Gaining Sustainable Performance through Risk Management System: Dealing with Uncertainty in Islamic Insurance Companies

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Company Profitability, Enterprise Risk Management, Islamic Insurance Companies, Risk-Based Capital

Abstract
This study investigates how the halal business process sustains company performance by examining the effect of premiums, claims, operating costs, investment income, and risk-based capital on the profitability of Islamic insurance in Indonesia. In particular, the risk management system is how Islamic insurance companies restrain risks to gain profits, considering that the basic concept of Islamic insurance is the risk sharing approach. Moreover, to provide research novelty and originality, the authors expand the research framework to include the interactions of the company's risk management system to test the influence of investment income and risk-based capital on profitability. The overall population comprised all Islamic insurance companies in Indonesia, but samples were restricted to life insurance businesses registered with the Indonesian Islamic Insurance Association for 2018-2022. The authors were left with a sample of 13 companies after using a non-probability approach with a purposive sampling technique. The data was analyzed by STATA 17 on four gradual statistical procedures: Panel Data Regression Analysis, Moderated Regression Analysis, Robustness Test Analysis, and Content Analysis. The results demonstrate that the premiums, claims, and investment income have no significant effect on company profitability. Meanwhile, operational costs and risk-based capital have a significant effect on profitability performance. Furthermore, enterprise risk management successfully acts as a moderating variable. Based on findings, the authors strongly recommend that Islamic insurance companies effectively implement enterprise risk management in dealing with uncertain circumstances for the real business process.

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1. Introduction

The rapid development of the Islamic economy in Indonesia is marked by the emergence of the Islamic finance industry. This industry is one of the most popular industries in the world and is considered a core part of economic recovery policy following the COVID-19 pandemic. Based on data from the Global Islamic Economy 2022, the global Islamic finance industry was worth USD 3.6 trillion in 2021 and was expected to increase by 8.0% in 2022 and to reach USD 4.9 trillion in 2025 (Global Islamic Economy, 2023/24). The development of this industry has had a positive influence on the expansion of the Islamic insurance industry in Indonesia (Harahap & Nasution, 2021). This can be seen from the growth in assets of the non-bank financial industry in 2021, which increased by 3.90%from the previous year, with Islamic non-bank financial industry assets in 2021 worth IDR 120.81 trillion (USD 8.47 billion), including IDR 43.55 trillion (USD 3.05 billion) contributed by assets owned by Islamic insurance (OJK, 2021).

The development of the Islamic insurance industry has progressed rapidly and is increasingly in demand, in line with the large Muslim population in Indonesia (Albanna & Nurdany, 2022; Zen & Manda, 2021). In Indonesia, another term for Islamic insurance is takaful. The Fatwa of the National Islamic Council No. 21/DSN-MUI/X/2001 concerning General Guidelines for Islamic Insurance explains that Islamic insurance is an attempt to protect and help each other between several people or parties through investment in the form of assets and/or tabarru', providing a model of return to overcome certain risks through a contract (agreement) that is in accordance with Islamic principals (MUI, 2001).

The global Islamic insurance market is projected to grow at a compound annual growth rate of 11% between 2021 and 2016 (IMARC Group, 2021). The growth of Islamic insurance can be seen from its operational performance, as evaluated through all aspects contained in businesses' financial reports (Fatmawati & Devy, 2021; Prahasti, 2020). With healthy financial performances and effective strategies, companies can compete and maintain business continuity (Maharani & Ferli, 2020).

Financial observers can assess and evaluate performance as a whole by looking at its success in obtaining profit in each period so that it can be used as a basis for making economic decisions (Hidayat *et al.*, 2021). Profit is used as a measure in determining whether a company experiences a profit or loss (Cummins & Weiss, 2009). Profit is a summary of income and expenses from the company's operational activities for a certain period, which is then written into additions and reductions in capital (Hidayat *et al.*, 2021). Companies that have good financial conditions and operational capabilities will be marked by profit growth (Harahap & Nasution, 2021), and so that profits can increase as desired, companies can minimize their burden and maximize income (Cummins & Weiss, 2009).

Risk assessment in the financial sector has historically been carried out based on the balance sheet components of each financial institution. The failure of financial institutions can have a negative impact on the entire financial system. So, in this case, non-bank financial services institutions, including Islamic life insurance businesses, are required to implement risk management effectively so that company operations can run smoothly. Having structured risk measurements can make companies more resilient to shocks (Chaturvedi & Singh, 2022).

The Indonesian government has issued risk management standards and policies as guiding principles for non-bank financial service institutions (Ahmad & Ishak, 2021). In this case, risk control is prepared by implementing regulations POJK 44/POJK.05/2020 concerning the Implementation of Risk Management for Non-bank Financial Service Institutions and SEOJK 8/SEOJK.05/2021 concerning the Implementation of Risk Management for Insurance Companies, Islamic Insurance Companies, Reinsurance Companies, and Islamic Reinsurance Companies. The regulations outline nine risk indicators: strategic risk, operational risk, insurance risk, credit risk, market risk, liquidity risk, legal risk, compliance risk, and reputation risk.

Companies can strive to strengthen the supervisory accountability of the board of directors, board of commissioners, and Islamic supervisory board and encourage a healthy system (Ahmad & Ishak, 2021). The committees are expected to be able to establish a comprehensive methodology in the decision-making process. Management is also expected to ensure the implementation of effective risk management by policies, procedures, and governance practices. If a company has problems managing its assets, it requires immediate action for risk mitigation strategies (Kaplan & Mikes, 2012; Reddy & Reddy, 2020). In this case, modern risk management practices are needed that classify risks broadly as economic risks (micro and macro risks) and develop a strategic analysis framework, so that companies can work effectively in assessing and mitigating risks in the internal and external environment (Kaplan & Mikes, 2012; Reddy & Reddy, 2020).

Many variables can affect the profits of Islamic life insurance companies. Based on research by Khaddafi & Agung (2021), variables that affect profits include investment returns, premiums earned, claims expenses, and operating costs.

