

Nexus of Non-Controlling Interests on Capital Structure: Macroeconomic and External Party Integrity as Moderator

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ABSTRACT

This study investigates the effect of share ownership of non-controlling interests (NCI) on capital structure policy and investigates moderating effects of macroeconomic fundamentals and integrity of independent external parties. NCI negatively impacts capital structure, consistent with the trade-off theory in capital structure policy. Companies that already obtain funding from NCI tend to reduce debt financing, and vice versa. Macroeconomic fundamentals reinforce the trade-off between corporate funding sources, whether debt or equity, related to the cost of debt and the cost of equity. The quality of independent external parties strengthens the investment decision of fund providers, whether in equity securities or corporate debt securities, considering the most favorable investment returns.

Keywords: Non-controlling interests; capital structure; macroeconomics; external party integrity.

INTRODUCTION

Capital structure policy is an important strategic foundation because it impacts the company's operations and the financing of investment assets, and even impacting the prospects for cash flow, profitability, and future dividend payments [46]. Miscalculations in capital structure strategies and policies can potentially lead to financial distress [43] and increased risk [53] because the costs of debt and equity are unavoidable, while the returns on investment and sales turnover from operational activities are subject to significant fluctuations, especially in a competitive business environment and external conditions beyond the company's control [52]. Management is required to be able to make the right choices in determining funding sources and company capital structure policies [41]. In capital structure theory, there is a trade-off theory proposed by [33], which states that the choice of external financing policy between debt and equity issuance is a conflicting policy, each with its advantages and disadvantages for the company. Therefore, it is necessary to make decisions regarding the appropriate selection and composition of debt and equity funding sources [37].

Numerous studies examining the determination of capital structure policies have been conducted, including those by [2]; [34]; [8]. To date, research has examined the effect of share ownership structure on

capital structure. The share ownership structures examined include institutional share ownership [54], managerial share ownership [5], employee share ownership [15], foreign share ownership [7]; [38], government shareholding [18], and family shareholding [9], all of which are shareholding structures in a parent entity or corporate group. To our knowledge, few studies have examined how Non-Controlling Interests (NCI) shareholding affects capital structure policy; NCI is relevant only in the preparation of consolidated financial statements and indicates the presence of an external financing policy or the disclosure of equity securities by a subsidiary. Previous research examining the effect of shareholding structure on capital structure has involved several moderating variables that strengthen or weaken this influence, such as good corporate governance [22], financial performance [47], earnings management [36], and tax avoidance [50]. To our knowledge, few have examined the moderating role of macroeconomic fundamentals and independent external integrity in the influence of non-controlling interests on capital structure.

The originality of this research is twofold. First, it examines the effect of NCI share ownership on capital structure policy. Second, it examines the moderating role of macroeconomic fundamentals and the integrity of independent external parties in this influence. The urgency of this research is to prove the capital structure trade-off theory, that is,

whether the choice of equity financing policy in subsidiaries, which results in the presence of NCI, can reduce external funding from debt sources. Previous research has been conducted, but so far, studies on the relationship between debt and equity funding have focused on parent entities. Few studies have examined the impact of equity financing sources in subsidiaries on the capital structure of group entities. This topic is important because the presence of NCIs can control the arrogance of majority shareholders, mitigate earnings management, and minimize agency conflicts [1], even though share ownership is small and does not have controlling rights. Testing the moderating role of macroeconomic fundamentals and the integrity of independent external parties is important, because macroeconomic fundamentals influence a country's investment climate and the direction in which investments are made by many investors [16]. High interest rates make deposit investments more profitable than buying shares [11], especially for prospective retail investors who have the potential to become NCIs in the shareholding structure because they invest small amounts and pursue returns from the difference in stock market price changes. Meanwhile, involving the integrity of independent external parties as moderators is also important due to their role in minimizing agency conflicts between management and shareholders, among shareholders, and between shareholders and creditors.

This research addresses a gap in the academic literature on financial accounting and financial management by providing empirical evidence regarding the influence of NCI shareholding on capital structure policy, as well as the moderating roles of macroeconomic fundamentals and the integrity of independent external parties in this context. The contribution to the practical world, particularly for prospective equity investors who are capital gains-oriented and will become NCI, is that capital structure policy will influence cash flow prospects and the fulfillment of future investment return expectations, moderated by macroeconomic conditions and the professional integrity of independent external parties in assessing the fairness of the presentation of financial statements containing financial performance and capital structure.

This paper consists of five sections. The first section contains an introduction that presents the originality and contributions of this research. The second section contains the theoretical basis and justification of the hypotheses. The third section presents the research methodology. The fourth section contains data analysis and discussion, and the fifth section provides conclusions.

Literature Review

Trade-Off Theory

Trade-off theory [33] states that the choice of external funding sources, debt and equity, each has intersecting advantages and disadvantages. The advantages of a debt financing policy are also the disadvantages of an equity financing policy, and vice versa. Debt financing does not increase the number of company owners, thus minimizing dividend payment pressure and minimizing agency conflicts. However, its weakness is the pressure of interest expenses and principal repayments, making it a tax-saving measure [21]. Meanwhile, equity financing, through the issuance of new shares, does not incur interest expenses or principal repayments but increases the number of shareholders, potentially suppressing dividend payments and potentially exacerbating agency conflicts [23]. Therefore, an appropriate external financing strategy is required, balancing the composition of debt and equity to mitigate the weaknesses of each option and optimize its benefits [29].

