

## **Determining Factors of Sharia General Insurance Profitability: Study on Investment Returns, Premiums and Operating Expenses**

**Mesi Herawati<sup>1</sup>, Kholilatul Khusni<sup>2</sup>, Yeyen Novita<sup>3</sup>**

*<sup>1,2,3</sup> Diponegoro University, Indonesia*

*Correspondence: [mesiherawati@lecturer.undip.ac.id](mailto:mesiherawati@lecturer.undip.ac.id)*

### **Abstract**

This research aims to analyze the influence of investment returns, premium income and operating expenses on the profitability of sharia general insurance companies in Indonesia. The research method used is quantitative with multiple regression analysis. The data used in this research is secondary data taken from the financial reports of sharia general insurance companies in Indonesia. Data processing was carried out using the EViews 12 application. The research results show that investment returns have a significant effect on the profitability of sharia general insurance in Indonesia. However, partially, premium income and operating expenses do not have a significant effect on profitability. However, when analyzed simultaneously, the variables of investment returns, premium income and operating expenses together have a significant influence on the profitability of sharia general insurance companies. These findings indicate that sharia insurance companies need to focus on efficient investment management to increase profitability. In addition, although premium income and operating expenses do not have a partially significant effect, good management of these two variables in combination with investment returns can have a significant impact on the company's financial performance.

**Keywords:** Investment Returns; Premium Income; Operating Expenses; Profitability Sharia General Insurance

---

### **Introduction**

The sharia insurance sector is a supporting sector of the country's economy which operates in the financial sector. The sharia insurance

system is an effort to help each other among sharia insurance participants which is divided into two items, namely through investment and through tabarru' funds which are intended as a forum for mutual assistance between participants in facing risks. The presence of sharia insurance is an alternative choice for Muslim communities to be able to enjoy insurance facilities that are in accordance with sharia principles. Andina et al., (2021) states that sharia insurance is an economic activity based on sharia principles, the guidelines for its implementation are based on devotion to God Almighty. As time goes by insurance has indeed experienced growth, but in the past 6 years sharia insurance has begun to experience a decline both in terms of growth in the number of insurance sharia and sharia insurance performance. As in the following OJK data and AASI research

**Table 1.** Number of Sharia Insurance Companies

NO	Company	2018	2019	2020	2021	2022	April 2023
1	Life insurance company with sharia principles						
	a. Full shariah	7	7	7	7	8	8
	b. Sharia business unit	23	23	23	23	21	21
2	General insurance company with Sharia principles						
	a. Full shariah	5	5	5	6	6	6
	b. Sharia business unit	24	24	21	20	19	19
3	Reinsurance company with Sharia principles						
	a. Full shariah	1	1	1	1	1	1
	b. Sharia business unit	3	3	3	3	3	3
4	<b>Total</b>	<b>63</b>	<b>63</b>	<b>60</b>	<b>60</b>	<b>58</b>	<b>58</b>

