The evolution of agency theory and its impact on firms' investment has uncovered several conflicts between managers and principals that can affect performance and increase financial distress risk. These conflicts include too much investment and empire-building, goodwill issues, little firm investment, managers avoiding projects whose returns are unpredictable adopting a "quiet life" approach, and overconfidence (Stein, 2003). Each of these issues influences investment decisions and, in turn, the likelihood of financial distress. For example, the agency problem of over-investment occurs when managers take on risky projects or investments with negative net present values to expand the assets under their control, a practice known as empire-building. Managers may prefer to run larger firms for personal benefit, which may trigger agency conflict between the owners and managers if they utilize all available finances on additional investments even if their returns are uncertain (Baumol, 1959; Bolton *et al.*, 2013; Danthine & Donaldson, 1984). Conversely, there is a negative relationship between leverage and investment because debt repayments compel managers to use cash, thereby reducing the funds available for over-investment (Jensen, 1986, 1993).

Recent research into the association between firms' investment and information availability differences between managers and employees includes (Li, 2010) work, which suggests that managers' investment choices often reveal insights about the quality of firms' earnings. However, Li argues that these investment decisions signal information less strongly than other financial decisions, like dividend payouts. This view is echoed by Skinner and Soltes (2011), who found that investments in capital and

labor are less sensitive to signaling compared to dividend decisions. Their findings are consistent with (Lang & Litzenger, 1989; Koch & Shenoy, 1999), who noted that dividend decisions have a stronger signaling effect and higher agency costs for firms that overinvest those with a Tobin's Q below one compared to firms with a Tobin's Q closer to one.

The challenges tied to long-term asset investments have prompted research into current assets too. For example, (Carpenter *et al.*, 1994) investigated how investing in inventory, which is a current asset, affects a company's operations. Their results align with (Carole, 1989) ideas, suggesting that a firm's sales growth might be more closely tied to investments in current assets rather than long-term assets. As a result, companies that allocate more resources to current assets might see higher growth rates compared to those that primarily invest in long-term assets.

Modigliani and Miller (1958) model, which takes into account imperfections in capital markets, implies that companies may not always be able to seize all value-creating investment opportunities. This limitation can lead to sub-optimal investment decisions due to market imperfections like information asymmetry and agency costs. As a result, firms might either under-invest, missing out on profitable projects, or over-invest, engaging in overly risky projects with negative net present values Morgado and Pindado (2003) provide a thorough review of these issues). Although various authors have included investment-related variables in models of financial distress, empirical evidence on how increased capital investment affects financial distress remains inconsistent. Some research shows a strong positive relationship (Aziz *et al.*, 1988; Aziz & Lawson, 1989; Gentry *et al.*, 1985), while other studies find no such link (Gentry *et al.*, 1985; McKee & Lensberg, 2002; Min & Lee, 2005). Long-term investments typically boost performance during favorable economic times but can elevate risks during downturns, such as the COVID-19 pandemic (Männasoo & Maripuu, 2015). Kane and Richardson (2002) found that distressed companies might recover more effectively by scaling back their asset base, while Flagg *et al.* (2010) recommend cutting capital expenditures and boosting R&D spending as a way to navigate distress.

Previous research into investment decisions underscores the importance of financial constraints. Bhagat *et al.* (2005) observed that "financially distressed firms behave differently from financially constrained firms," suggesting that insights about financial constraints might not fully apply to firms in financial distress, despite some overlap. The extent of financial constraints is often difficult to measure directly, leading researchers to use proxies that might not reflect the firm's true financial condition. The effects of financial distress on investment behavior have been explored indirectly in various studies. Whited (1992) looked at how borrowing constraints impact investment behavior, finding that difficulties in securing debt finance affect investment choices. Bhagat *et al.*

(2005) examined how financial distress influences the sensitivity of investment to internal cash flow, revealing that this relationship is influenced by operating profits. White (1996) proposed that issues of over- and under-investment could be exacerbated in distressed companies even before they declare bankruptcy, though this hypothesis has not been empirically tested until now, as past studies did not address how financial distress impacts investment strategies. Campello *et al.* (2011) investigated the interplay between investment decisions and liquidity during the 2009 crisis, finding that firms constrained by credit were more likely to use external credit lines to substitute for internal liquidity when making investments during the downturn.

Popov. (2014) highlights how credit constraints negatively impact investments in human capital, noting that this effect is more significant in industries that are education-intensive and those with promising global growth prospects. Avarmaa *et al.* (2013) investigate the impact of financial leverage and credit constraints on labor productivity, revealing that reduced credit constraints, especially through failure-tolerant investors, enhance innovation productivity in venture capital-backed startups, particularly those established during economic downturns.

H02: Investment rate does not have a significant impact on the likelihood of financial distress

Dividend Payout Ratio

Dividend payout policy refers to the financial ratio indicating the amount of profit distributed to shareholders *visa vis* profit retained for investments. It involves decisions on the amount, timing, and frequency of dividend payments, balancing between retaining earnings for growth and rewarding shareholders (Hauser, 2013). The association between the dividend payment ratio and the likelihood of financial distress is that a company's dividend payout policy can influence its likelihood of financial distress. A company that pays out a large portion of its earnings as dividends may not have enough funds to meet its financial obligations, such as debt payments and operating expenses. This can lead to financial distress, including being declared bankrupt. In addition, the firm may lack cash flow to invest in growth opportunities. On the other hand, a company that has a low dividend payout or does not pay dividends at all may be able to plow back its earnings into the business and maintain a strong financial position, reducing the risk of financial distress (Widagdo & Sa'diyah, 2022). Companies that balance their dividend policy with their investment and debt management strategies are more likely to avoid financial distress (López *et al.*, 2015). When a company is experiencing financial distress, it may be forced to reduce or eliminate its dividend payments to conserve cash and meet its financial obligations. This can hurt the company's stock price and its ability to raise capital. On the other hand, companies that are financially healthy and have

strong cash reserves may be more likely to pay higher dividends to shareholders. This can signal to investors that the company is financially sound and has confidence in its ability to generate future cash flows, (Abdulkadir *et al.*, 2015).

