Analysis Early Warning System and Risk Based Capital PT Asuransi Jiwa Sinarmas MSIG Tbk

Desi Susilawati[1], Alsadyla Alfat Taqwa[2], Resma Kurnia Turidho[3]

{desisusilawati@umy.ac.id[1] , alsadylaalfattaqwa@gmail.com[2] , resma.kurnia.vok20@mail.umy.ac.id[3]}

Universitas Muhammadiyah Yogyakarta, Yogyakarta, Indonesia[1,2,3]

Abstract. The existence of sharia insurance, or takaful, continues to grow, demonstrating its contribution to the Indonesian insurance market. We generate financial information using financial ratios. This study uses a quantitative method. We rely on secondary data as a source of information. The Early Warning System ratios used in this study are the solvency ratio, profitability ratio, liquidity ratio, net premium growth ratio, and technical reserve ratio. The results showed PT Asuransi Jiwa Sinarmas MSIG Tbk.'s financial performance for 2019–2021. The results of the analysis of financial ratios and risk-based capital show that all ratios meet normal limits, except for the premium growth ratio, which is still below the minimum limit. Even though the company's financial performance is excellent because the results tend to meet standards, some of its financial ratios have weaknesses where the percentages are close to normal limits. This research was used. RBC (Risk Based Capital) is another technique that can evaluate the financial performance of the insurance business. According to the Minister of Finance Regulation of the Republic of Indonesia No. 53/PMK.010/2012, the RBC (Risk Based Capital) technique limits the solvency level and measures the expertise of the insurance business in fulfilling its business obligations, while considering the risk profile and processing size.

Keywords: Financial performance, Early Warning System, Risk-based Capital.

1 Introduction

Development within the sharia industry which is beginning to be created is right now expanding in Indonesia. The support of public interest and mindfulness that's beginning to move to the Sharia industry is progressively fortified by the lion's share of the Indonesian populace being Muslim. Based on an investigation detailed by [1], it is anticipated that the number of Muslim inhabitants in Indonesia in 2020 will increase to 263.92 million individuals This makes Indonesia have tall potential to create the Sharia industry.

On the other hand, Sharia protection is one of the non-bank education that has made great advances in Indonesia [2] intrigued in utilizing Sharia protection administrations has an impact on the development of Sharia protections. Maintaining a strategic distance from exchanges that contain the maghrib framework, to be specific maysir (betting), gharar (extortion), and usury, impacts individuals in utilizing sharia protection administrations [3]. The execution of the

UHICEB 2023, December 18-19, Jakarta, Indonesia

DOI 10.4108/eai.18-12-2023.2350224

benefit-sharing framework is exceptionally reasonable for all levels of society, both proprietors of overabundance and those who require reserves [4]

An insurance company is a business that provides risk coverage services by providing reimbursement in the event of damage, loss, financing arising, loss of profits, or the responsibility of the insured or policyholder to third parties as a result of an uncertain event. Life Insurance Company is a business that provides risk management services and pays to the insured, policyholders, or other heirs, the insured, including death or survival, and the insurance contract at the time specified in the contract. To a person, the insured, or other beneficiaries. The amount identified is based on the results of fund management. One of the insurance businesses that is growing very rapidly at the moment is PT Asuransi Jiwa Sinarmas MSIG Tbk. Public interest in utilizing Islamic insurance services has a profound effect on Sharia insurance growth. Avoidance of transactions that contain the system maghrib that is*maysir* (gambling), *gharar* (fraud), and usury affect the public in using Islamic insurance services The application of a profit-sharing system is very fair for all members of society, both owners of excess funds and those who need funds [5] PT Asuransi Jiwa Sinarmas MSIG Tbk. has been supervised and registered with the OJK (Financial Services Authority). Being one of the well-known businesses providing financial protection and planning services in Indonesia, PT Asuransi Jiwa Sinarmas MSIG Tbk. Able to provide excellent service and provide products with a focus on customer needs through distribution, provide assurance of long-term profitability, and form synergies through collaboration to contribute to generating profits that are aligned with business philosophy and values. In this way, PT Asuransi Jiwa Sinarmas MSIG Tbk. Currently in the form of a life insurance joint venture led by PT Sinar Mas Multiartha Tbk and Japanese giant Mitsui Sumitomo Insurance Co., Ltd. owned 50% of each company in 2011. PT Asuransi Jiwa Sinarmas MSIG Tbk. [6]

