“Executive characteristics and investment efficiency: The role of earnings smoothing and debt maturity”

AUTHORS	Eka Rosalina Niki Lukviarman Masyhuri Hamidi Fajri Adrianto

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Eka Rosalina (Indonesia), **Niki Lukviarman** (Indonesia), **Masyhuri Hamidi** (Indonesia), **Fajri Adrianto** (Indonesia)

EXECUTIVE CHARACTERISTICS AND INVESTMENT EFFICIENCY: THE ROLE OF EARNINGS SMOOTHING AND DEBT MATURITY

Abstract

Investment efficiency is a critical issue in emerging markets, as information asymmetry and agency conflicts can lead firms to make investments that deviate from optimal levels. This study aims to examine the impact of executive characteristics specifically executive experience and executive size and earnings smoothing on investment efficiency and debt maturity, while also investigating the mediating role of debt maturity. The study utilizes an unbalanced panel dataset of manufacturing firms listed on the Indonesia Stock Exchange from 2015 to 2024. Following data selection and outlier handling, the final sample comprises 275 observations from 87 firms. Analysis was conducted using panel data regression in STATA 17 and the Sobel test to assess mediation effects. The results indicate that executive experience and executive size both have a positive and significant impact on investment efficiency; earning smoothing also shows a significant positive effect. However, executive experience, executive size, and earning smoothing do not significantly affect debt maturity, nor does debt maturity significantly influence investment efficiency. The Sobel test reveals that debt maturity provides only marginal evidence of mediation regarding the relationship between executive size and investment efficiency, and it does not mediate the relationships of executive experience or earning smoothing with investment efficiency. These findings suggest that investment efficiency is driven more by internal capacity and governance mechanisms than by debt maturity.

Keywords executive size, executive experience, earnings smoothing, investment efficiency, debt maturity, manufacturing sector

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Eka Rosalina, Student and Lecturer, Business and Economics Faculty, Management Department, Andalas University, Padang State Polytechnic, Indonesia.

Niki Lukviarman, Professor, Business and Economics Faculty, Management Department, Andalas University, Indonesia. (Corresponding author)

Masyhuri Hamidi, Professor, Business and Economics Faculty, Management Department, Andalas University, Indonesia.

Fajri Adrianto, Associate Professor, Business and Economics Faculty, Management Department, Andalas University, Indonesia.

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INTRODUCTION

Investment efficiency is a critical issue in corporate finance because it reflects a company's ability to optimally allocate resources to create long-term value. This issue is increasingly relevant in Indonesia, given that the manufacturing sector remains a major contributor to national economic growth. The manufacturing sector is a key driver of economic growth through value creation, employment, and competitiveness, particularly in Indonesia, where it significantly contributes to GDP and investment. As a capital-intensive industry, it relies on efficient investment decisions. However, global uncertainty and structural pressures increase inefficiency risks, including over- and underinvestment (OECD, 2023; Houcine et al., 2022). Agency theory explains these inefficiencies through conflicts between managers and shareholders, leading to opportunistic behavior (Jensen & Meckling, 1976; D'Aveni & Finkelstein, 1994; Das et al., 2025). These differences in interests can encourage managers to make investment decisions that are not always in line with shareholders' goals to maximize company value (Wagner et al., 2021).

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In this context, a governance mechanism is needed that is capable of directing managerial behavior to produce more efficient investment decisions. Executive characteristics emerge as a key internal governance mechanism. Attributes such as executive size and executive experience reflect managerial capacity, cognitive diversity, and decision-making structures within the firm (Finkelstein & Hambrick, 1988). Executive size enhances decision quality through diversity of expertise and perspectives, although it may also increase coordination costs and managerial discretion (Haleblian & Finkelstein, 1993). Meanwhile, executive experience represents accumulated knowledge and industry understanding, enabling better evaluation of investment opportunities and risk management, although excessive experience may lead to decision bias (Upadhyay et al., 2017).

