



## PROFITABILITY AND THE FIRM'S VALUE

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**Abstract:** The cause of this research is to investigate and prove the impact of ROA, ROE, NPM, and GPM on firm's value (Tobin's Q) either partially or simultaneously and decide which profitability ratio is more dominant in explaining Tobin's Q variance. The analysis was carried out on companies listed in the Jakarta Islamic Index (JII) for 2015-2020. The sample selected was issuers consistently registered with JII during the 2015-2020 period, and 11 issuers were selected. The results of the analysis show ROA and NPM partially sizeable good-sized effect on Tobin's Q, whilst ROE and GPM do not have any effect. ROA is positively correlated, and NPM is negatively correlated. However, all independent variables simultaneously have a significant impact on Tobin's Q. The R-square value of is 0.953648 shows that 95.37% of Tobin's Q variance can be explained by changes in ROA, ROE, GPM, and NPM, while other factors outside the model cause the remaining 4.43%. Of the four variables tested, ROA is the more dominant variable affecting Tobin's Q and can be used as the best proxy for corporate profitability.

**Keywords:** ROA, ROE, GPM, NPM, Tobin's Q.

### INTRODUCTION

It has been more than a year since the C-19 virus pandemic has hit the world, including Indonesia. This virus outbreak has dramatically impacted every aspect of human life, not only the world of health but also the economy, where this sector is often said to be the trigger for every turmoil in various sectors. Indonesia itself has been declared to have experienced an economic crisis marked by negative economic growth during the last two quarters. However, the national economy has slowly begun to rise with the regulation of banking institutions that provide various financing for business actors.

Apart from banking institutions, the capital marketplace also performs a extensive position in mobilizing assets and directing them to various productive channels. The capital market is also a forum and a liaison between savers and investors and transfers savings into productive investments. This can accelerate economic growth through resource allocation that

results in the expansion of trade and industry and reflects the general condition of a country's economy. In addition, the capital market additionally performs a function in stabilizing charges that are facilitated through imparting capital to debtors with lower interest value's, lowering speculative and unproductive sports (Rubani, 2007).

Seeing the massive role of the capital market, the development of the capital market can also be used as a benchmark for a country's economic growth. Meanwhile, capital market development is often seen from the development of the stock fee index. The Indonesia Stock Exchange (IDX) has so far launched 24 indices, and one of them is the Jakarta Islamic Index (JII) which is 30 selected stocks selected by the National Sharia Council (DSN-MUI) every six months with various terms and conditions. Previously set.

Amid the C-19 virus pandemic that is still endemic in Indonesia, public interest in investing in JII has begun to increase. This indication can be seen from the JII index for the past year showing an increasing trend. Not only that, seen from the development of capitalization values that occurred until the end of 2020 established a growing trend. However, the average value of the firm according to PBV shows a downward trend, as can be seen in the following graph.

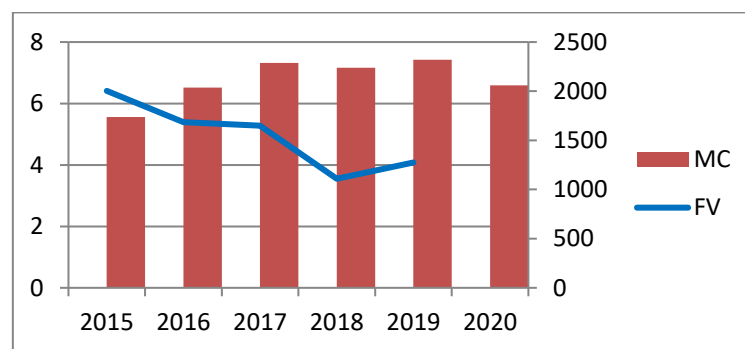


Figure 1. Market Capitalization Value and Firm Value

People interested in investing in shares want dividends, and the value of their investment increase through increasing stock prices to get capital gains. This price increase is also an interpretation of an increase in the value of the firm. Therefore, various financial performance analyses, including the firm's value, are important considerations for investors in their investment decisions. Generally, this is done through the use of firm accounting information, considering that this information can provide an overview of the prospects, growth, and development of the firm and assess the potential of controlled economic resources for the future to predict the production capacity of existing resources (Sundjaja, 2003).

This financial performance analysis was chosen because it measures accounting is easy to understand and generally accepted and is considered a convenient and reliable analytical tool and is a proven and most frequently used technique in all financial decision-making processes despite the various weaknesses of the analysis (Tze, et al. 2011). Not only from investors but also firm management, these financial ratios are also often used to measure the firm's strengths

and weaknesses. This information can help improve management performance and predict future results (Brigham & Ehrhard, 2011).

From several analyzes of financial performance that can be done, considered one of which may be a severe concern for traders is profitability which describes the firm's potential to make income. Profitability this additionally cannot be ignored due to the fact an increase in profitability is essential for the business enterprise's lengthy-term survival (Gill et al., 2010). Several kinds of profitability ratios which can be regularly used encompass Gross Income Margin, Net Profit Margin, Return on Equity, and Return on Assets. These four ratios are proxies of profitability. Even researchers often use one of these ratios as a proxy for profitability, although some use several of these ratios at once. What is clear is that no one can guarantee that one ratio is more stable than the other.

In general, this probability ratio can be measured with the aid of tactics, namely the income technique and the investment approach. However, the most frequently used measures are ROA and ROE. ROA will see the firm's capability to generate earnings through all its assets, so it is used to know the overall firm operational efficiency level. Meanwhile, ROE looks at the firm's ability to generate profits through its capital to see the effectiveness of its capital management and investment efficiency (Sabrin et al., 2016). Meanwhile, Megginson et al. (2008) describe ROA as a measure of management effectiveness in providing returns to shareholders.

Investors will favor companies with a high level of profitability. They will be interested in investing their capital into the firm in the hope of increasing the value of their investment. Accomplishing an excessive degree of profitability will usually get a response from the market, marked by an increase in the agency's inventory price. This can truly influence increasing the fee of the organisation. Several studies that have been conducted on the relationship between profitability (ROA, ROE, GPM, NPM) with firm value (Tobin's Q) still show different results. Several research results show that ROA has an effect on Tobin's Q (Rosikah, et al (2018); Zuhroh (2019); Dang, et al (2019); Tommy (2021); Effendi (2019); Alghifari, et al (2013) and some showed no effect (Amidu (2007); Hakim & Sugianto (2018); Fintreswari & Sutiono (2017). Other studies have shown that ROE is influential (Tommy (2021); Dang et al. (2019); Effendi (2019); Fajaria & Isnalita (2018) and who found no effect (Fintreswari & Sutiono (2017); Rosikah et al. (2018). Fintreswari & Sutiono (2017) and Effendi (2019) showed that NPM had no effect. At the same time, several studies showed that NPM had an effect (Tommy (2021); Debi & ama Sari (2020) and which showed no effect (Fintreswari & Sutiono (2017); Effendi (2019).

Seeing that several previous studies that have been carried out still show different results, so there is still a gap to be entered for re-examination to obtain new findings. This is the motivation of the author to conduct research and conduct testing on issuers in the Jakarta Islamic Index. The selection of this index group is very appropriate because each issuer is selected by the National Sharia Council-Indonesian Ulema Council every six months with several assessment criteria such as capitalization value, liquidity level, and other predetermined criteria.