EWS (Early Warning System) is a parameter in forming the NAIC (The National Association of Insurance Commissioners) or insurance company regulators in the United States that measures the financial performance and soundness of the insurance business in terms of financial ratios: solvency ratio, liquidity ratio, and profitability ratios as a measurement of the level of premium stability and the level of technical reserves. The EWS (Early Warning System) technique for life insurance business people in Indonesia has been stipulated in PSAK (Statement of Financial Accounting Standards) No.36 concerning Accounting for Life Insurance. Another technique that can be used in evaluating the financial performance of the insurance business is RBC (Risk Based Capital). Based on the Minister of Finance Regulation of the Republic of Indonesia No.53/PMK.010/2012, RBC (Risk Based Capital) is a solvency level limiting technique used in measuring insurance business expertise in meeting all of its business obligations taking into account the risk profile and size being processed.

Fundamental factors in insurance companies are reflected in ratios Financial Early Warning System which is specifically used in analyzing financial ratios of insurance companies while in other financial services especially in the banking industry, the sizes commonly used in the measurement of a company's performance is expressed in bank financial ratios using the RBC ratio.

Sinarmas MSIG acknowledged that in the case of insurance fraud which reached 200 billion at its branch company in Manado, the perpetrators carried out their actions not alone, but in collaboration with several parties including banking officers. This should be of concern to the performance of the parent company's financial statements to maintain transparency and financial health so that similar things can be well controlled, so the authors choose PT Asuransi Jiwa Sinarmas MSIG Tbk. as an object of research using the EWS (Early Warning System) and RBC (Risk Based Capital) methods, so the authors take research with the title "Financial Performance Analysis of Sharia Insurance Companies Based on the Early Warning System (EWS) and Risk-Based Capital at PT Asuransi Jiwa Sinarmas MSIG Tbk." to find out whether this incident has an effect on financial performance in the following year and can be a source in assessing the soundness of the company and used as material for evaluating company resources.

Literature review

Based on RI Law No.40/2014 and OJK Control (Money related Administrations Specialist) No.69/POJK.05/2016, Sharia Life Protections Commerce is one of the businesses that carry out Sharia life protections trade, such as overseeing dangers concurring to Sharia standards so that they offer assistance to each other as well as giving assurance by setting installments based on the life and passing of individuals, or other installments to individuals or other parties who have rights inside a certain period based on the rules within the contract, where the sum has been decided or based on the comes about of preparing of sharia life protections trade funds and sharia units within the protections trade The soul can as it carried out life protections commerce, particularly the wellbeing protections trade line, annuity trade line, and individual mischance protection line agreeing to sharia principles [7], [8]. Based on the investigation, it is demonstrated that the findings are still conflicting and curious for advance inquiries to get more reliable and common discoveries that can be utilized as an extra last reference for comparative research

Financial reports are a source of information that describes a company's financial performance and are the most important means of obtaining messages regarding financial position and business results. Financial reporting can help several stakeholders to understand where a business has realized its goals. The state of a business is described in the achievements it achieves. Financial performance (financial performance) is a tool needed by a financial analyst in evaluating performance, as well as the financial condition of a business. According to opinion [9], financial achievement is the result or performance that has been achieved by business management in carrying out the function of managing business assets effectively within a certain time. The measure of business performance is an element of the financial performance analysis activity [10]. Financial performance analysis is an activity that aims to critically study the financial performance of a business in terms of interpretation, financial, measurement, and calculation data, as well as providing solutions to financial problems experienced by the business at a certain time. [11]

Early Warning Frameworks are coordinated frameworks of danger observation, determining and forecast, catastrophe chance evaluation, communication readiness exercises frameworks and forms that empower people, communities, governments, businesses, and others to convenient activity to decrease fiasco dangers in the progress of perilous occasions. Calculation of the Early Warning Framework. EWS is utilized by numerous nations to screen financial performance insurance companies, this is often because the examination comes because this system gives early caution (early caution) concerning budgetary conditions so merely can utilized in analyzing the money-related execution of protection companies. The financial execution of protection companies can be seen to be encountering increment or diminish from the comes about of budgetary proportion investigation.

