

The Moderating Effect of Audit Quality on The Impact of Financial Reporting Quality, Financial Performance, and Financial Leverage on Investment Opportunity Set

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ABSTRACT

This study intends to examine the effect of Financial Reporting Quality (FRQ), financial performance, and financial leverage on the Investment Opportunity Set (IOS), which is often used as a proxy for a firm's future growth potential. Further, the present study explores the moderating influence of audit quality on these connections. This analysis uses data from 45 businesses listed in the LQ45 IDX, based on audited financial records for the period 2022-2025. Panel data regression analysis is used to assess the proposed hypotheses, and multiple regression with ARMA is used as a robustness check. Theoretically, this paper is based on Signaling Theory and Pecking Order Theory. The results suggest that Financial Reporting Quality (FRQ) and financial leverage have significant positive and negative effects on the Investment Opportunity Set (IOS), respectively, based on panel data and multiple regression analyses. However, there is no significant effect of financial performance on IOS. The results also show that audit quality greatly moderates the influence of FRQ and financial leverage on IOS. But the influence of financial performance on IOS is not moderated by the audit quality. This study discusses only companies listed in the LQ45 Index on the IDX during the new normal era. Future studies could extend the investigation to additional nations and longer time frames. In addition, other variables such as liquidity, firm size, and firm value can be incorporated to provide a more complete picture of the determinants of the Investment Opportunity Set (IOS). The findings contribute to regulators' knowledge of how to enhance accounting standards and encourage greater professionalism among accountants. They also have practical consequences for firms wishing to improve their future growth prospects. The uniqueness of this study is to identify Financial Reporting Quality (FRQ), financial leverage, and audit quality as major predictors of IOS, which shows the future growth potential of the Indonesian companies.

Keywords: Investment Opportunity Set, Financial Reporting Quality, Financial Performance

1. INTRODUCTION

Apple Inc. is ranked the top technological business in the world with the highest Investment Opportunity Set (IOS) [1], followed by Microsoft, Alphabet and Amazon. This is indicative of the high level of confidence of investors and stakeholders in Apple Inc. as a result of its wide spectrum of investment prospects, strong future cash flow projections and huge investments in research and development (R&D) that supplements its long term growth potential.

PT Barito Renewables Energy Tbk. ranks highest in the Indonesian renewable energy business based on the IOS ranking [1]. Global study information also reveals that the growth potential associated to IOS in Indonesia are mostly concentrated in renewable energy, major banking and technology sectors, while at the global level they are mostly centered in the technology sector [2]. The Investment Opportunity Set (IOS) is the level of investment opportunities available to a corporation, which is measured by total assets. The measurement is done using the Market Value to Book Value of Assets (MVBA) ratio [3] [4]; [5]. Investors make the decision to invest on the basis of the company's capacity to undertake profitable investment opportunities[6]; [7]. Therefore, IOS is an important idea that has to be further researched.

This is especially true for the 45 best companies listed on the Indonesia Stock Exchange (IDX), which is called the LQ45 Index. These companies are categorized as blue-chip stocks with lesser risk on investing compared to other listed companies. Therefore, knowing the IOS levels and finding out the variables determining the IOS are crucial issues for investors, managers and other stakeholders.

These arguments underlie the selection of LQ45-listed firms as the unit of analysis in this study. This study specifically explores the determinants of IOS among the top publicly listed companies in Indonesia from 2022 to 2025, which is the post COVID-19 pandemic timeframe, focusing on corporations that are part of the LQ45 Index. One of the aspects that affect the Investment Opportunity Set (IOS) is Financial Reporting Quality (FRQ) [8]. High-quality financial reporting is often more credible and reliable in the view of investors and other stakeholders. If

earnings are robust and a good indicator of economic health of a firm, the firm is more likely to have more profitable investment projects to undertake thereby raising the IOS. The Signaling Theory regards the quality of financial reporting as a major signal for the firm's growth opportunities and future investment potential [8]; [9].

On the contrary, Agency Theory says that organizations with high IOS may have a greater motivation to control earnings. This is because managers are incentivized to present good financial results to seek investment for projects with high values and boost market value. However, good quality financial reporting reduces the asymmetry of information between managers and investors and so allows for more efficient investment decisions. Research on companies listed on the IDX provides empirical evidence that companies with greater IOS likely to have better accounting information quality, indicating a positive association between IOS and financial reporting quality [4].

[10] pointed out the financial performance, especially profitability, as one of the elements influencing the Investment Opportunity Set (IOS). Financial performance is a measure of a firm's total success and efficiency of resource usage to generate profits[11] The higher the ROA, the more efficient the use of assets. This would improve the value generated from the firm's assets and increase its future growth potential.

In theory, profitable organizations are better positioned to finance new investment projects and to exploit growth prospects. Higher IOS is therefore likely to be connected with better financial success. [12] and [13] empirical studies show that profitability is a significant determinant of the expansion of investment opportunity, so that firms with higher profitability tend to enjoy more investment opportunities and better growth prospects.

Financial leverage may also have an effect on the IOS. The financial leverage ratios including debt-to-equity ratio (DER) are often used as proxies for the efficiency of business financing choices and risk management [10]. A rise in the level of debt gives enterprises better access to finance for business expansion and investment activities, hence potentially raising their IOS. However, rising leverage exposes organizations to higher financial risk and liabilities [14]

Damodaran (2014) states that debt financing directly impacts firm valuation and stock prices. From the perspective of Signaling Theory, a growth in corporate debt might be considered a positive signal to the market that the management is confident about the firm's future cash flows and its capacity to fulfill the debt obligations. Hence, companies with an optimal amount of financial leverage can be better placed to exploit profitable investment opportunities and improve their future growth prospects.

