

Corporate Governance Structure and Stock Price Synchronicity

Auberta Danice Susanto*, Robiyanto

Faculty Economics and Business, Universitas Kristen Satya Wacana, Indonesia

*corresponding author e-mail: aubertadanice1998@gmail.com

Article Info

Keywords:

Board of commissioners;
Board of directors;
Corporate governance;
Stock price synchronicity

JEL Classification:

C32, D53, F36

DOI:

10.33830/jom.v16i2.967.2020

Abstract

The corporate governance structure within the company is formed to carry out proper supervision, but a company can have agency problems that affect investment decision making. Transparency of a company is important to prevent agency problems. In addition, transparency in the form of company-specific information can be reflected in stock prices. When investors' trust in company-specific information increase, stock price synchronicity will decrease. The research was conducted in the banking sector in Indonesia during the 2016-2019 period, using purposive sampling and panel regression methods. **Findings.** The analysis was carried out twice, namely analysis with and without control variables. Analysis without control variables found that the size of board of commissioners has a positive effect on stock price synchronicity, while independent board of commissioners, board of commissioners' gender heterogeneity, size of board of directors, and board of directors' heterogeneity have no effect on stock price synchronicity. Analysis with control variables shows that company size as a control variable must be controlled so that supervision is more effective and yields on Bank Indonesia Sharia Certificate as interest rates that have a positive effect on stock price synchronicity, while all independent variables have no effect on stock price synchronicity.

1. Introduction

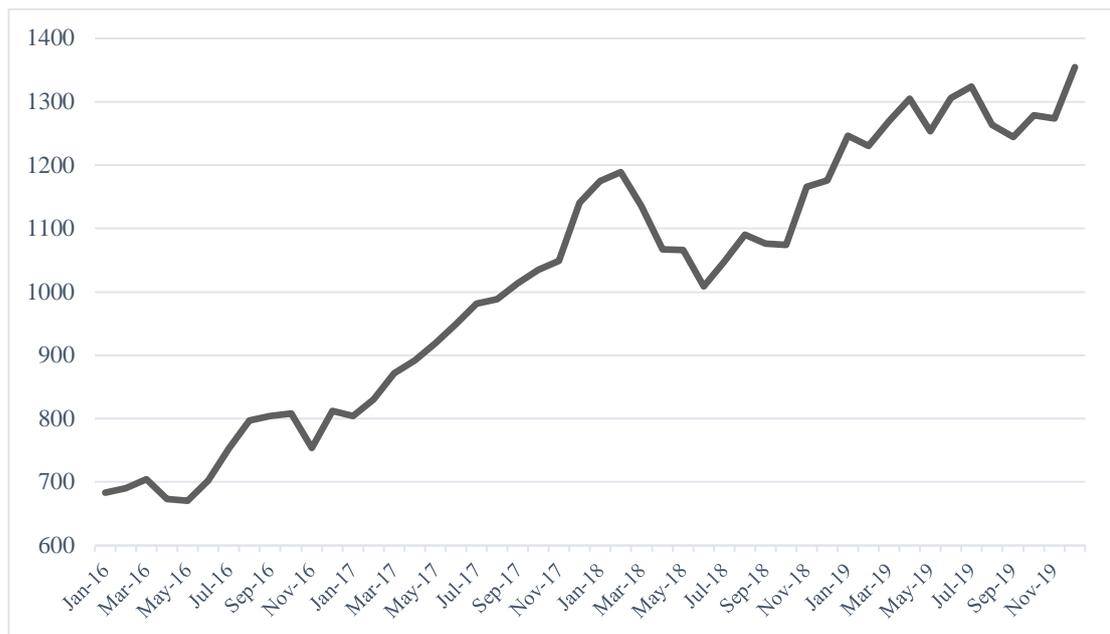
Risk in investment is divided into systematic and idiosyncratic risks. The systematic risks are related to (macro) market conditions such as inflation, interest rates, and government regulations. The idiosyncratic or unsystematic risks are associated with individual companies' conditions. The company always makes annual reports explain its financial condition. Before investing, an investor first needs to seek information relating to market information and company-specific information, reflected in the stock price.

Market information is related to macro conditions such as interest rates. However, stock returns can negatively correlate with changes in interest rates. When interest rates are high, investors prefer to invest in risk-free instruments rather than riskier investments. If interest rates are low, investors prefer to invest in stocks rather than in risk-free instruments (Yunita & Robiyanto, 2018).

Company-specific information is related to financial reporting, such as reports on the implementation of corporate governance. The report contains a corporate governance structure consisting of a board of directors and commissioners. The presence of the board of commissioners and directors is expected to increase the company's capabilities, which will make investors

consider the company-specific information; moreover, boards within companies can also reduce asymmetric information (Paniagua, Rivelles, & Sapena, 2018). Company-specific information which does not describe the stock price sufficiently means that it has a relatively high stock price synchronicity (Xing & Anderson, 2011).

The Indonesia Stock Exchange has ten sectoral indices, and one of the sectoral indices is the financial sector. The financial sector has several sub-sectors, namely the insurance, the financing institution, the securities company, and the banking. The financial sector has shown an increase from 2016 to 2019. In 2017, the financial sector experienced the highest increase of 31.45%, and the support for this increase in the index was the banking sub-sector. Thus, this research will use the banking sub-sector as an object.