Meanwhile, according to Maharani and Ferli (2020), there are three key variables: participant contribution, claim costs, and risk-based capital. However, studies on the topic of Islamic insurance are still rare, even though Islamic insurance is an instrument that can be used in managing and mitigating various risks that probably occur. Empirically, relevant previous studies lead to inconsistent results in their research findings, so the authors were encouraged to investigate independent variables (premiums, claims, operational costs, investment income, and risk-based capital) on company profitability. To seek research novelty and originality, the authors provide a fundamental distinction by involving Enterprise Risk Management (ERM) as an interaction or moderation effect, this has not been done in previous studies. ERM is expected to strengthen the relationship (direct effect) between investment income and risk-based capital variables on company profits.

Based on this background, researchers are interested in analyzing various independent variables that influence company's profitability. Good company performance is reflected in the level of profit earned and companies' success in managing risks and assets. Moreover, the authors stand with the high confidence level that one of the pathways to reach and generate long lasting sustainability is the company's ability to handle the number of risks as good as possible to overcome uncertain conditions. If profits are generated by large companies, it indicates that the performance and financial health are good, so that they are able to develop and compete.

2. Literature Review

2.1. Islamic Insurance versus Conventional Insurance

The company's business model will greatly determine the company's success as measured through financial performance. Islamic insurance companies have a business model that is very different from conventional insurance companies. In general, conventional insurance companies adopt a 'risk transfer' scheme, where the insurance company will cover the risks of all insurance policy holders. Through a model like this, insurance companies view the premiums offered by customers to the company are income, while claim payments by the company to customers are counted as costs.

On the other hand, Islamic insurance companies implement a risk sharing scheme (known as tabarru' contract in Islamic terms) as has also been used in several countries such as Malaysia (Kamil & Nor, 2014), Pakistan (Ali *et al.*, 2019), Brunei Darussalam (Matsawali *et al.*, 2012), Nigeria (Kazaure, 2017), United

Kingdom (Coolen-Maturi, 2013), Ireland (Mauro *et al.*, 2013), Middle East and North African countries (Sherif & Hussnain, 2017), and the Gulf Country Council countries (Al-Amri, 2015). Based on the Fatwa of the National Islamic Council of the Indonesian Ulema Council (DSN-MUI) Number 53 of 2006, a tabarru' agreement is any type of business carried out with the aim of kindness and mutual help. It is not for commercial purposes. Specifically, each Islamic insurance policy holder will contribute, with contributions included in the tabarru' fund. These tabarru' funds are then used to pay claims from Islamic insurance customers whose funds come from member contributions.

In short, tabarru' funds are not company income, and customer claims are not counted as expenses for Islamic insurance companies, as the money used to pay customer claims is not company money but comes from tabarru' fund contributions. Thus, the business model adopted by Islamic insurance companies is believed to be able to produce sustainable financial performance to face conditions of uncertainty in the future. The company does not bear the burden of claims alone but rather has the participation of all Islamic insurance policy holders, who take responsibility for helping members who experience difficulties or are struck by disaster.

Furthermore, Islamic insurance companies as providers of Islamic insurance management services will receive compensation in the form of ujrah (fee). Apart from that, in the case of tabarru' funds managed based on a mudharabah agreement, Islamic insurance companies act as fund managers (mudharib) so they are entitled to receive profit sharing according to the agreed percentage. In general, it can be understood that Islamic insurance is a financial product that provides guarantees against practices or activities that are prohibited in Islam such as riba, maysir, and gharar. Islamic insurance must also be managed in a transparent, accountable, and professional manner, and in accordance with Islamic principles.

There are at least three crucial points that differentiate the Islamic insurance system from conventional insurance, including: 1) tabarru' funds are the main characteristic and an added value compared to conventional insurance. These funds are used to help other policy holders in reducing the negative impact (financial loss) of disasters that befall them; 2) Islamic insurance companies must manage funds following Islamic principles, including by investing in investment instruments that comply with Islamic. The implementation of Islamic principles is supervised by the Islamic supervisory board, which has the function of supervising and providing advice on the implementation of the insurance business so that it is run in a trustworthy manner in accordance with Islamic principles. In carrying out their tasks, the boards refer to the Fatwa of the National Islamic Council of the Indonesian Ulema Council; and 3) Islamic insurance companies are required to manage policy holder contribution funds and claims, as well as placement and investment profit sharing in a transparent manner.

The company must inform participants regarding the amount of premiums used for tabarru' and ujrah, the use of underwriting surplus, and the portion of investment profit sharing. The use of underwriting surplus must first obtain recommendations from company experts and approval from the Islamic Supervisory Board. The underwriting surplus according to Financial Services Authority Regulation (POJK) No 6 of 2023 is the difference between the total contribution to the tabarru' fund plus claim recovery from reinsurers minus claim payments, reinsurance contributions, and increases in technical allowances, in a certain period.

Based on the explanation above, the researchers formulate conceptual differences between Islamic and conventional insurance companies. These are illustrated in Table 1.

Table 1. Differences between Islamic and Conventional Insurance Companies

No	Dimensions	Islamic Insurance Companies	Conventional Insurance Companies
1.	Basic Concept	Share of Risk	Transfer of Risk
2.	Financial Management	Comply with Islamic Principles	Not Comply with Islamic Principles
3.	Tabarru' Funds	Yes	No
4.	Islamic Supervisory Board	Yes	No
5.	Company Profitability	• Profit Sharing (Mudharabah) • Ujrah (Ijarah)	Insurance Premium (Policyholder Payment)
6.	Claim	Not Company Cost	Company Cost
7.	Surplus Underwriting	Given to Tabarru' Fund, Policyholders with Specific Criterias, and Company Fund	Not Given

2.2. Enterprise Risk Management

Non-Bank financial service institutions are required to implement risk management effectively. This can be done by actively monitoring the board of directors, board of commissioners, and Islamic supervisory board; adequacy of risk management policies and procedures and determination of risk limits; adequacy of risk identification, measurement, control, and monitoring processes as well as risk management information systems; and a comprehensive internal control system. The Islamic life insurance businesses studied have made efforts to support the implementation of risk management effectively and optimally. The company has taken an approach to managing risks comprehensively, improving performance in managing uncertainty, minimizing threats, and maximizing opportunities. Risk management is carried out systematically, starting with a process of identifying, measuring, controlling, monitoring, and reporting risks which is carried out on an ongoing basis.

