This paper was presented at the 19th International Conference on Sustainable Development, International Conference Center, Sorbonne University, Paris, France on August 26-27, 2024.

State-Owned Insurance Holding: The Establishment Impact on The Efficiency and Profit Optimization of State-Owned Insurance Companies

Syah Amondaris [1], Eleonora Sofilda [2], and Muhammad Zilal Hamzah [3]
[1,2,3] Public Policy Studies, Faculty of Economics & Business,
Universitas Trisakti, Jakarta, Indonesia.
[2] Corresponding author: eleonora@trisakti.ac.id

OIDA International Journal of Sustainable Development, Ontario International Development Agency, Canada.
ISSN 1923-6654 (print) ISSN 1923-6662 (online) www.oidaijsd.com
Also available at https://www.ssrn.com/index.cfm/en/oida-intl-journal-sustainable-dev/

Abstract: The Indonesian government has established PT Bahana Pembinaan Usaha Indonesia (Persero) as the holding company of several state-owned insurance companies, which aims to support the strength of subsidiaries in fulfilling obligations and increasing efficiency in their governance. The establishment of a holding through government regulation Number 20 of 2020 creates a single governance system so it is hoped that there will be no overlap, especially in risk management. This study aims to analyze and examine the level of efficiency and performance determinants of state-owned insurance companies before and after the implementation of the holding formation. This study uses a quantitative approach using Data Envelope Analysis (DEA) analysis and panel data regression for 2018-2022 consisting of 5 state-owned insurance companies. Based on the results of the study, the efficiency values of Asuransi Jamkrindo, Jasa Raharja Putra, and Asuransi Jasa Indonesia are in the high-efficiency criteria (100%) and the determinants of insurance company performance are influenced by the variables of underwriting results, investment results, operating expenses, gross reinsurance premiums, and other income. The consistency of the efficiency level before and after the issuance of PP No. 20 of 2020 implies that governance factors (ownership) have an influence on the stability of insurance company efficiency through maximizing income, especially underwriting results. In addition, the stability of efficiency in insurance companies will also increase the company's trust in the real sector through the ability of insurance companies to handle the risks covered.

Keywords: State-owned Insurance, Holding Company, Efficiency, Profitability.

Research Background

The insurance sector in the long run needs to be well developed to be able to make a country's economic growth improve through its role in transferring risk. Not only globally, the insurance industry is one of the business pillars of the Non-Bank Financial Industry which has a significant contribution to the development of the Indonesian economy today. This can be seen in Indonesia's economic growth sectorally. Based on data from the Financial Services Authority (2021), the total insurance industry premium contributed to 3.26% of Indonesia's Gross Domestic Product in 2020. In terms of the number of companies, from 2016-2020, the number of insurance companies has an increasing trend, proving that the prospects for the insurance industry in Indonesia are quite good. The following Table shows the growth of gross premiums compared to Indonesia's Gross Domestic Product from 2016-2020.

Table 1. Gross Premium Receipts of Indonesian Insurance Companies 2016-2020 (IDR Trillion)

Year	Gross Premium		Gross Domestic Product		Ratio (a/b)
	Total (a)	Growth YoY	Total (b)	Growth YoY	
2016	361.78	22.4%	12,406.80	7.6%	2.92%
2017	407.71	12.7%	13,558.80	9.5%	3.00%
2018	433.38	6.3%	14,837.36	9.2%	2.92%
2019	481.10	11.0%	15,833.94	6.7%	3.04%
2020	503.30	4.6%	15,434.15	-2.5%	3.26%

Source: Financial Services Authority (2020)

From its development, the total amount of gross premiums in nominal terms has experienced positive growth every year (2016-2020). In 2016 the number of gross premiums was still in the range of IDR 361.78 trillion, and in 2020 it increased to IDR 503.3 trillion or managed to grow by 39% over 5 years. Meanwhile, gross premium income when measured against Indonesia's GDP has an increasing trend every year, starting from 2.92% in 2016 to 3.26% in 2020. This makes it clear that the role of the Insurance industry is getting bigger and bigger in its contribution to the Indonesian economy.