Source: Yahoo Finance, processed data

Figure 1. The Closing price of the financial sector stock price index 2016-2019 (monthly)

Ntow-Gyamfi, Bokpin, & Gemegah (2015) found that the board size of a company has a positive relationship with stock price synchronicity. Ahmad, Manzoor, & Khan (2017) conducted another research and proved that the size of the board of directors will reduce the synchronicity of stock prices. Nguyen, Vu, & Doan (2020) proved that a larger board of directors will increase the synchronicity of stock prices. Butar (2019) found that the presence of an independent board of commissioners and the larger number of commissioners can reduce the synchronicity of stock prices. This means that the quality of reporting will increase. Based on the differences in the results of the researches, the researcher will examine these variables again.

This research replicates Butar (2019) research by adding the variable size of the board of directors and gender heterogeneity of the board of directors and combining control variables of interest rates and PBV as suggested because PBV is a vital ratio to calculate the fair price of stocks. In addition, this research uses a different method from the previous research and the panel regression method because it combines the time series and cross-section to produce complete information. The research objective is to determine the impact of the size of the board of commissioners, the board of independent commissioners, the gender heterogeneity of the board of commissioners, the size of the board of directors, and the gender heterogeneity of the board of directors on the synchronicity of stock prices in the banking sector. This research contributes to adding the existing literature.

1.1 Agency Theory

This theory discusses the problem between investors and management. Management prefers to prioritize themselves when there is an opportunity because they have more information than investors (Agoglia et al., 2015). Managers are responsible for managing the company, while investors provide a mandate for managers to manage the company (Kholmi, 2011). Investors must have an effective way to align the goals of these parties, resulting in the rise of agency costs to reduce the opportunistic behavior of managers (Ntow-Gyamfi et al., 2015). Agency theory can create investor confidence to get returns from their investment (Rimardhani, Hidayat, & Dwiatmanto, 2016).

1.2 Stock Price Synchronicity

The synchronicity of stock prices shows the relationship between individual stocks and the market. The synchronicity of stock prices in empirical terms is calculated using the R-squared (Chan & Chan, 2014). Investors are considered rational when making investment decisions. Investors will seek information from reliable sources which describe the real condition of the macro economy and the state of a company, thus, the level of credibility of the information greatly affects stock price changes (Butar, 2019). Stock price synchronicity decreases when company-specific information is reflected in the stock price (Hasan, Song, & Wachtel, 2014).

1.3 Corporate Governance Structure

A good company implements a governance structure in order to improve company performance. Corporate governance has the role of monitoring management in order to perform tasks optimally so as to reduce earnings management (Karen & Oktavia, 2019). The purpose of the duty is to regulate the management's behavior to benefit investors and to do things for their interests. Corporate governance aims to create transparency in corporate financial reports (Oktafia, 2013). Corporate governance can be seen from the presence of a board of commissioners, board of directors, major stockholders, and an audit committee. This research will focus on the composition of the board of commissioners and the board of directors, which is an essential part of corporate governance implementation.

1.4 Board of Commissioners Structure

In general, the board of commissioners has the responsibility to provide advice to the board of directors and to supervise (Hidayat & Utama, 2015). It is hoped that this can reduce problems that arise between management and investors, thereby increasing the credibility of reporting. In addition, the supervision of the board of commissioners can reduce earnings management behavior. Earnings management aims to report earnings not according to the real company condition (Gunawan, Darmawan, & Purnamawati, 2015).

Several researchers, such as Sumanto, Asrori, & Kiswanto (2014), Kodriyah, Suprihatin, & Octaviani (2017), and Susanto, Pradipta, & Djashan (2017) has conducted research. They find that a board of commissioners can help detect earnings management practices. Butar (2019), also conducting another research, stated that a larger number of members of the board of commissioners can improve the quality of reporting. The increasing number of commissioners will increase the effectiveness of supervision in the company and eventually results in a better performance of the company. Thus, investors will use company-specific information in investment decisions, which will reduce the synchronicity of stock prices. Based on the previous studies, this study predicts that board of commissioners' size has a significant negative effect on stock price synchronicity.

An independent commissioner is an integral part of overseeing every decision of the board of directors and supervising managers to carry out their duties to improve the company (Fadillah, 2017). The more members of the independent board of commissioners, the more optimal management will be (Cinantya & Merkusiwati, 2015). Some researchers also studied the same field, but their results are contradicting previous findings. Arifin & Dectriana (2016), Mahadewi

& Krisnadewi (2017), Susanto et al. (2017), and Dwiati & Ambarwati (2017) who stated that independent commissioners can contribute to lower earnings management, thereby increasing company capability and increasing investor confidence as well as reducing the synchronicity of stock prices. Based on the previous studies, this study predicts that the independent board of commissioners has a significant negative effect on stock price synchronicity.

A good company is a company that has heterogeneity of members, while the presence of female commissioners can affect the decisions taken (Aluy, Tulung, & Tasik, 2017). Women are expected to reduce earnings management because they have higher ethical standards, are more reactionary, and avoid risk (Novilia & Nugroho, 2016). Thus, heterogeneity can create more concrete decisions because they are taken from various perspectives. It is hoped that a higher proportion of women will reduce the synchronicity of stock prices, resulting in investors' higher level of confidence in company-specific information. This study predicts that gender heterogeneity on the board of commissioners has a significant negative effect on stock price synchronicity.

