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INDONESIAN CAPITAL MARKET REVIEW

The Influence of Banking Risk on Share Price and the Moderating Role of Inflation Rate

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This research examines the relationship between banking risk and the share price of government banks in Indonesia. This research also discusses the moderating role of inflation towards banking risk and share price. This research employs the multiple regression analysis using the fixed-effect model to estimate the influence of banking risk on the share price and the role of inflation as a moderator variable. The findings reveal that both government and private banks' liquidity risk positively and significantly influences the share price. Private banks' credit risk has a positive and significant relationship with share price, while government banks' credit risk has no significant effect on the share price. Inflation moderates the relationship between government banks' liquidity risk and share price, but it fails to moderate the relationship between credit risk and share price. This research's findings not only become guidance for government banks in maintaining their risks but also can be a reference for banking authority in setting banking policy.

Keywords: banking risk; inflation; share price.

JEL Classification: G21

Introduction

The rapid expansion undertaken by banks in Indonesia requires considerable funding. Therefore, several banks in Indonesia conduct shares selling transactions to meet their funding needs. Uncertainties in the global economic condition and banks financial performance instability result in banks' share price fluctuation (Sambul, Murni, & Tumiwa, 2016; Fahlevi, Asmapane, & Oktavianti, 2018; Susilowati & Utiyati, 2016). The signalling theory explains the relationship between risk and share. This theory is used to overcome the asymmetry information problem (Morris, 1987). Sixpence, Adeyeye, and Rajaram (2020) applied the signalling theory to explain the relationship between fi-

ancial risk and the share price of listed companies in the Zimbabwean Stock Exchange. Their findings are consistent with the signalling theory; changes in the amount of debt indicate changes in the level of financial risk impacting changes in stock prices. Investors interested in buying the banks' shares will identify their performance and risk before buying the shares. Therefore, banks with sound financial performance and low risk can sell their shares at a favourable price, attracting investors to buy their shares.

Vo and Bui (2016) showed that the liquidity of listed companies in the Ho Chi Minh Stock Exchange has a positive relationship with stock return. Dang and T.M.H Nguyen (2020) analysed the relationship between liquidity risk and

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the stock price of more than 17,000 firms in 41 countries, and they found that the increase in liquidity risk decreases the stock price. Therefore, liquidity risk also becomes a significant concern for many banks in Indonesia. Generally, this risk is estimated by the liquidity ratio. The loan to deposit ratio as one of the liquidity indicators increased slightly from 92.11% in 2015 to 94.43% in December 2019 (Indonesia Financial Service Authority, 2019). Concerning the risk, an increase in the loan to deposit ratio indicates an increase in liquidity risk. A high loan to deposit ratio indicates that banks can maximise the allocation of their third-party funding into a loan. Furthermore, the increase in loan to deposit ratio will increase the banks' interest income; thus, increasing their performance and affecting their share price (Idawati, Pratama, & Mandasari, 2018). However, a high loan to deposit ratio also indicates that banks may face difficulties fulfilling their liquidity needs. Therefore, it will increase their liquidity risk and potentially decrease their share price. Thus, this ratio's movement shows the banks' liquidity performance, influencing their share price (Sambul, Murni, & Tumiwa, 2016; Fahlevi, Asmapane, & Oktavianti, 2018).

Credit risk also becomes a significant issue for banks in Indonesia. The amount of non-performing loans is an indicator of banks' credit performance. According to the Indonesia Financial Service Authority (2015), the number of non-performing loans to total loans ratio (NPLs) increased slightly from 4.86% in 2012 to 5.4% in 2015. Indirectly, the increase also indicated that there was an increase in the banks' credit risk. The increase in non-performing loans to total loans ratio will decrease credit performance. As a result, this circumstance will increase the banks' credit risk and decrease their share price (Putri, 2016). Moreover, the non-performing loans ratio decrease will potentially decrease the banks' share dividend and share price (Sambul, Murni, & Tumiwa, 2016). It occurs because the increase in the non-performing loans ratio indicates an increase in the credit risk.