## Formulation of the problem

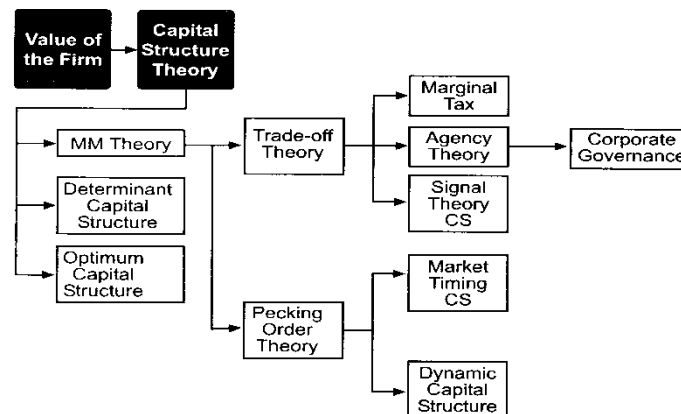
Primarily based at the description above, the issues on this have a look at can be formulated, namely: how influence *ROA*, *ROE*, *NPM*, and *GPM* to firm value (Tobins' Q) either partially or simultaneously and determine which profitability ratio is more dominant in explaining the Tobin's Q variance?

## LITERATURE REVIEW

### The Firm's Value

The development of the theory of corporate finance starts from the theory put forward by David Duran (1952), who suggests that the calculation of firm price can be executed with three strategies, specifically the net earnings method, the net running earnings technique, and the conventional approach. Furthermore, Modigliani and Miller (1958) put forward a theory which is considered the beginning of the theory of capital structure known as MM-Theory with propositions I, II and III. This MM theory is known as Irrelevance Capital Structure Theory which states that there is no effect of the proportion of equity and debt on firm value (Manurung, 2012:1). The development of monetary theory may be visible within the following chart:

Figure 2. Chart of the Development of Financial Structure Theory



Source: Manurung (2012)

Brigham and Ehrhardt (2011:10-12) state that what form of action should managers take to maximize shareholder wealth? To answer this question, we must first be able to answer, what are the factors that determine a firm's value? Briefly, it is said how a firm can increase current, and future cash flows through three fundamental aspects, namely: 1) Some financial assets, including firm shares, are only valuable if they generate cash flow; 2) Determining the timing of the occurrence of cash flows received earlier is better; 3) Risk-averse investors, all things being equal, will pay more for a stock that has a relatively specific cash flow than someone with a more risky cash flow.

The three main determinants of free cash flow are (i) sales revenue, (ii) operational value's and taxes, where the primary determinant of cash flow is the combination of the effect of operating value's and taxes, (iii) investments required in operations. The third factor affecting cash flow is the amount of money a firm must invest in its operations (including plants, equipment, computer systems, and inventories) (Brigham & Ehrhardt, 2011).

Measurement of firm price can be carried out by using searching on the development of stock charges within the secondary market. If the inventory charge rises, it means the firm's value increases because its actual price is the marketplace value of stocks plus the marketplace value of bonds or lengthy-term debt. The upward push in firm's value shows that they may be willing to pay better. this is consistent with their expectancies to get excessive returns (Thamrin et al. 2018).

According to Adenugba et al. (2016), Firm value can be obtained through different steps, each likely to provide an additional discount. the primary is accounting internet worth or e-book fee. This step is intricate, though, because the accounting rules inside the version may additionally range (divergence) from accepted ideas in monetary accounting. the second one is the market fee of all awesome stocks, and that is the maximum famous approach. The third degree is the overall performance of firm's value. Modigliani and Miller (1961) show that capitalization may be applied for this cause instead of giving upward push to the same valuation while the marketplace is perfect. but the capitalization fee has a trouble because it calls for arbitrary parameters (m) if the Goosen approach is applied. Fourth is the deductive application of human judgments which are assessed alongside a psychometric scale. The fifth degree is the agency's accounting net worth adjusted for the accounting guidelines used inside the simulation.

Measurement of firm value in the traditional model is associated with shareholder value. To increase firm value by maximizing shareholder value. However, the conventional concept of shareholder value as an explanation for firm value is also being challenged by a group of researchers. They believe that corporate value should not be based on shareholders but should include all stakeholder groups (Lonkani, 2018).

Research conducted by William (2015) proves which proxy is better in measuring firm value between PBV and Tobin'Q in the context of measuring corporate governance (GC). The check was carried out on corporations listed on the IDX inside the agriculture and mining sub-sector for 2010-2014. The results show no effect on CG PBV even though it is controlled by the characteristics of the firm's financial variables. Meanwhile, the Audit Committee positively influences Tobin's Q, and firm size negatively affects Tobin's Q. In general, the study recommends using Tobin's Q as a proxy in measuring substantial value (William, 2015).

Determining the value of a firm can be done by looking at various financial ratio values and can see the firm's performance. Investors see from the high or low this ratio. They can help assess whether the firm is cheap or expensive regarding income, growth, prospects, and dividend distribution (ASA, 2010). In general, the calculation of firm value can be done by several methods, including (i) Face Value, the test turned into completed on groups indexed at the IDX within the agriculture and mining sub-region for 2010-2014; (ii) market value, namely the price that takes place within the inventory market. This market value is often referred to as the exchange rate, (iii) Intrinsic value, s the maximum summary concept because it relates to an estimate of actual price. In this concept, it is not just the price of a set of assets, but as a business entity that can generate profits for future periods, (iv) Book Value, which is the value of the firm calculated based on accounting concepts, namely the comparison between the

difference between total assets and total debt with several shares outstanding, (v) Liquidity price, particularly the promoting fee of all business enterprise assets after deducting all obligations that should be fulfilled, (Christiawan and Tarigan, 2007:3).

in line with Sudana (2011: 23), the valuation ratio is associated with assessing the overall performance of an organization's shares that halon the avital marketplace. numerous methods that can be used to degree firm fee consist of:

**Price Earning Ratio (PER)** is the fee of the ratio of price according to percentage to profits in step with percentage and shows how lots of money buyers are willing to spend to pay for each greenback of said income (Brigham and Houston, 2010: one hundred fifty). The formula to calculate the in keeping with value is as follows:

$$PER = \frac{\text{Market price per share}}{\text{Earning per share}}$$

**Price to Book Value (PBV)** is the e-book value in line with share via comparing the wide variety of shareholders' equity with the range of shares outstanding? If the marketplace fee consistent with percentage is lower than the e book price in keeping with proportion, the proportion fee can be undervalued. The formulation to calculate the PBV value is as follows:

$$PBV = \frac{\text{Market price per share}}{\text{Book value per share}}$$

**Tobin's Q**, where this ratio is considered to give the quality because in tobin's Q, it covers all the factors of the debts of the firm and the percentage of capital, not to mention the ordinary shares the best and no longer most effective the equity of the employer but also all of the firm's property business. Through that cover all the firm's property business, the approach that the organization is not always centered on one type of investors, i.e. investors in the form of shares but also for the lender, because the supply of financing for the operation of the organization is not the most effective of the equity but also of the loans provided through the creditor (Sukamulja, 2004). The system used to calculate the value of tobin's Q, is as follows:

$$Q = \frac{(EMV + D)}{(EBV + D)}$$

Where: Q (firm's value); EMV (marketplace price of fairness); EBV (ebook value of overall belongings); D (book value of total debt)

The Tobin's q ratio became advanced with the aid of Tobin (1969) and is a precious concept as it represents the modern-day monetary market estimate of the return on every dollar of incremental funding. If Tobin's Q is above 1 (one), this indicates that investment in property generates a income that offers a better price than funding expenditure. this will stimulate new funding. If Tobin's Q is underneath one, funding in property isn't always attractive.

