udapest International Research and Critics Institute-Journal (BIRCI-Journal)

Rumanities and Social Sciences

ISSN 2015-3076 Online) ISSN 2015-1715 (Print)

# The Role of Actuarial Profile, Corporate Governance, and Actuarial Backup on Price to Book Value: A Study on Public Insurance Company in Indonesia

# Ika Dewi Nurida<sup>1</sup>, Moch. Doddy Ariefianto<sup>2</sup>

<sup>1,2</sup>Bina Nusantara University, Indonesia ika.nurida@binus.ac.id, moch.ariefianto@binus.ac.id

# Abstract

This study investigates the role of the actuarial Profile, corporate governance, and actuarial reserves in influencing the company's book value. We apply panel data econometric to a dataset comprising ten companies, annual frequency from 2006 to 2019; 140 yearly company observations. We find that size positively affects the price to book value. On the other hand, actuarial Profile and corporate governance (institutional ownership) negatively correlate with the price to book value. This study brings important implications to business/regulatory practices for Financial Services Authority regulators. This study is expected to be able to provide a reference for future research related to the insurance industry.

#### Keywords

actuarial profile; corporate governance; actuarial backup; price-to-book value



# **I. Introduction**

Based on IDX data for 2019, the growth of the financial sector reached 15.22%, which indicates a good growth potential. Insurance companies are one of the economic sectors that contribute to this growth. Based on insurance statistics originating from the Financial Services Authority Regulators, the performance of insurance companies is in a positive range because it shows insurance growth that has continued to increase from 2015 to 2019. The following is the growth of insurance assets and investments in the last five years.



Figure 1. Total Assets and Total Investment in the insurance Industry Sector in Indonesia2015 – 2019 In Trillion Rupiah Source: Data processed from insurance statistics for 2019.

Stocks are the most significant investment portfolio in the insurance industry, with a value of 245.2 trillion or 21.6% of the total investment. Therefore, shares are an essential source of capital for insurance companies. However, asset and investment growth did not support volatile stocks. As quoted by CNBC Indonesia 2019, the insurance sub-sector of stocks listed on the Indonesia Stock Exchange is less attractive. This could be due to the lack of liquidity, and that investors do not understand the prospects related to the insurance industry in Indonesia. Based on the development of insurance in Indonesia which continues to grow, but the market share is still relatively low compared to other sectors, it is necessary to make efforts to increase the firm value, and the performance of insurance companies with several determining factors that can affect the price to book value. Investors will use the firm value as a guide and an indicator for the market in assessing a company. One measure of firm value is the price to book value (PBV) which is usually used to find undervalued stocks that have good potential and will benefit if sold in the future.

Based on the literature and previous research, many factors influence the high and low price to book value. The company's success in creating PBV value will provide hope for shareholders in the form of increased profits. Therefore, competition in the corporate insurance industry requires internal efforts to explore factors to improve firm value. Other factors that can affect the firm value (price to book value) are implementing Good Corporate Governance (GCG) by implementing the GCG mechanism, including the institutional share ownership structure, and Independent Commissioner. Corporate governance can encourage economic growth and increase trust in the financial sector, especially the capital market.

The actuarial backup is an essential part of creating firm value. In recent years, the insurance industry has been rife with cases of claim failure. Therefore, Management must have control over the reinsurance premium claims so that they can be collected so that no provision for impairment losses is necessary. The company will experience asset growth if all reinsurance receivables can be collected. However, if uncollectible, there will be an impairment loss that can impact the estimated future cash flows.

To develop their investments, Management or investors can use actuarial profiles to evaluate the direction of premiums and claims payments. Therefore, the actuarial profile must be appropriately managed because the risk of higher premiums in insurance companies will be seen as a consequence of investor risk. It will affect the value of the company, and if the company has a low price to book value, it will be susceptible to economic conditions and low profitability (Jensen, Johnson, and Mercer, 1997). Another actuarial profile indicator is comparing the claim expense against technical reserves. Technical reserves are formed by actuaries to anticipate more significant claims and to ensure future liabilities can be sufficient by making technical reserves and providing appropriate premium rates.

Based on the above background, this research is important to determine factors such as actuarial profile, corporate governance, and actuarial backup that risk the insurance industry's survival that can affect the increase and decrease in the value of the company.