Nowadays, all government banks in Indonesia, namely Bank Mandiri, Bank Rakyat In-

onesia, Bank Nasional Indonesia, and Bank Tabungan Negara, participate actively in Indonesia's share trading. Banks performance and risk affect their activity in the capital market (Putri, 2016; Sambul, Murni, & Tumiwa, 2016; Fahlevi, Asmapane, & Oktavianti, 2018; Sari, Yanti, & Zulbahri, 2018). The risk will affect the share price fluctuation. Generally, banks with lower risk tend to show better performance than banks with higher risk. The lower the banks' risk, the higher the share price, vice versa (Fahlevi, Asmapane, & Oktavianti, 2018; Idawati, Pratama, & Mandasari, 2018). Thus, this research will analyse the influence of banking risk on Indonesia's government banks' share price.

Furthermore, inflation as one of the macroeconomics factors can affect not only the banks' risk (Fadillah and Aji, 2018; Rachmawati 2018; and Sengkey et al., 2018) but also the share price. Inflation can also be a great cause for changes in share price (Ghauri, 2014). Therefore, inflation becomes an important factor influencing the banks' interest rate. Singh and Padmakumari (2020) discussed the relationship between inflation and share price. They explained the relationship using the Fisher Hypothesis. According to Fisher (1930), in Singh and Padmakumari (2020), the expected nominal stock return value is equal to expected inflation and the real rate of return. Moreover, this hypothesis also predicts that there is a positive relationship between stock return and inflation. According to Bank Indonesia, the average inflation from 2005 to 2014 was still high, about 8%. Moreover, the Indonesian inflation rate contributed to changing banks' share price (Manasseh & Omeje, 2016; Kurniawan & Yuniati, 2019; Mukolu & Ilugbemi, 2020). Hence, this research will also analyse inflation as a moderator variable in the relationship between banking risk and share price.

Previous researchers have widely studied the interrelationship among inflation, banking risk, and share price. However, only a few studies have discussed the moderating role of inflation in the relationship between banking risk and share price. Thus, this research aims to fill this gap by investigating the moderating role of

inflation in the relationship between banking risk and share price. Moreover, this research is significant because inflation may have an important role in the relationship between banking risk and share price.

This research aims not only to examine the influence of banking risk on share price but also to investigate the role of inflation as a moderator variable. This research contributes to the literature on the relationship between banking risk, share price, and inflation. Moreover, this research will also provide guidance and information for banks in Indonesia to deal with risks and identify their impact on the share price. Hence, the banks can take necessary actions to anticipate these risks. As a result, it can minimise the share price fluctuation. This research also provides guidance for banking authorities in setting the interest rate and controlling the inflation rate. Furthermore, this research will assist investors in investing their funds in buying bank shares. Investors can analyse the types of risks that banks have and their impact on share price fluctuation. Besides, the investors will also be aware of inflation as one of the macroeconomics factors influencing the relationship between banking risk and share price.

The next section of this research will discuss the literature review. A discussion on the methodology follows it. Subsequently, the results and discussions section will discuss the findings. The last section will conclude the research.

Literature Review

Theories

This research employs two theories. The first theory is the signalling theory, explaining the relationship between banking risk and share price. According to this theory, risk negatively influences share price (Sixpence, Adeyeye, & Rajaram, 2020). An increase in banking risk indicates a bad signal for the banks, decreasing the number of share buyers. As a result, the share price may decrease. The second theory is the Fisher hypothesis. This hypothesis explains the role of inflation as a moderator variable in

the relationship between banking risk and share price. This theory defines that the expected nominal stock return is equivalent to the expected real rate of return and inflation (Fisher, 1930).

The Influence of Banking Risk on Share Price

Many researchers have discussed the relationship between liquidity risk and share price in Indonesia. Moreover, previous studies have also examined the influence of credit risk on the share price in Indonesia. Most of these studies did not measure the risk directly. Generally, these studies used liquidity ratio and credit ratio to estimate performance and risk. Devi (2016) discussed the influence of liquidity and credit performance on the share price of government banks in Indonesia from 2006 to 2015. The regression result showed that liquidity positively influences share price, while credit performance has a negative and significant effect on the share price. Putri (2016) analysed the relationship between the non-performing loan and the share price of 32 banks and ten foreign banks in Indonesia from 2013 to 2015. The study revealed that the non-performing loan has a negative and significant relationship with the share price. Concerning the risk, this result also means that credit risk and share price have a negative relationship. Sambul, Murni, and Tumiwa (2016) also discussed the influence of liquidity performance and credit performance on the share price of the ten biggest banks in Indonesia from 2012 to 2014. They showed that liquidity performance negatively influences share price, while credit performance positively influences share price. Indirectly, these results also indicate that liquidity risk negatively influences share price, while credit risk positively influences share price. Moreover, Sari, Yanti, and Zulbahri (2018) also examined the effect of liquidity risk and credit risk on the share price of government banks in Indonesia from 2012 to 2016. They revealed that the loan to deposit ratio and the non-performing loan has a negative and significant influence on the share price. These results also mean that, indirectly,