Kim et al., 1993 explained that theoretically, Tobin's Marginal Q is associated with the investment price of a agency, but direct size of Tobin's Marginal Q isn't always feasible. for that reason, Tobin's common Q is proposed as a proxy for Marginal Q, using average Q in explaining investment has been supported through Tobin himself, and using common Q has

been widely used in research research. Chung & Pruitt (1994) proposed a simple formula for Tobin's Q known as approximation Q, specifically:

$$\text{Approximation } Q = \frac{(MVE + PS + Debt)}{TA}$$

Where: MVE (Market Value Equity) / inventory market charge instances the variety of shares wonderful; ps (desired stock); Debt (overall e-book value of brief-term debt, long-term debt, and other payables; TA(total assets).

As explained earlier, the Q Ratio is a ratio price that has been substantially utilized in monetary literacy as a proxy for measuring investment possibilities. assume the value of the Q ratio is a legitimate proxy for measuring funding opportunities. if so, it could be assumed that there is a advantageous courting between the Q ratio and its future working overall performance. furthermore, the Q ratio can be defined because the ratio of the business enterprise's marketplace value to the fee of changing the organisation's property (Fu et al., 2016).

### **Profitability**

Profitability can be defined because of the potential of an organization to earn earnings related to income, total belongings, and lengthy-term debt (Lukman, 2000:72). Profitability is also a method e of efficiency, supplying proof of the way well an employer makes use of thingusesity to generate sales and earnings (Ahmed and Murtaza, 2015). The achievement of this profitability is often seen from the ratio will supply an overview of the level of effectiveness of the firm's management. The higher the profitability way, the higher because the proprietor's prosperity will increase with, the higher profitability. Sin fashionable, this chance ratio can be measured using approaches, namely the sales technique and the funding method. The 2 techniques encompass gross profit margin, net profit margin, return on equity or go back on internet worth, and return on asset (Brigham & Houston, 2010:146).

### **Return on Assets (ROA)**

ROA is a degree of the overall effectiveness of management in supplying returns to shareholders from all current property (Megginson, clever, and Lucey, 2008). The more the ROA, the greater the level of income done, and the higher the organisation's function in phrases of asset use. This profitability evaluation objectives to measure the extent of commercial enterprise efficiency and profitability achieved (Brigham & Houston, 2010:146). The higher the go back, the higher, which means that the dividends dispensed or reinvested as retained profits also are getting bigger (Kuncoro, 2002:570). Formulated, ROA can be calculated with the aid of the subsequent method (Gillingham, 2015):

$$ROA = \frac{\text{Net Income}}{\text{Total Assets}}$$

### **Return on Equity (ROE)**

ROE or return on net worth measures the organisation's ability to gain available income for organization shareholders or determine the amount of return provided by the firm for every rupiah of capital from the owner (Brigham & Houston, 2010:146). This ratio is inspired by way of the dimensions of the organisation's debt. If the share of debt is more big, this ratio can also

be even extra critical (Kasmir, 2015: 204). If ROA is regularly used to peer the corporation's overall potential to generate income via its property, while ROE looks at its ability to generate earnings through its total capital. Thus this ratio is used to see the effectiveness of own capital management and shows the investment efficiency of the firm (Sabrin et al. 2016). Formulated, ROE can be calculated by the following formula (Gillingham, 2015):

$$ROE = \frac{Net\ Income}{Average\ Shs'\ Equity}$$

Where

$$Average\ Shs'\ Equity = \frac{Beginning + Ending\ Shares'\ Equity}{2}$$

### Gross Profit Margin (GPM)

*Gross Profit Margin (GPM)* is valid for understanding the organisation's gross benefit from each object sold and is strongly motivated through the price of goods bought. If the value of products sold increases, the gross profit margin might decrease, and vice versa. accordingly, this ratio measures the efficiency of controlling the value of production or charge of manufacturing, indicating the corporation's potential to provide efficiently. This ratio is also an important indicator to measure the firm's financial health. GPM is also an essential measure of profitability because it can see its primary and outflows of money. Formulated, GPM can be computed by the following formula (Gillingham, 2015):

$$GPM = \frac{Net\ Sales - COGS}{Net\ Sales}$$

### Net Profit Margin (NPM)

*NPM* describes the amount of net profit earned by the firm on each sale made. In other phrases, this ratio measures internet income after tax on income (Brigham & Houston, 2010:146). A poor end result means the organisation said a internet working loss for the duration analyzed. There is no absolute measure, but it is best to compare this ratio with the ratios of other similar companies. Formulated, NPM can be computed by the following formula (Gillingham, 2015):

$$NPM = \frac{Net\ Income}{Net\ Sales}$$

Profitability analysis is essential, especially for investors who will invest in shares of a firm by utilizing firm accounting information. Trang (2012) found that profitability is also part of the firm's characteristics and the most critical determinant in the firm's dividend policy. This has a positive impact and a negative impact on business risk. The same study was also conducted by Mehta (2012), proving that profitability is also the most critical consideration of the dividend policy of companies in the UAE. principle and empirical evidence display that relative profitability plays a function in influencing the sensitivity of firm returns to new industries (Hao et al., 2011).

### Hypothesis



Allegations of the relationship between variables can be tested using statistical exams or particular strategies. This hypothesis can be proven or now not, relying on the outcomes received from statistical analysis (Al Hasan et al., 2013).

### **The Effect of ROA on Firm Value (Tobin's Q)**

The research was conducted by Zuhroh (2019) to obtain empirical evidence of the effects of leverage, profitability, and liquidity on firm value. The object of study is a real estate firm that went public on the IDX for 2012-2016. With the purposive sampling method, 31 samples were obtained. Using path analysis with LISREL version 8.8 shows that only profitability variables directly have a significant positive effect on firm value. In contrast, liquidity and firm size show a negative and insignificant impact.

Dang, et al. (2019) additionally analyzes the effect of growth, firm length, capital structure, and profitability on firm fee (EV) in Vietnam. Profitability the usage of ROA/ROE proxies and using panel information with a sample of 214 agencies inside the Vietnam stock marketplace for 2012-2016. The consequences of the regression analysis detected that length and profitability had been definitely correlated with firm price. while measuring widespread value under EV or Tobin's Q, the statistical consequences aren't absolutely regular. The outcomes of empirical research are helpful to assist corporations in increasing firm value.