F[redacted])

Source: No 72 /POJK.05/2016

However, based on the Financial Services Authority (OJK) as a regulator, it has established standardization of risk application where companies are required to identify a minimum of five risks to be managed (see Figure 1). As stipulated in POJK 6 of 2023, risk-based capital (RBC) is measured by comparing the company's solvency level with tabarru' funds and tanahud funds, where, the tabarru' and tanahud funds, or what are called Risk-Based Minimum Tanahud Funds (DTMBR) are the amount of funds needed to minimize or mitigate risks due to the management of assets and liabilities from the tabarru' and tanahud funds. Furthermore, OJK has determined that the minimum risk level for tabarru' and tanahud funds in Islamic insurance companies is 120%. This is in accordance with the stipulation of Number 72/POJK.05/2016. Based on the stipulations and regulations that have been implemented by companies regarding the source of Islamic insurance funds, companies are very concerned about risk factors in the face of national and global economic uncertainty. This is in line with Rifas *et al.* (2023), who found that during and after economic crisis followed by COVID-19 pandemic, most companies experienced a decline in performance because they did not participate in Islamic insurance.

2.3. Effect of Premiums on Profit

Insurance premiums are funds that must be paid by policy holders to the company in return for the protection services provided in accordance with a previously agreed contract (Hemrit, 2020). Premiums are managed by the company as Islamic investments to obtain profits and fees (ujrah) in accordance with the approved contract (mudharabah) (Purwaningrum & Filianti, 2020). The company earns a fee (ujrah) for its role as a quality fund manager, which indirectly affects the growth of the company's profit value (Hidayat *et al.*, 2021). Participant contribution funds are a combination of tabarru' and ujrah funds, which are managed according to Islamic principles and accountability for the separation of funds. The distribution of welfare can be accounted for, ensuring it is in accordance with the Islamic Split Fund Theory theory (Puspitasari, 2016). This separation of funds supports optimal fund management, providing benefits to companies and Islamic insurance participants (Aprilyani *et al.*, 2020). Researchers (Nasution and Nanda, 2020; Wahyuddin and Mauliyana, 2021) show that the premium variable has a significant positive effect on insurance company profits. This means that the higher the premium earned, the greater the profit the company gets. Therefore, the following hypothesis was formed:

H1: Premiums have a positive and significant effect on profits.

2.4. Effect of Claims on Profit

Based on PSAK No. 28, claims are compensation money paid by the insurance company to the insured in connection with the occurrence of risks based on contracts or agreements made (Metwally & Diab, 2024). High claim costs reflect the amount of money insurance companies must spend to cover claims and benefits of insured participants. If the total claim expenses are greater than the premium contribution (income), then the financial statements will show a negative number in the profit. According to the Islamic Split Fund Theory, claims must be paid as a form of accountability to God and people (the insured party) based on previously agreed agreements (Puspitasari, 2016). According to research (Fatmawati & Devy, 2021; Nurbaya & Alam, 2019; Reschiwati & Solikhah, 2018), claims have a significant negative effect on insurance companies' net profits. Therefore, the following hypothesis was formed:

H2: Claims have a negative and significant effect on profit.

2.5. Effect of Operating Costs on Profit

Operational costs are the costs which do not have a direct relationship with the company's products but are related to the company's operational activities (Rubio-Misas, 2020). Operational costs must be paid by the company so that the business can operate (Pahlevi, 2022). The greater the operational costs, the lower the profit growth will be because profits are obtained from the difference in income minus expenses (Fatmawati & Devy, 2021; Khaddafi & Agung, 2021). The main source of operational financing for insurance companies is from ujrah, while tabarru' funds are used for policy holders' claims. As noted, the Islamic Split Fund Theory shows that operational financing will reduce the ujrah of Islamic insurance companies for their efforts in managing funds, so that it will indirectly reduce the profits Islamic insurance companies(Puspitasari, 2016). Based on research by (Fatmawati & Devy, 2021), operational costs have a significant negative effect on asset growth. The greater the operating costs incurred, the lower the growth rate of Islamic insurance assets, indirectly impacting profits. Therefore, the following hypothesis was formed:

H3: Operating costs have a negative and significant effect on profit.

2.6. Effect of Investment Income on Profit

Investment is an activity of investing capital in the form of assets that have the aim of obtaining profits and distributing the proceeds to owners of funds (managers and policy holders) (Juniyanto & Sari, 2022). Funds are invested in securities and investment instruments that comply with Islamic principles and whose value is expected to increase in the future (Hidayat *et al.*, 2021; Yolanda Oktavia *et al.*, 2020). Insurance companies that invest their assets properly will gain a large return on investment and increase the amount of assets to be reinvested, further increasing company profits (Markonah, 2021). Based on signal theory, companies must provide good instructions to investors regarding the state of the company, especially regarding increasing company investment (Novitasari *et al.*, 2020). This guide is important because it can influence the investment decisions of outsiders of the company which will later have an impact on company income (Fauziah & Sudiyatno, 2020).

Based on research by (Harahap & Nasution, 2021; Markonah, 2021; Wahyuddin & Mauliyana, 2021), investment returns have a significant positive effect on insurance company profits. This indicates that if the return is large, it will increase the portion of income in the income statement, which will have an impact on increasing profits. Therefore, the following hypothesis was formed:

H4: Investment income has a positive and significant effect on profit.