Pecking Order Theory

The use of external funding sources will be considered if a company does not yet have sufficient internal funding. Pecking Order Theory [35] states the priority order for fund use: internal funding from operational activities is the first priority, followed by debt and new share issuance. The choice of priority and composition is a managerial skill that requires careful strategy and consideration. Internal funding comes from profitability, and external funding comes from creditors through debt policy and shareholders [30]. Internal funding is prioritized because it minimizes risk and optimizes future investment returns [10]. While external funding is faster and can be obtained in larger amounts, it also carries significant risks. The use of debt carries the risk of creditor intervention and periodic interest payments. Issuing new shares, which creates NCI, carries the risk of agency problems [4].

Agency Theory

Agency problems arise in companies where management and owners, including those providing funds, are separated [20]. Business scale development requires significant funding and invites the influx of external funding sources, both through new share issuance and debt. Agency problems arise between management, majority shareholders, NCI shareholders, and creditors, all of whom have an interest in the company and strive to optimize their respective

returns. The presence of a professional, honest, and independent external auditor can minimize agency problems between them [25]. Financial reports, which serve as a medium for agent accountability to principals, performance evaluation, and decision-making, require the involvement of an external auditor to assess the fairness of presentation. The quality of independent external auditors is crucial to ensure stakeholders avoid errors in performance evaluation and decision-making [40].

Dynamic Capital Structure

Dynamic capital structure theory is an external funding source policy that determines the ideal composition between debt and equity funding sources that is flexible over time. The ideal debt-equity composition is not static each year but changes according to changes in the debt-equity determination itself, the unique conditions of each time, and the unique internal characteristics of the organization each time. The ideal composition in one period may not be ideal in the next period. The ideal composition takes into account the cost-benefit of debt and equity source policies, including attention to internal funding sources from optimizing profitability with minimal risk and greater benefits [50].

Non-Controlling Interest

Non-Controlling Interests (NCI) are minority shareholders without controlling rights in subsidiaries within a group entity [51]. In consolidated financial statements, NCIs are entitled to information on the attribution of performance and net assets of the group entity [17]. According to the parent theory, NCI is not presented as a company owner and is therefore not eligible to be included in equity. Therefore, according to accounting standards based on the parent theory, NCI in the consolidated statement of financial position is not part of equity; NCI is presented between debt and equity. Meanwhile, according to financial accounting standards based on the entity theory, NCI is fully recognized as a company owner even though its ownership in the subsidiary is insignificant and does not have control rights. In the presentation of the consolidated statement of financial position, there is an equity item attributed to NCI, and in the consolidated income statement, there are net income and comprehensive income items attributed to NCI [3].

NCI is a manifestation of the funding policy of issuing new shares. When one of the subsidiaries owned by a group requires substantial funding for business expansion or expanding production

capacity, and internal sources are still insufficient, external funding becomes the option that must be pursued. There are two sources of external funding: debt to creditors or the issuance of debt securities and the issuance of equity securities. The existence of NCI indicates that management in the subsidiary has adopted a policy of external funding through the issuance of new shares. The group entity, as the majority and controlling shareholder, knows and approves this policy choice.

The behavior financial perspective relevant to NCI is that investors with small amounts of funds are oriented towards changes in stock prices in order to obtain optimal capital gains and invest in shares issued by entities where the entity is a subsidiary of another company that is positioned as a parent in a group, then investors like this are positioned as NCI or minority shareholders in the subsidiary entity. They pay more attention to short-term stock prices and dividends rather than the routine of receiving dividends in the long term and are not interested at all in the interests of controlling [51].

The governance mechanisms related to NCI include the following: the board of commissioners in the subsidiary side with NCI's interests regarding the right to transparent information, dividend policies, and other policy inputs. The internal control system in the subsidiary is designed and implemented to prevent and detect fraud that is detrimental to the interests of shareholders, including NCI [24]. Internal auditors in the subsidiary work professionally to ensure the suitability of the implementation of standard operating procedures and compliance with organizational policies that prevent losses that impact investment returns and the welfare of shareholders, including NCI. Independent external auditors with high integrity play a role in minimizing type 2 agency problems between majority and minority shareholders, including NCI [27].

Companies that have just adopted strategic policies related to ESG in the early years require large funding for investment in waste processing assets, environmentally friendly production assets, research and development investments related to environmental issues, funding for social activities, building governance systems and networks, and other investments so that if internal funding is insufficient while demands for ESG implementation are increasing, it ultimately encourages management to use funding sources from debt, which will further affect the company's capital structure [6]. High leverage encourages the implementation of good governance because creditors demand, as a guarantee of the security of credit investments and future investment returns, guarantees that funds

are well managed and there is smooth receipt of interest and repayment of principal debt in the future [4]. In the longer term, optimal ESG implementation and spurring an increase in ESG scores impacts the company's reputation in the eyes of the market and all stakeholders, which ultimately has an impact on increasing company value and widening access to equity funding and internal profitability, especially for product consumers who are fanatical about environmentally friendly products [12].

Based on the trade-off theory [33], this study aims to investigate whether the policy of issuing new shares in a subsidiary, indicated by the presence of non-controlling interests (NCI), will reduce the reliance on external funding from debt sources.