Research on the firm's financial ratios has also been carried out by Asiri (2015)[40], which is associated with the firm's market value. the use of panel statistics regression analysis, the effects display that ROA has a substantial positive relationship for creating a market value of the 15 models developed. Simultaneous research on corporate governance and firm value was also conducted by Hindasah and Akmalia (2017) with Tobin's Q as a proxy for firm value against the results of the annual survey by IICG in the report on the corporate governance performance index (CGPI) for the period 2008-2014. The results also found that ROA had a positive effect on Tobin's Q.

studies by Marsha and Murtaqi (2017) examines using monetary ratios (ROA, CR, and ATR) and their impact on firm fee, the use of a pattern of 14 issuers for the meals and beverage region listed at the IDX for the 2010-2014 length. The results of the evaluation display that ROA has a positive and vast impact on Tobin's Q.

### **H1: ROA significant effect on Tobin's Q.**

### **The Effect of ROE on Firm Value (Tobin's Q)**

studies conducted by means of Rosikah et al. (2018) identifies and analyzes the effect of ROA, ROE, and EPS on firm value (Tobin's q) on the IDX for 2006-2010. Using purposive sampling, a sample of 32 issuers was obtained. Data analysis was performed by regression analysis. The research results found that ROA had a positive and significant effect on firm value, but ROE did not show any product. But together, the three ratios have a substantial impact on firm value. An increase in ROA will indicate an increase in the firm's performance. It becomes the main attraction for investors to continue to invest in firm shares to encourage growth opportunities.

Research conducted by Fajaria and Isnalita (2018) on the effect of ROE on firm value (Tobin's Q). Using aThey are using 146 manufacturing companies on the IDX for the period 2013-2016. With judgment sampling obtained 108 companies in the 2013 period, 106 companies in the 2014 period, 94 companies in the 2015 period, and 112 companies in the 2016 period. The results of data analysis show that high profitability shows the firm 's management performance is also high in managing firm resources to achieve revenue tall one. Improved income may even distribute high dividends to draw investors and boom stock charges to cause a better agency value.

## **H2: ROE significant effect on Tobin's Q.**

### **Effect of GPM on Firm Value (Tobin's Q)**

studies carried out via Fintreswari and Sutiono (2017) to determine the impact of good corporate governance (GCG) and financial performance (ROA, ROE, GPM, and NPM) on firm's value (Tobin's Q). By analyzing data from all food and beverage industries listed on the IDX, there are 16 companies. Through purposive sampling obtained 7 companies. The analysis results show that partially all of the proposed financial performance ratios do not affect firm value. Only GCG has a significant effect.

## **H3: GPM significant effect on Tobin's Q.**

### **The Effect of NPM on Firm Value (Tobin's Q)**

studies conducted through Putri & Sari (2020) to research the impact of CR, DER and NPM at the enterprise's value (Tobin's Q) within the cosmetics and household items sub-region corporations indexed at the IDX. The effects of the evaluation display that NPM has a vast impact on Tobin's Q. The consequences of this evaluation mirror the better the NPM fee, the better the level of prosperity given with the aid of the agency.

## **H4: NPM significant effect on Tobin's Q.**

## **RESEARCH METHOD**

This research is included in the quantitative analysis by utilizing published secondary data. These data will be analyzed descriptively and panel data regression. The population used as objects in this study are all issuers listed in the Jakarta Islamic Index (JII) for the 2015-2020 period. whilst the pattern become determined using a purposive sampling technique with several criteria, namely issuers that were consistently registered in the JII for the 2015-2020 period and had complete financial reports during that period and had been published through the IDX official website. One model in this study, namely, examines the effect of profitability variables (GPM, NPM, ROE, ROA) on the firm value both individually and simultaneously. Thus, ROA, ROE, GPM, and NPM are independent variables. The variable is the ratio of Tobin's Q. Data analysis was carried out with a descriptive approach to explain the development of the profitability ratio and stock prices of issuers in the sample. Besides that, inferential statistical analysis was also carried out to see the effect of the profitability ratio value on stock prices through panel data regression tests. Data processing is carried out with the EViews version 11.0 program.

## FINDING AND DISCUSSION

This section will present the consequences and discussion via descriptive and inferential data. Descriptive statistical evaluation become done on all studies variables, which have been described one at a time.

### Firm Value (Tobin's Q)

A value indicates the lowest Tobin's Q value between 0 to 1. While a value above 1 indicates that the firm's value is higher than the value of the listed firm assets. Thus the market is willing to provide a more excellent value as a replacement value to take over the firm. The results of the descriptive analysis showed the average value was between 262.8709-405.0227 with a minimum ratio of 63.77 and the highest ratio of 103.83. In addition, every year (except 2016), some issuers have Tobin's Q value below 100%, which indicates the lowest firm value. The trend of the average Tobin's Q value of the sample issuers can also be shown in the following graph:

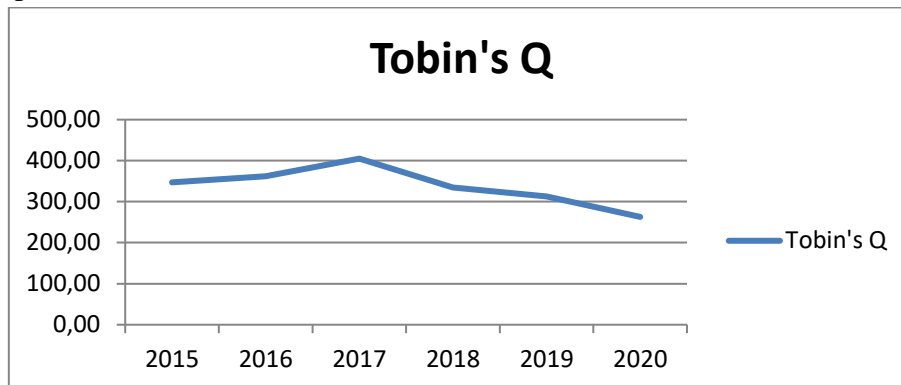


Figure 3. Trend Graph of Tobin's Q Issuer's Average Value (Sample)

### Return on Assets (ROA)

This ratio is an essential consideration for investors in making funding choices. The ROA level of each issuer in the sample shows an average of 8.3036-11.9100 with a minimum value of 0.47 and a maximum of 46.66. The highest ratio is generally achieved by UNVR, which is above 35.00 every year. The trend of the average ROA value of the sample issuers can also be shown in the following graphic image:

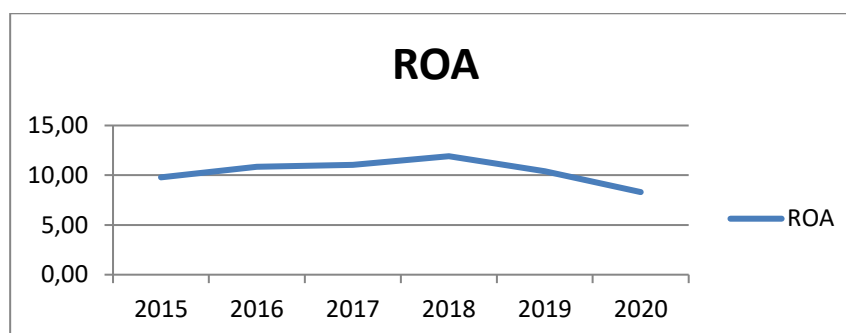


Figure 4. Trend Graph of Issuer's Average Return on Assets (Sample)