Ordinarily, investors are fascinated by the short-term budgetary state of a trade as well as profit-paying capabilities. The requirement for this data can be decided by calculating money-related proportions based on needs. The movement of calculating budgetary proportions is for the most part translated as financial ratio analysis. Monetary proportion examination may be an implies of measuring budgetary execution and assessing a company's money-related well-being. This incorporates checking on information, calculating, comparing comes about, deciphering, and fathoming issues. Based on the Serve of Back Control of the Republic of Indonesia No.53/PMK.10/2012 concerning the Money-related Well-being of the Protections Commerce and Reinsurance Commerce, the soundness of the protections commerce, both conventional and sharia insurance, is assessed utilizing the RBC (Chance Based Capital) strategy. RBC could be a dissolvability rating strategy that's utilized to degree the mastery of protection commerce in the assembly of all commitments by considering the chance profile and measure of the method. In Indonesia, Sharia protections and reinsurance businesses are required to have a least dissolvability level (RBC) of 120% in tabarru' stores and trade reserves.

2. Method

The object of this study is PT Asuransi Jiwa Sinarmas MSIG Tbk. The type of data in this study is quantitative. Quantitative data is statistical data in the form of numbers. The data used in this study is secondary data, including data obtained from several available sources, accessible via the Internet, browsing documents, or published messages. This study also uses time series data, which is one of the results of sequential data collection based on a period within a certain range with a period of 3 years from 2019 to 2021. Several stages that can be used in this study include:

1. Calculation and Analysis of Sharia Insurance Business Financial Reporting using financial ratio tools with the help of the EWS (Early Warning System) method, namely profitability ratios that show the Return on Investment Ratio and Claim Expense Ratio, Premium Growth Ratio, Liquidity Ratio, Technical Reserve Ratio, Solvency which shows the ratio RBC (Risk Based Capital). (Mendeley)
2. Carry out analysis with data processing
3. Based on PSAK No. 36 of 2010 Calculating ratios with the following formula:
   a. This limit ratio of solvency levels can be solved using the equation:

$$\text{Solvency Ratio} = \frac{\text{Asset}}{\text{Total Liabilities}} \times 100\,\%$$

   b. *Profitability Ratios*(Profitability Ratio)

$$\text{Claim Expense Ratio} = \frac{\text{Claim Expense}}{\text{Premi Revenue}} \times 100\%$$

$$\text{Return on Investment Ratio} - \frac{\text{Net Investment Income}}{\text{Average of Investment}} \times 100\%$$

$$\text{Commission Ratio} = \frac{\text{Commission}}{\text{Premi Revenue}} \times 100\%$$

$$\text{Asset liquidity ratio} = \frac{\text{Total Aset}}{\text{Total Liabilities}} \text{X } 100\%$$

$$\text{Premium Growth Ratio} = \frac{\text{incrase/decrase in neto premi}}{\text{netto premi n-1}}$$

$$\text{Technical reserve ratio: } \frac{\text{Technical Liabilities}}{\text{Netto Premi}} \text{X } 100\%$$

$$\text{RBC (Risk Based Capital) Ratio } \frac{\text{Limit of Solvency}}{\text{Minimal Solvency}} \times 100\%$$

Table 1. Rating Indicator Ratios

No	Ratio name	% range	Category
1	Solvency Level Limit Ratio	≥ 33.3%	Normal
2	Profitability Ratio		
	a. Claim Expense Ratio	≤ 100%	Normal
	b. Return On Investment Ratio	≥15%	Normal
3	Asset Liquidity Ratio	≥ 120%	Normal
4	Premium Growth Ratio	≥ 23%	Normal

Source(Nurfadila, 2015)