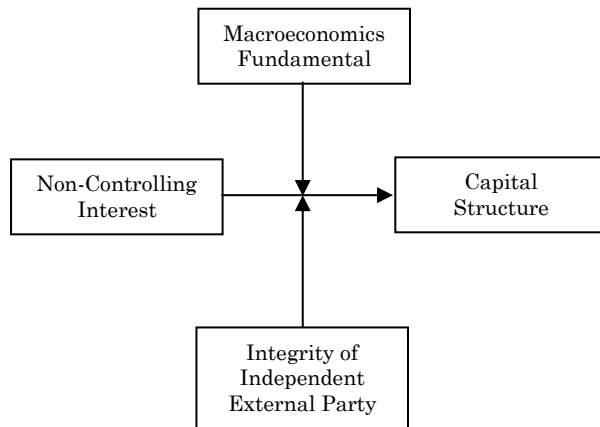


Figure 1. Conceptual Framework of the Research

Hypothesis Development

Trade-off theory [32] states that management strives to balance the composition of the capital structure from external funding sources between debt and equity at an ideal point, because the two funding sources each have their own cost-benefit trade-offs. The benefit of debt funding is that it does not increase the number of company owners, which tends to reduce agency problems; however, the cost includes paying interest expenses and the obligation to repay the principal when it matures [48]. The benefit of equity funding sources is that there is no obligation to pay periodic interest expenses and repay the principal debt, but the agency problem is widened due to the additional number of owners and greater agency burden. Based on the trade-off theory, this study aims to prove whether the greater the ownership of NCI, the lower the composition of the capital structure from debt sources. NCI are the owners, although the percentage is small and they do not have control rights, they are part of the equity in the consolidated financial statements, meaning that their existence arises from the activity of

issuing shares in subsidiaries as a form of additional external funding sources from share issuance. Previous studies have shown evidence that share ownership influences capital structure [42].

H₁: The existence of NCI influences capital structure policy.

Macroeconomic fundamentals influence a country's capital market climate, including capital structure policies [45]. When interest rates are high, investors are more attracted to deposit banking products than stock securities, and vice versa. When inflation is high, purchasing power weakens, sales turnover declines, financial performance declines, and dividend payments are impacted. Consequently, interest in investing in stock securities also decreases because investment return expectations may not be met [28]. Stock securities buyers are mostly retail investors, with small stock portfolio purchases and no controlling rights [26]. Their investment motivation is to gain the difference in share price changes, namely when the market price is higher than the acquisition price. If they purchase shares in a subsidiary within a group, their presence is reported as NCI in the consolidated statement of financial position published by the group. Stable macroeconomic fundamentals cause the Jakarta Composite Index (JCI) to rise and motivate retail investors to purchase shares of an entity. If the purchase amount is small and without controlling rights, they will be presented as NCI. Stable macroeconomic fundamentals encourage group entity management to obtain external funding with a low cost of capital and high returns. When interest rates rise, lenders' interest in loans also decreases. Due to the high cost of debt, investors and issuers are more attracted to equity securities [39]. A study of the Japanese capital market by [55] shows that economic conditions influence a company's capital structure.

H₂: Macroeconomic fundamentals strengthen the negative influence of NCI on capital structure.

A higher NCI reflects a greater external funding source from the issuance of new shares in subsidiaries, which impacts the composition of the number of shareholders in the group entity. According to agency theory, the greater the number of shareholders, the greater the potential for agency conflicts between management and shareholders and agency conflicts between fellow shareholders (majority and minority). Therefore, a mechanism is needed to control and minimize these conflicts through the role of truly independent parties with high integrity, in addition to internal control factors such as a qualified audit committee [19]. Furthermore, with the use of debt funding sources, although

perhaps lower than equity funding sources, debt fund providers or creditors remain interested in management's accountability for managing debt funds as a guarantee of future credit investment returns, namely, guaranteeing smooth periodic interest payments and the ability to repay debt principal maturing in the future [14]. Creditors are also interested in the existence of a truly independent party with high integrity, which minimizes conflicts of interest between management and creditors. The quality of integrity and independence of this independent external party is essential for mitigating agency conflicts between management, shareholders, and creditors. According to [56], the quality of integrity and independence of the independent external party is indicated by the size of the external audit fee. Higher external audit fees indicate that the company is paying a higher cost for high-quality audit assurance. Several previous studies have shown a strong relationship between external auditor quality and capital structure [13].

H₃: The quality of integrity of the independent external party strengthens the negative effect of NCI on capital structure.

RESEARCH METHOD

This research data comes from the financial reports of companies listed on the five largest capital markets in Southeast Asia, namely Indonesia, Malaysia, Thailand, Singapore, and the Philippines, during the 2018–2024 study period. A sample of 695 companies and 4,865 firm-year observational data and using purposive sampling techniques. We believe there is no sample selection bias because the criteria we used for sample screening align with the objectives of this study. The first criterion is that companies must have published complete financial reports between 2018 and 2024. If no reports were published within this period, it indicates the company was established after 2018. The second criterion is that the company has positive net income and comprehensive income or is not experiencing a loss because the NCI measurement uses a modified NCI-based return on equity, which is net income attributable to NCI divided by equity attributable to NCI. The third criterion is the presence of an item presenting profit and equity attributable to NCI in the income statement and statement of financial position. This item indicates the presence of NCI within the group entity presenting the consolidated financial statements. The table below displays the sample selection criteria for this study.