There are generally three perspectives on the relationship between dividend policy and stock value (Damodaran, 2010). The first perspective, known as the dividend irrelevance theory, suggests that dividend payment policy does not impact the likelihood of financial distress or the firm's value in a perfect capital market. According to this view, dividend policy does not affect the chances of financial distress (Black & Scholes, 1974; Miller & Modigliani, 1961). The second perspective argues that dividends are detrimental to the average stockholder due to tax disadvantages, which could decrease the firm's value and increase the likelihood of financial distress. The third perspective called the bird-in-the-hand theory, posits that dividends are beneficial and can enhance shareholder wealth by positively influencing stock prices, thus affecting performance and the likelihood of financial distress (Gordon, 1963; Harkavy, 1953; Pettit, 1972; Woolridge, 1983). Additionally, signaling theory explains that increasing dividend payouts signal positive future earnings to the market (Miller & Rock, 1985), which can lead to higher share prices. According to agency cost theory, dividend payments help reduce agency costs between shareholders and managers (Moh'd & Rimbey, 1995). They suggest that paying dividends demonstrates a manager's commitment to maximizing shareholder value rather than investing funds in risky or unprofitable projects.

Dividend policy is a topic with significant debate among academics and researchers. Studies indicate that how a company handles dividends directly impacts its value and shareholder wealth, affecting corporate liquidity and potentially increasing the risk of financial distress (Asquith & Mullins Jr, 1983; Baker & Powell, 1999; Lintner, 1962). Miller and Rock (1985) highlight that dividend payouts provide important signals about a company's future earnings. In practice, decisions about dividends are interconnected with other management choices, such as capital planning, capital structure, mergers and acquisitions, and asset pricing. Managers strive to boost their firm's value, which means enhancing shareholder wealth. According to Fama and French (2001), achieving a firm's optimal value involves making financial decisions that improve profitability. Since each financial decision impacts others, these choices affect the firm's market value and help reduce financial distress.

A dividend payment policy is a crucial financial decision that management uses to enhance shareholders' wealth. It has a direct impact on a firm's market value, which means that choices about dividends can either raise or lower an organization's risk of financial distress. Furthermore, other financial decisions, like investment strategies, can indirectly affect a firm's distress risk by influencing dividend payments (Juhandi & Aisjah, 2013).

Given its importance, the effect of dividend decisions on stock prices has been a point of interest for researchers over the years, particularly in developing markets. In a significant study of U.S. publicly listed firms, Baskin (1989) introduced a theory linking dividend policy to stock volatility. He suggested that dividends might cause a firm's stock price to move away from its true value, affecting liquidity. Baskin also noted that dividends serve as both an informational tool and a signal of market confidence in a firm's performance. Consequently, dividend policy can have a notable impact on a firm's liquidity and potentially increase its risk of distress.

Researchers have found that dividend payment policies are closely tied to investment rates (Easterbrook, 1984). Essentially, paying dividends reduces the cash available for investment, and the opposite is true as well (Jensen & Meckling, 1976). Easterbrook (1984) and Rozeff (1982) suggest that managers might opt for lower dividends to avoid the need for raising additional capital, which comes with higher transaction costs and more scrutiny from management. Jensen and Meckling (1976) argue that the way companies allocate their funding between equity and debt affects agency costs, which tend to increase when management's ownership stake decreases. Dividends can be an effective way to manage conflicts between managers and shareholders, as well as between majority and minority shareholders, by limiting management's ability to use cash freely (Jensen, 1986; Jensen & Meckling, 1976). Recent research has explored cash holding as a means of managing and overseeing agency costs. While cash holding can be a valuable tool for managers and controlling shareholders, it can also be misused, particularly in countries with weaker shareholder protections (Blanchard *et al.*, 1994; Dittmar *et al.*, 2003; Kalcheva & Lins, 2007; Mikkelsen & Partch, 2003; Opler *et al.*, 1999; Ozkan & Ozkan, 2004; Sher, 2014).

With the introduction of agency theory and information asymmetry concepts in the early 1970s, dividend models began to factor these elements into their analysis of dividend behavior. Ross (1977) was one of the first to link information asymmetry with dividend decisions in less-than-perfect markets. He proposed that management might use dividend policy to send signals to less informed shareholders. For example, a higher payout ratio could indicate expected higher profits, which would drive up share prices. Ross (1977) aligns with the bird-in-hand theory, which suggests that companies paying more in dividends are valued higher in the market. The main difference between the two theories is that the bird-in-hand theory focuses on investors' preference for immediate cash, while Ross's model centers on how information asymmetry and signaling play a role.