Managerial influence is also reflected in financial reporting behavior, particularly earnings smoothing practices. Earnings smoothing, typically conducted through discretionary accruals, is often associated with opportunistic managerial behavior (Munjal et al., 2021). However, from an alternative perspective, earnings smoothing may function as an informative mechanism that reduces earnings volatility and enhances performance predictability, thereby supporting more efficient investment decisions (Tucker & Hall, 2006; Chen et al., 2011; Li & Richie, 2016).

In addition to internal governance, corporate financing structure represents an important external control mechanism. Debt maturity, defined as the composition of short-term and long-term debt, plays a role in disciplining managerial behavior through creditor monitoring and renegotiation pressures (Monteforte & Staglianò, 2015). Shorter debt maturity structures are theoretically associated with stronger monitoring and reduced managerial discretion, which may enhance investment efficiency (Barclay & Smith, 1995). However, the effectiveness of this mechanism is highly dependent on institutional conditions, particularly in emerging markets where credit systems tend to be relationship-based (Gomariz & Ballesta, 2014). Larger companies tend to have better access to funding and resources, while more mature companies have more operational experience in making investment decisions. Therefore, company size and age need to be considered in the analysis to control the influence of company characteristics on investment efficiency and debt maturity.

The relationship between executive characteristics, earnings smoothing, and investment efficiency can be understood within an integrated framework where managerial attributes shape risk preferences, decision-making, and financial reporting practices, influencing information quality and investment outcomes. Earnings smoothing acts as a behavioral link, while debt maturity may alter this relationship through external monitoring. However, prior studies often examine these factors separately and show inconsistent results (Finkelstein & Hambrick, 1988; Upadhyay et al., 2017; Munjal et al., 2021). And they have not shown consistent results. The role of debt maturity remains underexplored, despite evidence of its impact through monitoring and financial constraints (Rauh & Sufi, 2012; Chen et al., 2011), especially in emerging markets like Indonesia.

1. LITERATURE REVIEW AND HYPOTHESES

Rapid global financial changes increase the importance of investment efficiency and control mechanisms that limit managerial discretion (Biddle et al., 2009). Changes in the global business and financial environment increase the importance of investment efficiency as an indicator of a company's ability to allocate resources optimally. Investment efficiency refers to a company's ability to allocate funds to value-added projects and avoid investments that do not provide economic benefits. However, in practice, investment decisions are often influenced by information asymmetry and conflicts of interest between management and shareholders, leading to overinvestment or underinvestment.

Investment efficiency refers to allocating resources to positive NPV projects while avoiding value-destroying investments. Although neoclassical the-

ory assumes optimal decisions based on growth opportunities and capital costs, market imperfections, information asymmetry, and agency conflicts often cause inefficiencies (Biddle et al., 2009). Inefficiency appears as overinvestment or underinvestment (Richardson, 2006), driven by manager-shareholder conflicts (Jensen & Meckling, 1976). From an agency theory perspective, investment inefficiency arises when managers use their discretion to pursue personal interests that are not always in line with shareholder goals (Chen et al., 2011).

One of the factors, executive characteristics, shapes strategic decisions under upper echelons theory (Hambrick & Mason, 1984). Proxied by executive size and experience, they reflect decision capacity and cognition. Larger teams enhance information exchange and oversight, improving investment efficiency, though excessive size may create coordination problems and reduce effectiveness. Executive experience reflects accumulated knowledge, industry expertise, and risk management capability. Experienced executives better understand business cycles and long-term investment implications (Chowdhury et al., 2023), though it may also lead to managerial entrenchment under weak oversight (Ardiany et al., 2024).

One practice often associated with managerial behavior is earnings smoothing, a management practice that reduces fluctuations in reported profits using accounting techniques, particularly accruals, without altering underlying economic performance. It is often viewed as part of earnings management aimed at stabilizing income and reducing stakeholder uncertainty (Healy & Wahlen, 1998). In volatile business environments, especially in manufacturing, this practice becomes increasingly relevant (Leqaa Al-Othman, 2016). From an agency theory perspective, managers smooth earnings to maintain reputation, meet contractual targets, and limit external intervention, creating potential information asymmetry (Ardiany et al., 2024). Such distortions can mislead investment decisions, leading to overinvestment or underinvestment due to biased financial signals (Teklay et al., 2024).