1.5 Board of Directors Structure

The board of directors must run a company to achieve its goals. A larger board of directors will increase the company's capabilities because decisions are based on the members' considerations (Dharmawan Krisna & Suhardianto, 2016). Wulandari & Budiarta (2014) research showed that the board of directors had a significant effect on the transparency of financial statements. Meanwhile, Taco & Ilat (2016) found that the board of directors can reduce earnings management practices. Another study by Jao, Daromes, & Yono (2020) found that a larger board of directors size will increase the company's reputation. This research proves that a larger number of board of directors will increase the capability of the company and decrease the synchronicity of stock prices. Based on the previous studies, this study predicts that board of directors size has a significant negative effect on stock price synchronicity.

Female directors will create added value for a company (Setiawan, Hapsari, & Wibawa, 2018). Gender heterogeneity will create higher quality board discussions, increase oversight, and reduce divisions within companies (Gul, Srinidhi, & Ng, 2011). Research conducted by Gul et al. (2011) shows that female directors' presence can enhance company-specific information. (Gavious, 2012) and Ali, Nekhili, Nagati, & Chtioui (2017) found that female directors can reduce earnings management practices. Larkin, Bernardi, & Bosco (2013) found that more female members are shown to create more transparent companies. This makes the company's performance increase, and in the end, investors have more confidence in the information from company reporting, which will reduce the synchronicity of stock prices. Based on the previous studies, this study predicts that gender heterogeneity on the board of directors has a significant negative effect on stock price synchronicity.

2. Research Method

2.1 Types and Sources of Data

This research is a quantitative research using secondary data and panel regression methods. Historical data for weekly stock prices were obtained from Yahoo Finance and annual reports from the IDX website from 2016-2019. This research uses the dependent, independent, and control variables. The dependent variable is stock price synchronicity. The independent variable consists of the size of the board of commissioners, the board of independent commissioners, the gender heterogeneity of the board of commissioners, the size of the board of directors, and the gender heterogeneity of the board of directors. Control variables, namely company size, PBV, leverage, and interest rates are calculated using the yield on Bank Indonesia Sharia Certificate (SBIS) because the BI rate has been replaced by the 7-day Repo Rate reference rate, which came into effect in April 2016, while this research had only started from January 2016. In addition, Bank Indonesia Certificate (SBI) were not used because even though the one-month SBI referred to the

BI rate, the auction was stopped in 2011. Although sometimes auctions are still conducted, it is not taken regularly, like SBIS, thus SBI will be abolished gradually because there are concerns that the SBI auction will increase volatility. In addition, the yield on SBIS is relatively the same as that of SBI.

This research uses a population from the banking sector listed on the IDX from 2016 to 2019. The researcher uses a purposive sampling method with the following considerations:

1. Banking sector companies listed on the IDX from 2016-2019.
2. The company regularly reports the annual report from 2016-2019, which provides complete information on the structure of the board of commissioners and board of directors.

2.2 Operational Variable Definition

a. *Dependent Variable*

Stock Price Synchronicity

The synchronicity of stock prices can prove the amount of company-specific information or market information reflected in the stock price. Thereby returns can be formulated as follows:

$$RN_{it} = \alpha + \beta_1 RNPR_{it-2} + \beta_2 RNPR_{it-1} + \beta_3 RNPR_{it} + \beta_4 RNPR_{it+1} + \beta_5 RNPR_{it+2} + e_{it}$$

RN_{it} = Stock return for week t and company i

$RNPR$ = Stock return every week

Synchronicity of stock prices is the ratio of variations in general returns to total, as used in the market model, namely R-squared (R^2) and has a value between 0-1 (Gul, Kim, & Qiu, 2010). Thus, the synchronicity calculation formula is as follows:

$$SKR = \log \left(\frac{R^2}{(1-R^2)} \right)$$

b. *Independent Variable*

Table 1. Independent operational variable definition

Independent Variable	
Board of commissioners size	The total members of the board of commissioners
Independent board of commissioners	Proportion of independent commissioners to the total of commissioners
Gender heterogeneity of the board of commissioners	The proportion of women on the board of commissioners to the total members of the board of commissioners
Board of directors size	The total members of board of directors
Gender heterogeneity of the board of directors	The proportion of women on the board of directors to the total members of the board of directors

b. Control Variable

Table 2. Control Variable Operational Definition

Control Variable	
Company Size	$\ln(\text{total asset})$
PBV	$\frac{\text{Stock price per stock}}{\text{Book Value per stock}}$
Leverage	$\frac{\text{Total debt}}{\text{Total asset}}$
Interest Rate	Bank Indonesia Sharia Certificate yield

2.3 Analysis Technique

This research uses panel regression with Eviews. The equation can be formulated as follows:

$$SKR_{it} = \alpha + \beta_1 KSZE_{it} + \beta_2 KIDP_{it} + \beta_3 KHTR_{it} + \beta_4 DSZE_{it} + \beta_5 DHTR_{it} + \beta_6 UKR_{it} + \beta_7 LEV_{it} + \beta_8 PBV_{it} + \beta_9 SBIS_{it} + e_{it}$$

- SKR = Stock price synchronicity
 KSZE = Board of commissioners size
 KIDP = Independent board of commissioners
 KHTR = Gender Heterogeneity of the board of commissioners
 DSZE = Board of directors size
 DHTR = Gender Heterogeneity of the board of commissioners
 UKR = Company size
 LEV = Leverage
 PBV = Price to Book Value
 SBIS = Bank Indonesia Sharia Certificate yield

The panel data regression has several steps. The panel estimation method consists of the common effect model (CEM), fixed effect model (FEM), and random effect model (REM). CEM is a method that overrides cross-section and time series. FEM is done by adding a false variable. REM is a method that eliminates heteroscedasticity. The best method selection applies several tests, namely the Chow test, Hausman test, and Lagrange Multiplier test. Chow test is used to determine the best method between CEM or FEM. If the chi-square is greater than 0.05, then CEM is selected. The Hausman test is performed to choose between FEM or REM. If the chi-square is greater than 0.05, REM is selected. The Lagrange Multiplier test is performed to choose between CEM or REM. If the chi-square is greater than 0.05, then CEM is used.