Later developments in the theory focused on linking dividend policy to agency costs. Easterbrook (1984) and Rozeff (1982) were trailblazers in this area. Rozeff (1982) introduced a framework where the payout payment ratio is influenced by factors such as the percentage of equity shares held by firm management, the company's historical

performance and future expectations on its increase in Assets, its beta factor, and the number of equity shares. He reveals that the percentage of equity owned by non-management and the number of debt holders serve as signals of the existence of agency conflict. A larger ownership base tends to increase agency conflicts and thus agency costs. Easterbrook (1984) provided fresh perspectives on how dividends can help reduce agency costs related to management behavior. He proposed that paying out higher dividends limits the cash available to managers, compelling them to seek external funding from financial markets, where their actions are more closely watched. This, according to Easterbrook, might explain why companies persist in paying dividends and raising funds from the market.

H03: Dividend payout ratio does not have a significant impact on the likelihood of financial distress

Control Variables

Apart from financial decisions and accounting conservatism, other factors may influence corporate financial distress, and thus the need to control for the variables. This study will control for the entity's size and its age.

Firm Size

The study accounted for the size of the entity and suggested a negative relationship between entity size and financial distress. This is because, as noted by (Frank & Goyal, 2004; Jermias, 2008; Ramaswamy, 2001), larger firms benefit from economies of scale and have more resources compared to smaller firms. Prior research has identified connections between firm size and financial distress (Bhattacharjee & Han, 2014; Madrid-Guijarro *et al.*, 2011; Rianti & Yadiati, 2018; Yazdanfar & Öhman, 2020). Consistent with the theory of economies of scale, larger firms generally have better access to resources and are more able to leverage economies of scale to diversify their products and strengthen their competitive edge. As a result, bigger firms are typically better equipped to withstand financial distress. However, (Yazdanfar & Öhman, 2020) did not observe economies of scale in larger banks. Firm size (SIZE), measured as the natural log of total assets, was used in this study to control for its potential effects. Based on previous research (Richardson & Lanis, 2007), we anticipate that larger firms are more likely to engage in tax avoidance due to their greater economic and political influence, which allows them to minimize tax liabilities.

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The study took entity size into account and suggested that larger firms are less likely to experience financial distress. This is because, as highlighted by (Frank & Goyal, 2004; Jermias, 2008; Ramaswamy, 2001), bigger companies benefit from economies of scale and have access to more resources than smaller firms. Previous research has also shown a link between firm size and financial distress (Bhattacharjee & Han, 2014; Madrid-Guijarro *et al.*, 2011; Rianti & Yadiati, 2018; Yazdanfar & Öhman, 2020). In line with the economies of scale theory, larger firms often have better resource access and can use economies of scale to expand their product lines and competitive advantage. This puts them in a stronger position to weather financial difficulties. However, (Yazdanfar & Öhman, 2020) found no evidence of economies of scale in larger banks. In this study, firm size (SIZE), measured by the natural log of total assets, was included to control for any potential effects. Based on prior research (Richardson & Lanis, 2007), we expect that larger firms are more prone to tax avoidance because their economic and political power allows them to lower their tax burdens more effectively than smaller companies.

Firm age

The length of time a firm has been in operation can indicate its level of financial distress. Research shows that firm age is generally negatively associated with financial distress (Evans, 1987). As firms grow older, their risk of failure tends to decrease. Firm age (FAGE), measured in years, reflects how long a firm's stock has been traded publicly. Newer publicly listed companies might face greater financial risks due to the pressure to meet earnings expectations (AICPA, 1987). Conversely, firms with more years in the public markets are likely to have adjusted better to regulatory demands (Beasley, 1996). Therefore, this study expects FAGE to show a negative relationship. Richardson and Lanis (2007) found a negative link between firm age and return on assets in their study of 200 firms listed on the Istanbul Stock Exchange between 2008 and 2011.

Financial decisions

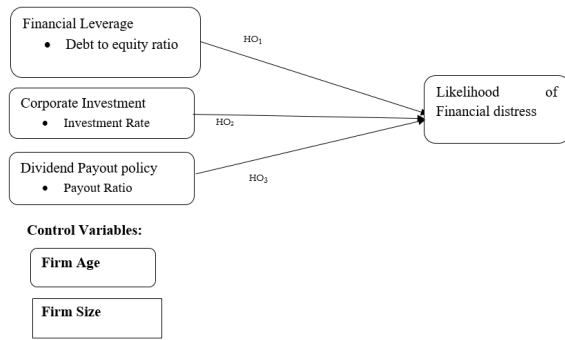


Figure 1: Conceptual framework

MATERIALS AND METHODS

The target population consisted of 65 firms listed on the Nairobi Securities Exchange that remained consistent for fourteen years, from 2008 to 2021. These years are particularly significant due to the global financial crisis and the COVID-19 pandemic, offering valuable insights into how firms in developing economies responded to these crises and the corporate failures seen between 2012 and 2015. The choice of this target population was based on the ease of obtaining the necessary data. NSE firms are grouped into sectors such as agriculture, automobile and accessories, commercial banks, construction and allied, energy and petroleum, insurance, investment, and manufacturing and allied.

The study’s inclusion and exclusion criteria targeted firms that were consistently listed on the NSE during the 2008 to 2021 period. Firms missing financial reports or listed after 2008 were excluded. This left 45 companies with available financial reports that participated in the survey, resulting in 630 firm-year observations across nine industries. The fourteen years was chosen to ensure a large enough sample size for thorough analysis and meaningful generalizations.

The study employed secondary data, collected through content analysis, sourced from the annual financial statements and reports of firms listed on the NSE. Both qualitative and quantitative data were extracted from these secondary sources. A document analysis guide was used to aid in the collection of this data. Content analysis involved reviewing the financial reports of firms from 2008 to 2021 to gather information on financial distress, corporate financial leverage, investment rates, dividend payout policies, assets, and firm age. To ensure accuracy, the researcher double-checked all entries from the annual reports.