The importance of audit quality has grown as demands for transparency and accountability in financial reporting have increased. Independent parties such as auditors have an important role in assuring the fairness and trustworthiness of financial accounts (UU-RI, 2011; [15]; [16] [17]. Agency theory posits that auditing is an efficient tool to reduce agency conflicts between managers and shareholders through lowering information asymmetry and improving the credibility of financial information [9]

High-quality audits are often connected with higher investor confidence and better company governance, which can lead to better future growth prospects as evidenced by a higher Investment Opportunity Set (IOS) [6]. The empirical data, however, has been mixed.[18] in Tunisia discovered a positive impact of audit quality on stock values, indicating that enterprises with good audit quality are likely to have more growth potential and higher IOS. To the contrary, [19] studying the Tunisian setting too found that audit quality did not affect stock prices significantly. However, the contradictory results suggest that further investigations are required. Thus, this research explores audit quality as a moderating variable in the Indonesian setting to see if it amplifies the impacts of Financial Reporting Quality (FRQ), financial performance, and financial leverage on the Investment Opportunity Set (IOS). This research is expected to provide a clearer understanding of the role of audit quality in affecting corporate growth potential for businesses listed on the IDX.

The research on the Investment chance Set (IOS) is still relevant and valuable since it provides a chance to further explore a number of unresolved issues in the literature. The purpose of this study is to examine whether Financial Reporting Quality (FRQ) has a significant effect on IOS [4], whether financial performance is the main factor affecting IOS [12] and [20], and whether financial leverage has an effect on IOS [14] and [21]. Moreover, conflicting results of the role of audit quality revealed in previous research conducted in Tunisia[6] provide a strong justification for the inclusion of audit quality as a moderating variable in this study. This study intends to fill a critical gap in the literature by evaluating the extent to which the links between financial reporting quality (FRQ), financial performance, financial leverage and IOS are moderated by audit quality.

The unit of analysis used in this study is the company listed in the LQ45 Index. The current performance of companies is expected to add to theory and practice. The results could give significant information for regulators for developing regulations that improve the quality of financial reporting, transparency and corporate governance. Moreover, the findings may have significant consequences for the public accounting profession in supporting good quality audit processes. In conclusion, this study is considered to be a standard for companies in Indonesia and also for companies in other countries that have the same economic growth conditions as Indonesia, especially in their attempts to increase future growth potential and long-term corporate value.

2. RESEARCH METHODOLOGY

This research uses a quantitative research approach [22]. Quantitative research involves testing hypotheses and research issues using statistical analysis of objective measurement. Through this approach, researchers can study correlations among variables, test theoretical ideas, and develop empirical evidence by analyzing data systematically.

The quantitative method involves collecting data in numerical values or measurable variables from sources such as surveys, experiments or secondary data analysis. The obtained data is then examined using statistical tools in order to explore the correlations between variables, make predictions and find patterns that could exist within the data [23].

Primary data was collected through expert discussions. Of the 45 firms listed on the LQ 45-IDX, the criteria for the use of purposive sampling are companies that have annual reports for 2022-2025, are not delisted from the IDX and do not have negative profitability. The samples selected were 45 IDX-listed companies that had audited financial statements in 2022-2025. So that in the 4-year period, a total of 180 observations were obtained.

The measurement of variables is presented in Table 1 as follows.

Table 1: Operationalization of Variables

Variable	Definition	Scale	Indicator
Financial Reporting Quality (independent variable)	This measure reflects a firm's ability to convert accounting profits into operating cash flows. A higher ratio indicates superior Financial Reporting Quality (FRQ), as it implies a lower degree of accrual-based earnings manipulation and a more faithful representation of the firm's economic performance (Scott & O'Brien, 2019).	Ratio	Operating Cash Flow/Earnings After Tax
Profitability as an indicator of Financial performance (independent variable)	The profitability represents the company's performance (Scott & O'Brein, 2019; Connelly et al., 2011; Manurung et al., 2025).	Ratio	ROA = Net Income/ Total Assets
Financial Leverage (Independent variable)	The comparison of Total Debt and total equity (Scott & O'Brein, 2019)	Ratio	Debt Equity Ratio = Total Debt/ Total Equity
Audit quality (Moderating variable)	Audit quality when conducted by public accountant firms of the Big 4 (Holly et al., 2023).	Ratio	The ranking weight of the public accounting firm [24]).
Investment Opportunity Set/IOS (dependent variable)	The Investment Opportunity Set (IOS) reflects the growth opportunities available to a firm through future investment projects that are expected to enhance corporate value and long-term performance. Consistent with Hidayah (2015), IOS is measured using the Market-to-Book Value of Equity (MBVE) ratio as a proxy for the firm's future growth opportunities.	Ratio	MBVE= $\frac{\text{Total outstanding shares} \times \text{market price}}{\text{Total equity}}$ [4], [24]

Source: processed by researchers

Notes:

The audit quality indicator is the ranking of the public accounting firm that audited the company, based on Janan opinion that Deloitte Indonesia = 11, EY Indonesia = 10, PWC Indonesia = 9, KPMG Indonesia = 8, BDO Indonesia = 7, RSM Indonesia = 6, Grant Thornton LLP = 5, Crowe Indonesia = 4, Mazars Indonesia = 3, KAP Anwar & Rekan = 2; other KAPs outside of 10 are weighted by = 1 (Janan, 2023).

3. THEORY AND CALCULATION

3.1 Signalling Theory

Management signals the market to provide information to investors about a firm's future prospects [25]; [26] [27] as per Signaling Theory. Investors interpret such information as positive signals (good news) or negative signals (bad news), which subsequently influence their investment decisions and the firm value perception [25]; [28]; [29]. A high Investment Opportunity Set (IOS) is often interpreted as a strong signal that a company has good future growth possibilities. Such signals are frequent in high quality financial reporting and good profitability performance, both of which increase investors' trust in the firm's future investment opportunities and value creation potential [25];[28].