The next step is the classical assumption test which consists of normality test, multicollinearity test and heteroscedasticity test. The normality test is used to see the distribution of normal or abnormal data. If the significance value is less than 5 percent, the data is not normally distributed. The multicollinearity test examines the relationship among independent variables. The regression requirement occurs if there is no heteroscedasticity; therefore a heteroscedasticity test is carried out first. If the significance value is greater than 5 percent, then there is no heteroscedasticity.

After knowing the results of the heteroscedasticity, a feasibility test consisting of the t test, F test, and R-squared can be used. The t test is to see the relationship between the influences of individual variables. The F test looks at the relationship of all independent variables to the dependent variable. R-squared shows how strongly the variables influence each other.

3. Results and Discussions

3.1 Result

In this study, tests were carried out twice. The first test was analysis without using control variables and the second test was analysis using control variables. The method used is panel regression which uses three tests in determining the model. The test consists of Chow test, Hausman test, and Lagrange Multiplier test. The first step is the Chow test, which selects between CEM or FEM. The following are the results of the Chow test:

Table 3. Chow test without control variable

Effects Test	Statistic	d.f.	Prob.
Cross-section F	2.400244	(32,94)	0.0006
Cross-section Chi-square	78.836228	32	0.0000

Source: data processed with Eviews 9

Table 4. Chow test with control variable

Effects Test	Statistic	d.f.	Prob.
Cross-section F	2.870462	(32,90)	0.0000
Cross-section Chi-square	92.848648	32	0.0000

Source: data processed with Eviews 9

Table 3 shows the results of the Chow test without control variables. The results show that the Cross-section Chi-square probability is $0.0000 < 0.05$. Table 4 shows the Cross-section Chi-square probability of $0.0000 < 0.05$. Thus, according to both tests, FEM is applicable. Next, the Hausman test was carried out and the results is in the following table:

Table 5. Hausman test without control variable

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	9.010938	5	0.1086

Source: data processed with Eviews 9

Table 6. Hausman test with control variable

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	12.261480	9	0.1990

Source: data processed with Eviews 9

The Hausman test without control variables (Table 5) shows a probability of $0.1086 > 0.05$. The Hausman test with control variables (Table 6) shows the probability of $0.1990 > 0.05$. According to Ann & Manurung (2019), REM is selected if the probability is greater than 0.05. Thus, the researcher concludes from the two tests that the best model is REM. Furthermore, the result of the Lagrange Multiplier test is in the following table:

Table 7. Lagrange Multiplier test without control variable

	Cross-section
Breusch-Pagan	7.612996 (0.0058)

Source: data processed with Eviews 9

Table 8. Lagrange Multiplier test with variable control

	Cross-section
Breusch-Pagan	11.60134 (0.0007)

Source: data processed with Eviews 9

Table 7 shows the Lagrange Multiplier test results without control variables, and a probability of $0.0058 < 0.05$. While table 8 shows the Lagrange Multiplier test results with the control variable and a probability of $0.0007 < 0.05$. Both tests suggest REM as the best model for panel regression models. After finding the best model, it is necessary to test classical assumptions using normality test, multicollinearity test, and heteroscedasticity test.

The normality test without control variables shows a probability of 0.593458 and the normality test with control variables shows a probability of 0.548019. The probability value of the two tests is greater than 0.05, which means that the data is normally distributed. Furthermore, the multicollinearity test was carried out and the results are:

Table 9. Multicollinearity test without control variable

Variable	Centered VIF
C	NA
KSZE	3.289333
KIDP	1.179729
KHTR	1.224055
DSZE	3.068972
DHTR	1.008779

Source: data processed with Eviews 9

Table 10. Multicollinearity test with control variable

Variable	Centered VIF
C	NA
KSZE	3.943625
KIDP	1.206979
KHTR	1.295779
DSZE	7.279293
DHTR	1.047160
UKR	6.194738
PBV	1.171719
LEV	1.136746
SBIS	1.055817

Source: data processed with Eviews 9

The multicollinearity test on both tests has a VIF value that is not greater than 10, so there is no multicollinearity in the data. The next step is to perform the heteroscedasticity test as follows:

Table 11. Heteroscedasticity test without control variable (Breusch-Pagan-Godfrey)

Prob. Chi-Square(1)	0.2054
----------------------------	--------

Source: data processed with Eviews 9

Table 12. Heteroscedasticity test with control variable (Harvey)

Prob. Chi-Square(1)	0.3770
----------------------------	--------

Source: data processed with Eviews 9

Heteroscedasticity test without control variables (table 11), using Breusch-Pagan-Godfrey, has a probability of 0.2054 and heteroscedasticity test with control variables (table 12), using Harvey, shows a probability of 0.3770. The results of the probability of the two tests are greater than alpha (0.05), thus they pass the heteroscedasticity test.