Secondary data are valuable as they enhance understanding, clarify the research problem, and offer insights into potential solutions (Ghauri *et al.*, 2020). The benefits of using secondary data include time and cost savings, reduced resource requirements, availability of comparative and contextual data, potential for unexpected findings using appropriate methods, and ease of information access (Saunders *et al.*, 200; Sekaran & Bougie, 2016). Fraser *et al.* (2006) assert that annual financial reports provide more accurate information

compared to other secondary data sources. Additionally, the information in annual reports is considered highly reliable and of superior quality by maintaining the continuity of the texts.

Model specification

$$\text{logit}(p)_{it} = \beta_0 + \beta_1 \text{SIZE}_{it} + \beta_2 \text{AGE}_{it} + \dots \dots \dots \text{model 1}$$

$$\text{logit}(p)_{it} = \beta_0 + \beta_1 \text{SIZE}_{it} + \beta_2 \text{AGE}_{it} + \beta_3 \text{FL}_{it} + \beta_4 \text{INVE}_{it} + \beta_5 \text{DP}_{it} + \dots \dots \dots \text{model 2}$$

Where:

- p = is the probability of the event occurring
- logit(p) = natural logarithm of the odds of the event occurring (i.e. the logarithm of p divided by 1-p) [log[p/(1-p)]]
- β0 = constant
- β1...β5 = regression coefficients
- SIZE = Firm size
- AGE = Firm age
- FL_{it} = Corporate financial leverage
- INVE_{it} = Investment rate
- DP_{it} = Dividend payout Policy ratio
- E_{it} = Error term
- i = Company
- t = Year

RESULTS AND DISCUSSION

Descriptive Results

Table 1 reveals the average descriptive results for all the variables analyzed from 2008 to 2021. These results show that 23% of firms analyzed during the period were financially distressed. The results further show that the mean investment rate is 0.116, indicating that, on average, firms invest at a rate of approximately 11.6%. The standard deviation of 0.174 suggests moderate variability in investment rates among the sample firms.

Analysis of the table also indicated that the mean dividend payout ratio is 0.3512, indicating that, on average, firms pay out approximately 35.12% of their earnings as dividends. The high standard deviation (0.678) suggests considerable variability in dividend payout ratios among the sample firms. This shows the perceived importance of dividends by firms trading at NSE.

Table 1: Distribution of the Mean and Standard Deviation of the Variables

Variable	Obs	Mean	Std. Dev.	Min	Max
FD	630	0.231	0.422	0.000	1.000
FL	630	2.202	3.606	-8.926	57.218
INVE	630	0.116	0.174	-0.556	0.738
DP	630	0.351	0.678	-3.571	11.111
FA	630	3.976	0.543	1.386	4.836
FS	630	7.029	1.132	3.818	9.201

FD: likelihood of financial distress, FL: Financial leverage, INVE: Investment rate, DP: Dividend payout ratio, FA: Firm Age, FS: Firm Size, P50: 50th percentile, SD: standard deviation, Min: minimum, Max: maximum, N: number of firms.

Source: Research (2024)

The mean firm age during the study period was 3.976, indicating that, on average, firms in the sample were in operation for approximately 3.98 years. The standard deviation of 0.543 suggests moderate variability in firm ages. The mean firm size during the period was 7.029 and the standard deviation was 1.13 suggesting considerable variability in firm sizes among the sample firms.

Correlation Analysis

Pearson correlation coefficient was applied to evaluate the strength and direction of the linear relationships between financial decisions, control variables, and financial distress. Additionally, the correlation coefficients were used to check for multicollinearity in the regression analysis, as a correlation coefficient of 0.8 or higher indicates a significant multicollinearity issue between the independent variables (Hair *et al.*, 2006). The results of the correlation analysis are provided in Table 4.12.

Overall, the results in Table 2 indicate no issues with multicollinearity, as all coefficients are below 0.8. Among the variables analyzed, financial leverage showed the strongest link to financial distress, followed by firm size, investment rate, firm age, accounting conservatism, and, finally, the dividend payout ratio.

The Pearson correlation findings in Table 2 specifically show that financial leverage (FL) has a positive and significant link to financial distress ($r = 0.348, p < 0.05$). This means that a rise in financial leverage notably increases the likelihood of financial distress. This finding aligns with earlier studies by (Wangsih *et al.*, 2021; Dirman, 2020; Susanti *et al.*, 2020; Koh *et al.*, 2009; Park & Lee, 2009; Tsai & Gu, 2007; John, 1993), which also observed a significant positive relationship between financial leverage and financial distress likelihood.

The results also indicate that the investment rate (INVE) has a positive and significant relationship with financial distress ($r = 0.207, p < 0.05$). This suggests that the likelihood of financial distress increases significantly as the investment rate increases. These findings align with previous studies, such as those by (Al-Dhamari *et al.*, 2023; Suranta *et al.*, 2023; Aziz *et al.*, 1988; Aziz & Lawson, 1989; Gentry *et al.*, 1985), which found a positive and

significant effect of the investment rate on the likelihood of financial distress. However, these results contradict the findings of some other studies, including (Gentry *et al.*, 1985; McKee & Lensberg, 2002; Min & Lee, 2005), which reported no positive or no relationship between the investment rate and financial distress likelihood.