Financial leverage could, on the other hand, be sending confusing signals to the market. Debt usage can also be interpreted as creditors' confidence in the firm's ability to generate future cash flows and sustain growth, but too much leverage can be interpreted as a higher risk of financial distress that can restrict future investment opportunities and negatively impact IOS [27]

At the same time, audit an independent third party verification method, strengthens the credibility and reliability of the financial information revealed by management. High audit quality mitigates the information asymmetry between managers and investors, and so enhances the efficacy of corporate signals, which in turn enables the stakeholders to better appraise a firm's future growth potential.

3.2 Agency theory

Agency theory suggests that managers have better access to internal information and knowledge about the future prospects of a corporation than shareholders, which creates information asymmetry between the two parties [30]. [31] claim that managers and shareholders have different objectives and decision making, and disputes develop between managers and shareholders primarily on financing strategies and the allocation of investment. The managers may be tempted to undertake the investment initiatives which are most beneficial for their own interests, not for the shareholder value and agency difficulties in the firm [32]. To minimize such conflicts, external monitoring measures are needed. One of the most essential mechanisms is auditing which increases trust and openness of financial reporting. In this study, audit quality is seen as an external governance tool that can align the interests of managers and shareholders by minimizing information asymmetry and increasing the trustworthiness of financial information [33]; [34]. Hence, good quality audits are believed to enhance corporate governance and enable more efficient investment decisions, thereby facilitating the realization of the firm's growth potential as represented by its Investment Opportunity Set (IOS).

3.3 Pecking Order Theory

Pecking Order Theory was first proposed by Stewart C. Myers and Nicholas S. Majluf in 1984. The idea posits that organizations have a sequence of preference in financing decisions. organizations prefer to use internal financing (retained earnings), then debt financing and finally issuing equity as a last resort [35]. The IOS is similar to the Pecking Order Theory as organizations with large growth possibilities require large financial resources to finance future investments. A high IOS often signals a need to build and expand assets more. In line with the pecking order theory, corporations are anticipated to rely mostly on internally generated money, especially retained earnings to finance these investment possibilities before resorting to external sources of capital. Therefore, profitability and retained earnings are important for the financing of investment operations and generation of future business growth.

Calculation

The Regression of Data Panel

The multiple panel data regression equation is formulated as follows:

Equation: The effect of Financial Reporting Quality (FSQ), ROA, and Leverage, moderated by the audit quality variable, on Investment Opportunity Set (IOS).

$$IOS_{it} = \alpha + \beta_1 FRQ + \beta_2 ROA + \beta_3 Leverage + \beta_4 AQ * FRQ + \beta_5 AQ * ROA + \beta_6 AQ * Leverage + \varepsilon$$

IOS = Investment Opportunity Set

α = Constanta

β = Regression coefficient independent variable

FRQ = Financial Reporting Quality

ROA = Return on Assets (Profitability = Net Income/ Total assets)

Leverage = DER (Total debt/ Total assets)

AQ = Audit Quality (the ranking of Public Accountant Firm)
 ε = Error term
i = company
t = year/ time

Panel data regression analysis can be performed using the Common Effect Model (CEM), Fixed Effect Model (FEM) and Random Effect Model (REM).

The chow test, Hausman test and Lagrange Multiplier (LM) test are conducted to discover the most suited model. The Chow test is used to examine the best model of the Common Effect Model (CEM) and Fixed Effect Model (FEM).

The hypotheses of the chow test are:

H 0 : The regression model is the common effect model.

H 1 : The regression model is Fixed Effect Model.

The Hausman test is a statistical test which is used to decide whether the Fixed Effect Model or the Random Effect Model is more appropriate to use

H0: The Random Effect model is the regression model.

H1: The Fixed Effect Model is the regression model

To assess whether the Random Effect Model or the Common Effect Model is more appropriate, the Lagrange Multiplier (LM) test is performed.

H0: Random Effect Model for the regression model.

H1: The regression model is the Common Effect Model.

Mathematical Expressions and Symbols

Multiple Linear Regression

The second data analysis approach in this study is multiple linear regression. The effect of independent variable on dependent variable is tested by using multiple linear regression [36]; [23]. This method is used because it can describe if there is a significant effect on FRQ, ROA, leverage, and AQ on IOS.

The following is the multiple linear regression equation used in this study:

$$IOS = \alpha + \beta_1 FRQ + \beta_2 ROA + \beta_3 Leverage + \beta_4 AQ * FRQ + \beta_5 AQ * ROA + \beta_6 AQ * Leverage + \varepsilon$$

IOS = Investment Opportunity Set

A = Constant

$\beta_1, \dots, \beta_6$ = Coefficient Multiple Regression

FRQ = Financial Reporting Quality

ROA = Net Income/ Total assets

DER = Total debt/ Total assets

AU = Audit Quality

ε = Error

4. RESULTS AND DISCUSSION

4.1 Hypothesis Development

4.1.1. Financial Reporting Quality and Investment Opportunity Set

According to Signaling Theory, financial statements are a kind of communication between a corporation and its stakeholders [37]; [38]; [39]. High-quality financial reports provided by a corporation is an effective positive indication to the financial stability, operational success and future growth possibilities of a firm [25] [28]. High quality financial reporting decreases information asymmetry and increases investors' confidence in the ability of the organization to generate future value, thereby enhancing attractiveness of its investment prospects.

Based on Agency Theory, high Financial Reporting Quality (FRQ) enhances monitoring and accountability [40]; [41]). Thus, managers are more discriminating in selecting investment projects and assets that do maximize business value from the Investment Opportunity Set (IOS). This results in a decrease in the risk of overinvestment and underinvestment, thereby improving investment efficiency and fostering sustainable growth of companies [42].

Recent empirical research also supports this argument. According to the studies by (Le et al., 2024) and [42], the transparency and quality of financial information are of substantial importance in capital allocation decisions and the availability of investment options. Firms that produce more reliable and transparent financial reports are likely to have better growth prospects and higher IOS.