Table 13. Autocorrelation test without control variable

Prob. Chi-Square(2)	0.8334
----------------------------	--------

Source: data processed with Eviews 9

Table 14. Autocorrelation test with control variable

Prob. Chi-Square(2)	0.8902
----------------------------	--------

Source: data processed with Eviews 9

Table 13 shows the results of the autocorrelation test without control variables and has a probability of $0.8334 > 0.05$. Table 14 shows the results of the autocorrelation test with control variables and has a probability $0.8902 > 0.05$. Both tests pass the autocorrelation test, therefore the best model is REM. Next, a feasibility test was then carried out, consisting of the t test, F test, and R-squared, and had the following results:

Table 15. Significance test without control variable

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-1.220549	0.243598	-5.010495***	0.0000
KSZE	0.057269	0.031882	1.796296*	0.0748
KIDP	-0.151509	0.318393	-0.475855	0.6350
KHTR	-0.160158	0.288606	-0.554935	0.5799
DSZE	0.041950	0.025920	1.618451	0.1081
DHTR	-0.061146	0.230873	-0.264848	0.7916
F-statistic	5.446881	R-squared	0.177730	
Prob (F-statistic)	0.000143	Adjusted R-squared	0.145101	

Source: data processed with Eviews 9

Table 16. Significance test with control variable

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-4.921081	1.202243	-4.093250***	0.0001
KSZE	0.039001	0.033448	1.166010	0.2459
KIDP	-0.184752	0.308187	-0.599480	0.5500
KHTR	-0.069082	0.287878	-0.239971	0.8108
DSZE	-0.039815	0.035155	-1.132553	0.2596
DHTR	-0.081603	0.236916	-0.344438	0.7311
UKR	0.166904	0.055519	3.006260***	0.0032
PBV	-0.024659	0.039820	-0.619260	0.5369
LEV	-0.347532	0.772198	-0.450055	0.6535
SBIS	0.288108	0.111780	2.577452**	0.0111
F-statistic	4.252174	R-squared		0.238783
Prob (F-statistic)	0.000082	Adjusted R-squared		0.182627

Source: data processed with Eviews 9

Explanation:

*** significant at $\alpha = 1\%$

** significant at $\alpha = 5\%$

* significant at $\alpha = 10\%$

Table 15 is the result of testing without control variables. The results show that board size has a positive and significant effect on stock price synchronicity. Independent board of commissioners, board of commissioners' heterogeneity, and board of directors' heterogeneity variables have a negative and insignificant effect on stock price synchronicity. The variable of board size has a positive and insignificant effect on stock price synchronicity. The probability of F-statistic is $0.000143 < 0.05$, resulting in the ability of independent variables to jointly affect the synchronicity of stock prices. The R-squared value of 0.177730 indicates that the synchronicity of stock prices can be influenced by the variable size of the board of commissioners, the independent board of commissioners, the heterogeneity of the board of commissioners, the size of the board of directors, and the heterogeneity of the board of directors is 17.7730% and the rest is influenced by variables outside the research.

Table 16 shows the test results by adding control variables. The size of the board of commissioners' variable has a positive and insignificant effect on stock price synchronicity. The variables of independent board of commissioners, board of commissioner's heterogeneity, board of directors' size, and board of directors' heterogeneity have a negative and insignificant effect on stock price synchronicity. The control variables of company size and SBIS have a positive and significant effect on stock price synchronicity. PBV and leverage control variables have a negative and insignificant effect on stock price synchronicity. The probability of F-statistic is $0.000082 < 0.05$, thus the independent variable can influence the dependent variable simultaneously. The R-squared of 0.238783 show that the variable size of the board of commissioners, the independent board of commissioners, the heterogeneity of the board of commissioners, the size of the board of directors, the heterogeneity of the board of directors, company size, PBV, leverage, and SBIS can affect the synchronicity of the stock price by 23.8783% and the rest is explained by other variables outside this study. The low R square values imply that the variables considered may not explain the major part of the variance in the dependent variable.

This research proves that when the test is conducted without control variables, the size of the board of commissioners can affect the synchronicity of stock prices. Meanwhile, when the control variables are included in the test, it is evident that the control variables, namely company size and SBIS play a greater role in influencing stock price synchronicity, and the independent variable cannot affect stock price synchronicity.

3.2 Discussions

This research has five hypotheses and was tested twice. The first test applied independent and dependent variables, while the second test was added with control variables. The results showed a positive relationship between board of commissioners' size and stock price synchronicity when testing was carried out without control variables. The probability is $0.0748 > 0.1$. Thus, the size of the board of commissioners' variable has a significant effect on the 10% level. When a company has an increasing number of board members, the synchronicity of stock prices will increase, which means that investors can use the market information effectively in making investment decisions. The finding is in line with the research of Kristiani, Sulindawati, & Herawati (2014) who stated that board of commissioners' size has a positive effect on earnings management. This may imply that the increasing number of boards of commissioners is not sufficient in detecting earnings management behavior which has an impact on decreasing the performance of a company and investors' trust in company information.

The results of further research shows that the independent board of commissioners had no effect on the synchronicity of stock prices, and it happens when the probability was $0.6350 > 0.05$, thus H2 is rejected. An investor's investment decision making is not influenced by company-specific information. This result is the same as the research of Restuningdiah (2011) and Agustia (2013) who stated that the independent board of commissioners has no effect on earnings management practices. This is due to limited time to manage the company and the expertise factor. Therefore, the information provided by the company is not used in an investor's investment decision.