### Return on Equity (ROE)

*ROE* as an indicator to measure the ability to earn a profit through the capital owned. The average ROE is between 22.1836-25.4064. while the trend of the average ROE value of the sample issuers can also be shown in the following graphic image:

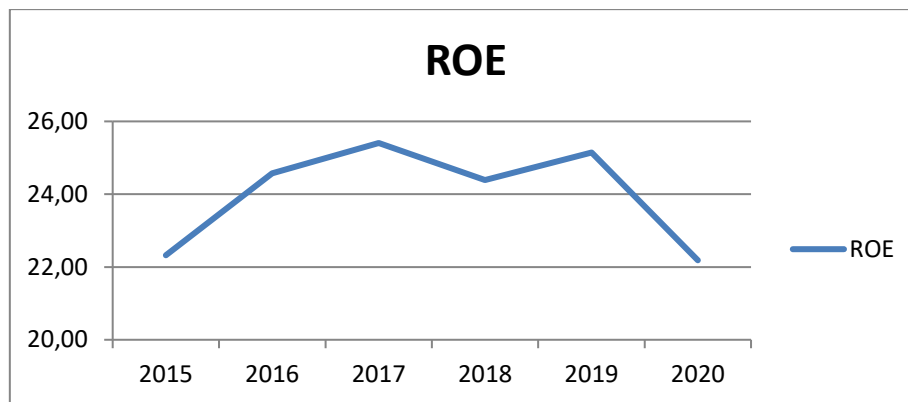


Figure 5. Trend Graph of Issuer's Average Return on Equity (Sample)

### **Gross Profit Margin (GPM)**

As with ROA and ROE, the GPM ratio is also one of the ratios contained in the profitability ratio. What distinguishes this ratio is measuring the ability to earn a profit, as seen from the percentage of gross profit made to the level of firm sales. The average GPM of each issuer in the sample is between 27.4027-34.8773. The trend of the average ROE value of the sample issuers can also be shown in the following graphic image:

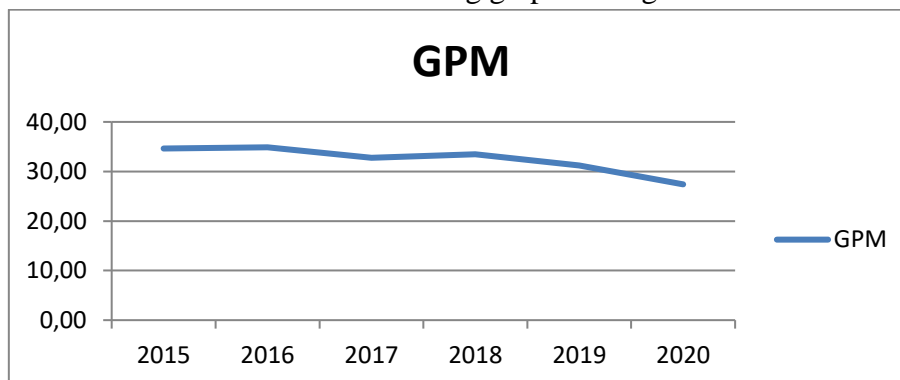


Figure 6. Trend Graph of the Average Gross Profit Margin of Issuers (Sample)

### **Net Profit Margin (NPM)**

The NPM ratio is almost the same as the GPM ratio, except that this ratio compares net income to sales. The average NPM of each issuer in the sample is between 9.2691-12.0345. The trend of the average NPM value of the sample issuers can also be shown in the following graphic image:

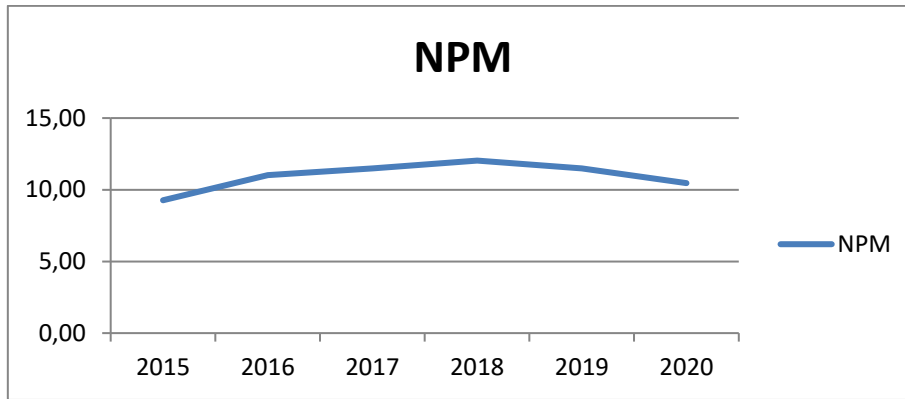


Figure 7. Trend Graph of Issuer's Net Present Value (Sample)

**Panel Data Regression**

Moreover, panel information regression evaluation changed into conducted to determine how the influence of these profitability ratios on Tobin's Q determines which profitability proxy is more dominant. The take a look at selects panel statistics regression models, including common outcomes, constant outcomes, and random results. The 3 models are as follows

**Table 1. Standard Effect Model (CEM)**

Variable	Coefficient	Std. Error	t-Statistics	Prob.
C	62.19499	30.64350	2.029631	0.0468
ROA	34.09385	4.880854	6.985221	0.0000
ROE	5.928970	1.206065	4.915963	0.0000
GPM	0.379488	1.047445	0.362298	0.7184
NPM	-21.32357	5.174351	-4.121013	0.0001
R-squared	0.959474	Mean dependent var		337.3262
Adjusted R-squared	0.956816	SD dependent var		492.1927
SE of regression	102.2809	Akaike info criterion		12.16606
Sum squared resid	638144.6	Schwarz criterion		12.33194
Likelihood logs	-396.4799	Hannan Quinn Criter.		12.23161
F-statistics	361.0502	Durbin-Watson stat		1.625304
Prob(F-statistic)	0.000000			

**Table 2. Fixed Effect Model (FEM)**

Variable	Coefficient	Std. Error	t-Statistics	Prob.
C	256.4167	86.70002	2.957517	0.0047
ROA	23.20860	7.950952	2.918971	0.0052
ROE	-2.498640	3.250862	-0.768609	0.4457
GPM	0.638385	1.541693	0.414081	0.6806
NPM	-11.04667	7.241545	-1.525458	0.1333
Effects Specification				

Cross-section fixed (dummy variables)

R-squared	0.971245	Mean dependent var	337.3262
Adjusted R-squared	0.963352	SD dependent var	492.1927
SE of regression	94.22373	Akaike info criterion	12.12594
Sum squared resid	452783.7	Schwarz criterion	12.62359
Likelihood logs	-385.1559	Hannan Quinn Criter.	12.32258
F-statistics	123.0450	Durbin-Watson stat	2.192015
Prob(F-statistic)	0.000000		

Table 3. Random Effect Model (REM)

