
Financial performance of sharia and non-sharia life insurance: A comparative analysis

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Article Info

Article history:

Received 11 July 2022

Revised 4 May 2023

Accepted 10 May 2023

Keywords:

Financial Performance; Early Warning System; Risk Based Capital; Insurance

ABSTRACT

The emergence of Islamic insurance as a financial solution for Muslim communities, especially in Muslim-majority countries, is an intriguing topic. This study aims to evaluate the financial performance of Sharia-compliant life insurance in Indonesia and its market presence. Specifically, it compares the financial performance of non-Sharia and Sharia life insurance companies using the Early Warning System (EWS) and Risk-Based Capital (RBC). The EWS evaluation measures capital adequacy ratio, claim expense ratio, liquidity ratio, and own retention ratio, while RBC measures solvency ratio. The results of hypothesis testing, using the Mann-Whitney U test, reveal a significant difference between the financial performance of non-Sharia and Sharia life insurance companies based on EWS. However, there is no significant difference between their financial performance based on RBC's solvency ratio. The findings of this study imply that, as a whole, sharia-compliant insurance outperforms its non-sharia counterparts. Despite the relatively small sample size, these results offer a ray of hope for Islamic financial institutions to pursue further growth and development.

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INTRODUCTION

In the last 5 decades, the sharia-compliant insurance industry has experienced rapid growth, particularly in countries with a predominantly Muslim population (Kantakji et al., 2020). Presently, despite a somewhat reduced pace, this sector continues to exhibit a double-digit growth rate (Md Husin et al., 2016). By contrast, other elements of the Islamic financial system, including Islamic philanthropy, Islamic banking, and Islamic capital market, display a consistent upward trend (Sarker et al., 2020). This development bodes well for the sharia ecosystem and represents a positive step

towards tackling issues that remain beyond the scope of non sharia economic approaches. Within the context of Islamic economics, the majority of research focuses on popular themes such as Islamic finance (Kachkar & Yilmaz, 2023), Islamic marketing (Rokhman & Abduh, 2019), Islamic philanthropy (Aligarh et al., 2021; Sadallah & Abdul-Jabbar, 2022; Setianingsih et al., 2022), and Islamic banking (Sarker et al., 2020). Research on sharia insurance is comparatively sparse in relation to other fields due to its slower pace of development. The majority of existing research on sharia insurance has focused on specific topics such as consumer behavior (Hassan & Abbas, 2020) and marketing strategies (Md Husin et al., 2016). This study will focus on the financial performance of insurance companies that have two types of businesses, namely Shariah and non-Shariah.

The insurance sector in Indonesia displays erratic growth trends, which stand in contrast to advanced economies such as the United States of America (USA), the United Kingdom (UK), and Japan, where insurance financial instruments are widely utilized (Abdoush et al., 2022). The insurance industry in Indonesia is divided into non-sharia and sharia insurance (Widyani, 2018). According to Zahara (2020), non-sharia and sharia insurance have the same goal, which is managing risk. However, there is one fundamental distinction between the two, and that is how risk is managed. Risk management in non-sharia insurance employs the notion of risk transfer, which entails transferring the participant's or insured's risk to the insurance company, while Sharia insurance employs the notion of risk-sharing, in which insurance participants aid one another in sharing the risks that will be encountered by collecting premiums from which tabarru funds are collected (Zahara, 2020).

The insurance industry in Indonesia has undergone significant growth and development, in line with increased public awareness of the importance of insurance in managing future risks (Afifah, 2020). This increased understanding has had a positive impact on the development of the insurance industry in the country (Sukmaningrum et al., 2022). The Financial Services Authority (OJK) reported in 2020 that there are presently 50 life insurance companies, 24 sharia-compliant life insurance companies, 72 general insurance companies, 29 sharia-compliant general insurance companies, 6 reinsurance companies, and 3 sharia-compliant reinsurance companies operating in Indonesia (OJK, 2020). In addition to the large number of insurance companies, there has been a notable increase in the industry's total assets, both in non-sharia and sharia-compliant insurance. The total assets of non-sharia insurance increased from IDR 944.578 trillion in 2016 to IDR 1,325,746 trillion in 2019, while sharia-compliant insurance assets also showed an upward trend, although still lagging behind non-sharia insurance. Sharia insurance assets amounted to IDR 33.244 trillion in 2016 and were projected to reach IDR 45.453 trillion in 2019, as reported by the Financial Services Authority (OJK) in their Non-Bank Financial Industry (IKNB) report.