liquidity risk and credit risk negatively influence share price. Medyawicesar, Tarmed, and Purnamasari (2018) discussed the influence of credit ratio on the share price of private banks. Besides, Idawati, Pratama, and Mandasari (2018) also examined the relationship between liquidity performance and share price of government banks in Indonesia from 2011 to 2016. They also found that liquidity estimated by the loan to deposit ratio has a negative and significant effect on the share price. Thus, this finding also indicates that liquidity risk and credit risk have a negative effect on the share price.

The Role of Inflation as a Moderator Variable

Hasan and Javed (2009), in Menaje (2012), revealed that inflation has little impact on returns in the equity market. For example, Manasseh and Omeje (2016) analysed the influence of inflation on the share price in Nigeria from 1981 to 2012. This study showed that inflation has a negative and significant influence on the share price. Meanwhile, Rachmawati (2018) examined the relationship between inflation and the share price of the banks in Indonesia from 2015 to 2017. The study found that inflation has a negative and significant relationship with the share price. Ginting, Topowijono, and Sulasmiyati (2015) discussed the impact of inflation on the share price of 29 banks in Indonesia from 2011 to 2015. They revealed that inflation has a negative and significant impact on the share price. Kurniawan and Yuniati (2019) analysed the effect of inflation on the share price of ten banks from 2013 to 2017. Their analysis result showed that inflation has a positive and significant impact on the share price. Previous researchers also discussed the relationship between banking risk and inflation. For example, Waemustafa and Sukri (2016) analysed the influence of inflation on the liquidity risk of Islamic and conventional banks from 2001 to 2011. They found that liquidity risk has a positive influence on the share price. Purba and Darmawan (2016) discussed the relationship between inflation and credit risk of *shariah* banks in Indonesia from 2014 to 2016.

Their findings showed that inflation has a negative and significant relationship with the share price. Besides, Nainggolan, Pandia, and Ansori (2018) identified the influence of inflation on banks' credit risk in Indonesia from 2014 to 2018. They revealed that inflation has a negative and significant influence on credit risk.

Methodology

This research applies one dependent variable, two independent variables, and one moderator variable. Table 1 presents a description of the variables used in this research. This research employs the share price of banks as the dependent variable, following Menaje (2012), Ariff and Tunyarputt (2013), and Ghauri (2014). The share price is used as an indicator because it shows the company performance and value to become an indicator for investors to decide to buy or sell shares of a company (Marwansyah, 2016; Rusli & Dasar, 2014). The higher the share price may indicate, the higher the company performance and value (Marwansyah, 2016). This share price is generated from the average of quarterly banks' share price. The share price is available on a daily basis. Thus, this research converts this daily basis share price into quarterly by taking an average of four months. Meanwhile, the independent variable in this research is banking risk, consisting of liquidity risk and credit risk. Liquidity risk is estimated indirectly by liquidity ratio. This liquidity ratio is calculated using the loan to deposit ratio, following Jiang, Yao, and Zhang (2009) and Sobhy and Megeid (2017). This ratio measures the banks' liquidity and evaluates the banks' management performance in distributing their loans (Sobhy & Megeid, 2017). The loan to deposit ratio that is too high indicates that the banks may experience difficulties in financing their short-term liquidity as if a sudden withdrawal of savings. On the other hand, the loan to deposit ratio that is too low indicates that the banks have not maximised their fund (Sobhy and Megeid, 2017). Thus, the higher the loan to deposit ratio, the higher the liquidity risk, and vice versa. Moreover, credit risk is also estimated indirectly by non-performing loans to total loans,