Variable	Coefficient	Std. Error	t-Statistics	Prob.
C	62.40744	35.93301	1.736772	0.0875
ROA	34.54441	5.320620	6.492553	0.0000
ROE	5.716556	1.324596	4.315696	0.0001
GPM	0.339380	1.112210	0.305140	0.7613
NPM	-21.18452	5.362557	-3.950451	0.0002
Effects Specification			SD	Rho
Cross-section random			40.56019	0.1563
Idiosyncratic random			94.22373	0.8437
Weighted Statistics				
R-squared	0.925372	Mean dependent var	232.1254	
Adjusted R-squared	0.920478	SD dependent var	345.1155	
SE of regression	97.32108	Sum squared resid	577755.0	
F-statistics	189,0971	Durbin-Watson stat	1.813105	
Prob(F-statistic)	0.000000			
Unweighted Statistics				
R-squared	0.959420	Mean dependent var	337.3262	
Sum squared resid	638990.4	Durbin-Watson stat	1.639352	

Of the three models, one of the best models was selected through the following tests:

### Chow test

The Chow test was conducted to choose between CEM and FEM by identifying the prob values. Chi-square cross-section with the following criteria:

H<sub>0</sub> : Selected CEM model (if prob. > 0.05)

H<sub>a</sub> : Selected FEM model (if prob. < 0.05)

The results of the Chow test are as follows:

Tables. 4 Chow Test Results

Effects Test	Statistics	df	Prob.
Cross-section F	2.087841	(10.51)	0.0428
Cross-section Chi-square	22.647924	10	0.0121

Based on the Eviews output, the prob value is known. 0.0121 is smaller than 0.05, then the model chosen is FEM.

### Hausman test

The Hausman test was conducted to choose between FEM and REM by identifying the prob value. Random cross-section with the following criteria:

H<sub>0</sub> : Selected REM model (if prob > 0.05)

H<sub>a</sub> : Selected FEM model (if prob < 0.05)

The Hausman test results are as follows:

**Table 5. Hausman test results**

Test Summary	Chi-Sq.		
	Statistics	Chi-Sq. df	Prob.
Cross-section random	8.076339	4	0.0888

Based on the Eviews output, the prob value is known. For a random cross-section of 0.0888 greater than 0.05, the model chosen is REM.

### Lagrange Multiplier Test

The Lagrange Multiplier (LM) test was conducted to choose between CEM and REM, through cross-section identification for Breusch-Pagan with the following criteria:

H<sub>0</sub> : Selected CEM model (if prob > 0.05)

H<sub>a</sub> : Selected REM model (if prob < 0.05)

The results of the LM test are as follows:

**Table 6. LM Test Results**

	Hypothesis Test		
	Cross-section	Time	Both
Breusch-Pagan	0.032781 (0.8563)	0.206441 (0.6496)	0.239221 (0.6248)

Based on the Eviews output, it is known that *cross-section* Breusch-Pagan of 0.8563, which is greater than 0.05, the model chosen is CEM. Because the model selection results did not conclude, the initial data outlier data was checked, which saw several oseveralata on UNVR issuers. With various considerations, UNVR issuers were eliminated as samples. Furthermore, an analysis is carried out with the new data by proposing three models as follows:

**Table 7. Common Effect Model (CEM)**

Variable	Coefficient	Std. Error	t-Statistics	Prob.
C	93.04230	13.02262	7.144669	0.0000
ROA	42.09931	2.901183	14.51108	0.0000
ROE	-8.158867	2.096401	-3.891845	0.0003
GPM	0.533618	0.430580	1.239300	0.2205
NPM	-12.93574	2.229234	-5.802774	0.0000
R-squared	0.884573	Mean dependent var		188.9052
Adjusted R-squared	0.876179	SD dependent var		113.5340
SE of regression	39.95061	Akaike info criterion		10.29282
Sum squared resid	87782.81	Schwarz criterion		10,46735
Likelihood logs	-303.7846	Hannan Quinn Criter.		10.36109
F-statistics	105.3733	Durbin-Watson stat		0.894222
Prob(F-statistic)	0.000000			

**Table 8. Fixed Effect Model (FEM)**

Variable	Coefficient	Std. Error	t-Statistics	Prob.
C	113.4716	18.10101	6.268799	0.0000
ROA	31.25314	5.481470	5.701599	0.0000
ROE	-4.250415	3.202486	-1.327224	0.1910
GPM	-0.050399	0.507917	-0.099227	0.9214
NPM	-10.14545	2.235756	-4.537816	0.0000
Effects Specification				
Cross-section fixed (dummy variables)				
R-squared	0.953648	Mean dependent var		188.9052
Adjusted R-squared	0.940549	SD dependent var		113.5340
SE of regression	27.68257	Akaike info criterion		9.680446
Sum squared resid	35250.93	Schwarz criterion		10.16913
Likelihood logs	-276,4134	Hannan Quinn Criter.		9.871596
F-statistics	72.80071	Durbin-Watson stat		1.629521
Prob(F-statistic)	0.000000			

**Table 9. Random Effect Model (REM)**

Variable	Coefficient	Std. Error	t-Statistics	Prob.
C	101.8654	18.72336	5.440552	0.0000
ROA	35,78895	4.320314	8.283875	0.0000
ROE	-5.743849	2.675053	-2.147191	0.0362
GPM	0.060651	0.439797	0.137906	0.8908
NPM	-10.79464	2.106624	-5.124144	0.0000



Effects Specification		
		SD Rho
Cross-section random		35.39669 0.6205
Idiosyncratic random		27.68257 0.3795
Weighted Statistics		
R-squared	0.728741	Mean dependent var 57.45574
Adjusted R-squared	0.709014	SD dependent var 51.53640
SE of regression	27.80036	Sum squared resid 42507.30
F-statistics	36.93966	Durbin-Watson stat 1.496999
Prob(F-statistic)	0.000000	
Unweighted Statistics		
R-squared	0.864221	Mean dependent var 188.9052
Sum squared resid	103260.9	Durbin-Watson stat 0.616239

At the model selection stage, it is carried out based on specific considerations such as if t (amount of time series data) is large and n (number of individuals) is small, there may be a slight difference in the parameter values of the estimation results of the two models. Thus the selection of the model can be made based on the convenience of calculations, and generally, FEM is preferred (Gujarati, 2003:650). Model selection can also be caused by considering how to collect data for individuals. If it is done randomly from the population, then the suitable model is REM. Still, if the individual is not taken at random (taken based on the choices and provisions of the researcher), then the suitable model is FEM (Baltagi, 2008:299).

Based on these considerations, the chosen model is FEM. Furthermore, this model is tested for classical assumptions (classical linear regression model), including normality, multicollinearity, and heteroscedasticity tests. Meanwhile, the autocorrelation test was not carried out, considering that the data were no longer pure time series.

The normality test of the data is finished to determine whether the error time period is commonly distributed or not. The assumption is that a good regression model has an error time normally distributed or close to normal. This test is carried out through the following normality histogram graph.