Based on the foregoing theoretical arguments and empirical evidence, the following hypothesis is proposed:

H₁: Financial Reporting Quality (FRQ) has a significant effect on the Investment Opportunity Set (IOS).

4.1.2. Financial Performance and Investment Opportunity Set

Signaling Theory states that there is a close relationship between financial performance and Investment Opportunity Set (IOS). Profitability is a reflection of a firm's operational effectiveness in using its assets to generate income and build value for shareholders [9]; [24]). Strong financial performance gives information to the investors about the firm's potential to sustain expansion and invest in future projects. Furthermore, earnings are the most essential source of internal finance to support future growth chances from Pecking Order Theory perspective [3].

Furthermore, Signaling Theory implies that firms with high profitability are viewed by investors as having more financial flexibility to fund new investment projects embedded within their IOS [44]; [45]; [5]; [25]; [28]. Firms with higher profitability can rely more on their internal finances and hence face fewer financial constraints in pursuing value-enhancing investment possibilities. This theoretical thesis is supported by empirical evidence. Likewise, [12] and [20] also discover profitability as an important driver for investment opportunity expansion, which indicates that organizations with better profitability are likely to have a higher IOS and growth opportunities.

Based on the foregoing theoretical arguments and empirical evidence, the following hypothesis is proposed:

H₂: Profitability has a positive effect on the Investment Opportunity Set (IOS).

4.1.3. Financial Leverage and Investment Opportunity Set

Within the Agency Theory context, financial leverage, which is the proportion of debt in a firm's capital structure, is typically assessed by the Debt-to-Equity Ratio (DER) and is considered to be a disciplinary mechanism to curb management opportunism and resolve agency difficulties. Debt financing might be useful in stimulating more efficient investment decisions by putting fixed duties on managers [44]; [27]). However, from the standpoint of Pecking Order Theory, an over reliance on debt financing may result in financial pressure and a greater likelihood of financial trouble [27]; [3]. Firms with high levels of debt may have increased financial responsibilities that can hinder their ability to pursue successful investment initiatives and limit chances for future growth.

Moreover, Signalling Theory postulates that excessive leverage might send a negative signal to investors and others. The higher the leverage, the higher the financial risk, including a higher possibility of default and financial trouble. Such impressions may undermine the confidence of investors and harm the firm's growth potential, therefore reducing its Investment Opportunity Set (IOS) [5].

Based on the foregoing theoretical arguments, the following hypothesis is proposed:

H₃: Financial leverage has a negative effect on the Investment Opportunity Set (IOS).

4.1.4. Audit Quality as a Moderating Variable in the Relationship Between Financial Reporting Quality and Investment Opportunity Set

Audit quality is an important external verification technique that promotes the reliability and legitimacy of information revealed by management [46]. High quality audits enhance stakeholders' confidence in the veracity of financial statements and eliminate information asymmetry between management and investors. Based on the Agency Theory framework, although a corporation has a high Financial Reporting Quality (FRQ), the information presented is not necessarily a reflection of the underlying economic reality of the organization without verification by competent and independent auditors [47]. Auditing quality improves the effectiveness of monitoring and minimizes the likelihood of managerial opportunism, which in turn improves the dependability of financial information utilized in investment decision making.

Audit quality is a second-order signal of the first order signal of financial reporting i.e. signaling theory [48]. Thus, investors are more likely to rely on financial information that is associated with high-quality audits, resulting in more accurate evaluations of a firm's growth potential and Investment Opportunity Set (IOS).

Based on the foregoing theoretical arguments, the following hypothesis is proposed:

H₄: Audit quality moderates the relationship between Financial Reporting Quality (FRQ) and the Investment Opportunity Set (IOS).

Signaling Theory proposes that high profitability is a good indicator of a firm's good fundamentals and potential to exploit future investment opportunities [26]. The reliability of this signal is further increased in the eyes of investors and other stakeholders when good profits performance is certified by a recognized auditor [49]. This idea is further backed by the Pecking Order Theory which states that profits and retained earnings are the major source of finance for company expansion and future investment activities [3]. However, Agency Theory posits that opportunistic managers may spend large earnings into inefficient or value-destructive investment projects instead of those that maximize shareholder value [12]. In this setting, high-quality auditing is an effective monitoring method that improves managerial accountability and eliminates agency difficulties. Therefore, companies with good financial performance are expected to be viewed more favorably by investors and the market when such performance is backed by credible and high-quality audits, thereby strengthening the link between financial performance and the expansion of investment opportunities[49].

Based on the foregoing theoretical arguments, the following hypothesis is proposed:

H_s: Audit quality moderates the relationship between financial performance and the Investment Opportunity Set (IOS).

According to the Pecking Order Theory [50] ; [35], enterprises with high leverage levels are subject to underinvestment concerns, because a large part of their cash flows needs to be used to cover debt commitments, such as interest and principal payments. As a result, organizations with high debt loads may be constrained from funding viable investment possibilities, restricting their future growth prospects. In the context of Agency Theory, high quality auditing plays a critical role as an external monitoring mechanism for guaranteeing transparency and accountability in corporate investment choices. Even if a company is highly indebted, capable and independent auditors contribute to transparency in investment activities and the efficient and productive management of the borrowed funds [51]. Audit quality, by minimizing information asymmetry and increasing corporate governance, can help to mitigate agency risks associated with highly indebted corporations.

Signaling Theory further indicates that credible auditors increase the reliability of information about a firm's contractual commitments and financial status. Improved transparency helps investors and other stakeholders to better assess whether a company's debt is being used to finance value-generating investments. Therefore, the market can still have positive growth potential despite the firm's financial debt load [48].

Based on the foregoing theoretical arguments, the following hypothesis is proposed:

H_s: Audit quality moderates the relationship between financial leverage and the Investment Opportunity Set (IOS).