From the total number of claims during 2016-2020, it has increased yearly, originally at IDR 277.35 trillion in 2016 to IDR 356.5 trillion in 2020 or grew by 56% over 5 years. This is greater when compared to premium growth of only 39% over 5 years. So that insurance companies are required to be ready to complete existing claim obligations. Another thing can be seen from the ratio of claims to gross premiums which is increasing over time. In 2016 the ratio was at 62% and increased to 71% over 5 years. Therefore, looking at its function, a good insurance company is a company that can fulfill claims from customers and still be able to continue its business. So the healthy and efficient financial performance of insurance companies is a major challenge in the insurance industry in Indonesia. The following is data on the development of Gross Insurance Claims in Indonesia.

Table 2. Development of Indonesia's Gross Claims 2016-2020

Year	Claim						Total Gross Premium (b)	Ratio (a/b)
	Nonlife Insurance & Reinsurance	Life Insurance	Social Insurance	Mandatory Insurance	Total Claim (a)	Increase/ Decrease		
2016	34.19	96.19	86.81	10.16	227.35	15.0%	361,78	62.8%
2017	35.26	118.62	109.64	12.13	275.65	21.2%	407,71	67.6%
2018	38.84	150.35	121.90	13.80	324.88	42.9%	433,38	75.0%
2019	47.67	163.50	138.18	138.18	364.26	12.1%	481,10	75.7%
2020	55.72	152.90	131.96	131.96	356.53	-2.1%	503,30	70.8%

Source: Financial Services Authority (2021)

In Indonesia there are several State-owned General Insurance companies engaged in various fields, namely: (i). Jamkrindo (insurance for credit insurance or suretyship); (ii). Jasindo (engaged in general insurance services); (iii). Askrindo (stands for credit insurance services); (iv). Jasa Raharja (stands for loss insurance related to social affairs); and (v). Jasa Raharja Putera (engaged in general insurance). The Indonesian government issued Government Regulation No. 20 of 2020 concerning the addition of state capital participation into the share capital of

PT Bahana Pembinaan Usaha Indonesia (BPUI). This Government regulation is to strengthen the capital structure and increase the business capacity of the company insurance.

The insurance company collects funds in the form of premiums from customers (insured) by carrying out operational activities in the form of risk management. Every premium collected by an insurance company can have an impact on its ability to fulfill claim payment obligations (Azzhari, 2023). De Haan & Kakes (2010) argue that insurance companies that have good profitability performance will be able to sustain coverage obligations from existing risks. Furthermore, Jaloudi (2019) also argues that the performance of insurance companies is closely related to the level of efficiency produced. Therefore, the efficiency and performance of insurance companies need special attention to ensure that the industry can run according to its duties and functions properly. Based on the above background, this study aims to: (i). Analyse and examine the efficiency level of the company before and after the transformation of the formation of state-owned insurance holding; and (ii). Analyse and review financial indicators, macroeconomic indicators, and governance on the performance of state-owned insurance before and after the transformation of holding formation.

Theoretical Background

Regulations related to the performance of insurance companies include OJK Regulation No. 71/POJK.05/2016. This regulation explains the financial health of Insurance Companies. This regulation explains that every insurance company must submit a solvency-level report using the Risk-Based Capital (RBC) method. Furthermore, article 3 of POJK No. 71 of 2016 states that Insurance Companies and Reinsurance Companies must at all times meet a solvency level of at least 100% (one hundred percent) of the minimum risk-based capital (MMBR) and the internal Solvency level target is set at a minimum of 120% (one hundred and twenty percent) of MMBR by taking into account the risk profile of each company and considering the results of the simulation of changing scenarios (stress test). Article 4 states that the risks that must be calculated according to the minimum capital requirements are credit risk, liquidity risk, market risk, insurance risk, and operational risk. Insurance companies must be able to maintain their financial health in accordance with applicable regulations so that the trust of policyholders or customers in the insured risks remains in good condition.