It is also notable that sharia-compliant life insurance recorded a higher average growth of gross premiums than non-sharia life insurance in the past five years, with an average of 11.94% versus 6.02%, respectively. This suggests that the growth of gross premiums in sharia-compliant life insurance has been more favorable than in non-sharia life insurance, with year-on-year growth rates of 5.08% and 2.16%, respectively, as reported by the OJK in March 2020. With the rapid development of the life insurance sector in both non-sharia and sharia units, competition among insurance companies has increased. Based on this analysis, non-sharia and sharia life insurance companies must continue to compete to determine which performance is better. Non-sharia and sharia life insurance companies must adequately regulate and optimize asset management and premium income to meet the criteria for a solvent insurance company (Widyani, 2018). Furthermore, non-sharia and sharia life insurance companies must be able to demonstrate good company performance to acquire the trust of their clients (Zahara, 2020).

Insurance companies need to analyze financial statements to evaluate their financial performance. The evaluation of financial performance at insurance companies can be done using the EWS and RBC (Widyani, 2018). EWS is a financial ratio whose formula has been customized to

insurance companies' financial statements, which differ from those of other financial institutions. This ratio is useful for knowing the level of the company's financial ability to bear risks or obligations that may arise from closing a risk (Fernanda, 2017). Other than EWS, RBC can be used to evaluate the financial condition of insurance companies. Based on the Regulation of the Minister of Finance Number 53/PMK.010/2012 concerning Financial Health of Insurance Companies and Reinsurance Companies as a perfection of the Law of the Republic of Indonesia Number 40 of 2014 concerning Insurance, RBC or also known as the minimum solvency Limit is an indicator of an insurance company's financial health, especially with regard to solvency or the ability to pay its obligations.

Literature Review

Non-sharia Insurance and Sharia Insurance

Insurance is a service industry that offers protection against potential losses. The party seeking protection pays a payment to the party providing the protection; often, the two parties sign a contract in which they mutually agree on matters pertaining to their respective rights and obligations. If the party requesting protection suffers a loss as specified in the contract, he will be paid a sum of money by the party providing protection. The sum of money follows the contract (Hanifah, 2017). The term 'insurance' in Arabic is known as *Al-ta'min* which comes from the word *amanah*. The word *amanah* means something that provides protection, tranquility, and a sense of security and fosters a sense of freedom from fear. According to this definition, sharia insurance operations are known as *ta'min*, which implies payment carried out by someone for him or his heirs to get compensation for property loss that may occur (Ali et al., 2018).

Early Warning System (EWS)

The Early Warning System (EWS) is a tool that analyses financial reports and converts them into valuable information that can be used to monitor the financial performance of the insurance company (Fernanda, 2017). The EWS method has been recognized and regulated in Indonesia financial accounting standards (PSAK) number 28 concerning accounting for loss insurance. The Early Warning System (EWS) includes liquidity, solvency, and profitability ratios. The Early Warning System (EWS) calculates financial ratios for insurance companies based on their financial statements and serves as an early warning system for financial problems (Astutik, 2018). The EWS results can provide an early warning of potentially risky financial conditions in the future. Monitoring and prevention actions can be done against insurance company failures using EWS. The adoption of the EWS will make it easier for the authorities to guide and supervise the insurance industry (Ratna, 2019).