2.7. Effect of Risk-Based Capital on Profit

Based on Government Regulation (PP) No. 63 of 2004, RBC is a measure that provides information on the level of financial security or health of an insurance company that must be achieved by the company in accordance with regulations related to percentages set by the government (Maharani & Ferli, 2020). RBC is a key parameter for measuring the financial health of insurance companies by using the solvency ratio to the risks faced (Nasution & Nanda, 2020). With an RBC of 120%, the company will always be in a position to be able to pay all obligations and risks incurred, including claims (Maharani & Ferli, 2020). This is in line with signal theory, which states that if a company can meet the RBC of 120%, it will give a good signal to investors, influencing investment decisions and increasing company profits. Scholars suggest, RBC has a significant positive effect on insurance company profits (Markonah, 2021; Nasution & Nanda, 2020; Wahyuddin & Mauliyana, 2021). In order for public trust to increase, companies must be able to reach a sufficient level of solvency, so that people can entrust their assets to insurance company services. This will affect the absorption of insurance premium income and affect the increase in company profits (Nasution & Nanda, 2020). Therefore, the following hypothesis was formed:

H5: Risk-based capital has a positive and significant effect on earnings.

2.8. Effect of Investment Income and Risk-Based Capital on Profit with Enterprise Risk Management as Moderating Variable

(ERM is a methodology that helps to measure, identify, monitor, and control risks to companies (Anton & Nucu, 2020; Halim & Wijaya, 2020). A well-implemented ERM can overcome and cover the risks of losses arising from irregularities in the management of assets and liabilities (Wahyuddin & Mauliyana, 2021). Thus, an Islamic insurance company will be able to bear all of its obligations (debt) and the costs of each insurance risk with available capital of at least 20% greater than the company's assets and achieve the required minimum solvency level (Markonah, 2021).

The implementation of ERM is also a good signal on the condition of the company which is conveyed to information users such as investors, potential investors, and creditors as well as the public. The provision of signals by management is expected to reduce information asymmetry and can be used for investor decision-making. According to research by (Iswajuni *et al.*, 2018), ERM has a significant positive effect on firm value. By implementing ERM, the company's risk management improves, thereby reducing the risk of failure in investment decisions. ERM aims to create procedures within the organization so that any risks that have a negative impact on investment can be overcome and managed to increase company value, which indirectly impacts company profits.

Islamic insurance companies that have a high RBC ratio will reflect good financial health and the profits generated will increase (Nasution & Nanda, 2020). Shad *et al.* (2018) proposed the integration of ERM implementation and sustainability reporting to assist organizations in increasing the price-to-income ratio and reducing the cost of capital through reducing information asymmetry between businesses, insurance companies, lenders, and company shareholders. ERM plays a critical role in reducing the cost of debt and equity financing that businesses collect to finance their assets. Therefore, the following hypotheses were formed:

H6: Enterprise risk management is able to moderate the effect of investment income on profit.

H7: Enterprise risk management can moderate the effect of risk-based capital on profit.

(*Iswajuni et al*., 2018)

Based on the literature review and hypothesis development, as well as to answer research problems, the research thinking framework can be illustrated in the image below:

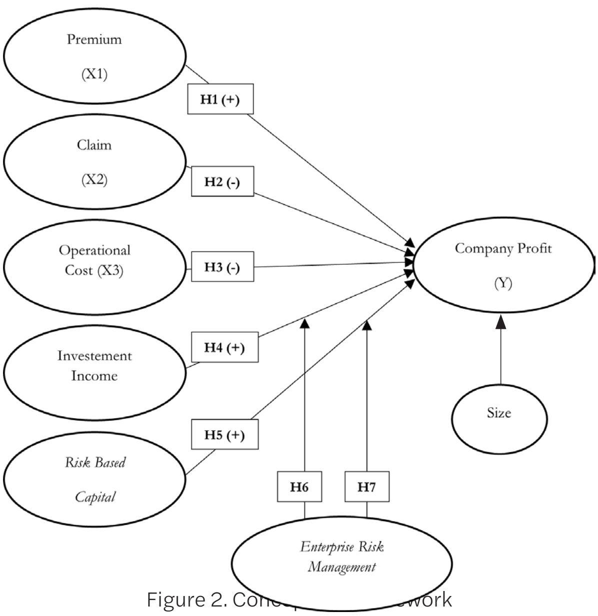


Figure 2. Conceptual Framework

3. Method

3.1. Data and Variables

This research uses panel data model fixed effect estimation, where researchers analyzed Islamic insurance companies over a five-year period . The population of this research is all Islamic insurance companies in Indonesia. The researchers focused on Islamic insurance companies because the researches wanted to explore how the concept of risk sharing can reduce the magnitude of the risks that occur. The samples were restricted to life insurance businesses registered with the Indonesian Islamic Insurance Association for the 2018-2022 period, leading to a total of 22 companies. Researchers did not include data for 2023 because not all companies had submitted annual reports for that year at the time of the study. Finally, the total sample was 13 companies after using a non-probability approach with a purposive sampling technique. To answer complex questions based on research objectives and to obtain maximum test results, researchers used STATA 17.

The researchers adopted several variables in Islamic insurance companies, including premiums, claims, operating costs, investment income, and risk-based capital, as independent variables on profitability which acts as a dependent variable. The researchers also used enterprise risk management risk factors, which can enable the relationship between independent and dependent variables to be strengthened. The definitions and measurements of all variables are explained in Table 2.

3.2. Estimation Method

Panel Data Regression Analysis and Moderated Regression Analysis (MRA) are analytical methods used to answer research hypotheses. The main research model is to test premiums, claims, operating costs, investment income, and risk-based capital on company profits. In addition, the study used MRA test to see whether moderator variables could affect the relationship between variables (Aryanti *et al.*, 2021). All stages of research testing are explained by the reserachers in detail and systematically in Figure 3.

3.3. Robustness Test

To gain robust results, the reseachers tested the data by using several tests in stages or multiple-step regression analysis by gradual hypothesis testing. The main model in this study was to measure the impact of premiums, claims, operating costs, investment income, and risk-based capital on the profits of Islamic insurance companies in Indonesia. This is illustrated in Model 1. In Model 2, the researchers added firm size as a control variable. Lastly, the researchers used the ERM variables as moderating variables, shown in Model 3.