According to Darmawi (2000), the insurance business is held to protect the interests of the community and therefore needs to be supervised more by regulators. Almost all aspects of the insurance business are supervised including its organization and liquidation. Regulators have set standards for insurance policy provisions, rates, cost limitations, asset and liability assessments, investment of funds, and requirements for sales representatives. It can be seen that there are three entities in the Insurance ecosystem, namely: Insurer, Insured, and Government. The three are interrelated with each other. The Insurer is directly related to the Insured in terms of making insurance agreements/contracts/policies, premium payments, subrogation, and claims. Furthermore, the Government is directly related to the Insurer and Insured in terms of supervision of Insurance companies to consumer protection.

The establishment of a holding for non-banking financial companies, especially insurance, is one way for the government to supervise through revamping the business competition of state-owned insurance companies (pricing war) to strengthen capital during a pandemic to maintain company solvency. There are three main problems in the Insurance Industry at this time, namely: (i). Total insurance claims that continue to increase from year to year so that it requires adequate governance, human resources, risk management and infrastructure in order to continue to generate profits for the company; (ii). The competitiveness of state-owned insurance companies is still low because the market share of gross premiums is still small. The above conditions have caused the government through the Ministry of State-Owned Enterprises to create a transformation program framework by creating a state-owned insurance holding to provide better performance; and (iii). How the impact of the transformation policy on the efficiency and governance of state-owned insurance and performance measurement through increased gross underwriting results and net profit.

Related to insurance, the function of financial theory intersects with financial decisions and investment decisions. Welch (2009) stated that there is a main thing that underlies or becomes the basis in financial science, namely measuring value (valuation). Furthermore, the more precise in measuring value, the easier it is for top management to determine company decisions. Wijaya (2017) stated that the company's goal is to maximize the wealth or value of the company's shareholders. Furthermore, according to Drake & Fabozzi (2010) finance is an application of the economic field to make decisions involving the allocation of money in certain conditions and under uncertainty. Furthermore, Drake & Fabozzi (2010) also stated that finance is related to other aspects such as: (i). Economics; (ii). Financial Accounting; (iii). Mathematics; (iv). Profitability Theory; (v). Statistical theory; and

(vi). Psychology. Furthermore, there are three branches of science in financial science, namely; (i). Capital market theory; (ii). Financial Management; and (iii). Investment management.

As related to this research, the aspect of financial management is the right aspect to be adopted in the study of theory. Wijaya (2017) stated that there are several scopes of financial management, namely: (i). Financial decision. It is a part of the managerial decision made to seek funds and is reflected on the right side of the financial position report which will reveal how large the proportion of the company's liabilities and equity is; (ii). Investment decision. It is a managerial decision made to allocate funds to various assets and is reflected on the left side of the financial position report which will reveal how large the current assets are; and (iii). Dividend policy. It is a management policy carried out to determine the current year's comprehensive income that will be distributed to shareholders and the comprehensive income that will be retained for next year's investment reserves.

Based on the above explanation, it can be seen that there are three main problems in the insurance industry in Indonesia in general and in state-owned insurance companies in particular, namely efficiency, performance and governance that are still relatively low. Furthermore, performance, which can be measured by profitability, is determined by internal factors under the control of the company and external factors consisting of industry-specific factors and the macroeconomic environment. Moving on from the fact that there is a downward trend in profitability ratios in state-owned insurance companies, as well as empirical gaps from various previous studies, encourages researchers to examine and analyse more focused on the influence of internal factors on the efficiency and performance of state-owned insurance companies. Based on these internal factors, it is expected to produce policy recommendations that strengthen the transformation of the formation of state-owned insurance holding. This study also includes macroeconomic conditions and examines the implementation of Government Regulation No. 20/2020 related to efficiency, performance and governance of state-owned general insurance using quantitative and qualitative approaches.