The results prove that gender heterogeneity on the board of commissioners has no effect on stock price synchronicity since the probability is $0.5799 > 0.05$; thus H3 is rejected. This is following Butar (2019) research, the presence of female members on the board of commissioners cannot carry out tighter supervision and can affect the reporting quality of a company and affect investors' decision making.

The research found that the size of the board of directors has no effect on the synchronicity of stock prices. The resulting probability is $0.1081 > 0.05$, thus H4 is rejected. Siyanbola, Ogbekor, Okeke, & Okunade (2019) find the same findings; they stated that board size cannot affect earnings management. A higher number of members of the board of directors cannot guarantee a company's performance and efficiency in the company.

The results of further research show that the gender heterogeneity of the board of directors does not affect the synchronicity of stock prices. and the resulting probability is $0.7916 > 0.05$, thus H5 is rejected. This means that when the proportion of women on the board of directors increase, it will not increase efficiency in supervision which results in the inability to reduce the synchronicity of stock prices.

This research has different results when the control variables are included in the test. All independent variables cannot affect the synchronicity of stock prices. This is because the control variables, the size of the company and the Bank Indonesia Sharia Certificate (SBIS), play a greater role in influencing the synchronicity of stock prices. Company size has a probability of $0.0032 < 0.01$, so this variable is significant at the 1% level. Investors pay great attention to the size of a company because they believe that when the size of the company is too large, it will cause ineffective supervision. SBIS has a probability of $0.0111 < 0.05$: thus, the SBIS variable is significant at the 5% level. SBIS can affect the synchronicity of stock prices because when interest rates are low, investors prefer to invest in stocks. The R-squared value also proves higher when there is a control variable; thus the stock price synchronicity variable can be influenced more when the control variable is included in the research model.

4. Conclusions

Stock price synchronicity is the ability of market returns to explain individual stock returns and it can be formed by a variety of available information. Stock price synchronicity decreases when company-specific information is reflected in the stock price. Company-specific information is related to annual reports such as reports on the implementation of corporate governance. The reports on the implementation of corporate governance contain a corporate governance structure consisting of a board of directors and a board of commissioners. The presence of the boards are expected to increase the company's capabilities which will make investors consider the company-specific information more. This research aims to determine the effect of the composition of the board of commissioners and the composition of the board of directors on the synchronicity of stock prices by using control variables, namely company size, leverage, PBV and SBIS. Based on the analysis with panel regression, the researcher found that when there is no control variable, the size of the board of commissioners' variable could have a positive and significant effect at the 10% level on stock price synchronicity. Meanwhile, when the research involves control variables, all independent variables cannot influence stock price synchronicity. This proves that the control variable plays a more crucial role. Company size has a positive and significant effect at the 1% level and SBIS has a significant positive effect at the 5% level. This research proves that an investor pays more attention to information from outside the company related to current interest rates and company-specific information regarding the size of the company. Investors do not use company-specific information regarding the existence of the board of commissioners and board of directors to make investment decisions.

This research has a limited sample and some samples do not actively trade in stocks. Therefore, further research is expected to use a sample of companies that are actively trading stocks. In addition, future research can add variables related to market information such as inflation rates and can add company-specific information variables such as the composition of committees on the GCG structure.

References

- Agoglia, C. P., Hatfield, R. C., & Lambert, T. A. (2015). Audit team time reporting: an agency theory perspective. *Accounting, Organizations and Society*, 44, 1–14. <https://doi.org/10.1016/j.aos.2015.03.005>
- Agustia, D. (2013). Pengaruh faktor good corporate governance, free cash flow, dan leverage terhadap manajemen laba. *Jurnal Akuntansi Dan Keuangan*, 15(1), 27–42. <https://doi.org/10.9744/jak.15.1.27-42>
- Ahmad, A., Manzoor, H., & Khan, M. I. (2017). Corporate governance as a determinant of stock price synchronicity : empirical evidence from Pakistan. *Global Regional Review*, 2(1), 289–304. [https://doi.org/10.31703/grr.2017\(II-I\).20](https://doi.org/10.31703/grr.2017(II-I).20)
- Ali, A., Nekhili, M., Nagati, H., & Chtioui, T. (2017). Beyond gender diversity: how specific attributes of female directors affect earnings management. *The British Accounting Review*, 50(3), 255–274. <https://doi.org/10.1016/j.bar.2017.09.001>
- Aluy, C. A., Tulung, J. E., & Tasik, H. H. (2017). Pengaruh keberadaan wanita dalam manajemen puncak dan kepemilikan manajerial terhadap kinerja keuangan perbankan (studi pada bank BUMN dan bank swasta nasional devisa di Indonesia). *Jurnal EMBA: Jurnal Riset Ekonomi, Manajemen, Bisnis Dan Akuntansi*, 5(2), 821–828. <https://doi.org/https://doi.org/10.35794/emba.v5i2.15997>