The following is the order of the research model:

Model 1:

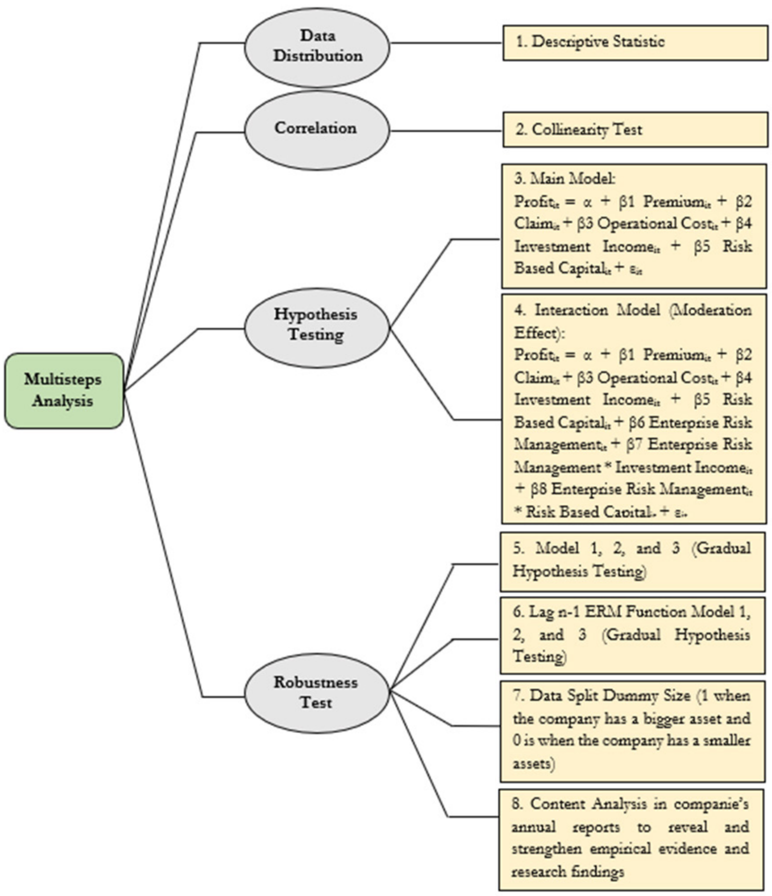
$$Profit_{it} = a + \beta 1\ Premium_{it} + \beta 2\ Claim_{it} + \beta 3\ Operational\ Cost_{it} + \beta 4\ Investment\ Income_{it} + \beta 5\ Risk\ Based\ Capital_{it} + \varepsilon_{it}$$

Model 2:

$$Profit_{it} = a + \beta 1\ Premium_{it} + \beta 2\ Claim_{it} + \beta 3\ Operational\ Cost_{it} + \beta 4\ Investment\ Income_{it} + \beta 5\ Risk\ Based\ Capital_{it} + \beta 6\ Size_{it} + \varepsilon_{it}$$

Model 3:

$$Profit_{it} = a + \beta 1\ Premium_{it} + \beta 2\ Claim_{it} + \beta 3\ Operational\ Cost_{it} + \beta 4\ Investment\ Income_{it} + \beta 5\ Risk\ Based\ Capital_{it} + \beta 6\ Enterprise\ Risk\ Management_{it} + \beta 7\ Enterprise\ Risk\ Management * Investment\ Income_{it} + \beta 8\ Enterprise\ Risk\ Management_{it} * Risk\ Based\ Capital_{it} + \varepsilon_{it}$$



The researchers also tested lag n-1 ERM on each research model to prove that the ERM reported by the company in the previous year can strengthen the influence of investment income and risk-based capital on profitability. Moreover, the authors split the sample between large-size Islamic insurance companies (assessed with the number 1) and small-size Islamic insurance companies (with number 0). We also conducted content analysis based on each company's annual report to ensure that empirically the research results have proven to have an impact on increasing the profitability of Islamic insurance companies.

Table 2. Operational Definition of Research Variables

Variables	Definitions	Measurements	Sources
Dependent variable			
Profit	Profit is the value of achieving financial health and the company's ability to carry out its activities optimally, which is measured on a nominal scale.	Net profit = operating income-tax expenses	Hemrit (2019)
Independent variables			
Premium	Premiums are funds paid by the insured to the company in exchange for benefits for the protection carried out, in accordance with a previously agreed agreement.	Premium = Total net premium income	Hemrit (2019)
Claim	Claims are rights submitted by policyholders to the company to replace losses incurred based on contracts or agreements.	Claims = Total net claim expenses	Metwally and Diab (2024)
Operational Costs (OC)	Operational costs are costs that must be borne by the company so that it can continue to run its business and is related to the company's daily business activities.	Operating costs/expenses = Acquisition expenses + marketing expenses + general administration expenses	Rubio-Misas (2020)
Investment Income (II)	Investment income is profit derived from investment activities in the form of assets, in which there is a distribution of profits given to owners of funds, namely companies as managers and policyholders.	Investment income = Return on investment of participant funds + return on investment of company funds	Juniyanto and Sari (2022)
Risk Based Capital (RBC)	Risk Based Capital (RBC) is a measure of the health of an insurance company that must be achieved by the company in accordance with POJK 6/2023 and No 72 /POJK.05/2016.	RBC = Solvency Rate/ DTMBR Where solvency rate is the allowable assets and liabilities other than qardh from company funds. While DTMBR is a risk-based minimum Tabarru fund and Tanahud fund implemented by the company	POJK 6/2023 and No 72 / POJK.05/2016
Moderating variable			

Enterprise Risk Management (ERM)	Risk management is a step or method that is useful in measuring, identifying, monitoring and controlling risks to the company. The company's ERM implementation can be seen from the annual report or company profile by searching and searching for the following words, among others: "Enterprise Risk Management", "Chief Risk Officer", "Risk Management Committee", "Risk Committee", "Strategic Risk Management", "Consolidated Risk Management", "Holistic Risk Management", or "Integrated Risk Management".	ERM uses a dummy variable where the value is "1" for those who have implemented ERM and the value "0" for those who have not implemented ERM	Hoyt & Liebenberg, (2011)
Control variable			
Size	The size of companies.	Firm Size = Ln (Total Asset)	Kader *et al.* (2014)