Investment decisions are also influenced by mechanisms such as debt maturity, which refers to the structure of a firm's debt based on its time to maturity, particularly the proportion of short-term liabilities. It functions not only as a financing decision but also as a mechanism to control managerial behavior, influencing liquidity risk, financial flexibility, and monitoring intensity (Van Khanh & Hung, 2020; Huang & Shang, 2019). Short-term debt increases creditor monitoring and renegotiation frequency, limiting managerial discretion. However, strict oversight may also encourage earnings smoothing, potentially distorting investment decisions and reducing efficiency (Gomariz & Balesta, 2014; Huang et al., 2018b).

The conceptual framework of this study is grounded in agency theory, which highlights conflicts of interest between managers and shareholders in investment decisions (Jensen & Meckling, 1976; Biddle et al., 2009). In manufacturing firms, high managerial discretion over capital allocation and accounting policies increases the risk of overinvestment and underinvestment when monitoring is weak (Biddle et al., 2009; Datta et al., 2005). Executive characteristics and earnings smoothing are positioned as internal governance mechanisms, while debt maturity functions as an external disciplinary tool through creditor monitoring (Myers, 1977; Diamond, 1991).

Executive size and executive experience reflect managerial capacity and decision-making quality. Prior studies show that these characteristics influence investment efficiency through improved project evaluation and risk management (Bertrand & Schoar, 2003; Custódio & Metzger, 2014), and also affect debt maturity decisions (Harford et al., 2011). Larger executive teams can enhance coordination and accountability, improving investment outcomes (Custódio & Metzger, 2014; Coles et al., 2004; Salehi et al., 2020; Afsay, 2024), although excessive size may increase complexity. Meanwhile, executive experience shows mixed effects; while it enhances decision quality, it may also lead to entrenchment or overconfidence, reducing efficiency and influencing financing (Malmendier & Tate, 2005; Hao et al., 2014; Zeng et al., 2024; Oware et al., 2023).

Earnings smoothing reflects financial reporting behavior that shapes investor and creditor perceptions. Opportunistic smoothing can distort performance signals and reduce investment efficiency (Healy & Wahlen, 1998; Biddle et al.,

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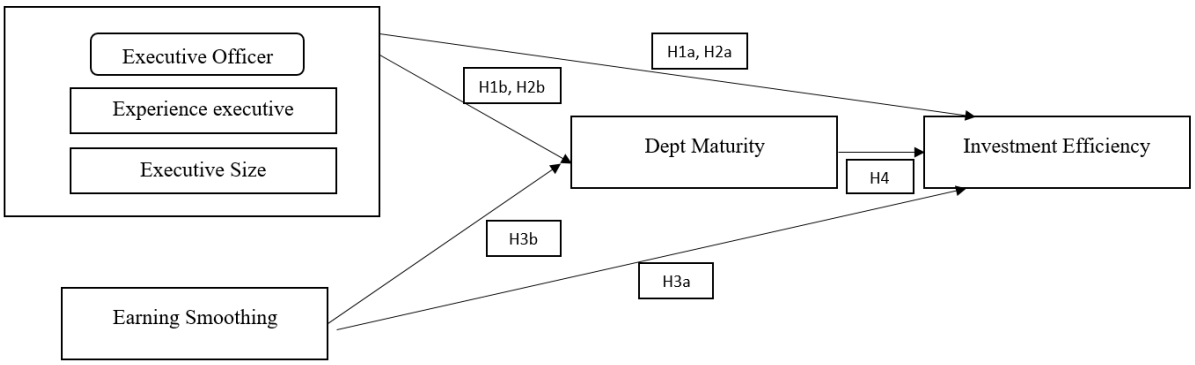

Figure 1. Research Framework

2009; Chen et al., 2011), while its effect on debt decisions has also been documented (Gassen & Fülbier, 2015). However, strong external monitoring, particularly through short-term debt, may limit its negative impact (Houcine, 2017; Bharath et al., 2008; Graham et al., 2008). Investment efficiency is shaped by executive characteristics, earnings smoothing, and debt maturity, yet prior findings remain inconclusive, requiring further study (Datta et al., 2005). The integrative framework is presented in Figure 1.