following Knapp and Gart (2014), Salim, Arjomandi, and Dakpo (2016), and Abbas, Iqbal, Aziz, and Yang (2019). Non-performing loans to total loans are the ratio functions to measure the loan quality (Knapp and Gart, 2014). The higher this ratio, the higher the banks' credit risk, and vice versa. Furthermore, these results also used the inflation rate as the moderating variable for the relationship between banking risk and share price. The average quarterly inflation rate estimates the inflation rate. Inflation is an important indicator because it can provide an overview of the macroeconomics conditions (Doyran, 2013). This research also employs capitalisation and efficiency as the control variables. The capital adequacy ratio estimates the capitalisation. This ratio measures banks' capital adequacy to back up assets containing or generating risk (Sudarmawanti and Pramono, 2017). Banks with a high capital adequacy ratio indicate that the banks can guarantee their capital based on their assets; thus, this circumstance will increase investor confidence to buy the banks shares (Fahlevi, Asmapane, & Oktavianti, 2018). Meanwhile, efficiency is estimated by the operating expenses ratio, following Rosly and Abu Bakar (2003), Ezeoha (2011), and Olson and Zoubi (2011). This ratio is calculated by dividing the operating expenses by operating income. This ratio measures the banks' capability in generating net profit determined by cost-efficiency.

Multiple regressions using the fixed-effect model is applied to measure the relationship between banking risk and share price. The regression model using the fixed-effect model in this research is as follows:

$$\begin{aligned} \ln Share\ price_{it} = & (\beta_0 + \lambda_i) + \beta_1 LiqRisk_{it} \\ & + \beta_2 CredRisk_{it} \\ & + \beta_3 Capitalisation_{it} \\ & + \beta_4 Efficiency_{it} + u_{it} \end{aligned} \quad (1)$$

Model (1) is a regression model measuring the relationship between banking risk and share price.

$$\begin{aligned} \ln Share\ price_{it} = & (\beta_0 + \lambda_i) + \beta_1 LiqRisk_{it} \\ & + \beta_2 CredRisk_{it} + \beta_3 Inflation_{it} \end{aligned}$$

$$\begin{aligned} & + \beta_4 Capitalisation_{it} \\ & + \beta_5 Efficiency_{it} + u_{it} \end{aligned} \quad (2)$$

The regression model with inflation as the moderating variable (M) is as follows:

$$\begin{aligned} \ln Share\ price_{it} = & (\beta_0 + \lambda_i) + \beta_1 LiqRisk_{it} \\ & + \beta_2 CredRisk_{it} + \beta_3 Inflation_{it} \\ & + \beta_4 LiqRisk\ MV_{it} \\ & + \beta_5 CredRisk\ MV_{it} \\ & + \beta_6 Capitalisation_{it} \\ & + \beta_7 Efficiency_{it} + u_{it} \end{aligned} \quad (3)$$

Model (3) is a regression model measuring the role of inflation as a moderator variable in the relationship between banking risk and share price.

Lagrangian Multiplier test is applied to test the better model between Ordinary Least Square (OLS) and random-effect model. Meanwhile, the Hausman test is also used to identify a better model between random-effect and fixed-effect models. Therefore, based on these tests, the fixed-effect model is considered the best model for this research. The fixed-effect model assumes that the differences between individuals can be accommodated from differences in the intercept. Moreover, this model also allows individual and/or time-specific effects to be correlated with explanatory variables (Hsiao, 2007). Besides, this research also employs the multicollinearity test and heteroscedasticity test using the Breusch Pagan test.

In this research, the samples consist of four government banks in Indonesia: Bank Mandiri, Bank Negara Indonesia, Bank Rakyat Indonesia, and Bank Tabungan Negara. These banks are categorised as banks with the largest assets in Indonesia (Rusli and Dasar, 2014). Furthermore, these banks' shares are in great demand by investors, and their share prices tend to increase every year (Sari, 2016). Moreover, this research also compares those government banks to private banks: Bank Central Asia (BCA), Bank Danamon, Bank Permata, Bank CIMB NIA-GA, Maybank, and Panin Bank. These banks are also part of the ten banks with the largest assets in Indonesia (Zafrizal & Said, 2019). The financial data of these banks is derived from the

Table 1. Variable Description

Variable	Description	Previous Studies
Dependent Variable		
Share Price	The average value of quarterly share price	Menaje (2012), Ariff and Tunyarputt (2013), and Ghauri (2014)
Independent Variable		
Liquidity Risk	The ratio of loan to total deposit • The higher the loan to the deposit ratio, the higher the risk	Jiang et al. (2009) and Sobhy and Megeid (2017)
Credit Risk	The ratio of non-performing loans to total loans • The higher the non-performing loans ratio, the higher the credit risk	Knapp and Gart (2014), Laryea et al. (2016), Salim et al. (2016), and Abbas et al. (2019)
Moderating Variable		
Inflation	The average of the quarterly inflation rate	Doyran (2013) and Manasseh and Omeje (2016)
Control Variables		
Capitalisation	Capital adequacy ratio	Maghyereh and Awartani (2014), Laryea et al. (2016)
Efficiency	Operating expenses to operating income ratio	Rosly and Abu Bakar (2003) and Ezeoha (2011)