4. Results and Discussion

4.1. Result

Table 3 provides the results of the distribution of Islamic insurance data from 2018 to 2022 with a total of 65 observations. On average, Islamic insurance companies have a profit of -0.1559. The 13 sample companies had an average premium growth value of 2.5347. On average, companies have claims growth of -0.3521, while company operating costs have average growth of 1.2605. Investment income shows that Islamic insurance companies over a period of five years had a growth of 0.8536. The RBC variable indicates that the average company had an RBC growth of 0.2119, which means that Islamic insurance companies have increasingly large risk fund reserves. Furthermore, researchers proved that the average ERM growth was 0.7846, which means the companies have carried out risk management identification very well. Finally, the companies have a company size of 13.2301 which is measured by considering the company's total assets.

Table 3. Descriptive Statistics

Variables	Obs	Mean	Std.dev
Profit	65	-0.1559	2.3860
Premium	65	2.5347	17.7355
Claim	65	-0.3521	6.0075
Operating Cost (OC)	65	1.2605	6.8907
Investment Incomce (II)	65	0.8536	5.6073
Risk Based-Capital (RBC)	65	0.2119	1.2036
Enterprise Risk Management (ERM)	65	0.7846	0.4143
Size	65	13.2301	1.7193

The researchers also present the results of the collinearity test in Table 4. The results indicate that there is no correlation in each variable because all variables have a correlation value below 0.8. The higher correlation is between ERM and claim (0.2477), while the lowest correlation is between size and operating costs.

Table 4. Collinearity Test

Variables	Profit	Premium	Claim	OC	II	RBC	ERM	Size
Profit	1.0000							
Premium	0.1461	1.0000						
Claim	-0.0514	-0.0387	1.0000					
OC	-0.0111	-0.0184	0.0015	1.0000				
II	0.0078	-0.0194	-0.0271	-0.0382	1.0000			
RBC	0.1202	-0.0303	0.0091	-0.1084	0.0501	1.0000		
ERM	-0.0701	0.0386	0.2477	0.0569	-0.2245	0.0755	1.0000	
Size	-0.0070	-0.2363	0.0403	-0.0039	0.1633	-0.0456	0.2053	1.0000

Table 5. Hypothesis Testing

Variables	(1) Main Model	(2) Moderation Model
Premium	0.169 (1.11)	0.187 (1.01)
Claim	-0.0129 (-0.82)	-0.0163 (-1.01)
OC	0.132*** (9.73)	0.134*** (8.09)
II	-0.0199 (-0.85)	0.0229 (1.07)
RBC	0.683** (3.68)	-0.0793 (-0.84)
ERM		0.0850 (0.26)
M1		0.0516 (0.16)
M2		0.801** (4.17)
_cons	-0.386***	-0.474
	(-6.65)	(-1.73)
Obs.	63	63
N Firm	13	13
Adj. R-square		
r2_a	0.121	0.0810

t statistics in parentheses

* *p* < 0.05, ** *p* < 0.01, *** *p* < 0.001

Table 5 is a regression analysis test for the 2018-2022 observation period. The main model shows that the operating cost variable has a positive effect on profit. This is not in line with hypothesis 3, whichhypothesized that operating costs have a negative effect on company profit. The research results also show that RBC has a positive influence on profits, so research hypothesis 5 is accepted. Meanwhile, the variables of premiums, claims, and investment income were proven to have no effect on company profitability. The same results were also shown in the moderation effect model testing that the operating cost variable consistently has a positive effect on company profitability. In contrast to the results of the previous model, in the moderation effect model, the varibles of premiums, claims, investment income, RBC, and ERM were proven to not influence company profits. However, RBC was proven to strengthen the positive influence between RBC and profitability, so research hypothesis 7 was accepted.

Researchers conducted a robustness test using multi-step analysis. To obtain accurate results, researchers carried out four stages of durability testing (see Figure 3). First, the results show that after gradual model testing, risk-based operating costs and capital consistently have a positive influence on revenue. Meanwhile, other variables do not influence income. Likewise, in conditions where the ERM variable is involved as a moderator, the results show that ERM strengthens the positive influence between RBC and profit (see Table 6). Second, after testing the Lag n-1 ERM, the same results were also displayed in testing each model. Surprisingly, that ERM in year t-1 can influence and strengthen the influence of RBC and Profit in year t (see Table 6). Third, researchers tested the main model on both small and large Islamic insurance companies. The results show that large Islamic insurance companies consistently have strong results in the research model results (see Table 7).

Table 6. Robustness Test Model 1, 2, 3 and Lag n-1 ERM

Variables	(1) Model 1	(2) Model 2	(3) Model 3	(4) Model 1 (Lag-1 ERM)	(5) Model 2 (Lag-1 ERM)	(6) Model 3 (Lag-1 ERM)
Premium	0.169	0.236	0.187	0.169	0.236	0.169
	(1.11)	(1.87)	(1.01)	(1.11)	(1.87)	(1.06)
Claim	-0.0129	-0.0131	-0.0163	-0.0129	-0.0131	-0.0224
	(-0.82)	(-0.93)	(-1.01)	(-0.82)	(-0.93)	(-1.29)
OC	0.132***	0.132***	0.134***	0.132***	0.132***	0.135***
	(9.73)	(9.58)	(8.09)	(9.73)	(9.58)	(8.17)
II	-0.0199	-0.0581	0.0229	-0.0199	-0.0581	0.0416
	(-0.85)	(-1.95)	(1.07)	(-0.85)	(-1.95)	(1.71)
RBC	0.683**	0.703**	-0.0793	0.683**	0.703**	0.0509
	(3.68)	(3.74)	(-0.84)	(3.68)	(3.74)	(0.28)
Size		0.688			0.688	
		(1.67)			(1.67)	
ERM			0.0850			
			(0.26)			
M1			0.0516			
			(0.16)			
M2			0.801**			
			(4.17)			
lagERM						0.483*
						(2.66)
Mod1						0.116
						(0.35)
Mod2						0.666**
						(3.11)
_cons	-0.386***	-9.555	-0.474	-0.386***	-9.555	-0.796***
	(-6.65)	(-1.72)	(-1.73)	(-6.65)	(-1.72)	(-4.59)
Obs.	63	63	63	63	63	62
N Firm	13	13	13	13	13	13
Adj. R-square						
r2_a	0.121	0.118	0.0810	0.121	0.118	0.0793

t statistics in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 7. Split Sample Small and Big Company Size