Risk-Based Capital (RBC)

The level of solvency, or the company's capacity to meet long-term obligations, indicates an insurance company's financial health. Because insurance companies pledge to pay insurance participants, insurance companies, both non-sharia and sharia insurance, must pay attention to the level of solvency of the companies they have. The insurance participant will suffer a loss if the insurance company has a low solvency level or is unable to meet its obligations (Ratna, 2019). According to Government Regulation Number 63 of 2004, RBC is a measure that informs insurance companies about the level of financial security or health that must be satisfied by insurance companies at a rate of 120%. The higher an insurance company's risk-based capital health ratio, the better its financial condition. The calculation of RBC in an insurance company is the same as the term Capital Adequacy Ratio (CAR).

Hypotheses Development

Early Warning Systems (EWS)

Widyani (2018) identified differences in the operational systems of non-sharia and sharia insurance companies, which serve as an indirect differentiator in EWS and RBC. Lamies (2017) discovered significant discrepancies in the calculation of EWS, namely in the capital adequacy ratio, claims expense ratio, and own retention ratio between non-sharia and sharia life insurance companies. In the calculation of Risk-based Capital (RBC), there are also significant differences in terms of solvency ratios between non-sharia and sharia life insurance companies. According to the EWS and RBC, non-sharia life insurance companies outperform sharia life insurance companies in terms.

Using the EWS, Widyani (2018) proves that there are significant differences in terms of the claim expense ratio and liquidity ratio. Meanwhile, in the analysis using the RBC, there are also significant differences between non-sharia and sharia insurance companies. According to the findings, sharia insurance companies outperform non-sharia insurance companies in terms of financial performance. Based on the foregoing description, the hypotheses for this research are formulated as follows:

- H_{1a}: There is a significant difference between the financial performance of non-sharia life insurance companies and sharia life insurance companies as observed from the capital adequacy ratio.
- H_{1b}: There is a significant difference between the financial performance of non-sharia life insurance companies and sharia life insurance companies as observed from the claim expense ratio.
- H_{1c}: There is a significant difference between the financial performance of non-sharia life insurance companies and sharia life insurance companies as observed from the liquidity ratio.
- H_{1d}: There is a significant difference between the financial performance of non-sharia life insurance companies and sharia life insurance companies as observed from the own retention ratio.

Risk-Based Capital (RBC)

In accordance with Minister of Finance Regulation No. 53/PMK.010/2012, which serves as a refinement of the Republic of Indonesia Law No. 40 of 2014 on Insurance, Risk Based Capital (RBC) is deemed an essential financial health indicator for insurance companies, particularly with regard to their solvency or ability to fulfill their obligations. The minimum solvency level set for insurance companies is no less than 120%. As highlighted by Widyani (2018), RBC is crucial in aiding customers to assess whether a company has adequate capital to fulfill their obligations in the event of an individual or group purchasing policies from them.

Research conducted by Indah (2014) has revealed that there exists a disparity in the average RBC between non sharia life insurance companies and sharia-based life insurance companies. Furthermore, the study found that non sharia life insurance companies exhibit better financial performance as compared to sharia-based life insurance companies. Similarly, Lamies (2017) has found that there is a substantial difference between non sharia life insurance companies and sharia-based life insurance companies based on the RBC methodology. Based on the foregoing description, the hypotheses for this research are formulated as follows:

- H₂: There is a significant difference between the financial performance of non-sharia life insurance companies and sharia life insurance companies as measured using the Risk-based Capital.

METHOD

The object of this research is non-sharia and sharia life insurance companies registered in the Financial Services Authority (OJK) from 2016 to 2020. The data used in this study were in the form of annual financial reports of the non-sharia and sharia life insurance companies. This study used secondary data. The data used in this study is the annual report from non-sharia and sharia life insurance companies from 2016 to 2020. This data was obtained from the official website of the Financial Services Authority (OJK) and the official website of the Indonesian Life Insurance Association (AAJI). It was followed by access to the official websites of non-sharia and sharia life insurance companies. A discrimination test was used for data analysis to determine the differences in financial performance using the Early Warning System based on the capital adequacy ratio, the claim expense ratio, the liquidity ratio, and own retention ratio and using the Risk-based Capital based on the solvency ratio. [Table 1](#) below describes the operational definitions of each ratio used.