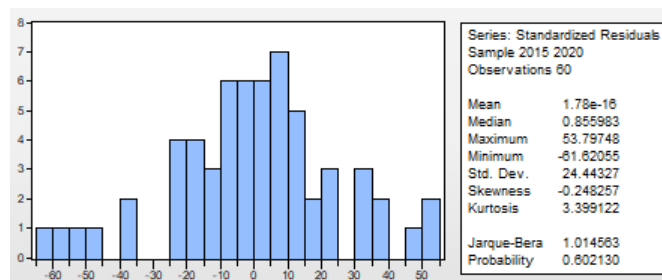


Figure 8. Normality Histogram Graph

H0: error term normally distributed

Ha: error term is not normally distributed

If  $-value < 0.05$ , then  $H_0$  is rejected

Because  $-value > 0.0000$ , then  $H_0$  is accepted, which means the error term is normally distributed

Based on the normality histogram above, it's far recognized that the possibility value is 0.602130 and is greater than the value of 0.05 so that it rejects  $H_0$  and accepts  $H_a$ , which means the error term is normally distributed.

The multicollinearity check changed into done to test the regression version, whether the regression version contained a correlation between the present independent variables. The assumption is that a good regression model does not correlate with the independent variables. However, considering that this study uses profitability ratios as independent variables, these ratios are assumed to be related to ensure that these ratios are proxies of profitability. The tolerance number to determine there is a correlation is 0.8 or -0.8. If the value is smaller, then it is said that there is no correlation (Gujarati, 2010:408)[17]. The outcomes of the multicollinearity test are supplied inside the following segment.

**Table 10. Correlation Coefficient of Independent Variables**

	ROA	ROE	GPM	NPM
ROA	1.0000000	0.905780	0.723757	0.753253
ROE	0.905780	1.0000000	0.733423	0.802463
GPM	0.723757	0.733423	1.0000000	0.852834
NPM	0.753253	0.802463	0.852834	1.0000000

Based on table 4.7 above, it is known that ROA and ROE are very strongly correlated, while GPM and NPM are also very strongly correlated. This is in line with the researcher's expectation that each of these variables is identical, where ROA and ROE both look at the investment aspect, while GPM and NPM both look at the sales aspect. By the research interests, it is assumed that these variables have a high correlation.

### Heteroscedasticity Test

A heteroscedasticity test was conducted to see whether there was an inequality of variance in the regression model. An awesome regression version does not have heteroscedasticity issues. The heteroscedasticity test, in this case, is carried out through the white test with the following hypothesis:

$H_0$ : there is no symptom of heteroscedasticity inside the regression version

$H_a$ : Symptoms of heteroscedasticity occur

The basis for decision making is if the significant value is greater than the value of  $= 0.05$ , then  $H_0$  is accepted, and vice versa if it is smaller, then  $H_0$  is rejected. The test is carried out with the white test with the following results:

**Table 11. White Test Results**

Variable	Coefficient	Std. Error	t-Statistics	Prob.
----------	-------------	------------	--------------	-------

C	239.4191	328.2666	0.729343	0.4695
ROA^2	-9.163513	8.744543	-1.047912	0.3002
ROE^2	4.935514	3.529376	1.398410	0.1687
GPM^2	-0.043108	0.147935	-0.291398	0.7721
NPM^2	0.435845	2.988741	0.145829	0.8847

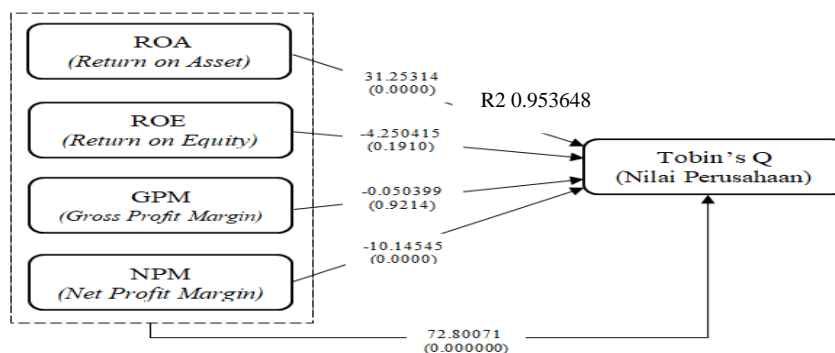
Based on the white test above shows that there are no symptoms of heteroscedasticity in the model. this will be visible from the chance fee of each showing a deal > 0.05. With some of these classical assumption tests, the model can be accepted for estimation where the model is presented in a summary form as follows:

**Table 12. Summary of Panel Data Estimation from Fixed Effect Model**

Model	R-Square	Fstat/ Ftable	Prob. Fcount	Probability = 0.05		
				ROA	ROE	GPM
Random Effect	0.953648	72.80071/ 2.75	0.000000	ROA	0.0000 < 0.05	Take effect
				ROE	0.1910 > 0.05	No effect
				GPM	0.9214 > 0.05	No effect
				NPM	0.0000 < 0.05	Take effect

Based on the summary of panel data estimates from the selected model, it can then be formulated in the form of a regression equation and the following structural equation relationship pattern:

Tobin's Q = 113.4716 + 31.25314\*ROA - 4.250415\*ROE - 0.050399\*GPM - 10.14545\*NPM  
 (0.0000) (0.0000) (0.1910) (0.9214) (0.0000)  
 t-stat (6.268799) (5.701599) (-1.327224) (-0.099227) (-4.537816)



**Figure 9. Structural Equation Relationship Pattern Diagram Model**

based at the image above, it could be defined that simultaneously (F test) ROA, ROE, GPM, and NPM have a enormous impact on Tobin's Q. that is also indicated by means of 0.000000 (< 0.05), this means that H0 is rejected and Ha is time-honored. in part ROA has a superb and great impact on Tobin's Q, which is indicated through the value of zero.0000 (< 0.05) which means that H0 is rejected and Ha is accepted. The value of the equation coefficient is 31.25314. ROE does not affect Tobin's Q, which is indicated by the value of 0.1910 (> zero.05), which means that H0 is familiar and Ha is rejected, and the coefficient of the equation is -four.250415. GPM does now not affect Tobin's Q, that is indicated by means of the value of zero.9214 (> zero.05), because of this that H0 is standard and Ha is rejected, and the value

of the equation coefficient is -0.050399. while NPM has a effective and widespread effect on Tobin's Q, that is indicated with the aid of the value of zero.0000 ( $<0.05$ ) because of this that  $H_0$  is rejected and  $H_a$  is prevalent, and the coefficient of the equation is -10.14545. on this version, it is recognised that the R-squared price of zero.953648 indicates that 95.37% of Tobin's Q variance can be defined by modifications in ROA, ROE, GPM, and NPM. on the same time, the closing four.63% is resulting from other factors outdoor the version.

## Hypothesis test

### Hypothesis 1

The outcomes of the analysis show the t value of five.701599  $>$  (ttable 1.99834) and the significance of 0.0000 ( $< 0.05$ ), for this reason  $H_0$  is rejected, and  $H_a$  is general, which means ROA has a significant effect on Tobin's Q with a fantastic effect. The regression coefficient value of the ROA variable is 31.25314, indicating that every increase in ROA is 1 unit resulting in an increase in Tobin's Q by 31,25314 units. Vice versa, every decrease in ROE by 1 team resulting in a reduction of Tobin's Q by 31,25314 units. These results also indicate that an increase in the ROA ratio is an interpretation of an increase in firm profit. Generally, the investor community is very interested in investing in companies with good prospects, especially in generating profits. This condition typically gets a response from the market in the form of an increase in the firm's stock price. This increase in inventory fees will boom the corporation's value, and buyers gets capital profits and growth the price of their funding. The consequences of this observe are in line with the consequences of the survey Alghifari et al. (2013), Zuhroh (2019), Tommy (2021) and is not in step with the research effects of Amidu (2007); Hakim & Sugianto (2018).