Research Methods

This research uses a quantitative approach with Data Envelop Analysis (DEA) to measure efficiency and panel data regression analysis to analyze and examine the determinants of efficiency and performance of state-owned Insurance. The types and sources of data used are secondary data in the form of financial reports from 3 state-owned general insurance published on their respective websites with the research years 2018-2022. This research consists of 2 stages namely: (i). Efficiency measurement using intermediation approach; and (ii). Model estimation of influencing factors, namely internal factors of insurance companies on efficiency.

Data Development Analysis (DEA). The following are the results of data processing using DEA to obtain the efficiency score of 5 state-owned insurance companies.

Table 3 Estimated Efficiency Results of Insurance Companies in 2018-2022

Company	Efficiency Score				
	2018	2019	2020	2021	2022
Askrindo	94%	100%	100%	100%	100%
Jamkrindo	100%	100%	100%	100%	100%
Jasa Raharja	100%	100%	100%	100%	100%
Jasa Raharja Putra	100%	100%	100%	84%	100%
Asuransi Jasa Indonesia	100%	100%	100%	100%	100%

Source: Data processed using BANXIA Software (2024)

Results and Discussion

The first stage in this study is to measure efficiency using the DEA method. This technique is carried out by comparing output variables to input variables, with the consideration that insurance is an agreement between an insurance company and a policyholder which is the basis for the receipt of premiums by the insurance company as compensation. As is known, this compensation is used to: (i) provide compensation to the insured or policyholder

for losses, damages, costs incurred, loss of profits, or legal liability to third parties that may be suffered by the insured or policyholder due to an uncertain event; or (ii) provide payments based on the death or life of the insured with benefits that have been determined and/or based on the results of fund management.

Based on the results of the efficiency calculation, it was found that the efficiency scores of Asuransi Jamkrindo, Jasa Raharja, and Asuransi Jasa Indonesia from 2018 to 2022 were at a high-efficiency criterion of 100 percent. Another case with Asuransi Askrindo where in 2018 it was in an inefficient condition with a score of 94 percent, while in 2019 and 2022 it again obtained efficiency with a score of 100 percent. Asuransi Jasa Raharja Putra in 2018-2020 was in an efficient position, but in 2021 experienced inefficiency conditions with a score of 84 percent, this situation did not last long, because, in 2022, Jasa Raharja Putra insurance was back in an efficient position, namely with a score of 100 percent.

Furthermore, from the Data Panel Regression, in the first stage, by using the Chow Test, this paper determines the Fixed Effect or Random Effect model that is most appropriate to use in estimating panel data. It is can be seen in the following Table 4.

Table 4 Chow Test Results

Cross-section Chi-square	Prob	Decision
12.161906	0.0162	Individual Effect

Source: Data processed

Based on the test results, it is known that the probability value of the Cross-section Chi-Square is smaller than 0.05 (alpha 5%), so it is decided that it is better to estimate using individual effects (Random Effect Model or Fixed Effect model). Therefore, it is continued to test which of the two individual effects is the best, whether the Random Effect Model or the Fixed Effect Model. To estimate it using the Hausman Test.

Table 5 Hausman Test Results

Cross-section Chi-square	Prob	Decision
3.752099	0.9968	Random Effect Model

Source: Data processed

The results of the Hausman test on the model show that the model is better estimated with the Random Effect Model because the Cross-section Chi-square results have a probability value greater than 0.05 (alpha 5%). The results of the Hypothesis test on the dependent variable for ROE are as follows.