Table 2. Descriptive Statistics

Variables	Government Banks			Private Banks		
	Mean	Minimum	Maximum	Mean	Minimum	Maximum
Share Price	4,634	1,190	9,900	4,713	151	33,425
Liquidity Ratio	0.941	0.804	1.140	0.890	0.740	1.070
Credit Ratio	0.014	0.001	0.085	0.014	0.002	0.029
Capitalisation	0.194	0.148	0.229	0.197	0.136	0.249
Efficiency	0.744	0.630	0.980	0.81	0.683	1.577
Inflation	0.039	0.024	0.072	0.039	0.024	0.072

Bank Indonesia website. Meanwhile, the share price data of government banks is derived from the yahoo finance website. Furthermore, this research uses quarterly data from 2015 to 2019.

Results and Discussions

The Influence of Banking Risk on Share Price

Table 2 shows the descriptive statistics of all variables estimated in this research, not only for government banks but also for private banks. The mean of the share price as the dependent variable for private banks is Rp 4,713. The minimum share price value is Rp 151, while the maximum value is Rp 33,425. The liquidity ratio of government and private banks estimated by the loan to deposit ratio has an average value of 0.94 and 0.89, respectively. This ratio indicates that private banks in Indonesia have a better liquidity ratio compared to government banks. The maximum liquidity risk value of government banks is about 1.14, and the minimum value is 0.80. Meanwhile, the maximum liquidity risk value of private banks is about

1.07, while the minimum value is 0.74. The credit ratio for government banks measured by non-performing loans to total loans has a mean value of about 0.014. This ratio indicates that government banks face low credit risk because it does not exceed the maximum requirement of non-performing loans, which is 0.05. This ratio is also similar for private banks, which is about 0.014. The maximum credit ratio value for government banks is 0.085, while the minimum value is 0.001. Moreover, as the first control variable, the government and private banks have an average capitalisation value of 0.194 and 0.197, respectively. These values indicate that both government and private banks in Indonesia have fulfilled their capital adequacy ratio requirement, a minimum of 0.12. As the second control variable, efficiency also has a mean value of 0.74 for government banks and 0.81 for private banks. These values also do not exceed the maximum value of the efficiency ratio, which is 85%. In other words, both government and private banks operate efficiently. However, government banks have a lower operating expenses ratio than private banks, meaning government banks tend to operate more efficiently than private banks. The maximum value of effi-

Table 3. Variance Inflation Factor

Variable	Government Banks	Private Banks
Column 1	Column 2	Column 3
Liquidity ratio	2.7	1.43
Credit Ratio	1.77	1.28
Capitalisation	1.42	1.22
Efficiency	3.75	1.12

Table 4a. Regression Analysis Result of Government Banks (Dependent Variable: Share Price)

Variable	Column 2	Column 3	Column 4
Column 1	Model (1)	Model (2)	Model (3)
C	7.64***	5.94***	8.24***
	-6.96	-5.61	-11.53
Liquidity ratio (LDR)	1.91**	0.06	1.797
	-2.64	-0.08	-1.52
Credit Ratio (NPLs)	0.022	0.016	0.113
	-0.36	-0.3	-1.21
Capitalisation	0.90**	-0.132	-0.356
	-2.33	(-0.31)	(-0.84)
Efficiency	-1.44**	-1.54***	-1.81
	(-2.26)	(-2.69)	(-3.17)
Inflation		-0.509***	24.65
		(-4.31)	-1.25
Liquidity Ratio*Inflation			-37.58*
			(-1.74)
Credit Ratio*Inflation			-74.73
			(-0.85)
Adjusted R Square	0.129	0.501	0.496
F-Test (<i>p</i> -value)	0	0	0
Langragian	0	0	0
Hausman test (<i>p</i> -value)	0	0	0

Note: 1. (*) indicates significance at 10% level, (**) indicates significance at 5% level, and (***) indicates significance at 1% level

2. Values in parentheses are *t*-statistics

Source: Author's Calculation

ciency for government banks is 0.98, while the minimum value is 0.63. Lastly, as the moderator variable, inflation has an average value of 0.039. The minimum value of inflation is 0.024, while the maximum value is 0.072.