Table 1. Operational Definition of Variables

No	Ratio	Definition	Indicator (<i>Proxy</i>)
1.	Early Warning System (EWS)		
	The Adequacy of Funds Ratio	The adequacy of funds ratio is a ratio used to assess the adequacy of funds of insurance companies. (Widyani, 2018)	$\frac{\text{Own Capital}}{\text{Total Asset}} \times 100\%$
	The Claims Expense Ratio	The Claims Expense Ratio is a ratio used to measure the level of the company's profit acquisition ability and maintain its liquidity. (Widyani, 2018)	$\frac{\text{Claim Expense Incurred}}{\text{Premium earned}} \times 100\%$
	The liquidity ratio	The liquidity ratio is used to measure the company's ability to meet its current (short-term) obligations and provide an overview of whether the company is liquid or not. (Widyani, 2018)	$\frac{\text{Liability}}{\text{Admitted Asset}} \times 100\%$
	The retention ratio	The retention ratio is a ratio used to measure the amount of premiums retained compared to premiums received directly. (Widyani, 2018)	$\frac{\text{Net Premium}}{\text{Gross Premium}} \times 100\%$
2.	Risk Based Capital (RBC)		

The solvency ratio	The solvency ratio or Risk Based Capital (RBC) is a measure that indicates the level of financial safety or health of an insurance company. (Widyani, 2018)	$\frac{\text{Solvency Rate}}{\text{Minimum Risk Based Capital}} \times 100\%$
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RESULTS

Descriptive Statistics

Descriptive statistics on the data offer an overview of the study data in general. They are presented in terms of mean, standard deviation, minimum, and maximum values to describe the research variables. The descriptive statistics of this study is presented in [Table 2](#).

Table 2. Descriptive Statistics of Insurance Companies

Indicator	Minimum	Maximum	Mean	Standard deviation
Non-Sharia Life Insurance				
Capital Adequacy	7.60	63.55	29.26	15.57
Claim Expense	26.11	961.82	119.46	125.50
Liquidity	55.36	836.87	181.89	173.32
Own Retention	82.80	107.12	96.96	4.65
RBC	243.51	3696.29	836.94	654.84
Sharia Life Insurance				
Capital Adequacy	6.41	78.35	35.83	19.072
Claim Expense	7.33	111.76	40.34	26.16
Liquidity	12.57	620.32	94.13	105.97
Own Retention	29.05	1361.21	227.27	287.22
RBC	28.26	8414.86	1571.10	2127.13

Hypothesis Testing

The test was carried out by comparing the financial performance of non-sharia and sharia life insurance companies from 2016 to 2020. The decision-making in the Mann-Whitney U Test is, if Sig t < 0.05, the alternative hypothesis is accepted (H_0 is rejected). If Sig t > 0.05 the alternative hypothesis is rejected (H_0 is accepted). The following are the results of the different Mann-Whitney U Test:

Early Warning System

Capital Adequacy Ratio

The capital adequacy ratio of non-sharia and sharia life insurance companies was obtained by dividing own capital by total assets. The difference in capital adequacy ratio between non-sharia and sharia life insurance companies from 2016 to 2020 is described in [Table 3](#).

Table 3. Capital Adequacy Ratio

No	Indicator	Capital Adequacy
1	Mann-Whitney U	1179,000
2	Wilcoxon W	2719,000
3	Z	-1.994
4	Asymp. Sig. (2-tailed)	.046

The asymp value. Sig (2-tailed) is 0.046 (< 0.05). Therefore, it can be concluded that $H1_a$ is accepted. Thus, there is a significant difference between non-sharia and sharia life insurance companies as observed from the capital adequacy ratio.

Claim Expense Ratio

The claim expense ratio was obtained by dividing the claim expense incurred by the premium earned. The difference between non-sharia and sharia life insurance companies from 2016 to 2020 as observed from the claim expense ratio is depicted in [Table 4](#).