### Hypothesis 2

The results of the evaluation show that the value of tcount is -1.327224 $<$  (ttable 1.99834) and the importance of is 0.1910 ( $> zero.05$ ), accordingly  $H_0$  is well-known, and  $H_a$  is rejected, which means ROE has no impact on Tobin's Q with a bad courting. The value of the variable regression coefficient is -4.250415, indicating that every increase in ROE is 1 unit resulting in a decrease in Tobin's Q by 4.250415 units. Vice versa, every decrease ROE by 1 team resulting in an increase in the value of Tobin's Q by 4.250415 units. This shows that an increase in the ROE ratio cannot trigger an increase in stock prices and firm value. Even ROE only establishes a negative relationship. When the firm experiences an increase in profits and is seen in the rise in the ROA ratio, and encourages an increase in firm value. The increase in the firm's value is undoubtedly an increase in stock prices and higher equity values. In the ROE formulation, where the importance of equity is the denominator in the equation, it causes the ratio value to be lower. Thus, the relationship between ROE and firm value becomes a negative relationship. This also explains that changes in the value of the ROE ratio cannot significantly affect changes in solid value. The results of this study show that they are in line with the results of research by Fintreswari & Sutiono (2017) and are not in line with the results of research by Dang et al. (2019), Fajaria & Isnalita (2018), Effendi (2019).

### Hypothesis 3

The outcomes of the analysis display that the  $t$ -count is  $-0.099227 < (t_{table} 1.99714)$  and the value is  $0.9214 (> zero.05)$ , for that reason  $H_0$  is rejected, and  $H_a$  is general, because of this that GPM has no impact on Tobin's Q with a terrible courting. The analysis results additionally display that the regression coefficient price of the GPM variable is  $-0.050399$ , which means that that each growth in GPM is 1 unit led to a decrease in Tobin's Q by way of  $0.050399$  devices. Vice versa, each reduction in GPM by way of 1 unit resulted in an increase inside the fee of Tobin's Q by using  $0.050399$  gadgets. The GPM ratio is regularly used to measure the efficiency of controlling the fee of products or production prices, indicating the agency's capability to supply efficiently. when the fee of products bought increases, the GPM will usually fall, and vice versa. The fee thing within the price of products is a group of variable charges. when variable expenses growth, the contribution margin will decrease, thereby reducing the GPM ratio. The low contribution margin fee will make it difficult to finance the firm's operational charges. therefore, this ratio is regularly used as an vital indicator in measuring the health of a employer (Gillingham, 2015). looking at the consequences of the descriptive analysis wherein the common GPM ratio of issuers shows a downward trend, so there's an indication of inefficiency in variable value's. The outcomes of this observe are in line with the outcomes of other studies in general, which do not have an effect on firm price.

#### Hypothesis 4

The results of the analysis show that the  $t$ -count is  $-4.537816 > (t_{table} 1.99714)$  and the value is  $0.0000 (< 0.05)$ , thus  $H_0$  is rejected, and  $H_a$  is accepted. These results indicate that NPM has a significant effect on the importance of Tobin's Q. The coefficient value of the regression equation for the NPM variable is  $-10.14545$ , which means that each increase in NPM by 1 unit results in a decrease in Tobin's Q by  $10.14545$  units, and every reduction in NPM by 1 unit results in an increase in the value of Tobin's Q by 1 unit.  $10.14545$  units. Conceptually, NPM theory has a positive effect, but the analysis results only show a negative impact. This result indirectly explains that the conditions in the field are not always the same in theory.

In formulation, NPM is almost similar to GPM, the difference is only in measuring profit, where for the NPM ratio using net income after tax as in the calculation of ROA and ROE ratios. While GPM uses gross profit. This ratio is also expected to increase both by management and investors. Because the comparison figure is the level of net sales, this ratio can also be used to measure the overall efficiency of the firm's operations. The more efficient the firm's operations, the more it will increase the value of net income.

Based on descriptive analysis, the average NPM value of issuers in the sample shows an increasing trend, while the average firm value shows a decreasing trend. This is what causes the relationship between the two to be negative. The results of this study are in line with the results of Tommy's (2021) research and are not in line with the results of research Fintreswari & Sutiono (2017); Effendi (2019).

#### Hypothesis 5

The effects of the analysis display that the  $F$ -count fee is  $72.80071 > (F_{table} 2.seventy five)$  or the fee is  $0.000000 (< 0.05)$ , for this reason  $H_0$  is rejected and  $H_a$  is established. The consequences of speculation testing indicate that ROA, ROE, GPM and NPM

simultaneously have a good sized effect on Tobin's Q. In other phrases, the combination of these four variables can have an effect on firm fee (Tobin's Q). R-Square value of 0.953648 shows that changes in ROA can explain 95.37% of Tobin's Q variance, ROE, GPM and NPM variables, while the remaining 4.63% is caused by factors other than these four variables. Looking at the regression coefficient values of the four variables, ROA is a more dominant variable in influencing firm value and can be used as an appropriate proxy in measuring firm profitability.

## CONCLUSION

based totally at the studies and discussion which have been performed, it is able to be concluded that ROA and NPM partly have a huge effect on Tobin's Q, in which ROA is definitely correlated, and NPM is negatively correlated. While ROE and GPM have no impact on Tobin's Q. ROA, ROE, GPM, and NPM simultaneously have a significant effect on Tobin's Q. The R-square value in the model is 0.953648 shows that 95.37% of Tobin's Q variance can be explained by changes in ROA, ROE, GPM, and NPM, while other factors outside the model cause the remaining 4.43%. Of the four variables tested, ROA is the more dominant variable influencing Tobin's Q than ROE, GPM, and NPM. This shows that ROA can be used as the best proxy for firm profitability.

## Implication

Based on the conclusion of this study, when ROA, ROE, GPM, and NPM are synergized together, they can have a significant effect on Tobin's Q to be applied to optimize firm value and increase shareholder wealth. The increase in firm value is in line with the rise in the firm's share price. The investors earn capital gains and the importance of their investment increases. This study also provides theoretical implications that empirically, the ROA ratio shows ideal conditions as a proxy for achieving firm profitability. Although NPM also indicates a significant effect on firm value, the relationship is negative, so it does not mean ideal conditions and is contrary to theoretical concepts.

## Suggestion

Based on the conclusions and implications, several suggestions can be put forward, among others, increasing the ROA ratio also means increasing the value of the firm, so that the management can prioritize placing assets in productive allocations and avoiding the occurrence of idle assets (unproductive). A high ROA ratio can also describe the availability of liquid funds held in the form of cash. Cash that is too large causes a lot of idle funds, but it also causes high revenue opportunities if it is too small. So good cash management is needed.

This panel only takes a sample of issuers registered consistently during the 2015-2020 period in the Jakarta Islamic Index, so the results of this study have limitations to be generalized widely. It is also recommended for other researchers to try on a larger sample such as ISSI, LQ 45, and others. For researchers who use a broader range of financial performance variables, ROA is chosen as the sole proxy for profitability.

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