The comprehensive research model of this study is presented in **Figure 1** as follows.

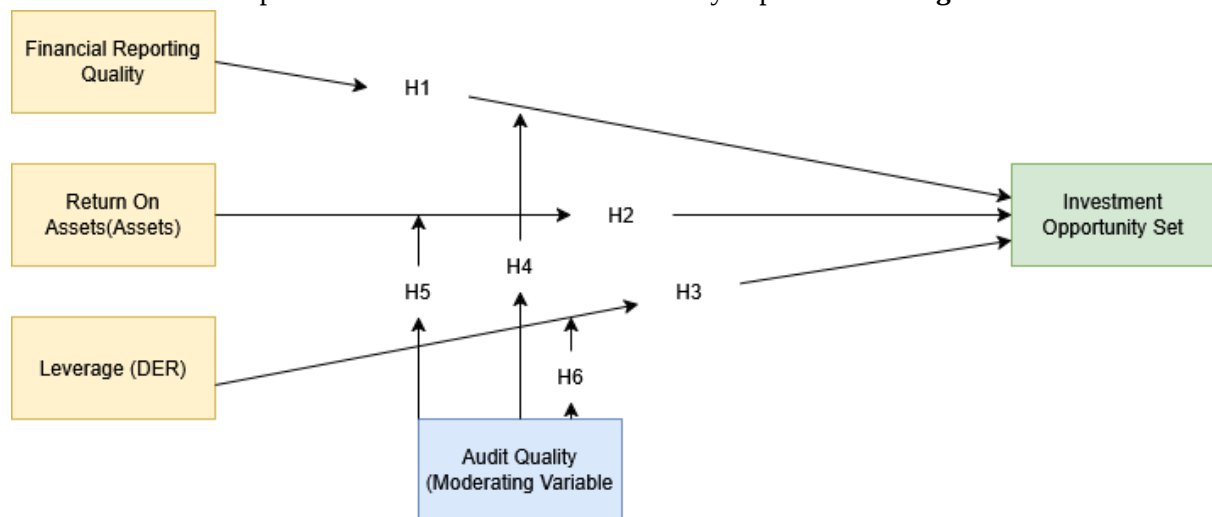


Figure 1. Research Model

4.2 Panel Data Regression Results

The results from 180 observations led to the choice of the best appropriate panel data regression model. The Chow test yielded a cross-section chi-square of 312.3256 with a p-value of 0.0000, indicating H₁ was accepted and the Fixed Effects (FE) model was preferred to the pooled model. Next, the Hausman test revealed a cross-section random statistic of 2.915380 and a p-value of 0.8194. The null hypothesis could not be rejected, so the Random Effects (RE) model was more appropriate than the Fixed Effects model.

In order to check the choice of the model, the Lagrange Multiplier (LM) test was performed. The Breusch–Pagan cross-section statistic was 152.0111 with a p-value of 0.0000, which suggests that the Random Effects (RE) model was the best appropriate specification for the panel data analysis. "Since the RE model was selected and estimated by the GLS method, traditional assumption checks were not necessarily required. GLS estimators are considered to be efficient and resilient to several breaches of the standard linear regression assumptions. As supplementary analyses, however, diagnostic tests were completed. The normality test on the residuals gave a p value of 0.0000 which indicated that the residuals were not exactly normally distributed. However, [52] said that according to the Central Limit Theorem, the distribution of the sample mean tends to be normal when the sample size is more than 30 observations. Therefore, the data in this investigation can be assumed to be approximately regularly distributed. In addition, the model has passed the heteroscedasticity test by the Glejser technique since all the p-values of the partial t-test are greater than α 0.05, and the p-value of the F-test is 0.1861 (> 0.05). The model also passed the autocorrelation test with the Durbin-Watson value of 2.5952, showing that there are no major autocorrelation difficulties.

The normality assumption was not completely satisfied given the initial data set of 180 observations. A trimming process was then used to improve the data quality. A total of 36 outlier observations were discarded, leaving a final sample of 144 observations. The process of trimming was repeated using Chow, Hausman and LM tests. The results showed that the Fixed Effects (FE) model was the best specification for the modified dataset. The discussion opens with the descriptive statistics of the research variables. This is followed by an in-depth review of the panel data regression results.

Table 2: Statistic Descriptive
Sample: 2022 2025

	IOS	DER	ROA	FRQ	DER*AU Q	ROA*AU Q	FRQ*AU Q
Mean	0.610173	1.138438	0.213617	1.561580	10.17923	1.767936	13.97323
Median	0.206832	0.626793	0.057110	1.067820	5.131348	0.452045	8.962380
Maximum	3.305046	7.231405	9.362799	15.21348	65.08265	84.26519	152.1348
Minimum	0.026100	2.00E-05	-0.650194	-4.744023	0.000180	-6.501940	-47.44023
Std. Dev.	0.831040	1.524938	0.997584	2.879562	14.14912	8.540698	27.58334
Skewness	1.800444	2.288415	7.448958	2.574731	2.265107	8.114502	2.608621
Kurtosis	5.145596	7.365195	61.04260	11.84701	7.262016	72.15651	12.07169
Jarque-Bera	105.4199	240.0138	21545.35	628.7197	232.1258	30276.02	657.0910
Probability	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Sum	87.86486	163.9351	30.76082	224.8675	1465.809	254.5827	2012.145
SumSq DEV	98.75984	332.5371	142.3100	1185.739	28628.24	10430.92	108800.2
Observations	144	144	144	144	144	144	144

Source: EvIEWS 14 process result

Table 2 shows descriptive statistics of the study variables. The average values of the variables are: Investment Opportunity Set (IOS) = 0.610173, Debt to Equity Ratio (DER) = 1.138438, Return On Assets (ROA) = 0.213617 and Financial Reporting Quality (FRQ) = 1.561580. The median values are IOS = 0.206832, DER = 0.626793, ROA = 0.057110 and FRQ = 1.067820 . Meanwhile.