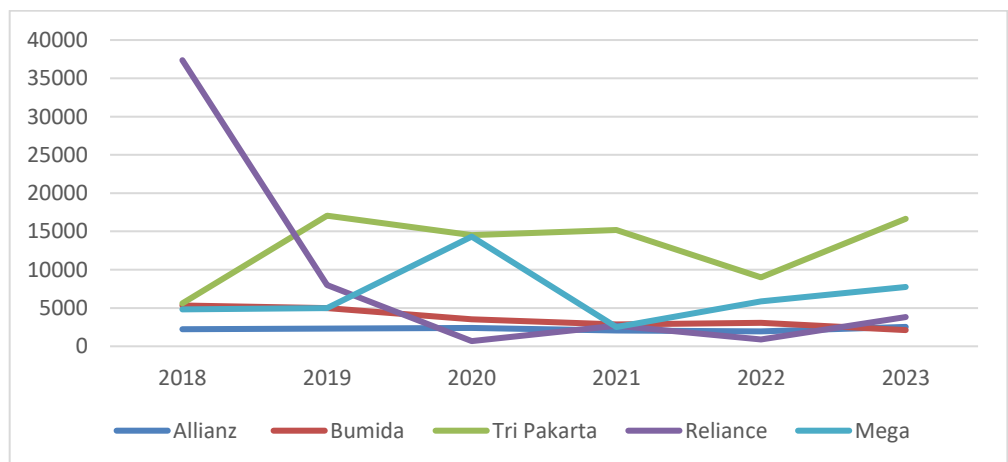
Source: ojk.go.id

**Table 2.** Summary of Sharia Insurance Performance

No	Account name	April 2022	April 2023	Growth
1	Assets	45.540	45.723	0,40%
2	Gross Contribution	8.853	8.241	-6,91%
3	Gross Claims	5.859	6.724	14,78%
4	Investment	37.173	36.550	-1,68%
5	Investment Growth	811	444	-45,33%
6	Penetration	0,139%	0,130%	-6,63%
7	Density (in full units)	86.578	92.233	6,53%

Source: AASI

Based on the data above, it can be seen that the number of sharia insurance companies, especially sharia general insurance, has decreased, while other types of sharia insurance have stagnated, neither experiencing a decrease nor an increase in units. Meanwhile, from sharia insurance performance data, it can be seen that several aspects of performance have decreased, starting from the aspects of contribution, investment and penetration. Then, if we look at the profitability aspect of sharia insurance, especially sharia general insurance, the amount of profit generated each year seems to fluctuate, even in some years the profit of sharia general insurance seems to increase.



**Figure 1.** Shariah General Insurance Profitability

Source: Data Proceseed, 2024

Based on the data above, it can be seen that sharia general insurance profits are experiencing a fluctuating trend, even if we look at it from 2022

to 2023, it can be seen that sharia general insurance profits have increased, although not significantly. However, if we compare it with previous data, it can be seen that the financial performance of sharia insurance has decreased from 2022 to 2023, even though several aspects that have decreased are aspects that have an influence in determining the level of profit on sharia insurance. So it is necessary to identify aspects that influence the profitability of sharia general insurance in Indonesia.

One thing that is of concern in determining company profits is sales volume, in this case the study is sharia insurance, so the sales are the premiums obtained by sharia general insurance. Premiums are the main source of funds used by sharia insurance companies to invest. Premium income can affect the company's financial performance, especially in generating profits (Hartaroe et al., 2016). The amount of premium earned will determine the amount of funds available to invest. The greater the premium collected, the greater the potential investment returns that the company can obtain. On the other hand, high operational expenses can reduce the company's profit potential, based on research that large operational expenses will affect the company's financial performance (Desy deskry, Marliah, 2022).

Investment returns are one of the factors that influence company performance (Amin, 2019). In its operations, insurance companies manage funds from premiums paid by participants to be invested in accordance with sharia rules. The results of this investment are then used to cover claims and operational costs, as well as providing profits for the company. Therefore, premiums and operational expenses are two factors that can influence the Company's financial performance. Examining the factors that determine the profitability of sharia general insurance, especially with a focus on investment returns, premiums, and operational expenses, from several studies known that Investment performance is a significant determinant of profitability for insurance companies (Mansur et al., 2017). Another research state that Studies have shown that premium income significantly impacts the profitability of insurance firms. In the context of Takaful (Islamic insurance), the written premium growth rate has a notable effect on profitability.

So the last one, efficient management of operating expenses is essential. High operating expenses can negatively impact profitability, as seen in the Indonesian general insurance industry, where operating expenses to operating income (OEOI) have a significant negative effect on profitability (Arintoko et al., 2021). Based on the background that has been described, this research aims to encourage growth in the profitability of sharia general insurance through investment income.

## **Literature Review**

### **Profitability**

Every company tries to gain the greatest profit. The survival of the company will be influenced by the profit it earns. According to Subramanyam. K. R. (2014), profit (earnings) or net income indicates profitability. According to Samryn (2012) profit is a source of internal funds that can be obtained from the company's normal activities that do not require extra costs for storage and use. While the items in the report show how profit is earned, profit shows the return to equity holders for the period.