The dependent variable in this study is capital structure. The reason for choosing capital structure

as the dependent variable is because management's policy on the selection and composition of funding sources will impact the purpose of cash payments to fund providers in the future, whether dividends for equity funding sources or interest expenses for debt funding sources [49]. Capital structure ($CP_{i,t}$) is measured by the debt to equity ratio [12] with the following formulation:

$$CP_{i,t} = \frac{Total\ Liability_{i,t}}{Total\ Equity_{i,t}}$$

Table 1. Research Sample

Description	Indo-nesia	Malay-sia	Thai-land	Singa-pore	Philip-pines	Total
Registered population 2024	911	1,023	867	751	283	3,835
Complete financial statements not available	(480)	(209)	(245)	(311)	(72)	
Negative net income or comprehensive income	(181)	(342)	(315)	(170)	(54)	
No NCI	(149)	(211)	(167)	(186)	(48)	
Sample	101	261	140	84	109	695
Observe data (firm-years)						4865

The independent variable is NCI. The reason for choosing NCI as the independent variable is because it represents the external financing policy in the form of equity, namely the issuance of new shares in subsidiaries. This study aims to prove the trade-off theory: whether choosing an external financing policy of issuing new shares reduces the external financing policy in the form of debt. Non-controlling interest ($NCI_{i,t}$) is measured by the return on equity (ROE) attributed to NCI [6];[24] with the following formula:

$$NCI_{i,t} = \frac{Net\ Income\ Attributable\ to\ NCI_{i,t}}{Equity\ Attributable\ to\ NCI_{i,t}}$$

The moderating variable is macroeconomic fundamentals, proxied by the annual interest rate [31]. The reason for choosing macroeconomic fundamentals as a moderating variable is because stock prices formed in the market influence the size of cash receipts from the sale of new shares purchased by NCIs. Macroeconomic fundamentals also influence the dominant public decision-making regarding two investment options: investing in stock securities, which subsequently have the potential to become NCIs in the invested company, or investing in debt securities, which subsequently have the potential to become creditors. The formulation of macroeconomic fundamentals (FME) measurement is as follows [26]:

$FME = \text{Average annual interest rate}$

The second moderating variable is the integrity quality of the independent external party, as measured by the independent external audit fee [54]. The reason for choosing the integrity quality of the independent external party is because it bridges the interests of management, creditors, majority shareholders, and NCI. The decision of external funders to invest credit or equity in a company is determined by the prospects for future profits and cash flows, where the assurance of trust in the financial statements as the basis for assessing future profit and cash flow prospects is the opinion provided by the independent external party. Professional quality and integrity are indicated by the amount of the audit fee paid, where companies are willing to pay more for the experience, integrity, and all the positive qualities possessed by the external auditor. The measurement formula is as follows [27]:

$$IEI_{i,t} = \frac{\text{External Audit Fee}_{i,t}}{\text{Total Assets}_{i,t}}$$

The control variables in this study are company size, financial performance, industry type, and the research period [44]. The reason for using company size as a control variable is because leverage is influenced by a company's total asset ownership; greater assets require greater funding sources. The measurement formula is as follows:

$SIZE = \text{Natural Logarithm of Total Assets}_{i,t}$

This research uses financial performance as a control variable because, according to capital structure theory, companies prioritize funding from internal sources generated by operational activities before seeking external funding sources. The industry type and research period are designed to assess how these two factors influence the results obtained from using panel data for hypothesis testing. Measurement of industry type uses multiple dummy variables of 9 industrial sectors based on the BEI classification, and measurement of research period uses multiple dummy variables of the research year periods.

Financial performance is measured by return on assets (ROA) with the following formula:

$$ROA_{i,t} = \frac{\text{Net Income}_{i,t}}{\text{Total Assets}_{i,t}}$$

We use macroeconomic fundamentals, such as the average annual interest rate and the inflation rate (for model robustness testing), because these two measures are more relevant to the NCI's

investment choices than other indicators such as gross domestic product (GDP) or other proxies. When interest rates are high, the market or NCI is more interested in investing in bonds than in equity securities. Similarly, when inflation is high, the NCI is more interested in investing in gold or debt securities than in equity securities. Furthermore, the influence of country characteristics is represented by the interest rate and inflation proxies.

The basic model is as follows:

$$CP_{i,t} = \alpha_0 + \beta_1 NCI_{i,t} + \beta_2 SIZE_{i,t} + \beta_3 ROA_{i,t} + IND + YEAR + \varepsilon_{i,t} \quad (1)$$

Model with FME moderation:

$$CP_{i,t} = \alpha_0 + \beta_1 NCI_{i,t} + \beta_2 FME + \beta_3 (NCI_{i,t} * FME) + \beta_4 SIZE_{i,t} + \beta_5 ROA_{i,t} + IND + YEAR + \varepsilon_{i,t} \quad (2)$$

Model with IEI moderation:

$$CP_{i,t} = \alpha_0 + \beta_1 NCI_{i,t} + \beta_2 IEI + \beta_3 (NCI_{i,t} * IEI) + \beta_4 SIZE_{i,t} + \beta_5 ROA_{i,t} + IND + YEAR + \varepsilon_{i,t} \quad (3)$$

Robustness testing was conducted to test the consistency of the hypothesis or the robustness of the model developed by this study by replacing the variable measurement proxies and separating the research data by time. The proxy for measuring capital structure, previously using the DER ratio, was replaced with the DAR. Second, the proxy for measuring macroeconomic fundamentals, previously using the average annual interest rate, was replaced with the average annual inflation rate. The proxy for measuring the quality of integrity of independent external parties, previously using external audit fees, was replaced with a dummy variable for audits conducted by Big 4 and non-Big 4 public accounting firms. Regarding proxy validity, this study uses proxy measures based on subsequent research references to measure variables, and their validity has been tested in measuring what should be measured. The selection of proxies represents what we mean in explaining the measurement of variables, and to present the consistency of the results of the hypothesis proof, we conducted additional robustness tests with the same model but different measurements, such as capital structure variables measured by the DER and DAR ratios, macroeconomic fundamental variables measured by interest rates and inflation, and the quality of the integrity of independent external parties measured by the quality of external auditors proxied by external audit fees and dummy variables BIG4 and

non-BIG4. Based on the robustness test of the model by replacing the proxy measure variables, the results are proven consistent; this strengthens our argument that the proxy measure has unquestionable validity.