The highest value of IOS is 3.305046, reflecting the highest level of future investment possibilities among the sampled firms. For other variables, the maximum values are 7.231405 for DER, 9.362799 for ROA and 15.21348 for FRQ. On the other hand, minimum IOS is 0.026100 which means very few future investment prospects. The minimal values of DER, ROA and FRQ are 2.00E-05, -0.650194 and -4.744023 respectively. The negative ROA value indicates that some of the enterprises were in the red during the time of monitoring. Standard deviations of IOS, DER, ROA and FRQ are 0.831040, 1.524938, 0.997584 and 2.879562 correspondingly. The standard deviation numbers are quite significant which indicates a large variation within the observations. This would signal that the data points are spread out and not centered around the mean values.

4.3 Panel Data Regression Analysis

The analysis of the panel data regression findings is based on the Fixed Effects (FE) model, which was chosen as the best acceptable model after the model selection procedures. The regression findings are reported in Table 3 and discussed in the next section.

Table 3: The result of the Variables DER, ROA, FRQ, DER*Audit Quality, ROA*Audit Quality, FRQ*Audit Quality Process On IOS

Fixed Effect

Dependent Variable: Y_IOS_TRM

Method: Panel Least Squares

Date: 04/03/26 Time: 18:23

Sample: 2022 2025

Periods included: 4

Cross-sections included: 41

Total panel (unbalanced) observations:

144

Variable	Coefficient	Std. Error	t-Statistic	Prob
C	0.392351	0.087866	4.465326	0.0000
X1_DER	-0.980291	0.312204	-3.139904	0.0022
X2_ROA	-0.274290	0.178057	-1.540463	0.1267
X3_FRQ	0.314402	0.132314	2.376182	0.0195
X1_DER*Z_AUDITQUAL	0.130120	0.037399	3.479187	0.0008
X2_ROA*Z_AUDITQUAL	0.027697	0.020852	1.328283	0.1872
X3_FRQ*Z_AUDITQUAL	-0.033781	0.013987	-2.415198	0.0176
Effects Specification				
Cross-section fixed (dummy variables)				
R-squared	0.907850	Mean dependent var	0.610173	
Adjusted R-squared	0.864149	S.D. dependent var	0.831040	
S.E. of regression	0.306304	Akaike info criterion	0.729200	
Sum squared resid	9.100766	Schwarz criterion	1.698514	
Log likelihood	-5.502412	Hannan-Quinn criter.	1.123075	
F-statistic	20.77448	Durbin-Watson stat	2.564656	
Prob(F-statistic)	0.000000			

Source: the result of Panel data regression processing by Eviews 14

The results of the panel data regression are presented in Table 3. The results reveal that financial leverage (measured by debt to equity ratio (DER)) has considerable negative influence on investment opportunity set (IOS) with probability value of $0.0022 < 0.05$ significance level. The regression coefficient of -0.9802 indicates that with every one unit increase in DER, IOS decreases by 0.9802 units, holding other variables fixed. On the other hand, the financial performance proxied by Return on Assets (ROA) has no significant effect on IOS as evidenced by a p-value of 0.1267 greater than the 0.05 significance level. Thus, the matching hypothesis is not supported. The results also demonstrate that Financial Reporting Quality (FRQ) has a substantial positive effect on IOS with a p-value of 0.0195. The computed coefficient of 0.314402 suggests that a one-unit rise in FRQ results in a 0.314402-unit increase in IOS, ceteris paribus. With regard to moderating effects, the interaction between DER and audit quality is statistically significant, which means that the audit quality has a moderating role in the association between financial leverage and IOS. This result indicates that greater audit quality will strengthen the effect of financial leverage on investment prospects. On the other hand, the interaction between ROA and audit quality is not statistically significant, indicating that audit quality does not affect the association between financial performance and IOS. Moreover, the interaction term between FRQ and audit quality is significant with a p-value of 0.0176. This finding suggests that the favorable effect of Financial Reporting Quality on IOS is reinforced by audit quality. In other words, the positive effect of good financial reporting on investment prospects is enhanced in the presence of good auditing.

Finally, the joint significance test verifies that the joint effect of DER, ROA, and FRQ and the moderating effect of audit quality have substantial impacts on IOS with an overall model p-value of 0.0000. The results imply that the suggested model is highly explanatory in accounting for heterogeneity in enterprises' investment opportunity sets. Robustness test using ARMA method was done, the result is compatible with data panel regression that is FRQ impact IOS is approved, ROA affect IOS is rejected, however DER affect IOS is accepted in data panel regression result and rejected in multiple regression result. The convergence of the outcomes of two different analytical procedures offers solid and reliable results.

Table 4: The result of the Variables DER, ROA, FRQ, DER*AUQ, ROA*AUQ, FRQ*AUQ Process On IOS

Multiple Regression with ARMA

Dependent Variable: Y_IOS

Method: ARMA Maximum Likelihood (OPG - BHHH)

Date: 04/10/26 Time: 13:00

Sample: 1 142

Included observations: 142

Convergence achieved after 22 iterations

Coefficient covariance computed using the outer product of gradients

d.f. adjustment for standard errors & covariance

Variable	Coefficient	Std. Error	t-Statistic	Prob
C	0.544193	0.307299	1.770892	0.0789
X1_DER	-0.639985	0.435147	-1.470735	0.1437
X2_ROA	0.110492	0.410912	0.268895	0.7884
X3_FRQ	0.304868	0.133771	2.279033	0.0243
X4_DER_AUQ	0.080610	0.047570	1.694545	0.0925
X5_ROA_AUQ	-0.014219	0.061979	-0.229410	0.8189
X6_FRQ_AUQ	-0.036379	0.014062	-2.587045	0.0108
AR(1)	0.636645	0.079241	8.034289	0.0000
SIGMASQ	0.420280	0.051835	8.108053	0.0000
R-squared	0.392165	Mean dependent var		0.617660
Adjusted R-squared	0.355603	S.D. dependent var		0.834471
S.E. of regression	0.669866	Akaike info criterion		2.101463
Sum squared resid	59.67974	Schwarz criterion		2.288804
Log likelihood	-140.2039	Hannan-Quinn criter.		2.177591
F-statistic	10.72617	Durbin-Watson stat		2.109377
Prob(F-statistic)	0.000000			