Based on Table 3, the variance inflation factor (VIF) value of independent and control variables for both government and private banks are lower than 10. These results show that there is no multicollinearity problem between variables. The VIF value of liquidity ratio for government banks is about 2.70, while for private banks is 1.43. Meanwhile, the VIF value of credit ratio for government banks is 1.77, higher than private banks, about 1.28. Concerning capitalisation, the VIF value for government banks is 1.42, while for private banks is 1.22. Finally, the VIF value of efficiency for both government and private banks is lower than 10,

3.75 and 1.12, respectively.

Column 1 of Table 4.a presents the regression analysis result for government banks concerning the influence of banking risk on share price using the fixed-effect model. Based on this table, the Adjusted R-square value for government banks is 0.129. It indicates that the regression only explains 12.9% of the total variation in the share price. Meanwhile, Column 1 of Table 4.b shows that the Adjusted R-square value for private banks is 0.231. Moreover, the F-test probability value for both government and private banks are 0.0000, or lower than 5%. These values indicate that there is a significant relationship between banking risk and share price. The probability value of the Breusch Pagan test is 0.165, or higher than 0.05. This value means that there is no heteroscedasticity in this regression model. Besides, the probability value of

Table 4b. Regression Result of Private Banks (Dependent Variable: Share Price)

Column 1	Column 2	Column 3	Column 3
Variable	Model (1)	Model (2)	Model (3)
C	9.17***	8.93***	6.46*
Liquidity ratio (LDR)	-16.86	-13.07	-0.67
Credit Ratio (NPLs)	1.55**	1.53**	-2.28
Capitalisation	-2.25	-2.22	(-0.25)
Efficiency	0.195	0.17	4.50
Inflation	-1.71	-1.45	-0.55
Liquidity Ratio*Inflation	0.52*	0.39	0.37
Credit Ratio*Inflation	-1.82	-1.09	-1.03
Adjusted R Square	-0.14	-0.13	-0.15
F-Test (<i>p</i> -value)	(-1.59)	(-1.56)	(-1.74)
		-1.58	23.17
		(-0.58)	-1.54
			3.22
			-0.39
			-4.38
			(-0.52)
	0.231	0.273	0.281
	0	0	0

Note: 1. (*) indicates significance at 10% level, (**) indicates significance at 5% level, and (***) indicates significance at 1% level

2. Values in parentheses are *t*-statistics

Source: Author's Calculation

the Hausman test is 0.000, or lower than 0.05. This value means that the fixed-effect model is better than the random effect model to measure the influence of government banks risk on the share price.

According to Column 2 of Table 4.a, the *t*-statistic value of liquidity ratio is 2.64, and the probability is 0.018, or lower than 0.05. Moreover, the coefficient value of liquidity risk is about 1.91. It indicates that there is a positive and significant influence of liquidity risk on the share price. On the other hand, Column 2 of Table 4.b shows that the relationship between liquidity ratio and share price is also significant, with a *t*-statistic value of about 2.25 and the coefficient value of about 1.55. Table 4.a shows that credit risk has a coefficient value of 0.022, while the *t*-statistic value of credit risk is 0.36. However, the probability value of this variable is higher than 0.05. Thus, this result shows that there is no significant influence of credit risk on the share price. In fact, this result is contrary to the private banks. Column 2 of Table 4.b shows that the credit ratio has a positive and significant relationship with the share price. The *t*-statistic value is about 1.71, and the probability value is 0.19. This result shows that credit risk has a positive and significant relationship with the share price. According to the

fixed-effect regression analysis, the *t*-statistic value of capitalisation is 1.61, and the probability is 0.023 or lower than 0.05. The coefficient value of capitalisation is about 0.90. Thus, these results indicate that there is a significant relationship between capitalisation and share price. The *t*-statistic value of efficiency is -2.26, and the probability value is 0.027. Furthermore, this efficiency has a coefficient value of -1.44. This result shows that there is a negative and significant relationship between efficiency and share price.

Column 3 of Table 4.a shows that inflation has a significant relationship with government banks' share price. The *t*-statistic value of inflation is about -4.31 with a probability of 0.000, and the coefficient value is about -0.509. On the other hand, this result is contrary to private banks. Column 3 of Table 4.b indicates no significant influence of inflation on private banks' share price.