Therefore, the following hypotheses were proposed and tested empirically within the framework of this study, which was divided into and included intervening tests, namely:

In the first:

H1a: Executive experience has a positive effect on investment efficiency.

H2a: Executive size has a positive effect on investment efficiency.

H3a: Earnings smoothing has no significant effect on investment efficiency.

In the second:

H1b: Executive experience has a positive effect on debt maturity.

H2b: Executive size has a positive effect on debt maturity.

H3b: Earning smoothing has no significant effect on debt maturity.

In the third:

H4: Debt maturity has a positive effect on investment efficiency.

In the fourth:

H5: Executive characteristics and earnings smoothing each influence investment efficiency mediated by debt maturity.

The conceptual model integrates executive characteristics, earnings smoothing, and investment efficiency, highlighting their interactions in manufacturing firms and offering insights for academics, practitioners, and policymakers.

2. METHODOLOGY

The positivism paradigm guides this study through empirical, measurable, testable, and predictable analysis (Burrell & Morgan, 2017). It assumes a stable reality aligned with hypotheses, enabling conclusions. Accordingly, this research examines how executive characteristics, earnings smoothing, and debt maturity influence investment efficiency.

2.1. Population and sample

The study population comprised all manufacturing companies listed on the Indonesia Stock Exchange during the 2016–2024 period. From this population, 1,791 firm-year observations were obtained. After a selection process based on the availability of complete data as needed, the number of observations was reduced to 618. Furthermore,

to ensure data quality and meet analysis requirements, classical assumption testing and outlier handling were performed, resulting in 275 final observations used in hypothesis testing. The final sample consisted of 87 manufacturing companies that met all research criteria.

2.2. Data collection

This study employs a documentation method using secondary data from audited financial reports of companies listed on the Indonesia Stock Exchange, focusing on manufacturing firms from 2015–2024. Data were compiled into panel form and processed through cleaning procedures, including completeness checks, winsorization, and multicollinearity testing. Analysis was conducted using STATA 17 for panel regression, assumption testing, and mediation analysis. The study uses unbalanced panel data due to incomplete observations caused by IPOs, delisting, or missing reports (Baltagi et al., 2003). To reduce bias, all firms meeting criteria were included each year, ensuring more representative and reliable empirical estimates (Bushman et al., 2011; Wang et al., 2018).

To minimize bias due to unobserved variables, this study includes firm size and firm age as control variables in all regression models. Firm size is controlled because larger companies generally have greater resources and funding capacity, while firm age reflects the level of organizational maturity and accumulated operational experience. Panel data analysis in this study was conducted using STATA 17, with estimators selected based on the results of panel model testing. All regression models include firm size and firm age as control variables to reduce potential bias due to firm characteristics. Mediation analysis was conducted to simultaneously test the effects of executive characteristics, income smoothing, and debt maturity on investment efficiency. The significance of the indirect effect of debt maturity was then tested using the Sobel test.

2.3. Regression model

This test uses four measurement regression steps, namely:

$$IE = \alpha + \beta 1EX + \beta 2ExS + \beta 3\,ES + \beta 4\,fsize + \beta 5\,fage + \varepsilon, \quad (1)$$

$$DM = \alpha + \beta 1EX + \beta 2ExS + \beta 3\,ES + \beta 4\,fsize + \beta 5\,fage + \varepsilon, \quad (2)$$

$$IE = \alpha + \beta 1DM + \beta t\,fsize + \beta 3\,fage + \varepsilon, \quad (3)$$

$$IE = \alpha + \beta 1EX + \beta 2ExS + \beta 3\,ES + \beta 4\,DM + \beta t5\,fsize + \beta 6\,fage + \varepsilon, \quad (4)$$

where *ES* – Earnings Smoothing, *EX* – Executive Experience, *ExS* – Executive Size, *IE* – Investment Efficiency, *DM* – Debt Maturity, *fsize* – Firm Size, and *fage* – Firm Age.