Table 2 Assessment indicators

Risk-Based Capital

No	Ratio name	% range	Category
1	*Risk-Based Capital*	≥ 120%	Normal

Source (Indonesia, 2018)

3. Results and Discussion

The results and how they might be interpreted in light of earlier research and working hypotheses should be reported by the authors. It is important to discuss the results and their consequences in the widest context feasible and to draw attention to the work's limitations. Future directions for research can also be addressed. Results and this section could be combined. Clearly and succinctly state the experimental findings, their interpretations, and any conclusions that can be made. The results and their interpretation in light of prior research and working hypotheses should be covered by the authors. It is important to convey the results and their consequences in the widest context feasible while also emphasizing the work's limitations. Future directions for research can also be addressed. The description of the research results can also be presented along with tables of data processing results or tables that are felt to support the explanation of the research results. The description of the research results can also be presented along with a table of data processing results or a table that is deemed supportive of the explanation of the research results.

Table 3. Solvency Level

Calculation Results of Solvability Ratios for 2019-2021

Year	Achieve Ratio Results	Category
2019	202.81%	Normal
2020	204.90%	Normal
2021	187.47%	Normal
Average of the last three years	198,40	Normal

Source: Primary Data Processed, 2022

Based on Table 3 above, the calculation results are presented within the normal percentage range. The solvency limit ratio is a ratio that shows the ability of a company to bear debt. The solvency limit ratio has a minimum limit of 33.3%.

From 2019 to 2021, the average solvency ratio is 198.40%. This shows that the solvency ratio of PT Asuransi Jiwa Sinarmas MSIG Tbk has a very positive trend. Years of operation experienced fluctuating changes, but still within a good range.

Table 4. Profitability Level

Claim Expense Calculation Results for 2019-2021

Year	Achieve Ratio Results	Category
2019	82.80%	Pretty Normal
2020	172.26%	Normal
2021	90.66%	Pretty Normal
Average of the last three years	115,24	Normal

Source: Primary Data Processed, 2022

Based on Table 4 above, the results of calculating claim expenses are presented which are within the normal percentage range. The claim expense ratio is a ratio that shows claims that occur in insurance companies. The claim expense ratio has a maximum limit of 100%. Efforts are being made to increase the minimum ratio by increasing claim expenses and stabilizing premium income every year.

In 2020, the company experienced a difficult case. 200 billion in insurance was breached and the trial has been rolling at the Manado District Court. This of course has a negative impact on the company. One of the impacts felt is that the company has to compensate customers who use it, loss of image, and messy financial flows. From 2019 to 2021, the average solvency ratio is 115.24%. This shows that PT Asuransi Jiwa Sinarmas MSIG Tbk has claims expenses that are still in the good category (normal limits). Even though in 2019 and 2021 the range is below 100%, the average for the last 3 (three) years has had a good report card.

Table 5. Return on Investment Calculation Results for 2019-2021

Year	Achieve Ratio Results	Category
2019	36.63%	Normal
2020	34.40%	Normal
2021	27.31%	Normal
Average of the last three years	32.78%	Normal

Source: Primary Data Processed, 2022

The return on investment ratio is used to measure how much the results achieved from the investment made by the company. The Return on Investment ratio has a minimum limit of 15%. Based on Table 2.5, it was found that PT Asuransi Jiwa Sinarmas MSIG from 2029-2021 showed very good results. This is because the normal limit of the return on investment ratio is exceeded by quite a large number. Even though from 2019 to 2021 it has decreased, it is still in a good category. Of course, this should be a concern for the company to increase the percentage so that it does not experience a similar decline in the following year.

Table 6. Commission Ratio Calculation Results for 2019-2021

Year	Achieve Ratio Results
2019	8.74%
2020	10.70%
2021	9.53%
Average of the last three years	9.65%

Source: Primary Data Processed, 2022

The commission ratio is used to measure commission costs incurred for business needs so that the company earns income. There is no limit to the commission ratio. From the calculation results shown in Table 5, it is known that in 2020 the percentage has increased while in 2021 it will be 9.53%. However, the average commission ratio is in good condition. This shows that costs are quite stable.