RESULTS AND DISCUSSION

Table 2 shows that the average debt-to-equity ratio is 0.245 and the average NCI ownership in group entities is 0.048, with a total of 4,865 firm-years. Table 3 shows a negative correlation between NCI and CP with a Pearson coefficient of -0.514^{***} , meaning that the presence of NCI reduces the policy of using funds from debt sources, in line with the trade-off theory where the use of external funding sources from share issuance is carried out, which is manifested by the emergence of NCI, reducing the use of external funding sources from debt. A negative correlation between FME and CP with a Pearson coefficient of -0.603^{***} meaning that high interest rates reduce the policy of using external funding sources from debt. A positive correlation between IEI and CP with a Pearson coefficient of 0.412^{**} , which means that debt instrument fund providers or creditors entrust the assessment of the fairness of the presentation of financial statements by an independent external party as a form of management accountability for the use of debt funds. Audit quality is of great interest to creditors because it directly impacts their cash prospects in fulfilling periodic obligations in the future. A negative correlation between NCI and FME with a Pearson coefficient of -0.405^{**} , meaning that higher interest rates make investors prefer credit securities instruments over equity securities. A positive correlation between IEI and NCI with a Pearson coefficient of 0.549^{***} , which means that NCI as a retail investor with minority shareholdings is also interested in financial reports to assess investment return expectations in the form of capital gains and dividends and bases its decisions on independent external audit opinions. A positive correlation between SIZE and CP with a Pearson coefficient of 0.528^{***} , which means that the greater the asset ownership, the greater the use of debt funds. A positive correlation between SIZE and IEI with a Pearson coefficient of 0.652^{***} , meaning that the greater the asset ownership, business scale, and transaction frequency, the greater the audit resources used, so the external audit costs are also greater. A positive correlation between ROA and CP with a Pearson coefficient of 0.424^{**} , meaning that the greater the use of debt funds, the more motivated to achieve profitability due to the pressure to fulfill interest payments and principal repayment installments.

Table 2. Descriptive Statistics

Variable	Obs.	Mean	Median	Min	Max	SD
CP	4,865	0.245	0.241	0.381	0.673	4.021
NCI	4,865	0.048	0.049	0.014	0.093	1.458
FME	4,865	2.657	2.678	1.250	5.750	2.543
IEI	4,865	0.368	0.372	0	1	0.412
SIZE	4,865	11.452	11.331	6.678	23.543	2.116
ROA	4,865	0.035	0.037	0.017	0.089	0.534

Table 3. Pearson Correlation Matrix

Variable	CP	NCI	FME	IEI	SIZE	ROA
CP	1					
NCI	-0.514^{***}	1				
FME	-0.603^{***}	-0.405^{**}	1			
IEI	0.412^{**}	0.549^{***}	0.013	1		
SIZE	0.528^{***}	0.481^{***}	0.021	0.652^{***}	1	
ROA	0.424^{**}	0.338^*	-0.242^{**}	0.003	0.432^{**}	1

Note : *** , ** , * Significant level of Pearson Correlation coefficient in 1%, 5% and 10%.

Table 4. Hypothesis Testing Results

Variable	(1)	(2)	(1)	(3)
	Basic Model	Moderated FME	Basic Model	Moderated IEI
Constant	0.019 ** (4.723)	0.021 ** (4.646)	0.026 ** (4.011)	0.029 ** (4.785)
NCI	-0.026^{**} (6.205)	-0.042^{***} (8.147)	-0.031^{**} (6.186)	-0.044^{***} (8.478)
FME	–	-0.048^{***} (11.523)	–	–
IEI	–	–	–	-0.054^{***} (11.729)
NCI*FME	–	-0.057^{***} (10.638)	–	–
NCI*IEI	–	–	–	-0.061^{***} (12.693)
SIZE	–	0.067^{***} (14.101)	0.059^{***} (12.778)	0.067^{***} (14.631)
ROA	0.033^{**} (8.116)	0.034^{**} (8.091)	0.042^{**} (8.781)	0.044^{**} (8.512)
IND	YES	YES	YES	YES
YEAR	YES	YES	YES	YES
F-Statistics	10.732 ***	11.489 ***	9.431 ***	10.093 ***
Adjusted R ²	0.4811	0.5143	0.4201	0.4968

Note : *** , ** , * Significant level of regression coefficient in 1%, 5% and 10%.

Table 4 displays the results of the hypothesis testing, where NCI influences capital structure with a negative coefficient of 0.042, significant at the 1% level. FME strengthens the negative effect of NCI on capital structure with a negative interaction coefficient of 0.057, significant at the 1% level. These results are reinforced by the basic model, where the NCI coefficient is -0.026^{**} (6.205) and increases after FME moderation -0.042^{***} (8.147), indicating that FME can strengthen the negative influence of NCI on capital structure. IEI makes the negative effect of NCI on capital structure stronger by 0.061,

which is significant at the 1% level. These results are reinforced by the basic model, where the NCI coefficient is -0.031^{**} (6.186) and increases after IEI moderation -0.044^{***} (8.478), indicating that IEI can strengthen the negative influence of NCI on capital structure.