Variables	(1) Small Size	(2) Big Size
Premium	0.449***	0.254
	(28.10)	(1.55)
Claim	-0.0343	1.173
	(-1.38)	(0.79)
OC	-0.559*	0.149***
	(-3.17)	(27.03)
II	-0.922	-0.0311
	(-1.01)	(-0.61)
RBC	-0.573**	0.884***
	(-5.40)	(27.62)
_cons	-0.0300	-0.715*
	(-0.36)	(-3.23)
Obs.	25	38
N Firm	7	8
Adj. R-square		
r2_a	0.553	0.181

t statistics in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

4.2. Discussion

The research results show that premiums do not affect the profits of Islamic insurance companies. This is not in accordance with the hypothesis established by previous researchers that premiums can have a positive effect on profits. Premiums are managed by companies through low-risk investments to minimize risks that threaten global economic conditions. This risk of intimidation can also encourage higher premiums (Jeris *et al.*, 2023). The basic difference between conventional insurance companies and Islamic insurance companies is that conventional companies have the aim of obtaining or receiving the largest possible premiums, while Islamic insurance companies aim to manage Islamic premiums with the concept of mutual protection and mutual assistance (Liany, 2020).

Changes in the premium amount cannot directly affect a company's return because in Islamic insurance, the premium can have a direct effect on mudharabah and musyarakah financing capital, which can then increase or decrease the company's return. These results are following Liany's (2020) research and do not align with the research of Ronaldo *et al.* (2019) which states that premiums can positively increase the revenue growth of Islamic insurance companies. This is supported by previous research (Fatmawati & Devy, 2021; Harahap & Nasution, 2021; Hidayat *et al.*, 2021; Lilavira & Zulaikha, 2020; Nainggolan & Soemitra, 2020; Nasution & Nanda, 2020; Wahyuddin & Mauliyana, 2021; Zen & Manda, 2021).

The results also show that claims have no significant effect on company profits. Islamic insurance company claims have been proven to influence the company's premium amount. This is in line with research by Harahap and Nasution (2021), where assets, company expenses, and claims have a positive effect on the company's premium amount. Pane *et al.* (2023) also revealed that Islamic insurance company claims did not affect company profits. In conventional terms, claims are considered costs and premiums are considered profits, but in Islamic insurance, each policyholder has responsibility for other policies. This finding strengthens the fact that claims are not costs and therefore have no effect on profits. In addition, Islamic insurance companies have the right to reject insurance applications by considering the applicant's financial health to ensure that the tabarru' funds owned by the company are stable (Mustafa & Rahman, 2019). This is in contrast to research conducted by Nainggolan & Soemitra (2020) which found that there is a negative relationship between claims and returns.

The results of this study show that operational costs have a positive significant effect on company profits. An increase in operational costs can also encourage high business profits. This is in line with research by Pane *et al.* (2023). This is different from research by (Lilavira & Zulaikha, 2020), which found that operational expenses do not have a significant effect on company assets (which indirectly affect profits).

The companies manage operational costs optimally so that they can increase profits. This research uses net profit, which is the result of the difference between profit before tax minus tax burden, so the tax burden factor will also affect net profit. In other words, even when operational costs increase but the tax burden is small, the net profit the company generates can also increase. On the other hand, if operational costs decrease, but the tax burden is high, the net profit that will be generated will also decrease. Thus, an increase in operational costs can be followed by an increase in net profit. This research is in line with research conducted by Khaddafi & Agung (2021), which found that operational expenses have a positive and significant effect on company profits. This is because the greater the operational costs, the higher the company's operational activities every day, so the company can increase company profits. This is also in line with research conducted by Rohmat & Suhono (2021)

Investment income does not influence the profits of Islamic life insurance companies registered with the Indonesian Islamic Insurance Association. The results in this study are in line with Setyaningsih *et al.* (2021), who found that investment results have no direct effect on profits. This is because investment results are not solely used internally by the company, but also to improve the welfare of policy holders by paying insurance expenses in the form of operational costs and insurance premiums. The research results are also in accordance with research conducted by Insani and Sholikha (2023) and Hidayat *et al.* (2021), who stated that investment results do not affect profits. Investment results are efforts to invest or place an asset in the form of property or funds in something that is expected to provide profits or increase its value in the future. The investment income does not have a significant effect on the profits of Islamic insurance companies. If investment returns increase or decrease, this does not affect profits because the insurance company retains the main source of premium income to cover its obligations.

Meanwhile, RBC has a positive and significant effect on company profits. To build public trust, companies are required to reach the level of solvency set by the government so that people entrust their assets to the company to manage. This is reinforced by several companies that have risk-based capital values above government regulatory standards of 120%, so that companies can build public trust. The higher the risk-based capital a company has, the higher the return it will obtain, because the company can maximize profitability by mitigating risk with large capital reserves. These results are in line with research by Abbas *et al.* (2022), who found that there is a relationship between RBC and profitability. However, the results of this study are not in line with the research of Hidayat *et al.* (2021) and Santoso *et al.* (2020), who found thate RBC does not have a significant effect on profits. If a company only focuses on increasing the RBC value, it will cause inefficiencies in capital management (Prahasti, 2020). This causes company profits to stagnate or even decline, due to inefficient capital management.