Table 7. Profitability Ratio Calculation Results

Ratio Type	Year	Results Achievement	Category
Claim Expenses	2019	82.80%	Pretty Normal
	2020	172.26%	Normal
	2021	90.66%	Pretty Normal
Calculation of	2019	36.63%	Normal
Return on	2020	34.40%	Normal
Investment	2021	27.31%	Normal
Commission	2019	8.74%	No limits-
Ratio	2020	124.70%	No limits-
	2021	9.53%	No limits -

Source: Primary Data Processed, 2022

Table 8. Liquidity Level

Results of Calculation of Liquidity Ratios for 2019-2021

Year	Achieve Ratio Results	Category
2019	49.55%	Does not meet normal limits
2020	48.80%	Does not meet normal limits
2021	5.33%	Does not meet normal limits
Average of the last three years	34.56%	Does not meet normal limits

Source: Primary Data Processed, 2022

The ability of the business to meet commitments or settle short-term debt is indicated by the liquidity ratio. There is a maximum restriction of 120% for the liquidity ratio. Ratio of Liquidity to calculate the amount of money available for debt repayment. Measuring liquidity has advantages as a tool for planning, particularly when it comes to debt and cash management. to periodically compare the company's liquidity over multiple periods in order to assess its state and position. To identify the company's shortcomings concerning each component of current liabilities and assets. According to the test results, the liquidity ratio is below the typical bar, which denotes an adverse situation. The ability of the business to pay down its maturing debt is correlated with its liquidity situation. The company's failure to fulfill its debt, particularly its matured short-term debt. One possible contributing aspect is that the company doesn't have enough money right now, but it will need to wait till it has enough cash on hand when it matures. By examining the present liquidity ratio, managers can use the measurement results as a catalyst to enhance their performance.

Table 9. Results of Calculation of Net Premium Growth for 2019-2021

Year	Achieve Ratio Results	Category
2019	0.008%	Not yet meet the normal limit
2020	0.006%	Not yet meet the normal limit
2021	0.121%	Not yet meet the normal limit
Average of the last three years	0.045%	Not yet meet the normal limit

Source: Primary Data Processed, 2022

The premium growth ratio illustrates how much premiums have increased this year over last year. There is a minimum of 23% for the premium growth ratio.
The premium growth ratio illustrates how much premiums have increased this year over last year. There is a minimum restriction of 120% for the liquidity ratio. The results of calculating the liquidity ratio from 2019 to 2021 are displayed in Table 9. The percentages for 2020 and 2021 have reportedly dropped. The fall in 2021 was so great that the findings of the 2019–2021 calculation fell outside of the predetermined normal limits.

Table 10. Results of Calculation of the Technical Reserve Ratio for 2019-2021

Year	Achieve Ratio Results
2019	218,42%
2020	203.66%
2021	227.77%
Average of the last three years	216.62%

Source: Primary Data Processed, 2022

The ratio of investment to technical reserves is used to measure the amount of technical liability formed by an insurance company on investment. There is no limit to the ratio of investment to technical reserves.

Table 11. Risk Based Capital

Assessment of Risk-Based Capital Weight

RBC%	Score	Criteria
X > 150%	15	Very good
150% > x > 120%	12	Good
120% > x > 110%	8	Enough
110% > x > 100%	4	Not enough
X < 100%	0	Very less

To make it easier, the results of PT Asuransi Jiwa Sinarmas MSIG's RBC calculations from 2029-2021 look as presented in Table 12 below:

Table 12. The calculation results in Risk Based Capital for 2019-2021

Year	Achieve Ratio Results	Category
2019	169%	Normal
2020	170.75%	Normal
2021	156.23%	Normal
Average of the last three years	165.33%	Normal

Source: Primary Data Processed, 2022

Risk-Based Capital is used to measure the soundness level of insurance and reinsurance companies. Nilia average Risk-Based Capital PT. Sinarmas MSIG Tbk Life Insurance in 2019 reached 155.33%. Based on a government decree, this result is higher than the minimum limit of 120%, and according to the Minister of BUMN Regulation Number: Per -10/MBU/2014, a score of 15 is obtained with very good criteria. Risk-Based Capital in 2017.