Robustness Test

Table 5. Model Robustness Test Results: Different Variable Measurements

Variable	(1)	(2)	(1)	(3)
	Basic Model	Moderated FME	Basic Model	Moderated IEI
Constant	0.0174** (4.332)	0.0183** (4.114)	0.022** (4.321)	0.028** (4.912)
NCI	-0.031^{**} (7.349)	-0.045^{***} (8.572)	-0.028^{**} (8.106)	-0.041^{***} (8.353)
FME	–	-0.046^{***} (11.734)	–	–
IEI	–	–	–	-0.052^{***} (11.364)
NCI*FME	–	-0.068^{***} (10.912)	–	–
NCI*IEI	–	–	–	-0.054^{***} (12.765)
SIZE	0.058*** (14.704)	0.061*** (14.203)	0.059*** (14.225)	0.066*** (14.758)
ROA	0.032** (7.231)	0.034** (8.059)	0.047** (8.683)	0.048** (8.906)
IND	YES	YES	YES	YES
YEAR	YES	YES	YES	YES
F-Statistics	11.031***	11.426***	9.349***	10.079***
Adjusted R ²	0.4923	0.5071	0.4211	0.4808

Note :
***, **, * Significant level of regression coefficient in 1%, 5% and 10%.

A robustness test is conducted to test the consistency of hypothesis testing results using the same model but different measurements: for capital structure, DER is replaced by DAR; for macro-economic

fundamentals, interest rates are replaced by inflation; and for the quality of integrity of independent external parties, external audit fees are replaced by Big 4/non-Big 4. Based on table 5 below, NCI influences capital structure with a negative coefficient of 0.045, significant at the 1% level. FME with proxy average annual inflation consistently strengthens the negative effect of NCI on capital structure with a negative interaction coefficient of 0.062 and is significant at the 1% level. IEI with proxy Big 4/non Big 4 strengthens the negative effect of NCI on capital structure with a negative interaction coefficient of 0.055 and is significant at the 1% level. This result is reinforced from the basic model that the NCI coefficient is -0.031^{**} (7.349) and increases after FME moderation of the NCI coefficient of -0.045^{***} (8.572); this means that the model is able to survive and is consistent with the results of the hypothesis testing even though the measuring proxy is replaced and that FME is able to strengthen the negative influence of NCI on capital structure. This result is reinforced by the basic model where the NCI coefficient is -0.028^{**} (8.106) and increases after IEI moderation; the NCI coefficient is -0.041^{***} (8.353). This model is able to survive and is consistent with the results of the hypothesis testing even though the measuring proxy is replaced, which means that IEI is able to strengthen the negative influence of NCI on capital structure.

We tested the robustness of the model by disaggregating the data by country. The test results are consistent with the fact that the presence of NCIs negatively impacts debt policy. Macroeconomic fundamentals and the integrity of independent external parties reinforce the negative influence of NCIs on debt policy in each Southeast Asian country.

Table 6. Model robustness test results: across countries

Variable	Indonesia		Malaysia		Thailand		Singapore		Philippines	
	(2)	(3)	(2)	(3)	(2)	(3)	(2)	(3)	(2)	(3)
Constant	0.020** (4.645)	0.028** (4.715)	0.019** (4.642)	0.027** (4.784)	0.021** (4.646)	0.028** (4.785)	0.021** (4.643)	0.027** (4.781)	0.021** (4.640)	0.026** (4.771)
NCI	-0.041^{***} (8.127)	-0.045^{***} (8.478)	-0.042^{***} (8.137)	-0.044^{***} (8.478)	-0.040^{***} (8.148)	-0.046^{***} (8.481)	-0.042^{***} (8.147)	-0.047^{***} (8.478)	-0.042^{***} (8.146)	-0.045^{***} (8.482)
FME	-0.047^{***} (11.513)	–	-0.049^{***} (11.515)	–	-0.048^{***} (11.523)	–	-0.050^{***} (11.526)	–	-0.052^{***} (11.524)	–
IEI	–	-0.054^{***} (11.719)	–	-0.055^{***} (11.730)	–	-0.053^{***} (11.731)	–	-0.054^{***} (12.115)	–	-0.056^{***} (11.682)
NCI*FME	-0.056^{***} (10.558)	–	-0.057^{***} (10.641)	–	-0.055^{***} (10.698)	–	-0.058^{***} (10.623)	–	-0.059^{***} (10.671)	–
NCI*IEI	–	-0.063^{***} (12.694)	–	-0.061^{***} (12.704)	–	-0.062^{***} (12.674)	–	-0.061^{***} (13.305)	–	-0.063^{***} (12.114)
SIZE	0.067*** (14.223)	0.066*** (14.804)	0.067*** (14.172)	0.069*** (14.645)	0.068*** (14.921)	0.067*** (14.656)	0.069*** (14.145)	0.067*** (14.674)	0.068*** (14.158)	0.067*** (14.631)
ROA	0.035** (8.093)	0.048** (8.545)	0.035** (8.322)	0.047** (8.482)	0.034** (8.092)	0.045** (8.543)	0.039** (8.075)	0.045** (8.512)	0.038** (8.058)	0.049** (8.572)
IND	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
YEAR	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
F-Statistics	11.482***	10.093***	12.489***	10.453***	12.489***	10.093***	13.485***	10.766***	12.409***	10.348***
Adjusted R ²	0.5126	0.4922	0.5208	0.4961	0.5185	0.4903	0.5178	0.5024	0.5145	0.4892

Note :
***, **, * Significant level of regression coefficient in 1%, 5% and 10%.