Tabel 4. Claim Expense Ratio

No	Indicator	Claim Expense
1	Mann-Whitney U	306,000
2	Wilcoxon W	1846,000
3	Z	-7.213
4	Asymp. Sig. (2-tailed)	.000

The analysis shows the asymp value. Sig (2-tailed) is 0.000 (< 0.05). Therefore, $H1_b$ is accepted. There is a significant difference between non-sharia and sharia life insurance companies as seen from the claim expense ratio.

Liquidity Ratio

The liquidity ratio was obtained by dividing the liabilities by the admitted assets. The difference in the liquidity of non-sharia and sharia life insurance companies from 2016 to 2020 is presented in [Table 5](#).

Tabel 5. Liquidity Ratio

No	Indicator	Liquidity
1	Mann-Whitney U	698,000
2	Wilcoxon W	2238,000
3	Z	-4.869
4	Asymp. Sig. (2-tailed)	.000

The asymp value. Sig (2-tailed) is 0.000 (< 0.05). Therefore, it can be concluded that $H1_c$ is accepted. Thus, there is a significant difference between non-sharia and sharia life insurance companies from 2016 to 2020 in terms of the Liquidity Ratio.

Own Retention Ratio

Own retention ratio was obtained by dividing the net premium by the gross premium. The difference in own retention ratio between the two life insurance companies is presented in [Table 6](#).

Table 6. Retention Ratio

No	Indicator	Own Retention
1	Mann-Whitney U	522,000
2	Wilcoxon W	2062,000
3	Z	-5.921
4	Asymp. Sig. (2-tailed)	.000

The asymp Sig (2-tailed) value is 0.000 (< 0.05). Therefore, $H1_d$ is accepted. Thus, there is a significant difference between non-sharia and sharia life insurance companies as observed from the own retention ratio.

Risk-based Capital Solvency Ratio

The solvency ratio was obtained by dividing the solvency rate by the minimum-risk-based capital. The comparison of non-sharia and sharia life insurance companies is described in [Table 7](#).

Table 7. Solvency Ratio

No	Indicator	Risk-based Capital
1	<i>Mann-Whitney U</i>	1504,000
2	<i>Wilcoxon W</i>	3044.000
3	<i>Z</i>	-.051
4	<i>Asymp. Sig. (2-tailed)</i>	.959

The asymp value. Sig (2-tailed) is 0.959 (> 0.05). Therefore, it can be concluded that H_2 is rejected. Thus, there is no significant difference between non-sharia and sharia life insurance companies as seen from the risk-based capital. Despite the difference in mean value, it is statistically inferred that the two groups have the same mean.

DISCUSSION

According to the research conducted, Sharia life insurance companies exhibit better financial performance than non sharia life insurance companies based on EWS ratios. This finding can be attributed to the consistent increase in premium income and asset growth of sharia life insurance companies as opposed to the declining trend observed in non sharia life insurance companies over the past five years. This result contradicts the findings by Lamies (2017) research, which suggests that the financial performance of non sharia life insurance companies is better than that of Sharia life insurance companies. The difference in the results is due to Lamies (2017) research focus on the best life insurance companies, with a different study period. Meanwhile, this research uses all life insurance companies, both non sharia and sharia, registered with the Financial Services Authority (OJK) in the most recent study period. A major factor that contributes to the superior financial performance of Sharia life insurance companies is their larger asset base, funded by tabarru' funds. These funds are collected from participants and invested in various types of investments that comply with Islamic law, making the assets funded by participants' tabarru' funds significantly larger than non sharia life insurance companies. The Mann Whitney U Test also revealed a significant difference in the claim ratio between non sharia and Sharia life insurance companies. This result is consistent with the findings of Widyani (2018) and Indah (2014), indicating that the claim ratio varies between non sharia and Sharia life insurance companies. Unlike non sharia life insurance companies, where claims are paid from the company's account, sharia life insurance companies pay claim benefits to participants from the tabarru' fund of all participants designated for mutual aid purposes. The liquidity ratio of non sharia and Sharia life insurance companies also differs significantly, with the latter performing better in this regard. This finding aligns with Widyani's (2018) research, which also found a significant difference in the financial performance of non sharia and Sharia life insurance companies. The self-retention ratio, which measures the extent to which premiums are retained compared to those received directly, is higher in Sharia life insurance companies than in non sharia life insurance companies. A high self-retention ratio indicates that the company is willing to bear the claim risk itself, assuming that the company's income will increase. Based on the above explanation, there is a significant difference in the financial performance of non sharia and Sharia life insurance companies based on the Early Warning System (EWS) method after conducting the difference test.