The results showed that investment income did not have a significant effect on company profits, which was moderated by enterprise risk management variables. The application of ERM in a company can be said to have no impact on company performance and financial health. In other words, the profit did not increase or decrease. The findings of this study are the same as (Aryanti *et al.*, 2021), where ERM does not have a significant effect on company performance.

Meanwhile, ERM has a significant and attenuating effect in moderating the relationship between risk-based capital and corporate profits. To have good ERM, there is company capital or assets allocated to identify, monitor, and also manage or overcome any existing risks. Thus, when a company has good ERM, profits tend to increase, indicatings that the company has very good financial health through RBC, which can further increase profits. The information conveyed by the company regarding ERM is absorbed as positive news by investors. This will increase the value of the company which will indirectly reduce the income earned by the company. Companies that have good ERM systems can improve the company's financial performance (Hameed *et al.*, 2020). Not only that, good ERM can improve long-term performance, which means the company has very effective risk management to create competitive strategies in unstable economic conditions (Oyewo, 2022). Furthermore, the robustness test shows that the results of the research model are consistent in large Islamic life insurance companies compared to small companies that. This result is the same as Oyewo (2022), who found that ERM must be considered by companies for their long-term survival, especially in large-scale companies.

Most companies have reported ERM as an antidote to uncertainties such as strategic, operational, insurance, liquidity, and credit risks. In this case, the researchers conducted content analysis to prove that the sample companies had identified the risks contained in ERM. For example, in 2018, PT AIA Financial identified strategic risks by analyzing the broader social, economic, political, regulatory, competitive, and technological trends that will influence its business strategy over a certain period. The company also reports operational risks by showing first line risk owners and risk champions, risk and control asessments, monitoring key risk indicators, internal incident reporting, and insurance protection from operational losses resulting from business interruptions, property damage, and even internal fraud. Furthermore, insurance risks are managed by implementing an effective business quality framework, good and consistent service standards, complying with market-oriented underwriting and claims guidelines and practices that have been developed based on extensive historical experience with the help of professional reinsurance companies, and initiatives to manage risks and improve claims management, including health program promotion. Liquidity risk is also identified by the company by determining appropriate limits and assessing the business's ability to deal with extreme market events. Finally, the company reports credit risk through a detailed analysis of each counterparty and providing recommendations.

Furthermore, PT Asuransi Jiwa Sinarmas SMIG in 2020 and 2021, the company reports strategic risks by analyzing business strategies and planning corrective actions if there are changes or additional information regarding the success factors of each strategy and internal control process. Operational risk identification is also carried out, including by planning service development through process efficiency and effectiveness that prioritizes and trusts customers, conducting regular reviews of standard operating procedures, and utilizing technological developments. Meanwhile, insurance risk is managed by maintaining the nature of the insurance business, the composition and diversification of the business portfolioand the reinsurance structure in managing insurance risk by the company so that it remains within the desired risk limits. To mitigate market risk, the company periodically evaluates securities performance, implements a portfolio diversification strategy, and ensures the suitability of investments with long-term strategic plans. Regarding credit risk, in placing investment assets, bills, and reinsurance, the company considers the credibility and/or rating of third parties to minimize failure to pay investments, bills, and claim recovery. Then the company's liquidity risk is managed by actuarially monitoring the components of financial health and by controlling the growth rate of its liabilities in terms of product design and development. Furthermore, the company also identifies legal and compliance risks.

Finally, risk identification was also carried out by PT Asuransi Allianz Life Indonesia from 2020 to 2022. By doing so, the company identified strategic risks, operational risks, credit risks, market risks, liquidity risks, insurance risks, legal risks, compliance risks, and reputation risks.

5. Conclusion

The main objective of this study was to prove the influence of premiums, claims, operational costs, investment income, and risk-based capital on Islamic life insurance companies in Indonesia for the 2018-2022 period. The results demonstrated that premiums, claims, and investment income do not affect company profits. On the other hand, risk-based capital and operational costs were proven to have a positive relationship on profits. Higher operational costs and higher levels of assets can affect companies' returns. Likewise, when risk-based capital is high, it will indicate to public that a company has the ability to overcome different types of risk (credit, market, operational, insurance, and liquidity), leading to customer trust and increased returns. This happens because the higher the value of risk-based capital, the greater the capital reserves to mitigate risks that may occur in Islamic insurance companies. Furthermore, ERM has been statistically proven to strengthen the influence of risk-based capital on company profitability. This finding was strengthened in the first robustness test by conducting the gradual hyphotesis testing on models 1, 2, and 3. Moreover, the model was robust in the second robustness test by examining the ERM report in the previous year. The previous year's ERM can strengthen the effect risk-based capital and profits in the current year. In addition, this research model provides consistent results for large companies.

5.1. Implications, Limitations, and Future Research Agenda

This study offers three pivotal implications for scholars, practitioners, and societies. This research has broadened scholarly insight and knowledge about Islamic insurance in Indonesia, especially through the literature review, on the determining factors that can affect the profits of Islamic life insurance companies in Indonesia. Moreover, for a practical contribution, this research provides consideration for managers of Islamic insurance companies to pay attention to the implementation of ERM in dealing with uncertain situations in their business activities. In addition, for insurance policy holders' insight, considering that the concept implemented by Islamic insurance companies is to share risks among members, policy holders can still make claims even if the company experiences losses. Aligning with the basic concept of Islamic insurance, policy holders can feel safe when making claims amidst uncertain circumstances.

This research has several limitations and suggestions that can support further studies. 1) The research sample size is only 13 companies. For further research, it is hoped that the sample will be expanded, and not only use Islamic life insurance companies but Islamic general insurance companies. 2) The variables used are limited due to limitations in the data. So, further research can include additional variables that are considered to influence profits, such as tabarru' fund reserves and underwriting results. 3) The period covered in this study was only five years. Thus, further research can use a different and longer timeframe to gain more accurate results. In addition, theory development can be carried out to further strengthen the research results. 4) Islamic insurance companies must continue to optimize their operational activities and be more active in promoting the importance of insurance so that more people are interested and confident in purchasing insurance products.

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