The panel model selection was conducted through the Chow Test, Hausman Test, and Lagrange Multiplier (LM) Test. The test results show that Model (1) is more appropriately estimated using

Table 1. Operationalization variables

Variable	Definition	Measurement
Experience (EC)	CEO's work experience in operational activities and corporate decision making	Average number of years of experience as an executive
Executive Size	The number of executive team members responsible for making strategic and operational decisions for the company	Number of executives in the firm
Earnings Smoothing	Earnings management practices to reduce fluctuations in reported profits so that profits appear more stable (Leuz et al., 2003)	$ES_{it} = \frac{\delta NEI_{it}}{\delta OCF_{it}}$
Debt maturity	Debt maturity structure reflects the proportion of short-term debt to the company's total debt (Barclay & Smith, 1995)	$\frac{\text{Debt that matures in the short term}}{\text{Total debt}}$
Investment efficiency	A company's ability to allocate investments optimally according to growth opportunities (Biddle et al., 2009)	$Investment_{i,t+1} = \beta 0 + \beta 1 \cdot Sales\ Growth_{it} + \varepsilon_{i,t+1}$

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the Common Effect Model (CEM), while Models (2) and (3) use the Random Effect Model (REM). Differences in the estimation methods used lead to different statistical results: the CEM produces a t-statistic, while the REM produces a z-statistic. All regression models include firm size and firm age as control variables to reduce potential bias due to company characteristics that can affect investment efficiency and debt maturity, and also test the mediating role of debt maturity by entering the independent variables and debt maturity simultaneously into the investment efficiency model in Model (4). The Sobel test is used as a mediator because it is a common approach used in research to test the significance of indirect effects. The model is estimated using the default standard error of the selected panel estimator. This study does not use robust standard errors or clustered standard errors in the estimation process (Baron & Kenny, 1986).

3. RESULT

This section presents the empirical analysis results obtained from testing the research data to evaluate the relationship between executive characteristics, earnings smoothing, debt maturity, and investment efficiency in manufacturing companies. The analysis was conducted in stages, beginning with descriptive statistics to provide an overview of the data characteristics, followed by hypothesis testing and mediation analysis in accordance with the study's conceptual framework.

3.1. Descriptive statistics

Descriptive statistics summarize data characteristics, including mean, median, minimum, maximum, and standard deviation, to describe the distribution and variation of investment efficiency, executive characteristics, earnings smoothing, debt maturity, and control variables.

The empirical results obtained represent the investment decision-making conditions and funding structure of Indonesian manufacturing companies during the observation period. The investment efficiency (IE) variable, measured using the Biddle et al. (2009) model, shows an average value of −0.0017864 with a standard deviation of 0.0410717. This value indicates that, in general, companies in the sample tend to make investments that are close to the optimal level, so that investment decisions can be said to be relatively efficient. However, the minimum value of –0.0929221 and the maximum value of 0.0946606 show that there are still companies experiencing underinvestment and overinvestment.

Meanwhile, the debt maturity (DM) variable measured using Barclay and Smith's (1995) approach has an average value of 0.6591162, indicating that approximately 65.91% of the company's debt comes from short-term debt. This finding reflects the high dependence of manufacturing companies on short-term financing, which has the potential to increase the intensity of creditor supervision of managerial decisions. The standard deviation of 0.2274963 indicates moderate variation among companies in debt maturity, with companies dominated by short-term debt.

Descriptive statistics show that executive experience (EX) in manufacturing companies using the approach has an average value of 6.869091 years with a standard deviation of 5.35, indicating a relatively moderate but varied level of executive experience between companies. The wide range of experience reflects the presence of executives who are still relatively new to very senior. This condi-

Table 2. Descriptive statistics

Variable	Observations	Mean	Std. Dev.	Min	Max
IE	275	−0.0017864	0.0410717	−0.0929221	0.0946606
DM	275	0.6591162	0.2274963	0.0919477	1
EX	275	6.869091	5.353656	1	22
ExS	275	4.829091	1.774687	2	9
ES	275	0.2032375	0.1883261	−0.274078	0.6918997
Firm Size	275	12.557	0.6412886	10.89167	13.91887
Firm Age	275	35.96364	16.54276	5	79

tion shows that most companies have executives with sufficient experience to support strategic decision-making, although overly long tenures have the potential to cause rigidity and decision bias that can affect investment efficiency.