Inverted AR Roots .64

Source: The result of Multiple regression processing by Eviews 14

The findings of the multiple regression analysis are shown in Table 4. The results show that both the DER and the ROA have no meaningful effect on the IOS. The p-value for DER is 0.1437, which is more than α 0.05. This suggests that changes in financial leverage do not have a significant impact on IOS. This conclusion is different from the panel data regression results provided in Table 3, where the DER was found to have a substantial effect on IOS. Similarly, the effect of ROA on IOS is not significant statistically. The conclusion is congruent with the results of panel data regression shown in Table 3 which also shown that financial performance did not significantly influence IOS. On the other hand, FRQ has a substantial beneficial influence on IOS at $p < 0.0243$ which is less than α 0.05. This finding is consistent with the panel data regression results in Table 3, which suggests that higher quality financial reporting is related with more investment opportunities.

The interaction between audit quality and DER does not have a significant moderating effect on IOS at 5% significance level, with a p-value of 0.0925. However, the result is marginally significant at 10% significance level indicating minimal evidence that audit quality may attenuate the association between financial leverage and IOS.

However, the interaction between audit quality and FRQ considerably amplifies the **favourable** impact of FRQ on IOS with a p-value of 0.0108. This conclusion is in line with the findings of the panel data regressions in Table 3 and provides further evidence that high audit quality boosts the impact of the financial reporting quality on firms' investment prospects.

Finally, similar to the panel data regression findings, the combined significance test revealed that DER, ROA and FRQ with the moderating influence of audit quality significantly impact IOS simultaneously. This can be seen from the overall p-value of the model which is 0.0000. In summary, the consistency of several important findings in both panel data regression and multiple regression analyses further gives support of the robustness and reliability of the conclusions of this study.

Table 5. Tabulated Hypothesis Test Result

Hypothesis	Panel Data Reression result	Multiple Regression result
H _{A1} : FRQ affect IOS	Accepted (positive)	Accepted (positive)
H _{A2} : ROA affect IOS	Rejected	Rejected
H _{A3} : DER affect IOS	Accepted (negative)	Rejected
H _{A4} : FRQ*auditQuality affect IOS	Accepted (negative)	Accepted (negative)
H _{A5} : ROA*auditQuality affect IOS	Rejected	Rejected
H _{A6} : DER*auditQuality affect IOS	Accepted (positive)	Rejected at α 5%, but accepted at α 10%

Source: Processed by researcher

4.4 Discussion

Results show that Financial Reporting Quality (FRQ) has a positive and significant impact on the Investment Opportunity Set (IOS) based on the results of panel data regression and multiple regressions. The robustness of the results is confirmed by the uniformity among estimating methodologies. These findings suggest that FRQ is an important communication tool between firms and investors, which is consistent with the notion that financial reporting is a primary channel through which companies convey information about their financial condition and future prospects [37]; Chen et al., 2011; [39]. The financial reports of better quality are seen by investors as more credible and dependable signals thereby lowering the information asymmetry and increasing confidence on the firm's future growth potential. Previous research [25]; [28] supports this finding, which is also compatible with the reasoning of the **Signalling** Theory. High quality financial reporting is met with a positive market response, which shows that financial statements contain value-relevant information that investors use to assess a firm's investment potential (Scott & O'Brien, 2019). Hence, companies with clear, precise and reliable financial information are more likely to have greater IOS, which indicates better expectations about future growth and investment potential.

In practical terms, companies included in the Indonesia Stock Exchange (IDX) LQ45 Index must preserve and improve the quality of their financial reporting. High-quality financial statements not only increase investor confidence, but also boost the firm's capacity to raise capital and sustain long-term growth potential. The results show that financial leverage, assessed by the Debt-to-Equity Ratio (DER), has a considerable negative impact on the Investment Opportunity Set (IOS). Firms may lever up to finance profitable investment possibilities. Debt can be seen as an indication of the confidence of creditors in the firm's future prospects and its ability to repay [27]. However, high levels of DER are frequently viewed as a source of financial risk by investors [5]; [27].

External investors may worry about managers choosing to satisfy short-term obligations to creditors rather than take up value-increasing investment possibilities. Leverage expansion may lead to tighter financial restraints for organizations, impacting their ability to invest in profitable projects and restricting future growth opportunities. The actual results of this study indicate that a greater DER leads to a considerable decrease in IOS. This result is in line with [5], and (Brealey et al., 2020), who argue that high leverage may constrain the room for corporate expansion and adversely impact the investment prospects of the organization. These findings suggest that enterprises should prudently manage and optimize their debt levels so as not to have a negative impact on their IOS performance. It is important to maintain a healthy balance between debt finance and financial flexibility to keep future investment opportunities open for sustainable growth of companies.

The Return on Assets (ROA) as a financial performance measure is generally expected to give organizations with better financial flexibility to finance new investment projects and take advantage of future growth prospects included in their Investment Opportunity Set (IOS) [44]. Greater profitability allows enterprises to rely on domestically generated funds and thereby reduces financing limitations and supports future investment activity. However, the results of this study did not support this notion as ROA was found to have no significant effect on IOS. This result is contradictory with the results of [44] who claim that profitability boosts firms' ability to take advantage of investment opportunities.