# **II. Review of Literature**

#### 2.1 Insurance Business Model Illustration

Insurance is referred to as a guarantee or protection, which means that one might impose losses that they might get from an accident on another party, namely insurance. There are various types of insurance, such as life insurance, general insurance, and reinsurance. The insurance company can share the risk by reinsuring part of the value with another company (reinsurance company). Insurance companies' most common business step is to allocate idle premium funds to various liquid investment instruments such as stocks, mutual funds, and bonds. Thus, caution is needed in seeing what sentiments affect investment performance. A good investment decision will increase the company's revenue and performance to improve the price to book value. In addition to managing its assets properly, the company must be able to work risks optimally, such as the risk of actuarial backups. There is a reinsurance premium bill, which requires management of receivables collection so that the company's cash flow continues. Thus, the company can fulfil the obligation to pay claims to customers appropriately. An insurance company must calculate the estimated claims that will occur to determine the amount of the premium to be selected so that the company does not suffer losses due to too low a premium or customer losses due to too high premiums (Zuhairoh, 2015). This is the main principle of actuaries to maintain the risk selection process (Meyers and Van Hoyweghen, 2018). An actuary has a significant role for insurance companies in managing financial risk and considering the technical reserves that must be prepared, such as actuarial profile risks.

The above discussion regarding the insurance business model can be shown in Figure 2.1:



**Figure 2.** The insurance business model Source: Modified from Atman and Manulana (2018), Heilpern (2014) and (Meyers and Van Hoyweghen (2018)

# **2.2 Prior Related Studies/ Development of Research Hypotheses a. Price to Book Value**

Firm value is a measure of the company's success in the future. It is considered to increase the company's credibility to shareholders. Therefore, companies must be aware in making decisions and pay attention to factors that will impact stock prices. According to Zhao et al. (2018), in their research, the positive coefficient concluded that the PBV ratio positively impacted stock movements, especially when it reached the lowest point on the

Shanghai Composite Index. From the study results, there was extensive growth in the company, which was shown by the PBV ratio value above 1. A PBV ratio that exceeds 1 when the book value is less than the market price indicates that the company has high-quality assets and has the potential to grow with better prospects, conversely if the PBV ratio is below 1, it has a low valuation (undervalue).

# **b.** Actuarial Profile

The actuarial profile is a very crucial part of the insurance industry. The actuarial Profile presented in this study is the premium divided by the cost of the claim. According to the survey by Kusi et al. (2020), premium growth significantly and negatively affects profitability in all insurance company models. This shows that increasing the number of premiums can also result in increased risk because this can reduce the performance of insurance companies. Tarsono, Ardheta, and Amriyani's (2020) study explain that the claims ratio is the ratio of premium adequacy to claim payments, where the company shows the ability to pay claims by showing the large percentage of premium income used for claim payments. The test results of Johny, Purwoko, and Merawaty (2021) show that claim payments negatively affect ROA. Therefore, the accuracy of claim payments is needed, and we must pay more attention to performance to maintain customer satisfaction and trust. However, in research by Tarsono, Ardheta, and Amriyani (2020), premium growth has no significant and negative effect on the company's financial performance. The researcher concludes that the premium income earned cannot only be used to make profits but is used partly for premium reserves so that the company can pay claims in the future. The test results of Johny, Purwoko, and Merawaty (2021) concluded that claim reserves negatively and significantly affect ROA. This shows that large claims reserves illustrate the company's ability to pay the sum assured. Therefore, the company's actuaries must carefully consider the funds to be reserved so that it does not impact a decrease in ROA and result in a reduction in company performance.

Actuarial Profile plays an important role in managing premium growth, handling claims according to maturity, and managing technical reserves to benefit the company and reduce the risks in every company activity. Suppose the Actuarial Profile risk management in the insurance company is not handled effectively and efficiently. Companies that cannot increase net income will reduce investor interest in investing because it indicates the company has not been able to show good enough performance. With decreasing demand for company shares, the stock price in the capital market will fall. A decrease in share price less than the book value per share will cause a low price to book value so that the firm value will decrease. Thus, referring to the description above, the hypothesis proposed in this study is as follows:

#### H1: There is a negative effect between the actuarial profile on price to book value.

# c. Independen Commissioner

Independent Commissioner is a board member who is not affiliated with the controlling shareholder and has no financial, Management, or family relationship with that which affects the ability to act independently. According to agency theory, many independent commissioners will facilitate maximum management control and practical monitoring functions and increase firm value (Amaliyah and Herwiyanti, 2019). Research by Widnyana et al. (2020) states that corporate governance with an independent proxy commissioner positively affects the firm value of PBV, PER, Tobin's Q, and EPS. Research Armeliyas and Patrisia (2020) state that independent commissioners have a positive effect on PBV, in line with the theory that the existence of a board of

commissioners can reduce high agency costs and increase transparency and supervision, which will have an impact on information asymmetry, thereby reducing monitoring costs, with this the company's efficiency will be realized. Generally, GCG can increase investor confidence to invest, which impacts increasing the firm value. Thus, referring to the description above, the hypothesis proposed in this study is as follows:

# H2: There is a positive influence between corporate governance (independent commissioner) on price to book value.

# d. Intitutional Ownership

Jensen and Meckling (1976) suggest that institutional ownership is essential in reducing agency conflicts between managers and shareholders. Herdjiono and Sari (2017) conclude that institutional investors can effectively monitor every decision-making by managers. The more institutional ownership increases, the greater the institution's supervision. It can hinder the opportunistic actions of managers and improve company performance. Research by Suriawinata and Nurmalita (2021) shows a negative relationship to firm value, and this is because institutional ownership will tend to seek profit by working with company managers without paying attention to other shareholders. Institutional investors are usually more profitable than companies. According to Bebchuk, Cohen, and Hirst (2017), institutional ownership will benefit more if it favors company management than monitoring the interests of the companies they represent. Thus, referring to the description above, the hypothesis proposed in this study is as follows:

H3: There is a negative influence between corporate governance (institutional ownership) on price to book value.

# e. Actuarial Backup

Actuarial Backup is an important indicator that can affect the firm value. Actuarial Backup is calculated by dividing the reinsurance premium bill by total assets. Reinsurance premiums are included in the calculation of investments that should be allowed to maintain the solvency level of the insurance company. If the reinsurance premium bill cannot be collected, it will pose a risk to the company, where the company will get a smaller profit. Research by Kiptoo, Kariuki, and Ocharo (2021) states that liquidity risk management and market risk positively affect the performance of insurance companies. The results imply that managing liquidity risk appropriately can increase the proportion of current assets to current liabilities and will impact improving the performance of insurance companies.

According to Malafronte, Starita, and Pereira (2018), disclosure of insurance risk is helpful for convincing stakeholders to provide information about the ability of insurance companies to manage the risks that have been taken. His research also concludes that the information about the threat has a positive and significant effect showing its contribution to increasing firm value. Therefore, from a stakeholder point of view, risk information and risk management activities require careful analysis to strengthen market discipline because market functions are used as company control. This can increase public confidence in the services of insurance companies. A low price to book value will decrease market confidence in the company's performance. As a result, the demand for shares will also decrease, which will impact the decline in stock prices. Thus, referring to the description above, the hypothesis proposed in this study is as follows:

H4: There is a positive effect between actuarial backup on price to book value.

#### f. Size

Companies with significant assets are considered to have good work stability, so the company can generate greater profits by managing existing resources for investment activities, either from fixed or current assets. According to S and Machali (2017), a company that has assets that match the collateral will get a loan, and will make it easier for the company to get sources of funds that increase its value, as researched by Chabachib et al. (2019) which states that company size has a positive and significant effect on profitability. They assume that any increase in company size or total assets will increase company profitability. The study results by Sihaloho and Ps (2021) show that firm size moderating or strengthening price to book value has positive and significant results.

#### g. Return of Equity

Return on Equity (ROE) is essential in measuring the company's ability to generate profits from its capital, which aligns with (Endri, 2019). Research by Adare, Murni, and Repi (2016) shows that Return on Equity (ROE) has a positive and insignificant effect on firm value. Even though the increase in firm value is little, investors still buy shares because the company is known for its good reputation. Hence, investors are pretty sure of with performance. This is in line with (Ahmed et al. (2014). They state that ROE has a positive and insignificant effect on stock prices, because management performance has been carried out efficient, thus providing a good return on investment. This affects the stock price positively so that the cost to book value will increase.

#### h. Equity

Capital structure is one of the determining factors in considering investment decisions. With a high increase in capital, the company will be safer in the event of liquidation (Shamki, Alulis, and Sayari, 2016). The company uses the Equity to Asset Ratio (EAR) as a reference for assessing a company because this ratio is a comparison between its capital and the total assets owned by the company, so the more significant the portion, the greater the shareholder portion, so that the company's performance level will also increase better. Research by Rizki, Fatma Lubis, and Sadalia (2018); Gazi et al. (2021) shows the Equity to Asset Ratio (EAR) has a positive and insignificant coefficient on price to book value due to additional capital originating from other debt, can expand the business and can increase stock prices so that the value of the company grows.