- Ann, S., & Manurung, A. H. (2019). The influence of liquidity, profitability, intensity inventory, related party debt, and company size to aggressive tax rate. *Archives of Business Research*, 7(3), 105–115. <https://doi.org/10.14738/abr.73.6319>
- Arifin, L., & Dectriana, N. (2016). Pengaruh firm size, corporate governance, dan karakteristik perusahaan terhadap manajemen laba. *Jurnal Bisnis Dan Akuntansi*, 18(1), 1–93. <https://doi.org/https://doi.org/10.34208/jba.v18i1.41>
- Butar, S. B. (2019). board of commisioners composition, governance committee, and stock price synchronicity. *Jurnal Akuntansi Dan Keuangan*, 21(1), 1–11. <https://doi.org/10.9744/jak.21.1.1-11>
- Chan, K., & Chan, Y. C. (2014). Price informativeness and stock return synchronicity: evidence from the pricing of seasoned equity offerings. *Journal of Financial Economics*, 114(1), 36–53. <https://doi.org/10.1016/j.jfineco.2014.07.002>
- Cinantya, I., & Merkusiwati, N. (2015). Pengaruh corporate governance, financial indicators, dan ukuran perusahaan pada financial distress. *E-Jurnal Akuntansi*, 10(3), 897–915. Retrieved from <https://ojs.unud.ac.id/index.php/Akuntansi/article/view/10418/8540>
- Dharmawan Krisna, A., & Suhardianto, N. (2016). Faktor-faktor yang mempengaruhi pengungkapan tanggung jawab sosial. *Jurnal Akuntansi Dan Keuangan*, 18(2), 119–127. <https://doi.org/10.9744/jak.18.2.119-128>
- Dwiati, A. R., & Ambarwati, Y. B. (2017). Corporate governance, earnings management, and investment opportunity set of banking industry in Indonesia. *Jurnal Keuangan Dan Perbankan*, 21(2), 321–330. <https://doi.org/10.26905/jkdp.v21i2.1556>
- Fadillah, A. R. (2017). Analisis pengaruh dewan komisaris independen, kepemilikan manajerial dan kepemilikan institusional terhadap kinerja perusahaan yang terdaftar di LQ45. *Jurnal Akuntansi*, 12(1), 37–52. Retrieved from <http://jurnal.unsil.ac.id/index.php/jak/article/view/294/206>
- Gavious, I. (2012). Female directors and earnings management in high-technology firms. *Pacific Accounting Review*, 24(1), 4–32. <https://doi.org/10.1108/01140581211221533>
- Gul, F. A., Kim, J. B., & Qiu, A. A. (2010). Ownership concentration, foreign shareholding, audit quality, and stock price synchronicity: evidence from China. *Journal of Financial Economics*, 95(3), 425–442. <https://doi.org/10.1016/j.jfineco.2009.11.005>
- Gul, F. A., Srinidhi, B., & Ng, A. C. (2011). Does board gender diversity improve the informativeness of stock prices? *Journal of Accounting and Economics*, 51(3), 314–338. <https://doi.org/10.1016/j.jacceco.2011.01.005>
- Gunawan, I. K., Darmawan, N. A. S., & Purnamawati, I. G. A. (2015). Pengaruh ukuran perusahaan, profitabilitas, dan leverage terhadap manajemen laba. *Jurnal Akuntansi Program SI Universitas Pendidikan Ganesha*, 03(1). <https://doi.org/http://dx.doi.org/10.23887/jimat.v3i1.5272>
- Hasan, I., Song, L., & Wachtel, P. (2014). Institutional development and stock price synchronicity: evidence from China. *Journal of Comparative Economics*, 42(1), 92–108. <https://doi.org/10.1016/j.jce.2013.07.006>
- Hidayat, A. A., & Utama, S. (2015). Board characteristics and firm performance. *International Research Journal of Business Studies*, 8(3), 137–154. <https://doi.org/https://doi.org/10.21632/irjbs.8.3.137-154>