Executive size (ExS), using the proxy, has an average value of 4.829091 with a standard deviation of 1.774687, indicating that companies in the sample generally have four to five executives at the top management level. These findings suggest that most companies have a moderate executive size, which has the potential to balance diversity of expertise and coordination effectiveness, and strengthen internal control functions relevant to improving the company's investment efficiency.

The earnings smoothing (ES) variable using the proxy approach of Leuz et al. (2003) has an average value of 0.2032375, indicating that manufacturing companies tend to smooth earnings at a moderate level. The fairly wide range of values (minimum –0.274078 and maximum 0.6918997) and standard deviation of 0.1883 indicate heterogeneity in earnings smoothing practices among companies. This finding is in line with Leuz et al. (2003), who state that earnings smoothing is influenced by internal conditions, funding structure, and external pressures on the company.

3.2. Regression results

This section presents the results and discussion of the influence of executive characteristics and earnings smoothing on investment efficiency (see Table 2). This analysis aims to empirically test how executive characteristics and earnings smoothing contribute to improving a company's investment efficiency. By combining these two factors, the study is expected to provide a more comprehensive picture of how executive characteristics and earnings smoothing variables can encourage optimal investment decision-making.

From an agency theory perspective, executive characteristics reduce agency conflicts and improve investment efficiency. Executive experience enhances the ability to assess risk, project complexity, and long-term implications, especially in capital-intensive manufacturing. In Indonesia's hierarchical context, experience also strengthens legitimacy in decision-making. Larger executive size improves internal control and investment evaluation through diverse expertise, reducing overinvestment and underinvestment. Informative earnings smoothing reduces information asymmetry by providing stable profit signals, supporting efficient capital allocation.

Control variables show that firm age negatively affects investment efficiency, reflecting organizational inertia and limited adaptability. Firm size has a negative but insignificant effect, indicating that scale alone does not ensure efficiency. In Indonesian manufacturing, effectiveness depends more on managerial quality than asset size. Debt maturity decisions further reflect strategies in managing liquidity risk, funding needs, and market discipline, making executive characteristics and earnings smoothing important indicators of transparency and risk.

From an agency theory perspective, executive characteristics and earnings smoothing are expected to reduce agency costs and influence debt maturity. However, this study finds no significant effect of these variables on debt maturity in Indonesian manufacturing firms. Instead, debt maturity is driven by external factors such as cash flow stability, leverage, asset structure, collateral, and operational risk. In capital-intensive and cyclical industries, funding decisions are shaped more by working capital needs and production

Table 3. Model test for H1a, H2a, and H3a: Executive characteristics, earnings smoothing, and investment efficiency

Variable	Coefficient	Std. error	t-statistics	Prob.
Cont	0.0580864	0.0598762	0.97	0.333
EX	0.0011275	0.0004864	2.32	0.021
ExS	0.0042985	0.0018306	2.35	0.02
ES	0.0245395	0.0135015	1.82	0.07
Firm Size	–0.0046611	0.0051372	–0.91	0.365
Firm Age	–0.0004298	0.0001562	–2.75	0.006

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Table 4. Model test for H1b, H2b, and H3b: Executive characteristics, earnings smoothing, and debt maturity

Variable	Coefficient	Std. error	z-statistics	Prob.
Cont	2.033361	0.4472761	4.55	0.000
EX	–0.0001684	0.002528	–0.07	0.947
ExS	0.0140444	0.009939	1.41	0.158
ES	0.0073911	0.0532877	1.45	0.146
Firm Size	–0.1230203	0.0373355	–3.29	0.001
Firm Age	0.0020221	0.0013364	1.51	0.13

cycles, while creditors rely on verifiable financial information rather than managerial signals.

Control variables show that firm age has a positive but insignificant effect, whereas firm size has a negative and significant impact, indicating larger firms prefer short-term debt as a disciplinary mechanism. Debt maturity is thus better understood as a financial and governance tool influencing investment behavior and risk management.