Column 4 of Table 4.a illustrates the regression result of the influence of government banks' risk on efficiency and the role of inflation as a moderator variable. The regression analysis shows that inflation has a *t*-statistic value of -1.74, significant at 5%. Thus, this result indicates that inflation can moderate the relationship between liquidity ratio and share price, or,

indirectly, inflation can moderate the relationship between liquidity risk and share price. On the other hand, Column 4 of Table 4.b shows that inflation fails to moderate the relationship between private banks' liquidity risk and share price. Column 4 of Table 4.a also shows that the *t*-statistic value of inflation as a moderator variable in the relationship between the credit ratio and share price is -0.85. Unfortunately, this value is not significant. This result is similar to the private banks, as shown in Column 4 of Table 4.b.

The positive influence of government banks' liquidity ratio on share price is consistent with Devi (2016). The increase in liquidity ratio will increase liquidity risk. However, an increase in the liquidity ratio will also increase the interest income, giving a good signal for the share price. Concerning the risk, this result also means that liquidity risk positively impacts the share price. These results are contrary to the signalling theory; the higher the risk, the lower the share price, and vice versa. Indeed, private banks also generate the same results.

Government banks' credit ratio has no significant influence on share price; this result is contrary to Devi (2016), Putri (2016), and Sari, Yanti, and Zulbahri (2018). It may be due to government banks in Indonesia are part of ten banks with the largest assets in Indonesia. Thus, this can convince investors to remain to buy their shares. Even though these banks' risks are increasing, investors still have the confidence to invest or buy their shares (Sambul et al., 2016). On the other hand, private banks' credit ratio has a positive and significant relationship with the share price. This result is consistent with Medyawicesar, Tarmed, and Purnamasari (2018). The increase in credit ratio indicates an increase in the number of non-performing loans; thus, increasing credit risk and giving a bad performance to the banks. As a result, this generates a bad signal for share price and potentially decrease the share price. However, the ratio of bad loans is still within the safe threshold, which is less than 5%. Thus, investors do not mind the increase in the non-performing loan ratio of these private banks (Medyawicesar et al., 2018)

Inflation can moderate the relationship be-

tween liquidity ratio and share price. The existence of inflation decreases the relationship between liquidity ratio and share price. Indirectly, this result also means that inflation can decrease the relationship between liquidity risk and share price. Inflation can reduce the purchasing power of investors against share (Iba and Wardhana, 2018). As a result, it will decrease the banks' liquidity ratio or decrease their liquidity risk. Meanwhile, an increase in inflation will increase the banks' net interest income generated by increasing lending rates (Kurniawan and Yuniati, 2019); inflation will produce a good signal for banks' share price. Hence, inflation as a moderator can decrease the banks' liquidity risk and increase government banks' share price. In other words, inflation reduces the positive effect percentage of government banks liquidity risk on the share price. In addition, this result is supporting the Fisher hypothesis, which defined that the expected nominal return of share price will be affected by the expected real return and inflation (Fisher, 1930)

Concerning the credit risk, inflation is unsuccessful to moderate the relationship between credit ratio and share price. Inflation may increase the banks' lending rate and their loan interest income. Even though the number of non-performing loans may increase because the lending rate increases, the share price may not change significantly. It is due to the increase in credit risk is covered by the increase in the banks' profit from their loan interest income.

Conclusions

This research aims to analyse the influence of banking risk on share price and inflation as a moderator variable in the relationship between banking risk and share price. This research focuses only on government banks in Indonesia. However, this research also compares government banks to private banks. This research employs panel data analysis using the fixed-effect model. The analysis results show that government banks' liquidity risk positively influences share price. On the other hand, credit risk has no significant relationship with the share price. Furthermore, inflation can moderate the rela-

tionship between liquidity risk and share price. Inflation can impact the increase in the banks' net interest income, and this circumstance may increase the government banks' share price. On the other hand, inflation is unsuccessful to moderate the relationship between credit risk and share price.

The implication of this research is to exam-

ine the role of inflation as a moderator variable in the relationship between banking risk and share price. Moreover, this research is useful as guidance for government banks in taking actions to minimise their risks. Besides, the banking authority can also use this research to make policies impacting the relationship between banking risk and share price.

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