In addition, Yusuf (2011) said that profit is the difference between income and expenses, while loss is the difference between income and expenses. Meanwhile, Nasution, F. R., & Lisa (2013) said that net profit is the positive difference between total income and expenses. Net profit is operating profit minus taxes, interest costs, research and development costs. Net profit is presented in the income statement by comparing income with costs (Hansen, 2001). Based on this understanding, it can be concluded that profit is the excess of income over costs in return for producing goods and services during the accounting period.

### **Contribution Income (Premium)**

Premium is a fund obtained after an insurance agreement is made for a certain period for the protection of protection services provided by the insurance party to insurance participants (Hidayat et al., 2021). Premiums can be considered as a number of costs which are an obligation of the insured party which must be paid within a certain period of time (Sasono, 2024). Premiums (contributions) in sharia insurance are referred to as net premiums because these premiums are free from

interest and loading (costs) (Badruzaman, 2019). The function of the premium payments made is to provide protection against various risks of loss experienced by the insured party (Hafifi & Afandi, 2023). The more premiums paid, the more profit the insurance company will make (Wahyono et al., 2021).

Research from (Prasetyo et al., 2023) illustrates a significant positive influence between premiums and company profits. This is in line with research by Juwita & Rindiati (2021), Denovis (2022) and Nasution, et al (2020) which shows that there is a significant positive relationship between premiums and profits. Meanwhile, research conducted by Ritha (2023) shows that premiums do not affect profits at PT. Asuransi Ramayana Tbk. However, the study also stated that although premiums do not have a significant effect on company profits, premiums are a dominant factor for company managers to make investment decisions. Based on the theory and results of previous research, it can be assumed that there is an influence between premiums and profits.

H1: There is a positive influence between premiums and profits in general sharia insurance in Indonesia.

## **Investment Results**

Investment is an activity of placing an asset with the expectation that it will provide income or will increase its value in the future. The accumulation of capital formed increases investment (Maudina et al., 2020). Investment results are the operational results obtained by the Insurance Company from the amount of money distributed by insurance participants (Wahyuddin & Mauliyana, 2021). From this understanding, investment results mean an activity of investing capital and assets with the aim of a return on investment profit sharing that is submitted to the fund owner, namely the manager and insurance participants. The better the management of investment funds, the more profit will be generated (Nasution & Nanda, 2020).

Research from Wijaya (2023) shows the results of a significant positive influence between investment results on company profits. This is in line with research by Nurhayati & Noprika (2020) and Quraniyah et al (2022) which provide results that there is a significant positive

relationship between investment results and profits. So if we look at several previous studies, it can be assumed that there is an influence between results and profits.

H2: There is a positive influence between investment results and profits in sharia general insurance in Indonesia.

### **Operating Expenses**

The use of costs is very important in the company's operational activities, such as in calculating the cost of goods sold, planning, and controlling. According to Mulyadi (2009), costs are sacrifices of economic resources measured in monetary units that have occurred or may occur for a specific purpose or cash resources that have been or will be sacrificed to achieve a specific purpose. According to Supriyono (2004), operating costs are included in two categories: direct costs are costs that occur or the benefits of which can be found in a particular cost object or center; indirect costs are costs that occur or the benefits of which cannot be found in a particular cost object or center, or costs whose benefits are enjoyed by several particular cost objects or centers.

Research conducted by Hery (2013) describes expenses as outflows of assets, use of assets, or liabilities of an entity caused by the delivery or manufacture of goods, provision of services, or other activities that are the main operations of the company. According to Harrison Jr. (2013), in addition to costs directly related to sales such as the cost of merchandise, operating expenses are also costs that are continuously incurred by the entity. Salaries, wages, utilities, and supplies are the largest operating expenses.