The correlation results further reveal that the dividend payout ratio (DP) has a negative and significant effect on the likelihood of financial distress ($r = -0.102, p < 0.05$). This suggests that increasing the share of dividends paid to shareholders significantly reduces the chances of financial distress. These findings align with earlier research by (Ali, 2022; Andriosopoulos *et al.*, 2021; Rivandi & Ariska 2019; Cao *et al.*, 2017; DeAngelo & DeAngelo, 1990), which showed that dividend payouts have a negative and significant effect on the likelihood of experiencing financial distress. However, these results contradict the findings of studies by Widagdo and Sa'diyah (2022), López-Iturriaga and Santana-Martín (2015), Black and Scholes (1974), and Miller and Modigliani (1961), which reported either no significant effect or a positive significant effect of dividend policy on the likelihood of financial distress.

Additionally, the analysis revealed a negative and significant link between firm size and financial distress ($r = -0.271, p < 0.05$). This indicates that as a firm's size increases, the chances of encountering financial distress decrease. Consequently, it can be inferred that small firms are more susceptible to financial distress compared to large firms. This finding aligns with previous research, such as that conducted by Alqatamin *et al.* (2021), Nguyen *et al.* (2023) and Harymawan *et al.* (2020). Furthermore, the results demonstrated that firm age has a positive and significant correlation with financial distress ($r = 0.172, p < 0.05$). This suggests that as a firm ages, its probability of experiencing financial distress also rises. Hence, it can be argued that older firms are more prone to financial distress than younger firms that are still in their growth stages. This observation may be attributed to agency problems arising from the separation of ownership and management, where managers might place their own interests above those of shareholders.

Table 2: Correlation results

	FD	FA	FS	FL	INVE	DP	AC
FD	1.000						
FA	0.172*	1.000					
FS	-0.271*	-0.053	1.000				
FL	0.348*	-0.053	0.299*	1.000			
INVE	0.207*	-0.045	0.243*	0.190*	1.000		
DP	-0.102*	-0.040	-0.053	-0.065	-0.024	1.000	
AC	-0.102*	0.041	0.035	-0.086*	-0.056	-0.058	1.000

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

* Correlation is significant at the 0.05 level (2-tailed)

FD: likelihood of financial distress, FL: Financial leverage, INVE: Investment rate, DP: Dividend payout ratio, FA: Firm Age, FS: Firm Size.

Panel Logistic regression results

The primary influence and corresponding hypothesis (H_{01} to H_{03}) were examined in the second model of the panel logistic regression analysis, and the results are presented in Table 3. From these findings, it is evident that the overall logistic regression model is statistically significant based on the chi-squared test, with a low p-value of 0.0000 ($P < 0.05$), indicating that it is highly unlikely that the observed relationships occurred by chance. The Wald $\chi^2(5)$ is 30.55 indicating the overall significance of the model suggesting a strong group-level effect. The negative log-likelihood (-159.471) and the R-squared (0.17), suggest that the model provides a reasonably good fit of the model explaining a significant portion of the variation in financial distress. The R-square for the model was 0.17, suggesting that the predictor variables explain approximately 17% of the variation in the likelihood of financial distress among companies trading at NSE.

Ho1: Financial leverage does not have a significant effect on the likelihood of financial distress among corporate entities trading at NSE.

The results in Table 3 indicate that a higher level of financial leverage (more debt) is linked to a greater likelihood of financial distress ($\beta = 0.238, P < 0.05$). With a p-value less than 0.05, the null hypothesis (H_0), which posits that financial leverage does not significantly affect the likelihood of financial distress among firms trading on the NSE, is rejected. This leads to the conclusion that financial leverage significantly impacts the likelihood of financial distress. A positive coefficient indicates that higher leverage (more debt) is associated with increased log odds of the likelihood of financial distress. This implies that a unit increase in financial leverage increases the log odds of the likelihood of financial distress by 0.238 units. This suggests that financially healthy firms depend more on equity than debt. This is because with increasing leverage (debt-to-equity ratio), the likelihood of financial distress increases due to investors' perception of levered firms. Scholars argue that financial debts reduce financial flexibility and therefore expose the firm to financial distress risk (the reduced-flexibility hypothesis). Additionally, high debt levels can lead to higher interest expenses, which can reduce profitability and further exacerbate financial distress (Fabozzi & Drake, 2009; Bhaskar *et al.*, 2017). A company with a high debt-to-equity ratio may either keep a larger portion of its profits to fund debt repayment or be obligated to distribute a portion of its profits according to debt agreements to secure the funds required for debt repayment (Bhaskar *et al.*, 2017). Firms with high debt levels often encounter limitations on their financial flexibility. They may find it challenging to adapt during economic downturns or cash flow issues, increasing their risk of financial distress. Elevated leverage results in higher interest payments, which can strain a company's cash flow. If revenues fall short of covering these expenses, the firm may face financial distress. Additionally, firms with significant debt may be bound by restrictive covenants from lenders,

which can constrain their operational flexibility and financial strategies. This increases the risk of distress if they fail to adhere to these conditions.

High leverage also magnifies the effects of market fluctuations on a firm's profitability. Negative changes in market conditions can have a greater impact on highly leveraged firms, making them more prone to financial distress. Moreover, high levels of financial leverage can signal greater risk to investors and creditors, potentially leading to increased borrowing costs or reduced investment, which further heightens financial distress. Firms with substantial debt may see a drop in their credit ratings, leading to higher interest rates on new loans and greater difficulty in securing financing, thus contributing to financial distress.