One probable explanation for this mismatch is that investors are still dubious about the quality and legitimacy of reported results. Financial information may still suffer from some degree of information asymmetry and may not be very useful in assessing the future growth possibilities of a corporation, albeit very profitable to investors. In addition, investors may doubt the sustainability of collusive behaviour, or the firms' governance challenges and whether reported earnings are indicative of operational performance and sustainable value creation [24]. Thus, profitability by se may not be sufficient for investors to identify the investment potential of a corporation. Investors may rather focus on the trustworthiness, transparency and dependability of financial information in assessing future growth perspectives and the firm's Investment Opportunity Set.

Results of this study also show that audit quality moderates the links between Financial Reporting Quality (FRQ) and financial leverage, respectively, and Investment Opportunity Set (IOS). However, audit quality does not mitigate the association between financial performance and IOS.

The interplay between audit quality and FRQ greatly improves the favourable effect of FRQ on IOS. The results imply that high-quality auditors are more effective in detecting possible inefficiencies in capital allocation and in ensuring that financial statements reflect the firm's actual investment prospects. Therefore, investors are more confident with financial information audited by respected auditors, which improves the beneficial effect of financial reporting quality on future growth potential.

Moreover, the interplay between audit quality and financial leverage (DER) greatly enhances the link between leverage and IOS. The results suggest that quality auditing increases investors' confidence that corporations handle their debt commitments properly and efficiently. Independent verification and enhanced openness by recognized auditors alleviate concerns about financial risk and information asymmetry in highly leveraged organizations. The decrease of the company's IOS owing to the expansion of DER confirms the thesis of the pecking order that net income is the main source of finances for future growth.

Audit quality is a crucial governance and verification tool that improves the credibility of the financial information presented by management in terms of Agency Theory and Signalling Theory. Thus, high-quality audits improve the signals coming from both financial reporting quality and capital structure decisions, helping investors to develop better-informed judgments on a firm's future investment opportunities and growth prospects. But the interplay between audit quality and financial performance (ROA) does not significantly alter the Investment Opportunity Set (IOS). This result indicates that, although the audit quality is a catalyst that increases the credibility of reported earnings and gives assurance that profits are reflective of the firm's true financial potential, it does not boost the effect of profitability on IOS.

One probable cause is that investors may remain dubious about the quality and reliability of stated results even after external audit verification. Also, profitability may not be the only factor that investors examine when it comes to a firm's future growth chances and investment potential. Rather, investors are more likely to take a wider scope of facts into account when making their investment decision, such as quality of financial reporting, capital structure, corporate governance, market conditions, and future strategic possibilities [9]. Thus, although high audit quality boosts the trustworthiness of financial information, it seems not to be sufficient to boost the effect of profitability on IOS. This conclusion suggests that investors may place more weight on other value-relevant information outside accounting profitability in judging a firm's future investment potential. The key lesson from this research that may be relevant internationally is that: high quality of financial reporting, financial leverage, Audit quality, the interaction between audit opinion and financial reporting, and the interaction between audit quality and financial leverage will significantly influence investment opportunity set (IOS). This result implies that improvements in these parameters boost the availability of profitable investment possibilities for firms, which in turn increases investors' confidence and raises expectations of future corporate growth. International effect. The economic growth rate varied among different countries over 2022–2025 era. Countries having economic growth rates similar to Indonesia's—around 3.69%–5.6% (PWC Indonesia, 2025)—are Brunei Darussalam, Vietnam, Cambodia, Thailand, and Malaysia [24]. These countries, especially in the region of ASEAN with relatively similar institutional and cultural characteristics, may use the findings of this study as a benchmark according to its own national situation.

5. CONCLUSIONS

This study has offered a number of critical insights into the factors of the Investment Opportunity Set (IOS). Results suggest that the Financial Reporting Quality (FRQ) and financial leverage alone have considerable effect on IOS. However, financial performance has insignificant effect on IOS. In addition, the result shows that audit quality is not able to control the association between financial performance and IOS. On the other hand, audit quality has a substantial effect on the effects of Financial Reporting Quality and financial leverage on IOS. The results imply that quality auditing improves the reliability of financial information and Financial leverage choices, therefore enhancing investors' confidence in the firm's future growth prospects. Overall, the study indicates the importance of Financial Reporting Quality, financial leverage and audit quality in determining investment opportunities and future growth

prospect of organizations. Improvements in these elements could lead to a greater number of viable investment possibilities and thus to a rise in investors' expectations of future company growth. The results of this study reveal that Financial Reporting Quality (FRQ) is a crucial communication between the company and investors and financial leverage (DER) gives relevant information on the level of risk faced by investors. Moreover, the quality of audit is an important factor to improve the effects of FRQ and financial leverage on the Investment Opportunity Set (IOS). These are basic elements of corporate governance and financial management accounting that companies need to maintain and continuously develop so that they can strengthen investor trust and open up prospects for future growth. We suggest that future research might broaden the scope of the analysis to include enterprises from different countries and use longer periods of study to improve the external validity of the findings. Further, inclusion of other explanatory variables like liquidity, company size and firm value may provide more insights on factors that influence the Investment Opportunity Set (IOS) and corporate growth opportunities.

6. DECLARATIONS

6.1 Author Contribution

First and second Author: Conceptualization, Methodology, Software, Data curation, Writing - Original Draft Preparation, Visualization, Supervision, Resources, Formal analysis, Project administration;
Third author: Data curation, Summarizing, Writing, Reviewing, and Editing

6.2 Funding source

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6.3 Competing Interests

The author has no interest or involvement in the companies studied, therefore the author declares that there is no conflict of interest in writing this paper.

6.4 Data Availability

IDX 2022-2025, Biro Pusat Statistik, Indonesia 2022-2025

6.5 Use of Artificial Intelligence

The author declares that there is no use of AI in writing this article.

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