In the research of Barus et al. (2016) the results of the study showed that operating expenses have a significant relationship to net profit in Food and Beverage companies listed on the Indonesia Stock Exchange for the period 2010-2014. In addition, in the research of Maulita, et al. (2020) it was found that the effect of operating expenses on operating profit is significant and the company's profit is influenced by operating expenses by 36%. While the effect of operating income on the company's operating profit is significant and the company's profit is influenced by 12% of operating income. Based on the theory and results of previous studies, it

can be assumed that there is an influence between operating expenses on profit

H3: There is a positive influence between operating expenses on profit in general sharia insurance in Indonesia.

### Research Methods

The type of research that is conducted is known as quantitative research, which is research with an emphasis on objectivity, inductivity, and scientific in which the data that is obtained consists of numbers or statements that are evaluated and subjected to statistical analysis (Handayani, 2020). According to Sugiyono (2012), quantitative research is a research method based on positivism used to test a population or sample, collect data using research tools, analyze data quantitatively/statistically, and test hypotheses. The study aims to document data obtained from all companies offering syariah insurance between 2018 and 2023. The data that will be gathered for this analysis of the study comes from each company's real-time investment website.

The population in this study is attributed to Islamic insurance companies in Indonesia. Researchers use purposive sampling, which is a sample technique with certain criteria. Based on the preceding explanations, the author identifies the criteria for businesses that serve the public. Some of the criteria used in sample selection include the following:

**Table 3.** Sampling Criteria

No	Criteria	Number of companies
1	Sharia general insurance companies registered with OJK	28
2	Sharia general insurance companies that presented financial reports for the 2018-2023 period	20
3	Sharia general insurance companies that did not experience delisting during the research period (2018-2023)	18
4	Sharia general insurance companies that presented annual reports from 2018-2023	17



<b>Total</b>	<b>102</b>
--------------	------------

Source: Data Proceseed, 2024

The validation of hypotheses in this research is conducted using a regression model with panel data. Data panels are made up of cross-sectional and time-series data (Gujarati & Porter, 2015). This study was conducted using evIEWS and provided three estimation methods: common effect model, fixed effect model, and random effect model. This research was analyzed with evIEWS because of its capabilities in multiple regression data analysis and the efficiency of time series data. Starting with model selection, classical assumption tests which include normality tests, multicollinearity tests, heteroscedasticity tests, and auto correlation tests. The panel regression equation formula is:

$$Y_{it} = \alpha + X_1\beta_1 + X_2\beta_2 + e$$

Keterangan:

- Y = Dependent Variable
- $\alpha$  = Konstanta
- $\beta$  = Regression Coefficients
- X = Independent Variable
- i = *Cross Section*
- t = *Time Series*
- e = error

## Results and Discussion

### Results

**Table 4.** Model Test and Classical Assumption Test

Chow test	Prob. 0,6989 > 0,05	CEM model
Hausman test	Prob. 0,9278 > 0,05	REM model
LM Test	Prob. 0,1327 > 0,05	CEM model
Multicollinerity test	X1, X2 (0,224008), X1, X3 (0,025015), X2, X3(0,711383) < 0,85	Ok
Heterocedasticity test	Residual graph does not cross 500 & -500	Ok

Source : (Napitupulu et al., 2021)(A.T & Yuliadi I, 2014)

Based on the table 4, we found that the chosen model is CEM according to (Napitupulu et al., 2021), and the result of the classical

assumption test, found that the variables passed the classical assumption test.

## Hypothesis test

**Table 5.** Hypothesis Test

Total panel (balanced) observations: 102

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-5788.233	5888.598	-0.982956	0.3280
X1	7.732420	0.801225	9.650750	0.0000
X2	0.023400	0.089605	0.261142	0.7945
X3	-0.027591	0.183582	-0.150295	0.8808

Source: Data Processed, 2024

From the T-test, can be concluded that:

1. The results of the t-test on the investment income variable (X1) obtained a calculated t value of  $9.650750 > t \text{ table } 1.983971519$  and a prob value of  $0.0000 < 0.05$ , so hypothesis 1 is accepted, this means that the investment income variable has an effect on profitability in sharia general insurance in Indonesia
2. The results of the t-test on the insurance premiums variable (X2) obtained a calculated t value of  $0.261142 < t \text{ table } 1.983971519$  and a probability value of  $0.7945 > 0.05$ , which means there is no influence, so it can be concluded that H2 is rejected which means that the insurance premiums does not influence profitability in sharia general insurance in Indonesia
3. The results of the t-test on the operating expenses variable (X3) obtained a t count of  $-0.150295 < t \text{ table } 1.983971519$  and a probability value of  $0.8808 > 0.05$ , meaning that H3 is rejected, so the operating expenses variable does not influence profitability in sharia general insurance in Indonesia

**Table 6. F-Test Result**

R-squared	0.523660
Adjusted R-squared	0.509078
S.E. of regression	40652.38
Sum squared resid	1.62E+11
Log likelihood	-1225.198
F-statistic	35.91178
Prob(F-statistic)	0.000000

Source: Data Processed, 2024

The calculated F value is  $35.91178 > F \text{ table } 2.69742322$  and the probability value is  $0.0000 < 0.05$ , so it can be concluded that variables X1, X2, and X3 Together have a significant effect on variable Y profitability in Sharia general insurance in Indonesia. The R Square value is 0.523660 or 53%, the coefficient of determination value shows that the independent variables consisting of the investment income, insurance premiums, and operating expenses can explain the profitability variable in Sharia general insurance in Indonesia of 53%, while the remaining is influenced by other variables that are not included in this research model.

## Discussion

The results of this research indicate that investment returns have a significant influence on the profitability of sharia general insurance in Indonesia. This is in line with previous research which found that insurance companies that are able to manage their investment portfolios well will increase returns, which ultimately contributes to the company's profitability (Alhassan & Biekpe, 2016). Another research state that Investment performance is a critical factor influencing the financial health and profitability of general insurance companies, including Sharia insurance(Arintoko et al., 2021). In sharia insurance, income from investments that comply with sharia principles such as sukuk, sharia shares and sharia mutual funds are the main source of profit besides premiums. Good investment management is very important for sharia insurance because, in contrast to conventional insurance, they must comply with stricter sharia principles in choosing investment instruments. The right investment decisions can increase the rate of return (return on investment), which ultimately increases the company's profitability (Kader et al., 2014).

So, partially, this research finds that premium income does not have a significant influence on profitability. This may be because high premiums are not always followed by increased profits, especially if the company faces high claims or operational risks that are not managed well. This finding is in line with the results of research from Adams & Buckle (2003), which states that although premiums are the main source of income, poor risk management can reduce the positive influence of premiums on profits. In the context of sharia general insurance, the premiums received are managed in the form of *tabarru'* funds to cover participant risks. If the claims submitted are high, the premium contribution received will not have a positive effect on profitability. Therefore, risk management is the key to maximizing profits from premium income.

Operating expenses, which include operational costs, salaries and administrative costs, were also found to have no significant effect on partial profitability. This shows that sharia general insurance companies may have the ability to manage their operational costs efficiently so that operating expenses do not become the main determining factor in profitability. This finding shows that increasing operating expenses does not necessarily reduce profitability, especially if the company has high operational efficiency. This can also mean that sharia insurance companies have succeeded in controlling costs so that they do not significantly affect their profitability.

Although partially premium income and operating expenses do not have a significant effect on profitability, this research finds that simultaneously, the variables investment returns, premium income and operating expenses together have a significant influence on the profitability of sharia general insurance in Indonesia. These results are consistent with findings that in the insurance industry, financial performance is often influenced by a combination of several factors working simultaneously, not just one variable partially. This emphasizes the importance of a holistic approach in insurance company financial management. Good investment management, combined with effective premium risk management and operational cost control, can create profitable synergies for the company. All three must be managed simultaneously to achieve optimal profitability.