Table 6 Hypothesis Test Results

Variable	Theory	Dependent Variable: ROE				
		Coefficient	Std Error	T-Stat	Prob (1 Tail)	Decision
Constants		183.0953	60.72482	3.015164	0.0065	
Gross Written Premium	+	-4.104733	1.348887	-3.043052	0.0062	H_1 Accepted
Under Writing Cost	-	0.697118	1.555661	0.448117	0.3318	H_2 Rejected
Underwriting Result	+	0.012875	0.005971	2.156324	0.0283	H_3 Accepted
Investment Result	+	9.217729	5.386544	1.711251	0.0589	H_4 Accepted
Operating Expenses	-	-20.60670	7.858991	-2.622054	0.0128	H_5 Accepted
Other Income	+	0.011135	0.003653	3.047991	0.0062	H_6 Accepted
Independent Com.	+	1.480839	1.224279	1.209560	0.1272	H_{7a} Rejected
Commissioner	+	0.722357	1.889085	0.382385	0.3551	H_{7b} Rejected
Board of Director	+	-1.191591	1.215887	-0.980017	0.1751	H_{7c} Rejected

Economic Growth	+	0.404544	0.342357	1.181645	0.1324	H_8 Rejected
Dummy Holding	+	-1.462547	5.642460	-0.259204	0.4004	H_9 Rejected
Interest Rate	+	0.943615	3.026043	0.311831	0.3808	H_{10} Rejected
Inflation	-	-0.491802	0.965210	-0.509528	0.3107	H_{11} Rejected
Reinsurance Premium	-	1.510516	0.904738	1.669562	0.0630	H_{12} Accepted
Goodness of Fit Model						
R-square		0.872311				
Adj R-square		0.693546				
F-stat		4.879659				
Prob F-stat		0.008035				

Source: Data processed

Conclusions and Recommendations

Conclusion

From data processing using DEA and Panel Data Regression can be concluded as follows:

1. The establishment of a holding carried out in 2020 through the company PT Bahana Pembinaan Usaha Indonesia (Persero) can maintain the efficiency performance of Jamkrindo, Jasa Raharja, and Jasindo Insurance companies. The determinants of the performance of insurance companies are influenced by the variables of Underwriting Results, Investment Results, Operating Expenses, Gross Reinsurance Premiums, and other results (income). Underwriting results, investment results, and other results have a positive influence on the performance of insurance companies (profitability). These results are in line with basic financial theory where income items, both operational and non-operational, will basically have an impact on the level of company profitability. In addition, Gross Reinsurance Premiums also have a positive direction of influence, this can be due to the breakdown of premiums to reinsurance companies is a way for insurance companies to share risks to stabilize their income from high-severity risks. Therefore, the premium paid will actually maintain the stabilization of income from claims so that the profitability of the insurance company is maintained. In addition, the negative effect of operating expenses is also in accordance with general financial theory related to the erosion of profit levels. Furthermore, the results of the literature review analysis also show that there is a link with reinsurance and economic growth in the "Insurance Financial Performance" keyword network.
2. The establishment of State-owned holding companies, especially for Insurance companies, has maintained the level of efficiency that has existed before. This is evidenced by the consistency of efficiency levels before and after the issuance of PP No. 20/2020. The establishment of a holding through this regulation makes the creation of a single Governance system so that there is no overlap, especially risk management because it is under one entity. Risk management in insurance companies is also an effort in the company's policy to close coverage policies that lead to claim payments. In addition, operational efficiency is also achieved through flexibility of access in managing the company's ownership and assets, to strengthen the company's capital.

Recommendation

The establishment of state-owned insurance holding in the long term is beneficial to improve efficiency and governance in state-owned insurance companies because the procurement of goods and services can be centralized in the holding. If there is something that cannot be centralized, hence "Benchmarking" can be done between insurance companies to get competitive prices. The establishment of a holding is also useful for improving the quality of human resources by exchanging employees between insurance companies so that "Cross-selling" or business synergy between state-owned insurance companies can be carried out.

References

1. Azzhari, F. (2023). The Effect of Technical Reserves, Premium Growth, and Own Retention on the Solvency of Insurance Companies on the Indonesia Stock Exchange in 2017-2021. *Dissertation*. Medan Area University.
2. Bryant, A. (2017). *Grounded Theory and Grounded Theorizing: Pragmatism in Research Practice*. New York: Oxford University Press.
3. Darmawi, H. (2000). *Insurance Management*. Jakarta: PT Bumi Aksara.