The results align with prior research, for example, the studies by (Wangsih *et al.*, 2021, Dirman, 2020, Susanti *et al.*, 2020, Koh *et al.*, 2009; Park & Lee, 2009; Tsai & Gu, 2007). John (1993) whose studies found that financial leverage has a significant positive relationship with the likelihood of financial distress. However, the findings of the study were not in agreement with the findings of (Jaafar *et al.*, 2018; Giarto & Fachrurrozie, 2020; Saputri & Asrori, 2019), whose studies found that leverage does not significantly increase the likelihood of financial distress. Similarly, these findings contradict the findings from research conducted by (Finishtya, 2019) as well as (Restianti & Agustina, 2018) which found that leverage does not have a significant influence on the likelihood of financial distress.

Ho2: Investment rate does not have a significant effect on the likelihood of financial distress among corporate entities trading at NSE.

The results in Table 3 reveal that the investment rate significantly and positively affects the likelihood of financial distress among companies listed on the NSE ($\beta = 2.199, P < 0.05$). Since the p-value is below 0.05, this indicates that the impact of the investment rate on financial distress is substantial. Therefore, the null hypothesis, which suggested that the investment rate does not significantly influence the likelihood of financial distress for NSE-listed companies, is rejected. It is concluded that the investment rate does have a significant effect on financial distress among these firms. Specifically, a one-unit increase in the investment rate increases the log odds of financial distress by 2.199 units.

High investment rates often necessitate substantial capital outlays. If these investments fail to yield adequate returns, they can place significant strain on a company's financial resources, heightening the risk of distress. To fund large investments, companies may turn to debt. Increased borrowing elevates interest costs and repayment demands, which can amplify financial distress if the company's cash flow falls short. Large investments, particularly in new projects, carry inherent operational risks. Should these projects falter or underperform, the resulting financial strain can lead to distress. Additionally, high investment rates can reduce liquidity, as funds are committed to

capital projects, potentially impeding the firm's ability to meet short-term obligations and increasing financial distress. Firms with high investment rates may also be more vulnerable to market fluctuations. Adverse market conditions can disproportionately affect companies with significant investments, making them more prone to financial distress. Furthermore, high investment rates often come with expectations of substantial returns. If these returns do not materialize, the discrepancy between investment costs and actual revenue can cause financial difficulties. Lastly, aggressive investment strategies can result in overexpansion. Rapid expansion without sufficient market research or operational capacity can lead to challenges, raising the risk of financial distress. This finding aligns with agency theory, which highlights various conflicts between managers and principals that are directly related to corporate investment decisions. These conflicts can impact performance and elevate the likelihood of financial distress (Stein, 2003). Among these conflicts are the cases of over-investment, empire-building, and reputational problems, which increase the company's likelihood of financial distress (Stein, 2003). All of these problems have different implications for corporate investment which ultimately increase the chance of financial distress. In addition, debt repayments on investments funded with external capital put pressure on the company's cash flows which increases the entity's likelihood of financial distress. These results are consistent with previous studies including (Al-Dhamari *et al.*, 2023, Suranta *et al.*, 2023, Aziz *et al.*, 1988; Aziz & Lawson, 1989; Gentry *et al.*, 1985) whose studies found that investment rate have a positive and significant effect on likelihood of financial distress. However, these findings are not consistent with the findings of (Gentry *et al.*, 1985; McKee & Lensberg, 2002; Min & Lee, 2005) whose studies found no positive or no relationship between investment rate and the likelihood of financial distress.

Ho3: Dividend policy does not have a significant effect on the likelihood of financial distress among corporate entities trading at NSE.

Similarly, Table 3 shows that the dividend policy has a significant negative impact on the likelihood of financial distress for companies listed on the NSE ($\beta = -1.852$, $P < 0.05$). The p-value being less than 0.05 confirms that the dividend policy significantly affects financial distress. As a result, we reject the null hypothesis that the dividend policy does not have a significant effect on financial distress for NSE-listed firms. The findings suggest that the dividend policy does significantly influence financial distress among these companies. Specifically, a one-unit increase in the dividend payout ratio lowers the log odds of financial distress by -1.852 units.

These results support agency cost theory, which argues that dividend payments reduce the conflicts between shareholders and managers (Moh'd *et al.*, 1995). According to this theory, paying dividends signals that managers are committed to using shareholders' funds wisely rather than funneling them into risky or unprofitable ventures. Moreover, Miller and Rock (1985) contend that dividend payouts provide important signals about a firm's future earnings, enhancing investor confidence and thereby decreasing the likelihood of financial distress.

These results are consistent with previous studies including (Ali, 2022, Andriosopoulos *et al.*, 2019, Cao *et al.*, 2017; DeAngelo & DeAngelo, 1990) whose studies found that dividend payout has a negative and significant effect on likelihood of financial distress. However, these findings are not consistent with the findings of (Widagdo & Sa'diyah, 2022, López-Iturriaga & Santana Martín, 2015, Black & Scholes, 1974; Miller & Modigliani, 1961) whose studies found that no significant effect of dividend policy or positive significant effect of dividend policy on the likelihood of financial distress.