The findings of this research have several important implications for the management of sharia insurance companies in Indonesia. First, companies must focus on better investment management because investment results have been proven to have a significant influence on profitability. Companies must optimize their investment portfolios in sharia financial instruments that produce high returns without violating sharia principles. Second, even though premium income and operating expenses have no partial effect, management still needs to maintain operational efficiency and risk management to maximize profitability. Good risk management can help reduce burdensome claims and increase premium contributions to profitability.

This research offers actionable guidance for Sharia General Insurance providers by demonstrating that strategically maximizing investment returns—particularly through Sharia-compliant assets like *sukuk* (Islamic bonds) and ethically screened equities—plays a pivotal role in boosting profitability. The findings stress the importance of refining portfolio diversification and asset allocation strategies to align with Islamic principles while achieving competitive yields. Notably, the study disputes conventional views by revealing that premium income and operational costs do not exhibit a direct correlation with profitability in Indonesia's Takaful sector. Instead, it argues that firms should prioritize enhanced underwriting practices (e.g., risk assessment accuracy), robust risk mitigation frameworks (such as reinsurance partnerships), and operational streamlining (e.g., automation and expense control) to ensure long-term stability.

From an academic perspective, the work advances Islamic finance scholarship by empirically validating key drivers of profitability in understudied markets like Indonesia, filling gaps in existing literature. Methodologically, it introduces rigor through dynamic panel data regression analysis in EViews, which accounts for time-varying factors and entity-specific effects, offering a replicable framework for future studies. For policymakers, particularly Indonesia's Financial Services Authority (OJK), the insights advocate for tailored regulatory adjustments, such as incentivizing sustainable investment practices or revising capital adequacy guidelines to reflect Sharia-compliant risk profiles. Collectively, these outcomes call for integrated financial

strategies that harmonize investment agility, risk governance, and regulatory compliance, positioning Sharia insurers to thrive in evolving market conditions while adhering to ethical principles.

### Conclusion

This research aims to examine the influence of investment returns, premium income and operating expenses on the profitability of sharia general insurance in Indonesia using multiple regression analysis. This research reveals that investment returns have a significant influence on the profitability of sharia general insurance in Indonesia, while premium income and operating expenses have no partial effect. However, simultaneously, these three variables together have a significant influence on profitability. Therefore, sharia insurance companies must pay attention to managing investments, premiums and operating expenses simultaneously to achieve optimal profitability.

### Bibliography

- A.T, B., & Yuliadi I. (2014). *Electronic Data Processing (SPSS 15 dan Eviews 7)*. Danisa Media.
- Adams, M., & Buckle, M. (2003). The determinants of corporate financial performance in the Bermuda insurance market. *Applied Financial Economics*, 13(2), 133–143. <https://doi.org/10.1080/09603100210105030>
- Alhassan, A. L., & Biekpe, N. (2016). Determinants of life insurance consumption in Africa. *Research in International Business and Finance*, 37(October 2015), 17–27. <https://doi.org/10.1016/j.ribaf.2015.10.016>
- Amin, H. (2019). *Pengelolaan Investasi pada Asuransi Syariah: Sebuah Kajian Teoritis*. Pustaka Syariah.
- Andina, W., Hanifuddin, I., & Maria, S. (2021). Jurnal Syar' Insurance ( Sijas ). *Jurnal Syar'insurance (SIJAS)*, 7(1), 36–44.
- Arintoko, Ahmad, A. A., & Habibah, S. N. (2021). Market Structure and Determinants of Firm Profitability on General Insurance Industry in Indonesia. *Studies in Business and Economics*, 16(1), 26–41. <https://doi.org/10.2478/sbe-2021-0003>
- Desy desky, Marliah, R. daim harapah. (2022). Pengaruh Biaya Operasional dan Pendapatan Terhadap Kinerja Keuangan pada Perusahaan Jasa Subsektor Perdagangan Besar yang Terdaftar di Bursa Efek Indonesia. *Jurnal Ilmiah Multi Disiplin Indonesia*, 2(2),

219–231.