## **III. Research Method**

#### 3.1 Research Models and Data Analysis Method

The type of research used in this research is a quantitative approach. According to Creswell (2009), quantitative research is an approach to testing the objective theory by examining the relationship between variables. These variables can be measured usually on instruments so that data in the form of numbers is analyzed using statistical procedures.

The samples used in this research are general insurance, life insurance, and reinsurance companies Tbk, registered with the Financial Services Authority (OJK) as many as 10 insurance companies. The research observation for the 2006 - 2019 period. The number of research observations contains 140 data.

The data is sourced from insurance statistics annual reports from Financial Services Authority (OJK) website, www.ojk.go.id, company financial reports, and published annual reports on the Indonesia Stock Exchange (IDX). Researchers use data sourced from the yahoo finance site to determine stock prices. The method used in processing panel data regression is Fixed Effect (FE), Random Effect (RE), and Pooled (OLS). This study used the Chow, Hausman, and Lagrange multiplier tests to determine the best estimation model.

# **IV. Result and Discussion**

#### **4.1 Descriptive Statistics**

The descriptive statistics table show an average PBV of 0.856 with a minimum value of 0.130 and a maximum value of 2.782. The average value of ACTP\_GAB and ACTB is 2.517, 0.143 for the minimum and maximum values of 1.755, 0.001 and 3,490, 0.370 Corporate governance (INDP), (INST) has an average value of 0.466, 0.684 for the minimum and maximum values of 0.333, 0.239 and 0.667, 0.981.

The control variables SIZE, ROE, and E.Q. showed an average value of 13.721, 0.112, 0.474 with a minimum and maximum values of 11983, -0.056, 0.181, and 16.000, 0.268, 0.904. The standard deviation of all proxies shows the level of variation in the data, which is lower than the mean value. The maximum PBV value of 2,782 indicates that there are general insurance companies, namely Asuransi Bina Dana Arta Tbk and Maskapai Reinsurance Tbk, showing a relatively large discount because the shares are valued higher than the company's assets and have overvalued stock conditions and are pretty stable in a long period long enough. This is considered quite good and attractive for long-term investment. Meanwhile, the average value of insurance companies sampled in this study shows undervalued stock conditions assess a value of less than 1.

The right decision to invest is made when conditions are undervalued because when undervalued will experience an increase in price in the future. The results of descriptive statistics, consisting of the mean, standard deviation, and minimum, are seen in Table 1:

Variable	Obs	Mean	Std. Dev.	Min	Max
PBV	140	0.856	0.753	0.130	2.782
ACTP_GAB	140	2.517	0.497	1.755	3.490
INDP	140	0.466	0.125	0.333	0.667
INST	140	0.684	0.210	0.239	0.981
ACTB	140	0.143	0.112	0.001	0.370
SIZE	140	13.721	1.243	11.983	16.000
ROE	140	0.112	0.083	-0.056	0.268
EQ	140	0.474	0.184	0.181	0.904

**Table 1.** Descriptive Statistics of variables

#### **4.2 Correlation Analysis**

Table 2 shows no correlation value between variables that exceed 0.75. Thus, H0 is accepted, and it can be concluded that there is no symptom of multicollinearity in the panel data used in this study (Gujarati 2006)

		Table	e <b>2.</b> Pear	son's Corr	elation				
VARIABLE	PBV	ACTP_GAB	INDP	INST	АСТВ	SIZE	ROE	EQ	
PBV	1.0000								
ACTP_GAB	-0.3566	1.0000							
INDP	-0.1963	0.0665	1.0000						
INST	-0.3136	0.2484	-0.1842	1.0000					
ACTB	-0.1502	0.2086	0.0532	0.0491	1.0000				
SIZE	0.3402	-0.3104	-0.1142	-0.2682	-0.6977	1.0000			
ROE	0.2257	0.0256	-0.0907	-0.2098	-0.1245	0.0083	1.0000		
EQ	-0.2439	0.0094	-0.0963	0.1757	-0.3670	0.2736	-0.2733	1.0000	

#### **4.3 Regression Result**

The R-square result is 0.500, indicating that the dependent variable's ability to explain the independent variable is 50%. In comparison, other factors outside the model explain the remaining 50%.