Table 13. Financial Performance Assessment of PT. Sinarmas Life Insurance MSIG Tbk. EWS Ratio Recapitulation for 2019-2021

Ratio	Normal Limit	2019	2020	2021
Solvency Ratio	Maximum 33.3%	202.81 %	204.90 %	187.47 %
Claim Expense Ratio	Maximum 100%	82.80%	172.26%	90.66%
Return On Investment Ratio	Minimum 15%	36.63%	34.40%	27.31%
Commission Ratio	-	8.74%	124.70%	9.53%
Liquidity Ratio	Maximum 120%	49.55%	48.80%	5.33%
Premium Growth Ratio	Minimum 23%	0.008%	0.006%	0.121%
Technical Reserve Ratio	-	218.42%	203.66%	227.77%
Risk Based Capital	Minimum 120%	169%	170.75%	156.21%

Source: Primary Data Processed, 2022

4. Conclusion

This research activity has been successfully carried out, marked by the large number of participants who were actively involved in the activities held. Participants' response to this activity was generally very positive. Most participants stated that they obtained significant benefits from the activities held. Apart from that, it was also shown that there was an increase in the results of the pre-test and post-test that had been carried out. In the future, it is hoped that activities can be held in collaboration with related parties to support increased access in the future.

References

[1] M. R. Woodward, "Indonesia, Islam, And The Prospect For Democracy".

[2] K. Handayani, "Analisis Kinerja Keuangan Perusahaan Bumn Asuransi Yang Go Publik (Menggunakan Analisis Ratio Dan Risk Based Capital)," *J. Stud. Manaj. Dan Bisnis*, Vol. 2, No. 2, Pp. 188–201, 2015.

[3] P. N. Tabarru, D. Prinsip, A. Syariah, S. Kasus, P. Asuransi, And P. Syariah, "Bongaya Journal For Research In Accounting," Vol. 1, No. April, Pp. 65–71, 2018.

[4] U. S. Maret, *Akumulasi: Indonesian Journal Of Applied Accounting And Finance*.

[5] A. A. Alazhari, M. T. B, And Y. Amelia, "The Implementation Of Murabahah Contract On The Retirement Financing At Sharia Bank Of Indonesia," *Tadayun J. Huk. Ekon. Syariah*, Vol. 4, No. 2, Pp. 163–176, 2023, Doi: 10.24239/Tadayun.V4i2.106.

[6] "Laporan Tahunan Penerapan Tata Kelola 2020_Konvensional.Pdf."

[7] S. Tinggi, I. Kesehatan, A. Abstrak, And B. D. Pemikiran, "Kegiatan Advokasi Dan Penyuluhan Perilaku Merokok Dalam Rumah Di Rt 01 Rw 04 Desa Sukamulya Kecamatan Singaparna Tahun 2024 Ayu Yugi Lestari," Vol. 01, No. April, Pp. 34–39, 2024.

[8] D. Susilawati And A. A. Taqwa, "Meninjau Sistem Peringatan Dini (Early Warning System) Dan Risk Based Capital Pt Asuransi Jiwa Sinarmas Msig Tbk .," 2022.

[9] N. Suyatna, “The Role Of Qard Accounting In Sharia Insurance Of The Covid-19 Period,” *J. Mantik*, No. January 2023, 2023, Doi: 10.35335/Mantik.V7i3.4324.

[10] R. D. Taruna And S. Setiawan, “‘Pengaruh Kinerja Keuangan Terhadap Pertumbuhan Laba Bank Umum Di Indonesia,’” *Aims J. Account. Inf. Syst.*, Vol. 2, No, Doi: 10.32627/Aims.V2i1.62.

[11] S. M. Farihah And S. Setiawan, “Determinan Intellectual Capital Terhadap Profitabilitas Di Bank Syariah: Pengujian Mediasi Kinerja Keuangan Dan Kinerja Non Keuangan,” *J. Samudra Ekon. Dan Bisnis*, Vol. 11, No. 2, Pp. 151–165, 2020, Doi: 10.33059/Jseb.V11i2.1996.