From an agency theory perspective, debt maturity is viewed as a control mechanism to reduce agency costs by increasing monitoring frequency, particularly through short-term debt, which is expected to limit managerial overinvestment behavior (Barclay & Smith, 1995). However, in the Indonesian context, the relationship-based credit market structure, varying financial reporting quality, and high information asymmetry weaken the role of debt maturity as a signal of managerial discipline, resulting in its insignificant effect on investment efficiency. Creditors rely more on cash flow, collateral, and short-term repayment capacity than on debt maturity structure (Chen et al., 2011; Rauh & Sufi, 2012; Gomariz & Ballesta, 2014). Additionally, firm age has a negative and significant effect on investment efficiency, indicating that more mature firms tend to be more efficient (Xie, 2015), while firm size shows no significant effect due to organizational complexity (Richardson, 2006).

In the context of this study, the fourth model used the Sobel test to measure whether debt maturity acts as a mediating variable in the relationship between executive characteristics and earnings smoothing with increasing investment efficiency.

Table 6. Model test for H5: Investment efficiency mediated by debt maturity

Variable	Sobel Test Statistic	One-Tailed Probability
ES	1.13385139	0.12842845
EX	–0.07994716	0.46813964
ExS	1.29123764	0.09831064

The mediation results indicate that debt maturity provides weak (marginal) evidence of mediating the relationship between executive size and investment efficiency, as the Sobel test is statistically significant only at the 10% significance level. Therefore, this mediating role should be interpreted with caution rather than as conclusive evidence. In contrast, debt maturity does not mediate the relationships between executive experience or earnings smoothing and investment efficiency. These findings suggest that, in firms with larger executive structures, debt maturity may contribute to strengthening external creditor monitoring, consistent with agency theory (Myers, 1977; Rosalina, 2025). However, the relatively weak statistical evidence indicates that this disciplinary mechanism is not sufficiently robust across Indonesian manufacturing firms. Executive experience appears to influence investment efficiency directly through managerial capability rather than through debt maturity as an intermediary. Likewise, earnings smoothing does not appear to influence debt ma-

Table 5. Model test for H4: Debt maturity and investment efficiency

Variable	Coefficient	Std. error	z-statistics	Prob.
Cont	–0.0347472	0.0571617	–0.61	0.543
ST-DM	0.0072845	0.0119032	0.61	0.541
Firm Size	0.0034126	0.0044703	0.76	0.445
Firm Age	–0.0004206	0.0001686	–2.49	0.013

turity decisions because creditors rely more heavily on verifiable financial information than on earnings stability.

4. DISCUSSION

Executive characteristics, particularly executive experience and size, positively affect investment efficiency by improving risk assessment and decision quality, supporting agency theory and prior studies on managerial capacity and internal oversight (Finkelstein & Hambrick, 1988; Custódio & Metzger, 2014; Coles et al., 2004; Papadakis & Barwise, 2002). Executive experience significantly enhances the ability to evaluate investment risk and complexity, reducing overinvestment and underinvestment, consistent with Anderson et al. (2022), Chen et al. (2017), and Silva and Soares (2023). However, this contrasts with studies suggesting overconfidence or insignificant effects (Hao et al., 2014; Malmendier & Tate, 2005; Gupta et al., 2018; Lee, 2023), indicating that its impact is highly contextual.

The results show that executive size has a positive and significant effect on investment efficiency, as larger teams enhance decision quality through greater expertise diversity and information processing capacity. This aligns with prior studies (Hambrick & Mason, 1984; Haleblian & Finkelstein, 1993; Lai & Liu, 2018; Malmendier & Tate, 2005). The findings suggest that the impact of executive size is context-dependent; in Indonesian manufacturing firms, increased complexity is balanced by effective coordination, making executive size an internal governance mechanism that improves investment efficiency.

Earnings smoothing improves investment efficiency by reducing volatility and enhancing information quality, supporting its informative role (Tucker & Hall, 2006; Chen et al., 2011; Li & Richie, 2016). However, executive characteristics and earnings smoothing do not affect debt maturity, as creditors rely more on financial fundamentals (Siregar & Nuryanah, 2019; Huang et al., 2018a).