- Jao, R., Daromes, F. E., & Yono, B. (2020). Peran mediasi reputasi perusahaan terhadap hubungan ukuran dewan direksi dan return saham. *Jurnal Ilmiah Akuntansi Manajemen*, 3(1), 1–15. <https://doi.org/https://doi.org/10.35326/jiam.v3i1>
- Karen, J., & Oktavia. (2019). Pengaruh karakteristik organ tata kelola perusahaan terhadap praktik manajemen laba. *Jurnal Akuntansi*, 19(1), 1–16. Retrieved from <http://ejournal.ukrida.ac.id/ojs/index.php/Akun/article/download/1688/1768>
- Kholmi, M. (2011). Akuntabilitas dalam perspektif teori agensi. *Journal of Innovation in Business & Economics*, 02(02), 357–370. <https://doi.org/https://doi.org/10.22219/jibe.v2i02.4694>
- Kodriyah, Suprihatin, N. S., & Octaviani, S. (2017). Peran dewan pengawas syariah, komite audit dan dewan komisaris dalam mendeteksi praktik manajemen laba. *Jurnal Akuntansi*, 4(2), 59–64. <https://doi.org/https://doi.org/10.30656/jak.v4i2.251>
- Kristiani, K. E., Sulindawati, N. L. G. E., & Herawati, N. T. (2014). Pengaruh mekanisme corporate governance dan ukuran perusahaan terhadap manajemen laba pada perusahaan manufaktur yang terdaftar di BEI. *Jurnal Ilmiah Akuntansi Undiksha*, 2(1), 1–10. <https://doi.org/http://dx.doi.org/10.23887/jimat.v2i1.4358>
- Larkin, M. B., Bernardi, R. A., & Bosco, S. M. (2013). Does female representation on boards of directors associate with increased transparency and ethical behavior? *Accounting and the Public Interest*, 13(1), 132–150. <https://doi.org/10.2308/apin-10374>
- Mahadewi, A. A. I. S., & Krisnadewi, K. A. (2017). Pengaruh kepemilikan manajerial, institusional dan proporsi dewan komisaris independen pada manajemen laba. *E-Jurnal Akuntansi*, 18, 443–470. Retrieved from <https://ojs.unud.ac.id/index.php/Akuntansi/article/view/24299/16891>
- Nguyen, A. H., Vu, T. M. T., & Doan, Q. T. T. (2020). Corporate governance and stock price synchronicity : empirical evidence from Vietnam. *International Journal of Financial Studies*, 8(2), 1–13. <https://doi.org/10.3390/ijfs8020022>
- Novilia, O., & Nugroho, P. I. (2016). Pengaruh manajemen puncak wanita terhadap manajemen laba. *Dinamika Akuntansi, Keuangan Dan Perbankan*, 5(1), 27–45. Retrieved from <https://www.unisbank.ac.id/ojs/index.php/fe9/article/view/5570/1694>
- Ntow-Gyamfi, M., Bokpin, G. A., & Gemegah, A. (2015). Corporate governance and transparency: evidence from stock return synchronicity. *Journal of Financial Economic Policy*, 7(2), 157–179. <https://doi.org/https://doi.org/10.1108/JFEP-10-2013-0055>
- Oktafia, Y. (2013). Pengaruh manajemen laba terhadap pengungkapan tanggung jawab sosial perusahaan dengan corporate governance sebagai variabel moderasi. *Jurnal Ilmiah Akuntansi Dan Humanika*, 2(2), 676–704. <https://doi.org/http://dx.doi.org/10.23887/jinah.v2i2.1679>
- Paniagua, J., Rivelles, R., & Sapena, J. (2018). Corporate governance and financial performance: the role of ownership and board structure. *Journal of Business Research*, 89(June 2017), 229–234. <https://doi.org/10.1016/j.jbusres.2018.01.060>
- Restuningdiah, N. (2011). Komisaris independen, komite audit, internal audit dan risk management committee terhadap manajemen laba. *Jurnal Keuangan Dan Perbankan*, 15(3), 351–362. Retrieved from <http://jurnal.unmer.ac.id/index.php/jkdp/article/view/1029>
- Rimardhani, H., Hidayat, R., & Dwiatmanto, D. (2016). Pengaruh mekanisme good corporate governance terhadap profitabilitas perusahaan (studi pada perusahaan BUMN yang terdaftar di BEI Tahun 2012-2014). *Jurnal Administrasi Bisnis S1 Universitas Brawijaya*, 31(1), 167–175. Retrieved from <http://administrasibisnis.studentjournal.ub.ac.id/index.php/jab/article/view/1226/1408>

- Setiawan, D., Hapsari, R. T., & Wibawa, A. (2018). Dampak karakteristik dewan direksi terhadap pengungkapan corporate social responsibility pada perusahaan pertambangan di Indonesia. *Jurnal Ilmiah Manajemen*, 8(1), 1–15. Retrieved from <https://mix.mercubuana.ac.id/media/227074-dampak-karakteristik-dewan-direksi-terha-be121f1d.pdf>
- Siyabolola, T. T., Ogbobor, P. I., Okeke, O. C., & Okunade, R. A. (2019). Corporate governance and reported earning quality in deposit money banks in Nigeria. *International Journal of Business and Management Review*, 7(5), 26–37. Retrieved from publication.babcock.edu.ng
- Sumanto, B., Asrori, & Kiswanto. (2014). Pengaruh kepemilikan institusional dan ukuran dewan komisaris terhadap manajemen laba. *Accounting Analysis Journal*, 3(1), 44–52. <https://doi.org/10.15294/aaaj.v3i1.3901>
- Susanto, Y. K., Pradipta, A., & Djashan, I. A. (2017). Free cash flow and earnings management: board of commissioner, board independence and audit quality. *Corporate Ownership and Control*, 14(4), 284–288. <https://doi.org/10.22495/cocv14i4c1art10>
- Taco, C., & Ilat, V. (2016). Pengaruh earning power, komisaris independen, dewan direksi, komite audit dan ukuran perusahaan terhadap manajemen laba pada perusahaan manufaktur yang terdaftar di Bursa Efek Indonesia. *Jurnal Emba: Jurnal Riset Ekonomi, Manajemen, Bisnis Dan Akuntansi*, 4(4), 873–884. Retrieved from <https://ejournal.unsrat.ac.id/index.php/emba/article/view/14514/14087>
- Wulandari, N., & Budiarta, I. (2014). Pengaruh struktur kepemilikan, komite audit, komisaris independen dan dewan direksi terhadap integritas laporan keuangan. *E-Jurnal Akuntansi*, 7(3), 574–586. Retrieved from <https://ojs.unud.ac.id/index.php/Akuntansi/article/view/9064>
- Xing, X., & Anderson, R. (2011). Stock price synchronicity and public firm-specific information. *Journal of Financial Markets*, 14(2), 259–276. <https://doi.org/10.1016/j.finmar.2010.10.001>
- Yunita, Y., & Robiyanto, R. (2018). The influence of inflation, bi rate, and exchange rate changes to the financial sector stock price index. *Jurnal Manajemen Dan Kewirausahaan*, 20(2), 80–86. <https://doi.org/10.9744/jmk.20.2.80>