The actuarial Profile (ACTP\_GAB) regression results in the Random Effect (RE) model have a negative coefficient and are insignificant to price to book value. This study follows the hypothesis. The results of this study concluded that it is not always the premium received that is greater than the claim payment that can affect the increase in price to book value, but also, on the contrary, can reduce the cost to book value. This is because it is less effective in premium management, so investment placement is inappropriate and cannot generate optimal returns; conditions like this can increase the risk of default on claims. Another thing that can happen is the lack of claim management, so the claim payment process is not timely and will cause a risk to investor confidence.

This study is in line with Johny, Purwoko, and Merawaty's (2021) research, concluding that claim payments impact a decrease in Return on Assets (ROA). Therefore, it is necessary to pay attention to the accuracy of claim payments and pay more attention to performance and speed to maintain customer satisfaction and trust. This agrees with research by Tarsono, Ardheta, and Amriyani (2020) that the adequacy ratio of premiums to the number of claim payments will indirectly affect the decline in company profits. The premium income generated is not only used as profit or profit, but part of it can be used as a premium reserve so that insurance companies can pay claims in the future.

The actuarial Profile shows that the higher the claim cost compared to the technical reserve, the lower the price to book value. Therefore, an actuary must be careful in determining the method of calculating the claim funds that will be reserved not to affect the company's financial health, which will impact decreasing price to book value. This is in line with research by Johny, Purwoko, and Merawaty (2021), concluding that claim reserves hurt Return on Equity (ROE).

In Proxy Corporate Governance (INDP), the Random Effect (RE) model follows the plausible hypothesis, which shows a positive and insignificant coefficient on price to book value. This study indicates that independent commissioners do not affect firm value. The addition of independent commissioners is possible only to fulfil formality needs, while the majority shareholder still plays a vital role so that the board's performance does not increase. This indicates that the corporate governance function is not running well. So that it does not have an impact on improving the firm value. The independent commissioner acts as a mediator between the company and minority shareholders. If this function runs optimally, there will be an increase in objectively and transparent decision-making. This is in line with research (Widnyana et al., 2020), (Armeliyas and Patrisia, 2020), and in line with agency theory, the existence of a board of commissioners can reduce high agency costs and increase transparency and supervision which will have an impact on information asymmetry, thereby reducing monitoring costs, with this company efficiency will be realized.

In the corporate governance (INST), the (RE) model shows that the coefficient is negative and significant to the price to book value. This follows the plausible hypothesis. Therefore, the researcher concludes that as the company's performance increases, institutional ownership will get more personal benefits by siding with company managers rather than directly monitoring the interests of the institutions they represent, this can reduce profits for the company, and institutional ownership will reduce public trust in the company. As a result, the stock market reacted negatively by decreasing stock trading volume and stock prices, thereby reducing shareholder value and decreasing firm value (PBV). This study supports research by Suriawinata and Nurmalita (2021) and Bebchuk, Cohen, and Hirst (2017), which states that institutional ownership negatively and significantly affects firm value. This shows that when the company's size increases, institutional investors will work with managers to take actions that can increase the substantial value by not being concerned with other shareholders, where investors will benefit more than the company.

This study's results follow the proposed hypothesis in the Random Effect (RE) model, which states that the actuarial backup (ACTB) coefficient is positive and insignificant to the PBV. Management can use these sources of funds for investment. This will be a concern for investors in determining the value of the company (price to book value), because the company is considered to be able to maintain financial stability, so that the company tends to attract investors to invest. The higher the PBV ratio, the firm value can be trusted by the public. However, behind the high PBV value, there is also a risk that if the reinsurance premium bill is not collected, it will impact asset value decline and hinder the company from generating profits. Other things that investors use to assess a company are looking at the history of its existence in the insurance industry in the previous period so that they ignore the current statistical situation. This is in line with Kiptoo, Kariuki, and Ocharo (2021) research, which states that liquidity risk management and market risk positively affect insurance companies' performance.

The SIZE proxies in the Random Effect (RE) model shows that the coefficient is positive and significant to price to book value. This is because the more influential the company's size is seen from its total assets and can positively signal to investors that the company has good prospects. Companies that experience positive growth in total assets can increase stock prices and affect the increase in firm value (PBV). This agrees with Sihaloho and Ps (2021) and Chabachib et al. (2019), which state that firm size is positive and significant to price to book value, and this is because the more total assets or fit size, the higher the substantial value.