Table 3: Regression results for direct effects

Random-effects logistic regression		Number of obs = 630				
Group variable: id		Number of groups = 45				
Random effects u _i ~ Gaussian		Obs per group: min = 14				
		avg = 14.0				
		max = 14				
Integration method: mghemite		Integration points = 12				
		Wald chi2(5) = 30.55				
		Prob > chi2 = 0.0000				
Log-likelihood = -159.471		Pseudo R2 = 0.17				
FD	Coef.	Std. Err.	z	P>z	[95% Conf.	Interval]
FL	0.238	0.081	2.13	0.003	0.789	0.396
INVE	2.199	0.693	3.17	0.002	0.836	3.552
DP	-1.852	0.788	-2.35	0.019	-3.397	-0.308
FS	-3.809	1.809	-2.11	0.003	-7.339	-2.791
FA	38.747	10.427	3.72	0.001	18.311	59.81
_cons	-68.4801	17.081	-4.01	0.000	-101.958	-35.003
lnsig2u	4.170	0.441			3.305	5.035

sigma_u	8.044	1.774		5.221	12.395
rho	0.952	0.203		0.892	0.979

Likelihood-ratio test of rho=0: chibar2(01) = 199.05 Prob >= chibar2 = 0.000

FD: likelihood of financial distress, FL: Financial leverage, INVE: Investment rate, DP: Dividend payout ratio, EA: Firm Age, FS: Firm Size.

Discussion of the Research Findings

Effect of Financial Leverage on Likelihood of Financial Distress

The study sought to understand how financial leverage influences the likelihood of financial distress among firms listed on the Nairobi Securities Exchange. The results revealed that financial leverage had a statistically significant positive effect on the likelihood of financial distress ($\beta=0.238$; $p<0.05$). This means that higher financial leverage was linked to a greater chance of financial distress among these firms during the analysis period. This underscores the crucial role that corporate leverage plays in affecting the financial health of these companies.

When a company takes on excessive debt, it elevates the risk of financial distress because the company may struggle to generate sufficient cash flow to meet its debt obligations. Moreover, high debt levels can result in increased interest expenses, which can erode profitability and exacerbate financial difficulties. A company with a substantial debt-to-equity ratio may either retain a larger portion of its profits to service its debt or be obliged to distribute a significant portion of its profits based on debt contracts, thus supplying the funds necessary for debt repayment (Bhaskar *et al.*, 2017).

Conversely, as leverage increases, corporate financial risk also rises, primarily due to investors’ perceptions of leveraged firms. Scholars argue that corporate debts reduce financial flexibility, exposing the firm to a higher risk of financial distress, a hypothesis referred to as the “reduced-flexibility hypothesis.” Simultaneously, it is widely acknowledged in the literature that firms with high debt levels and significant financial distress risk often have an incentive to transfer wealth from creditors to shareholders through substantial and, at times, excessive payouts—a concept known as the “risk-shifting hypothesis” (Acharya *et al.*, 2017; Kaźmierska-Jóźwiak, 2015; Smith & Warner, 1979). Numerous previous studies on corporate leverage and the likelihood of financial distress (Mandelker & Rhee, 1984) corroborate this finding. They indicate that corporate leverage curtails the amount of free cash flow available for investment, placing a strain on a firm’s financial resources (Siregar *et al.*, 2015). According to Brealey and Myers (1984) and Lee *et al.* (2011), leverage tends to heighten a firm’s risk perception in financial markets due to the implicit or explicit costs linked to potential financial distress. It is important to note that the findings of this study diverged from the research conducted by Jaafar, Muhamat, Alwi *et al.* (2018), Giarto and Fachrurrozie (2020), Saputri and Asrori (2019), which found that leverage did not have a significant positive effect on financial distress. These

findings also contradict the results of studies conducted by Finishtya (2019) and Restianti and Agustina (2018), which concluded that leverage did not exert a significant influence on financial distress.

Effect of investment rate on likelihood of Financial Distress

The second objective of this study was to explore the effect of investment rate on the likelihood of financial distress among firms listed on the Nairobi Securities Exchange. The findings presented in Table 4.10 revealed that the investment rate had a statistically significant positive effect on predicting financial distress for these firms ($\beta=2.199$; $p<0.05$). This indicates that an increase in the investment rate is associated with a higher likelihood of financial distress. Several factors can explain this relationship:

Capital Requirements: The pursuit of rapid investment often demands a substantial initial capital outlay. Consequently, firms may need to seek external financing, which can increase their overall debt burden. Elevated debt levels translate into higher interest expenses and greater debt servicing obligations, placing additional financial pressure on the firm.

Competitive Pressures: In instances where companies increase their investment rate in response to competitive pressures or industry trends, a simultaneous surge in such investments across multiple firms within the same industry can create fierce competition for resources and market share. This intense competition can lead to diminishing returns on investments, making it more challenging for individual companies to achieve their desired financial performance.

Agency Theory and Managerial Conflicts: Agency theory and the dynamics of corporate investment decisions reveal the existence of conflicts between managers and shareholders in listed companies, particularly in developing markets like Kenya. These conflicts can directly impact corporate investment choices and, consequently, increase the likelihood of financial distress. Examples of such conflicts include over-investment, empire-building behavior, and reputational issues. Over-investment occurs when managers allocate funds to risky or unprofitable projects to expand their sphere of control, often referred to as empire-building. Managerial preferences that prioritize their interests can become problematic when resources are allocated to new investments without adequate consideration of their profitability (Baumol, 1959; Bolton *et al.*, 2013; Danthine & Donaldson, 1984).

This finding aligns with previous research, including studies by Al-Dhamari *et al.* (2023), Suranta *et al.* (2023),

Aziz *et al.* (1988), Aziz and Lawson (1989), and Gentry *et al.* (1985). These studies consistently found that investment rate had a positive and notable impact on the likelihood of financial distress. However, it's worth noting that this finding differs from the results of studies by Gentry *et al.* (1985), McKee and Lensberg (2002), and Min and Lee (2005), which did not find a positive or significant relationship between investment rate and the likelihood of financial distress.

Effect of dividend payout Ratio on likelihood Financial Distress.