These findings indicate that debt maturity decisions are driven more by external factors and verifiable financial indicators than managerial characteristics. While prior studies suggest CEO experience influences financing decisions (Custódio & Metzger, 2014; Malmendier et al., 2011; Lu & Wang, 2015; Huang et al., 2016), the results align with research showing limited impact in certain contexts (Oware et al., 2023; Tosun & Senbet, 2020). In Indonesia, creditors rely more on cash flow, leverage, and collateral than executive traits.

Earnings smoothing is not a primary determinant of debt maturity. While prior studies show it reduces the cost of debt through earnings stability (Gassen & Fülbier, 2015; Li & Richie, 2016), it may also raise creditor suspicion by masking risk (Houcine, 2017). The insignificant results suggest creditors in emerging markets rely more on firm fundamentals than reporting practices. Additionally, debt maturity does not significantly affect investment efficiency, indicating its limited disciplinary role. Although short-term debt is expected to enhance monitoring (Barclay & Smith, 1995), its effectiveness depends on supervision intensity. These findings differ from Rauh and Sufi (2012) and Chen et al. (2011).

The mediation results show that debt maturity only mediates the relationship between executive size and investment efficiency, but not executive experience or earnings smoothing. This indicates that in larger executive structures, short-term debt functions as an external disciplinary mechanism that strengthens creditor monitoring, consistent with agency theory (Myers, 1977; Rosalina, 2025). In contrast, executive experience operates effectively as an internal control without relying on debt maturity. Overall, these findings suggest Executive characteristics and earnings smoothing play a role in increasing investment efficiency by improving the quality of decision-making and financial information. This finding is consistent with Custódio and Metzger (2014), Anderson et al. (2022), who emphasize the importance of managerial capacity and information quality in improving investment allocation efficiency. Conversely, debt maturity has no significant effect as either a control mechanism or a mediator, which contrasts with the findings of Chen et al. (2011) and Rauh and Sufi (2012). These results indicate that in Indonesian manufacturing companies, investment efficiency is more determined by managerial capacity than external financing mechanisms in emerging markets like Indonesia.

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CONCLUSION

This study examines the influence of executive characteristics and earnings smoothing on investment efficiency and debt maturity, with debt maturity as a mediating variable in Indonesian manufacturing firms. The results show that governance mechanisms affect investment efficiency unevenly. Executive experience and executive size positively influence investment efficiency, while earnings smoothing contributes by improving financial information quality.

However, executive characteristics and earnings smoothing do not significantly affect debt maturity. In addition, debt maturity does not significantly influence investment efficiency and only partially mediates the relationship between executive size and investment efficiency. These findings indicate that governance effectiveness is primarily driven by managerial capacity and internal decision-making dynamics rather than external financing mechanisms. In the Indonesian context, characterized by high information asymmetry, investment efficiency depends on executive capability and coordination. Larger and more experienced executive teams enhance decision quality through better information processing and stronger internal monitoring, while earnings smoothing contributes to information stability by showing that the financing structure plays only a supporting role, while the primary influence still comes from executives' decision-making capacity.

However, debt maturity is largely determined by external financial factors and does not function effectively as a control mechanism. Mediation results confirm its limited role, indicating that internal governance remains more dominant in improving investment efficiency.

For future research, it is recommended to develop more comprehensive measures of managerial characteristics, financial reporting quality, and debt structure. Furthermore, exploring institutional factors and differences in industry characteristics is also important for a deeper understanding of the mechanisms that influence investment efficiency in emerging markets.

AUTHOR CONTRIBUTIONS

Conceptualization: Niki Lukviarman.
Data curation: Eka Rosalina.
Formal analysis: Eka Rosalina.
Funding acquisition: Eka Rosalina.
Investigation: Masyhuri Hamidi.
Methodology: Fajri Adrianto.
Resources: Fajri Adrianto.
Software: Fajri Adrianto.
Supervision: Niki Lukviarman, Masyhuri Hamidi.
Validation: Niki Lukviarman.
Visualization: Masyhuri Hamidi.
Writing – original draft: Eka Rosalina.
Writing – review & editing: Niki Lukviarman, Masyhuri Hamidi, Fajri Adrianto.

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