Additional Tests For Endogeneity

This study uses a conventional endogeneity procedure, namely 2-stage least squares regression (2 SLS), which aims to ensure that the findings are free from endogeneity bias. The main independent variable in this study is NCI, and we use the instrumental variable of NCI changes (or ΔNCI). NCI changes are used as an instrumental variable because they meet the correlation criteria with NCI as the main independent variable but not with capital structure as the dependent variable. After testing with 2 SLS, the findings are consistent with the basic model after accounting for the possibility of endogeneity, namely, the existence of NCI influences capital structure policy, -0.023** (6.415). Macroeconomic fundamentals strengthen the negative influence of NCI on capital structure, -0.057*** (10.413). The quality of integrity of the independent external party strengthens the negative effect of NCI on capital structure, -0.061*** (12.693), as presented in Table 7 below:

Table 7. Robustness Test (2 SLS) Regression Results

Variable	(1)	(2)	(1)	(3)
	Basic Model	Moderated FME	Basic Model	Moderated IEI
Constant	0.012** (4.113)	0.019** (4.632)	0.012** (4.113)	0.029** (4.785)
NCI	-0.023** (6.415)	-0.041*** (8.150)	-0.023** (6.415)	-0.049*** (8.478)
FME	-	-0.048*** (11.523)	-	-
IEI	-	-	-	-0.051*** (11.689)
NCI*FME	-	-0.057*** (10.413)	-	-
NCI*IEI	-	-	-	-0.061*** (12.693)
SIZE	0.059*** (12.778)	0.067*** (14.101)	0.059*** (12.778)	0.069*** (14.631)
ROA	0.042** (8.781)	0.034** (8.091)	0.042** (8.781)	0.044** (8.512)
IND	YES	YES	YES	YES
YEAR	YES	YES	YES	YES
F-Statistics	9.431***	11.489***	9.431***	10.093***
Adjusted R ²	0.4378	0.5266	0.4378	0.5092
Instrumented	NCI	NCI	NCI	NCI

Note :
Instrumental variable : ΔNCI
***, **, * Significant level of regression coefficient in 1%, 5% and 10%.

Dynamic Capital Structure Modelling: Generalized Moment Methods (GMM)

Although the focus of this study is to examine the influence of NCI on capital structure, as well as the moderating role of macroeconomic fundamentals and the integrity of independent external parties, we conducted additional tests using generalized moment methods (GMM) to determine the speed of

capital structure ratio adjustment towards achieving optimal capital structure. We calculated the optimal capital structure (DER OPT) and the speed of capital structure ratio adjustment to optimal conditions (Speed DER) for company i over the 2018–2024 time period. The regression results using the GMM method are described in the Table 8.

Table 8. Result of generalized moment methods

Variable	Coef.	Std. Error	t-Stat.	Prob.
DER_Opt	-0.582	0.071	-8.182	0.000
Speed_DER	0.614	0.048	12.890	0.000
Adjusted R ²	0.5201			

Note :
***, **, * Significant level of regression coefficient in 1%, 5% and 10%.

Table 8 above shows that the optimal debt level and the speed of adjustment to the optimal debt condition influence the dynamic capital structure. This finding means that NCI is a minority shareholder in a subsidiary with dynamic ownership. Because this type of investor's orientation is short-term returns in the form of the difference between stock price changes and short-term dividends, the existence of NCI is highly dynamic. A dynamic NCI impacts a dynamic capital structure, although the primary determinant is not NCI, as NCI only contributes very small and insignificant funding. The existence of NCI stimulates the entity to always maintain a dynamic capital structure that adjusts to the optimal proportion of ideal debt composition, with low debt costs, so that it can distribute dividends to NCI and is free from financial distress that will impact the decline in stock prices.

The Effect of NCI on Capital Structure

NCI negatively impacts leverage. In line with the trade-off theory, the choice of capital structure between debt and equity funding is a trade-off, as the advantages of one funding source are often the disadvantages of the other. Management must choose a strategy that balances debt and equity funding sources. When equity funding is chosen, namely the issuance of new shares in a subsidiary with the inclusion of NCI in the consolidated financial statements, debt funding sources will be reduced. The presence of NCI in the shareholding structure of a group entity will exacerbate agency problems. Prior to the subsidiary issuing new shares or before the NCI existed, agency conflicts likely only arose between management and shareholders. After the introduction of NCI, the potential for conflict increases not only between management and shareholders but also between the parent owner entity (POE) and the NCI. Naturally,

management does not want to create new conflicts with creditors by increasing external debt funding sources. Cash proceeds from the sale of shares purchased by the public, which then become NCI in the group entity's share ownership structure, are used by management to fund operations, asset investments, and other items to optimize profitability to meet NCI's expected future investment returns. When management deems cash receipts from NCI sufficient, coupled with cash receipts from other operational activities, management will optimize this funding and reduce debt financing.

Management considers this for two reasons: first, funds from NCI, combined with internal sources in the form of profitability, are sufficient to meet funding needs, and second, management is unwilling to take on greater risk if both external financing activities are undertaken simultaneously in significant amounts and within the same period. NCI's presence diversifies shareholders, and management must meet their interests. This finding aligns with previous research that suggests ownership structure influences debt policy, where debt policy and share issuance are financing strategies that require careful consideration to determine the optimal balance between the two [40].

Macroeconomic Fundamentals Moderate the Effect of NCI on Leverage

Macroeconomic fundamentals reinforce the negative effect of NCI on leverage. This result is in line with the trade-off theory, which posits that alternative external funding sources are in a trade-off position, avoiding the two risks of both being pursued in large amounts. When a subsidiary within a corporate group decides to pursue external financing by issuing new shares, as reflected in the emergence of NCI, the subsidiary's management will reduce debt financing or possibly even eliminate it altogether during the same period. Management perceives that the benefits of issuing new shares or incorporating NCI into the entity's ownership structure outweigh the debt to creditors. Macroeconomic fundamentals exert a significant influence on this choice. They influence the decision of fund providers to choose investment alternatives, which in turn impacts the company's external environment. Macroeconomic fundamentals also influence management's decision to select the best external funding source, considering the trade-off between issuing debt securities and borrowing from banks and issuing equity securities by inviting NCI to join as part-owners of the subsidiary.