- Hartaroe, B. P., Mardani, R. M., & Abs, M. K. (2016). Pengaruh Pendapatan Premi, Hasil Underwriting, Beban Operasional Dan Hasil Investasi Terhadap Laba Pada Perusahaan Asuransi Umum Yang Terdaftar Di BEI Periode Tahun 2017-2019. *E – Jurnal Riset Manajemen*, 82–94.
- Kader, H. A., Adams, M., Hardwick, P., & Kwon, W. J. (2014). Cost efficiency and board composition under different takaful insurance business models. *International Review of Financial Analysis*, 32, 60–70. <https://doi.org/10.1016/j.irfa.2013.12.008>
- Mansur, M., Radam, A., & Yaakub, Y. (2017). Market structure, Firm's behavior and productivity: Empirical study on general insurance firms in Malaysia. *Jurnal Ekonomi Malaysia*, 51(1), 133–144. <https://doi.org/10.17576/JEM-2017-5101-11>
- Napitupulu, R. ., T.P, S., Damanik, Harianja, & Sirait. (2021). *Penelitian Bisnis, Teknik dan Analisa dengan SPSS-STATA-Eviews* (01 ed.). Madenatera.
- A.T, B., & Yuliadi I. (2014). *Electronic Data Processing (SPSS 15 dan Eviews 7)*. Danisa Media.
- Adams, M., & Buckle, M. (2003). The determinants of corporate financial performance in the Bermuda insurance market. *Applied Financial Economics*, 13(2), 133–143. <https://doi.org/10.1080/09603100210105030>
- Alhassan, A. L., & Biekpe, N. (2016). Determinants of life insurance consumption in Africa. *Research in International Business and Finance*, 37(October 2015), 17–27. <https://doi.org/10.1016/j.ribaf.2015.10.016>
- Amin, H. (2019). *Pengelolaan Investasi pada Asuransi Syariah: Sebuah Kajian Teoritis*. Pustaka Syariah.
- Andina, W., Hanifuddin, I., & Maria, S. (2021). Jurnal Syar ' Insurance ( Sijas ). *Jurnal Syar'insurance (SIJAS)*, 7(1), 36–44.
- Arintoko, Ahmad, A. A., & Habibah, S. N. (2021). Market Structure and Determinants of Firm Profitability on General Insurance Industry in Indonesia. *Studies in Business and Economics*, 16(1), 26–41. <https://doi.org/10.2478/sbe-2021-0003>
- Desy desky, Marliah, R. daim harapah. (2022). Pengaruh Biaya Operasional dan Pendapatan Terhadap Kinerja Keuangan pada Perusahaan Jasa Subsektor Perdagangan Besar yang Terdaftar di Bursa Efek Indonesia. *Jurnal Ilmiah Multi Disiplin Indonesia*, 2(2), 219–231.
- Hartaroe, B. P., Mardani, R. M., & Abs, M. K. (2016). Pengaruh Pendapatan

- Premi, Hasil Underwriting, Beban Operasional Dan Hasil Investasi Terhadap Laba Pada Perusahaan Asuransi Umum Yang Terdaftar Di BEI Periode Tahun 2017-2019. *E – Jurnal Riset Manajemen*, 82–94.
- Kader, H. A., Adams, M., Hardwick, P., & Kwon, W. J. (2014). Cost efficiency and board composition under different takaful insurance business models. *International Review of Financial Analysis*, 32, 60–70. <https://doi.org/10.1016/j.irfa.2013.12.008>
- Mansur, M., Radam, A., & Yaakub, Y. (2017). Market structure, Firm's behavior and productivity: Empirical study on general insurance firms in Malaysia. *Jurnal Ekonomi Malaysia*, 51(1), 133–144. <https://doi.org/10.17576/JEM-2017-5101-11>
- Napitupulu, R. ., T.P, S., Damanik, Harianja, & Sirait. (2021). *Penelitian Bisnis, Teknik dan Analisa dengan SPSS-STATA-Eviews* (01 ed.). Madenatera.