In this study, the measurement of RBC ratio was used to measure the financial capability of insurance companies in supporting potential liabilities that may arise from risk coverage. Based on the solvency ratio, the research results showed that sharia life insurance companies performed better compared to non sharia life insurance companies. This was due to the fact that sharia life insurance companies had continuously increasing premium revenues each year, while non sharia life insurance companies had fluctuating premium revenues from year to year, even though both companies showed good financial performance based on the solvency ratio.

These research findings were consistent with the studies conducted by [Widyani \(2018\)](#) and [Astutik \(2016\)](#), which showed no significant difference in financial performance based on the solvency ratio between non sharia life insurance companies and Sharia life insurance companies. The solvency ratio or Risk Based Capital in non sharia and sharia life insurance companies did not differ. This was because both had the same solvency ratio achievement components, although with different percentage of attainment. The only difference was the object of agreement, the relationship between the company and the customer, and the complexity of the agreement (contract). The difference in financial performance between non sharia and sharia life insurance companies observed in the Mann Whitney U Test was due to the fact that non sharia life insurance companies had more capital than Sharia life insurance companies. Financial performance assessed through the EWS and RBC methods in non sharia and Sharia life insurance companies as a basis for better investment decisions was based on the RBC method. According to [Lamies \(2017\)](#), this was because the RBC method not only considered the results of financial ratio calculations but also took into account other factors such as direct decisions made by managers in handling company finances, while the EWS only considered the financial ratios used in the EWS method. In a study conducted by [Astutik \(2016\)](#), it was stated that the performance of Sharia life insurance companies had shown the ability to surpass the performance of non sharia life insurance companies, although it was still inconsistent. Many factors influenced Sharia life insurance and insurance instruments in general. Market conditions, both in the capital and money markets, which experienced turbulence due to social, political, and global conditions were some examples. The good or bad financial performance achieved would depend greatly on the company's ability to manage it. Every business or company should evaluate what has been achieved to measure the extent of success achieved so that decisions can be made to maintain factors that contribute to good performance and to improve other factors that are less good. Good financial performance in a company would be directly proportional to the rewards received with an increasing number of investors trusting the company to invest in ([Lamies, 2017](#)).

CONCLUSION

This study reports the comparison of financial performance between non-sharia and sharia life insurance companies using the EWS and RBC. Based on (EWS), there are significant differences between the financial performance of non-sharia and sharia life insurance companies in terms of capital adequacy ratio, claim expense ratio, liquidity ratio, and own retention ratio. Moreover from the next hypothesis, there is no significant difference between the financial performance of non-sharia and sharia life insurance companies in terms of solvency ratio. the financial performance of sharia life insurance companies is better than non-sharia life insurance in terms of the solvency ratio. This research provides a theoretical contribution that better financial performance measurements are still needed because both EWS and RBC still have some shortcomings. Furthermore, this research provides a bright outlook for Shariah finance practitioners that Shariah insurance institutions are now able to compete with established non-Shariah insurance institutions.

This study, like other studies, has several limitations that can affect the study's results. This research still used a small number of companies, therefore a broader analysis is needed, such as a multi-country study. This research also has limitations regarding the analysis which is limited to the use of EWS and RBC. Furthermore, there are still many opinions stating that both of these analyses have many limitations. Future studies are recommended to include monthly or quarterly data so that the conclusions may be generalized to all companies. Future studies are encouraged to use other variables or approaches to evaluate financial performance such as Common Size, Economic Value

Added (EVA), Trend Index, and other variables as well as adding more discussion regarding the differences in fund management between non-sharia and sharia life insurance companies.

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