The third objective of this study was to assess the effect of the dividend payout ratio on the likelihood of financial distress among firms listed on the Nairobi Securities Exchange. The findings revealed a negative and statistically significant relationship between the dividend payout ratio and the likelihood of financial distress for these firms during the study period ($\beta = -1.852$; $p < 0.05$). This means that firms that distribute higher dividends are less likely to experience financial distress compared to those that pay lower dividends. Several factors can explain this result:

High dividend payments can act as a signal of financial strength and stability to both investors and creditors. When a company consistently distributes substantial dividends, it sends a message that it is confident in its ability to maintain financial stability over the long term. This positive signaling can enhance the firm's reputation in financial markets and make it easier to access capital when needed.

The payment of dividends can help mitigate agency costs, which stem from conflicts of interest between managers and shareholders. Managers may be inclined to pursue projects that do not necessarily maximize shareholder value. By returning cash to shareholders through dividends, the firm reduces the funds available for potentially value-destructive investments. This alignment of interests can result in more prudent financial decisions and, consequently, a reduced likelihood of financial distress.

Firms that pay high dividends often attract a specific type of investor base, such as income-oriented investors and retirees seeking reliable income streams. These investors typically have a long-term investment horizon and are less likely to engage in short-term trading or speculative behavior. This stability in the investor base can contribute to a more stable stock price and lower stock price volatility, reducing the risk of financial distress.

The findings align with the "bird in the hand" school of thought, which argues that dividends are favorable and contribute to an increase in shareholder wealth. This school of thought suggests that dividends positively influence stock prices, implying that dividend payments are essential for firm performance and, consequently, have a negative effect on the likelihood of financial distress.

By paying out a significant portion of profits as

dividends, a company can reduce agency costs associated with excess cash. Shareholders might be concerned that managers could misuse excess cash, so high dividend payouts can mitigate these concerns and align managerial actions with shareholder interests. Companies with a history of regular and high dividend payouts often build a strong market reputation. This reputation can lead to better terms when negotiating with creditors or obtaining financing, as lenders and investors perceive such companies as lower risk. A high dividend payout ratio can incentivize management to operate more efficiently. Since the company is distributing a large portion of its profits, management may focus on generating higher returns and managing costs effectively to maintain profitability and sustain dividend payments.

Regular dividend payments can enhance relationships with investors who seek steady income streams. This strong investor base can provide stability and support, making it easier for the company to weather financial difficulties and reduce the likelihood of financial distress. Companies that pay higher dividends might be seen as having better liquidity management practices. They may be perceived as having the financial stability to distribute cash regularly, which can reassure investors and creditors and help reduce financial distress. High dividend payouts might signal that a company has sufficient cash flows and profitability to support such distributions. This can be interpreted as a sign of financial stability and lower financial risk, reducing the perceived likelihood of financial distress.

The results are also consistent with agency cost theory, which posits that dividend payments help minimize agency costs between shareholders and managers. By paying dividends, managers demonstrate their commitment to maximizing shareholder value without pursuing risky or unprofitable projects. The study's findings may be attributed to the informational content of dividend payouts. Dividend payments often provide positive signals about a firm's future earnings prospects to investors, which can boost investor confidence and reduce the likelihood of financial distress. (Gordon, 1963; Harkavy, 1953; Pettit, 1972; Woolridge, 1983).

This finding supports agency cost theory, which suggests that dividend payments help reduce agency costs between shareholders and managers (Moh'd *et al.*, 1995). The theory posits that paying dividends reflects a manager's dedication to using shareholder funds wisely rather than investing in risky or unprofitable ventures. Additionally, Miller and Rock (1985) point out that dividend payouts serve as a signal of positive future earnings expectations, boosting investor confidence. This heightened confidence, in turn, decreases the likelihood of financial distress for the company.

Moreover, this finding is consistent with previous studies including (Ali, 2022, Andriosopoulos *et al.*, 2021, Rivandi, Ariska, 2019, Cao *et al.*, 2017; DeAngelo & DeAngelo, 1990) whose studies found that dividend payout has a negative and significant effect on likelihood of financial

distress. However, these findings are not consistent with the findings of (Widagdo & Sa'diyah, 2022, López-Turriaga & Santana Martín, 2015, Black & Scholes, 1974; Miller & Modigliani, 1961) whose studies found that no significant effect of dividend policy or positive significant effect of dividend policy on the likelihood of financial distress.

CONCLUSIONS

Conclusions of the Study

The study highlights the significant impact of financial decisions—specifically financial leverage, investment rates, and dividend payout policies—on a company's likelihood of financial distress. High financial leverage increases fixed obligations and limits financial flexibility, raising the risk of default. Firms should maintain optimal leverage levels to balance growth opportunities and minimize distress. High investment rates, while driving potential growth, can deplete cash reserves and create liquidity issues if returns fall short. Companies need to carefully evaluate investments and balance short-term liquidity with long-term growth. Dividend payout policies also play a crucial role in financial health, as consistent dividend payments signal stability and reduce financial distress risk. Managers should adopt sustainable dividend policies that do not compromise financial stability.

The study recommends that managers maintain a balanced approach to financial decisions, avoid over-leverage, and ensure that investments are financially viable. Aligning managerial incentives with long-term shareholder interests can reduce agency costs. Conservative accounting practices and regular financial health assessments are also essential to mitigating financial distress risks.

Recommendations for Future Research

Future research should explore the influence of external economic factors, corporate governance, and risk management strategies on financial distress, as well as the impact of technological advancements on financial decision-making and corporate stability.

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