The Random Effect (RE) model shows that the coefficient is positive and insignificant in the ROE proxies. This is in line with research by Adare, Murni, and Repi (2016) and Ahmed et al. (2014). According to the analysis results by Rosikah et al. (2018), Return on Equity (ROE) has a positive and insignificant effect on firm value. The researcher concludes that the high ratio of Return on Equity (ROE) can have a slight effect on the price to book value because investors do not only use Return on Equity (ROE) analysis in determining investment choices but can also use other fundamental analyses or pay more attention to current market demand, so many considerations must be considered.

In the Proxy E.Q., the Random Effect (RE) model has a positive and insignificant coefficient on price to book value. The researcher concludes that with a high increase in capital, the company will be safer in liquidation to protect capital owners from bankruptcy, reduce companies seeking external funding, and increase public confidence. In this case, it will not cause problems if the capital structure is below the optimum point. The increase in debt is still more significant than the costs incurred. The company must formulate the composition of the use of equity appropriately so that it can help the company's operational activities and ultimately improve the insurance company's performance and profitability, which will have an impact on increasing the firm value. This is following several studies by Rizki, Fatma Lubis, and Sadalia (2018) and Gazi et al. (2021), which show the Equity to Asset Ratio (EAR) has a positive and insignificant coefficient on price to book value.

	FE	RE	OLS
VARIABLES			
VIIIII DELLO			
ACTP GAB	-0.207**	-0.214**	-0.334***
	(0.103)	(0.102)	(0.115)
INDP	0.593	0.558	-1.132**
	(0.387)	(0.381)	(0.446)
INST	-0.589	-0.698**	-0.490*
	(0.376)	(0.351)	(0.293)
ACTB	0.915	0.991	0.350
	(0.617)	(0.612)	(0.724)
SIZE	0.493***	0.443***	0.196***
	(0.0791)	(0.0732)	(0.0659)
ROE	0.882	0.899	1.032
	(0.557)	(0.556)	(0.713)
EQ	0.432	0.213	-1.123***
	(0.350)	(0.330)	(0.335)
Constant	-5.691***	-4.808***	0.236
	(1.426)	(1.337)	(1.209)
R-squared	0.502	0.500	0.354
Chow Test	22.44		
	0.0000		
Hausman Test		8.37	
		0.3014	
L.M. Test		136.90	
		0.0000	

 Table 3. Regression Result

#### 4.4 Robustness Check Regression

From the results of the robustness check test that the researcher tested with six models sequentially, it can be seen that ACTP\_GAB showed results that were not robust. The researcher suspects that the risk of the company's ability to pay its obligations will also decrease due to the decrease in claim costs. Usually, the company will get higher profits. Still, if the company does not pay claims on time, it does not manage premiums, and technical reserves into investment instruments, it can result in other costs which can be at risk of loss to the company. INST shows not robust results. It is suspected that the more influential the proportion of institutional ownership, the more uninformative the information presented. This is because institutional investors are not owners, so they cannot monitor the manager's performance, so opportunistic behaviour may occur to avoid losses that arise because the company's performance is less than optimal. This will have an impact on decreasing public confidence in the company. INDP, ACTB, SIZE, ROE, and E.Q. showed robust results because the previous regression and robustness check tests showed consistent results.

Table 4.	Robustness	Check
----------	------------	-------

	RE						
VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	
ACTP_GAB	-0.214		-0.198	-0.181	-0.232	-0.211	
	(0.165)		(0.147)	(0.146)	(0.169)	(0.169)	
INDP	0.558	0.374			0.470	0.474	
	(0.539)	(0.529)			(0.523)	(0.530)	
INST	-0.698	-0.754		-0.648		-0.837	
	(0.570)	(0.589)		(0.581)		(0.528)	
ACTB	0.991	0.960	1.143	0.902	1.275*		

	(0.818)	(0.844)	(0.816)	(0.856)	(0.760)	
SIZE	0.443***	0.476***	0.525***	0.456***	0.504***	0.381***
	(0.122)	(0.155)	(0.145)	(0.134)	(0.134)	(0.133)
ROE	0.899	0.561	0.983	0.778	1.123	0.602
	(0.837)	(0.725)	(0.706)	(0.798)	(0.775)	(0.743)
EQ	0.213	0.0400	0.362	0.174	0.337	0.0482
	(0.812)	(0.734)	(0.846)	(0.817)	(0.845)	(0.767)
Constant	-4.808**	-5.548**	-6.290***	-4.806**	-6.158***	-3.579*
	(1.874)	(2.448)	(1.908)	(1.968)	(1.904)	(1.988)
R-squared	0.500	0.481	0.484	0.492	0.492	0.493
Chow Test	22.44	23.72	23.61	23.61	22.67	22.05
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hausman Test	8.37	8.63	8.42	8.42	13.43	11.51
	0.3014	0.1955	0.1347	0.1347	0.0368	0.0738
LM Test	136.90	164.52	187.30	187.30	130.11	130.76
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