4. De Haan, L., & Kakes, J. (2010). Are Non-Risk-Based Capital Requirements for Insurance Companies Binding? *Journal of Banking & Finance, 34(7), 1618-1627.*
5. Jaloudi, M. M. (2019). The Efficiency of Jordan Insurance Companies and Its Determinants Using DEA, Slacks, and Logit Models. *Journal of Asian Business and Economic Studies, Vol. 26 No. 1, 153-166.*
6. Januarti, I., & Khairunnisa, T. S. (2022). The Influence of Corporate Governance and Profitability on The Solvency Achievement of The Insurance Industry. *Journal of Accounting, 16(1), 47-66.*
7. Jiwanata, C. N., Syafitri, L., & Cholid, I. (2014). The Effect of Investment Returns, Premiums, and Claim Payments on The Profitability of Life Insurance Companies in Indonesia for The Period 2010-2016—Department of Management, STIE Multi Data Palembang.
8. Kantakji, M. H., Abdul Hamid, B., & Alhabshi, S. O. (2020). What Drives the Financial Performance of General Takaful Companies? *Journal of Islamic Accounting and Business Research, 11(6), 1301-1322.*
9. Karadağ Erdemi r, Ö. (2019). Selection of Financial Performance Determinants for Non-Life Insurance Companies Using Panel Data Analysis. *Journal of Accounting & Finance, (82).*
10. Klein, R. W. (1995). Insurance Regulation in Transition. *Journal of Risk and Insurance, 363-404.*
11. Kourtzidis, S., & Tzeremes, N. G. (2019). Investigating The Determinants of Firm Performance: A Qualitative Comparative Analysis of Insurance Companies. *European Journal of Management and Business Economics, Vol. 29 No. 1, 3-22.*
12. Kozak, S. (2011). Determinants of Profitability of Non-Life Insurance Companies in Poland During Integration with The European Financial System. *Vol. 14, Issue 1.*
13. Marsanto, S. A. S., Mulyantini, S., & Fadila, A. (2021). The Effect of Health Level on The Profitability of Insurance Companies Listed on The Indonesia Stock Exchange. *National Research Conference on Management Economics and Accounting, 2(1), 1759-1773.*
14. Financial Services Authority. (2020). Insurance Statistics (2020). Retrieved from Otoritas Jasa Keuangan: https://Ojk.go.id/id/kanal/iknb/data-dan-statistik/asuransi/documents/pages/statistik-perasuransian
15. Financial Services Authority. (2021). Insurance Statistics. Retrieved From Financial Services Authority: https://Ojk.go.id/id/kanal/iknb/data-datastatistics/insurance/pages/statistics-insurance-2021.aspx
16. Otto, R., & Weterings, W. (2019). D&O Insurance and Corporate Governance: Is D&O Insurance Indicative of The Quality of Corporate Governance in A Company. *STAN. Jl Bus. & Fin., 24, 105-136.*
17. Parsons, W. (2001). *Public Policy: An Introduction to The Theory and Practice of Policy Analysis.* Jakarta: Kencana.
18. Pradana, Y. A., & Rikumahu, B. (2014). Implementation of Risk Management Towards the Realization of Good Corporate Governance in Insurance Companies. *Trikonomika, 13(2), 195-204.*
19. Prasetyo, H., Tulung, J. E., & Palandeng, I. D. (2023). Analysis of The Effect of Premium Income, Investment, and Underwriting Results on The Profit of General Insurance Companies in The Financial Services Authority for The Period 2017-2021. *Emba Journal: Journal of Economic Research, Management, Business and Accounting, 11(02), 11-22.*
20. Prasetyo, R. P. (2016). The Effect of Premium Income, Underwriting Results, Risk-Based Capital, Liquidity, and Growth on The Profitability of General Insurance Companies in the 2011-2014 Period. *Dissertation*. Universitas Negeri Jakarta.