When the capital market climate is favorable and efficient, stock prices rise. This situation not

only benefits capital-gain-oriented investors but also the issuing company, as the cash received exceeds the recognized shares, resulting in the recognition of a share premium account. When stock prices are high, fund owners prefer to invest in equity securities rather than debt securities or hold their funds in deposits. When the benefits from changes in stock market prices outweigh changes in interest rates, fund owners who are short-term profit-oriented and play with relatively small stock portfolios prefer to become NCIs within the group entity's shareholding structure, rather than purchasing bonds or holding funds in deposits. This finding aligns with previous research that suggests fundamental macroeconomic factors influence capital structure policies and investors' decisions regarding investment choices in debt securities, equity securities, or other forms [37]; [53].

Moderating Effect NCI on Capital Structure is the Quality of Integrity of Independent External Parties

In line with agency theory, differences in access to information and interests create a gap between management and providers of funds, including shareholders and creditors, and even between shareholders and creditors. Management is interested in achieving its own well-being, such as stable and even increasing salaries, regular bonuses, career advancement, and even ownership rights in the company. Shareholders are interested in receiving regular dividends and ensuring the company's continued existence indefinitely. Creditors are interested in receiving interest income and principal repayment for debt. In practice, conflicts of interest and mutual intervention are possible, impacting the company's strategy and operations, including capital structure policies. Companies with high leverage ratios also experience significant creditor dominance over the company. In such circumstances, to facilitate the fulfillment of their interests, creditors will intervene in management to prevent the issuance of new shares. The existence of NCI will create conflict between creditors, the NCI, and management itself, and vice versa. Companies with a trade-off funding strategy, where an optimal balance is achieved between debt financing and equity issuance, create a balance between fund-providing stakeholders, avoiding dominant interests and intervention. This will further minimize agency conflicts if management operates professionally, does not impose its interests at the expense of other stakeholders, optimally adheres to good corporate governance principles, and, equally important, requires the presence of an independent external party.

The independent external party that sits between management and fund providers, shareholders, and creditors is the external auditor. A truly independent external auditor, free from vested interests or partiality toward specific stakeholders, upholds high professionalism, optimal integrity, and honesty in professional practice and upholds the professional code of ethics. A reputable external auditor will not jeopardize their professional reputation in the eyes of the audit market and regulators simply to obtain something from management that is insignificant compared to the credibility at stake for the foreseeable future. High-quality external auditors, both competent and moral, provide an objective assessment of the fairness of financial statement presentation, demonstrating management's accountability as agents, based on actual conditions. High-quality external auditors will weaken management's desire to exploit their access to information and authority to engage in unprofessional managerial decision-making, including through capital structure strategies. The results of this study align with evidence from previous studies showing a strong relationship between external auditor quality and capital structure [12].

CONCLUSION

NCI negatively affects leverage, consistent with the trade-off theory that suggests that companies adopt an optimal composition of external funding sources in their capital structure policy, including issuing new shares (NCI) and debt financing (leverage). Companies minimize risk if both external funding sources are equally large. The presence of NCI indicates that a subsidiary chooses an external funding strategy by issuing new shares, considering the benefits of NCI outweighing the costs of debt if a debt policy is chosen. When a subsidiary chooses NCI over creditors, the agency conflict associated with additional shareholders is better managed than the agency conflict with creditors and periodic interest expenses. Macroeconomic fundamentals influence the choice of fund providers regarding investment products, whether debt or equity securities, and corporate management's choice of external funding sources, whether debt or equity issuance. The choice of investment products, influenced by macroeconomic fundamentals, is related to the expected return on investment, and the choice of corporate funding sources, influenced by macroeconomic fundamentals, is related to the cost of debt and the cost of capital. Macroeconomic fundamentals reinforce the trade-off between corporate funding sources, whether debt or equity issuance. When interest rates are high,

corporate management prefers to issue shares rather than debt, and fund providers prefer to invest in debt securities rather than equity securities.

The quality of independent external audits is the primary basis for evaluating investment performance and making investment decisions by external stakeholders regarding corporations. The quality of independent external audits minimizes the gap and agency problems between management and fund providers, between majority and minority shareholders, and between shareholders and creditors. Investment decisions, whether in equity or debt securities, are influenced by the magnitude of investment returns, taking into account the results of financial performance evaluations, including financial statement analysis. The credibility of the financial statements as a basis for decision-making is based on the opinion provided by the independent external auditor. Financial statements audited by a high-quality independent external party have value relevance and can be used to predict future investment returns on both debt and equity securities.

This research's theoretical contribution is to strengthen trade-off theory in underpinning corporate management decisions regarding external financing strategies by emphasizing the moderating role of macroeconomic fundamentals and the quality of the independent external auditor. Trade-off theory remains relevant today in explaining corporate capital structure policies. The practical contribution of this research is a recommendation for fund providers that when making investment decisions regarding debt or equity securities, they should also consider the dominance of external funding sources, as reflected in the leverage ratio, because it will affect future investment returns. Furthermore, macroeconomic fundamental volatility and the quality of external auditors should be considered, as these factors will strengthen the basis for investment decisions and assess the prospects for future investment returns. Consolidated financial statements, which prioritize the rights of the parent entity's owners, limit this research. Future research is recommended to use financial statements issued solely by subsidiaries to assess the external funding strategies undertaken by subsidiaries.

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