# **V. Conclusion**

In this study, researchers investigate the determinants that affect firm value, namely price to book value, focusing on actuarial Profile, corporate governance (independent commissioner and institutional ownership), and actuarial Backup to be considered in making decisions for potential investors who will investin the insurance industry. From the regression results, the method chosen is the RE model, which shows the results of price to book value with a positive coefficient with the size of the control variable, which shows that the company's size is determined by its total assets. Meanwhile, price to book value negatively correlates with actuarial profile and corporate governance (INST). However, it is unfortunate that the independent proxy commissioner, actuarial backup, ROE, and E.Q. fail to show their significance. This can be considered a negative signal for the market and investors. Therefore, companies must focus more on risk management on actuarial backups and capital ratios to increase firm value because if independent commissioners, actuarial backups will, and the value of the company will also increase.

The results show that corporate governance (INST) has a negative and significant coefficient. It is concluded that the existence of institutional ownership cannot impact increasing the value of insurance companies. Hence, the presence of institutional ownership needs to monitor management activities so that corporate control becomes effective and reduces opportunistic management behaviour. For the insurance industry, it is hoped that this research can be used as an evaluation material for institutional ownership supervision. Independent commissioners must implement good corporate governance following their functions. For Financial Services Authority regulators, research is a reference in developing standards related to insurance risk and the implementation of corporate governance and an evaluation and assessment tool for a company. So that the insurance industry can implement best practices. The results showed that the actuarial Profile and actuarial Backup had a negative coefficient and did not show any significance. This indicates that the market does not appreciate the role of both, although actuarial profiles and actuarial backups are crucial in the insurance world. This can be input for insurance practitioners to evaluate in managing premiums and claims and optimally forming reserves, thereby reducing the risk of loss. Furthermore, it can place investments into liquid investment instruments, increasing investor confidence. Hopefully, this research can also provide a reference in supporting the literature for future research related to the insurance industry.

# References

- Adare, D., Murni, S. and Repi, S. (2016). 'Faktor-Faktor yang Mempengaruhi Nilai Perusahaan Subsektor Perbankan pada BEI dalam Menghadapi Mea', Jurnal Riset Ekonomi, Manajemen, Bisnis dan Akuntansi, 4(1), pp. 181–191. doi: 10.35794/emba.v4i1.11585.
- Ahmed Imran Hunjra a, Muhammad Shahzad Ijaza, Muhammad Irfan Chani b, Sabih ul Hassan a, U. M. a (2014) 'International Journal of Economics and Empirical Research', *Internation Journal of Economics and Empirical Research*, 2(2014), pp. 274–287.
- Armeliyas, M. and Patrisia, D. (2020) 'The Effect of Internal Corporate governance Mechanism on Corporate Values', 124(1976), pp. 1005–1018. DOI: 10.2991/aebmr.k.200305.170.
- Bebchuk, L. A., Cohen, A. and Hirst, S. (2017) 'The agency problems of institutional investors, *Journal of Economic Perspectives*, 31(3), pp. 89–112. DOI: 10.1257/jep.31.3.89.
- Chabachib, M. et al. (2019) 'Analysis of Company Characteristics of Firm Values: Profitability as Intervening Variables, *International Journal of Financial Research*, 11(1), p. 60. DOI: 10.5430/ijfr.v11n1p60.
- Creswell, J. W. (2014). Qualitative, quantitative, and mixed methods approaches/John W. Creswell.—3rd ed. p. cm. SAGE.
- Endri (2019) 'Determinant of firm's value: Evidence of manufacturing sectors listed in indonesia shariah stock index', *International Journal of Recent Technology and Engineering*, 8(3), pp. 3995–3999. DOI: 10.35940/ijrte.C5258.098319.
- Gazi, A. I. *et al.* (2021) 'Determinants of Profitability in Banking Sector: Empirical Evidence from Determinants of Profitability in Banking Sector: Empirical Evidence from Bangladesh', (November). DOI: 10.13189/ujaf.2021.090616.
- Herdjiono, I. and Sari, I. M. (2017) 'The effect of *corporate governance* on the performance of a company. Some empirical findings from Indonesia', *Journal of Management and Business Administration. Central Europe*, 25(1), pp. 33–52. DOI: 10.7206/jmba.ce.2450-7814.188.
- Jensen, G. R., Johnson, R. R. and Mercer, J. M. (1997) 'New evidence on size and priceto-book effects in stock returns, *Financial Analysts Journal*, 53(6), pp. 34–42. DOI: 10.2469/faj.v53.n6.2128.
- Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. Journal of Financial Economics, 13, 305-360
- Johny, M., Purwoko, B. and Merawaty, E. E. (2021) 'Effect of Gross Premiums, Claims Reserves, Premium Reserves, and Payment of Claims to ROA', International Journal of Econopositif mics, Management, Business and Social Science (IJEMBIS), 1(1), pp. 3–4.
- Kiptoo, I. K., Kariuki, S. N. and Ocharo, K. N. (2021) 'Risk management and financial performance of insurance firms in Kenya', *Cogent Business and Management*. Cogent, 8(1). DOI: 10.1080/23311975.2021.1997246.
- Kusi, B. A. et al. (2020) 'Insurance regulations, risk and performance in Ghana', Journal of Financial Regulation and Compliance, 28(1), pp. 74–96. DOI:

10.1108/JFRC-09-2018-0126.

- Meyers, G. and Van Hoyweghen, I. (2018) 'Enacting Actuarial Fairness in Insurance: From Fair Discrimination to Behaviour-based Fairness', *Science as Culture*. Taylor & Francis, 27(4), pp. 413–438. DOI: 10.1080/09505431.2017.1398223.
- Rizki, A., Fatma Lubis, A. and Sadalia, I. (2018) 'The Influence of Capital Structure to the Firm Value with Profitability As Intervening Variables', *KnE Social Sciences*, 3(10), pp. 220–230. DOI: 10.18502/kss.v3i10.3375.
- Rosikah et al. (2018) 'Effects of Return on Asset, Return On Equity , Earning Per Share on Corporate Value', *The International Journal of Engineering and Science (IJES*, 7(3), pp. 6–14. DOI: 10.9790/1813-0703010614.
- S, S. and Machali, M. (2017) 'The Effect of Asset Structure and Firm Size on Firm Value with Capital Structure as Intervening Variable', *Journal of Business & Financial Affairs*, 06(04). DOI: 10.4172/2167-0234.1000298.
- Shamki, D., Alulis, I. K. and Sayari, K. (2016) 'Financial Information Influencing Commercial Banks Profitability', *International Journal of Economics and Finance*, 8(6), p. 166. DOI: 10.5539/ijef. v8n6p166.
- Sihaloho, J. and Ps, A. R. (2021) 'The Influence of Price Earning Ratio (Per), Earning Per Share (Eps), Price To Book Value (Pbv) On Stock Prices And Firm Size As Mediators In Food And Beverage Sub- Sector Manufacturing Companies Listed On The Indonesia Stock Exchange 2015-2020', 2021(4), pp. 432–446.
- Suriawinata, I. and Nurmalita, D. (2021) 'Ownership Structure, Firm Value and the Moderating Effects of Firm Size: Empirical Evidence from Indonesian Consumer Goods Industry', Jurnal Manajemen dan ..., pp. 1–11. Available at: http://repository.stei.ac.id/5029/2/23915-Article Text-36756-1-18-20210905 revised.pdf.
- Tarsono, O., Ardheta, P. A. and Amriyani, R. (2020) 'The Influence of Net Premium Growth, Claim Ratio and Risk-Based Capital on the Financial Performance of Life Insurance Companies', 127(Aicar 2019), pp. 65–68. DOI: 10.2991/aebmr.k.200309.015.
- Widnyana, I. W. et al. (2020) 'Influence of financial architecture, intangible assets on financial performance and corporate value in the Indonesian capital market', *International Journal of Productivity and Performance Management*, (1999). DOI: 10.1108/IJPPM-06-2019-0307.
- Zhao, Y. et al. (2018) 'Selecting a better valuation model to measure bubble level of stocks price: empirical study from internet-based finance stocks in A-share market', *Economic Research-Ekonomska Istrazivanja*. Routledge, 31(1), pp. 1619–1640. DOI: 10.1080/1331677X.2018.1484787.