The determinants of idiosyncratic volatility in Indonesia banking industries

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Abstract

This study aims to examine the determinants of idiosyncratic volatility. This study uses firm fundamentals, institutional ownership, interest rates as idiosyncratic volatility determinants. The firm fundamentals of this study are represented by firm size, profitability, operating performances, dividend policy, and price to earnings ratio. Institutional ownership represents the ownership of the company's shares by financial companies. The interest rates are represented by 3-month bank deposit rates for one year. The research method uses a quantitative approach with secondary data. Hypothesis examining is conducted by panel data regression analysis. By using a purposive sampling method, the company selected is 24 banking sector companies with observation time from 2012 up to 2018. Thus, the total sample in this research amounted to 168 firm-year. The result of the study suggests that firm size, price-earnings ratio, dividend policy, profitability, and interest rates are negatively associated with idiosyncratic volatility. However, operating performance and institutional ownership are not associated with idiosyncratic volatility.

Abstrak

Penelitian ini bertujuan untuk menguji determinan volatilitas idiosinkratik. Penelitian ini menggunakan fundamental perusahaan, kepemilikan institusional, suku bunga sebagai determinan volatilitas idiosinkratik. Fundamental perusahaan dalam penelitian ini diwakili oleh ukuran perusahaan, profitabilitas, kinerja operasi, kebijakan dividen, dan price to earnings ratio. Kepemilikan institusional mewakili kepemilikan saham perusahaan oleh perusahaan keuangan. Sementara itu, suku bunga diwakili oleh suku bunga deposito bank 3 bulan selama satu tahun. Metode penelitian menggunakan pendekatan kuantitatif dengan data sekunder. Dengan menggunakan metode purposive sampling, *penelitian ini mendapatkan 24 perusahaan sektor perbankan dengan waktu observasi 2012-2018 sehingga total sampel dalam penelitian ini berjumlah 168* firm-year. *Hasil pengujian hipotesis menunjukkan bahwa ukuran perusahaan,* price to earnings ratio, *kebijakan dividen, profitabilitas, dan suku bunga berpengaruh negatif terhadap volatilitas idiosinkratik. Sementara itu, kinerja operasi dan kepemilikan institusional tidak berpengaruh terhadap volatilitas idiosinkratik.*

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1. Introduction

In financial theory, it turns out that high investment followed by high risk as a high-risk, high return. The risk of securities is formed by two components, which are a systematic risk and unsystematic risk (Noviayanti & Husodo, 2017; Pujianto & Wibowo, 2019). Systematic risk always exists and cannot be eliminated through diversification. It can be considered as an external risk because it is influenced by outside factors of the companies, such as economic conditions, socio-political conditions, and taxation policies. Meanwhile, the unsystematic risk can be eliminated by diversification. It can be regarded as an internal corporate risk because its change is influenced by factors that exist within the companies, such as market shares, management ranks, and annual profits.

The portfolio is one of the tools to minimize or eliminate diversifiable risk (Noviayanti & Husodo, 2017; Pujianto & Wibowo, 2019). Therefore, by making a portfolio of investments, securities return should be positively correlated to this diversified risk. In the field studies of financial economics, the unsytematic risk is known as the specific risk or idiosyncratic risk. Several factors may lead to the announcement of earnings, supply and demand information, and the dynamics of corporate competition. Thus, naturally, this risk will change over time (time-varying) depending on the change in the information. The idiosyncratic volatility is not an obstacle in riskier asset pricing, where idiosyncratic volatility is assumed to be diversified as investors hold well-diversified market portfolio proportions. Zhang et al. (2016) stated that idiosyncratic volatility is the most appropriate measure in explaining firm-specific risks.

Several studies investigated idiosyncratic volatility on stock returns instead of examining what factors may explain idiosyncratic volatility. The previous research suggested that idiosyncratic volatility is positively associated with stock returns (Liu & Di Iorio, 2012). On the contrary, Wang (2013) suggested that idiosyncratic volatility is not able to increase the proportional return of stocks. Bozhkov et al. (2018) proved that idiosyncratic is positively associated with stock returns. Nguyen, Zaied, & Pham (2019) found that idiosyncratic is negatively related to firm value. Qadan, Kliger, & Chen (2019) found that in periods associated with an increase in the aggregate market volatility risk, idiosyncratic volatility has a negative effect on future stock returns, while in periods associated with a decrease in the aggregate market volatility risk, idiosyncratic volatility has a positive effect on future stock returns. Those studies that have been conducted on this topic use the data from developed countries.

Meanwhile, several studies that examine idiosyncratic volatility on stock returns have been conducted in several developing countries with mixed results. Using data in India, Aziz & Anshari (2017) found that idiosyncratic volatility has a positive effect on stock future returns. Noviayanti & Husodo (2017) proved that idiosyncratic volatility does not affect stock excess returns in ASEAN. Furthermore, using company data in Bangladesh, Chowdury & Hossain (2019) found that idiosyncratic volatility is negatively associated with both individual stock returns and portfolio returns. Vo, Vo, & Nguyen (2020) found that idiosyncratic volatility is not associated with stock returns in Vietnam. Using Indonesia data, Anggiyanti (2018), Pujianto & Wibowo (2019) proved that idiosyncratic volatility is positively associated with stock returns. On the contrary, Darmawan, Murhadi, & Mahadwartha (2017) found that idiosyncratic risk has a significant negative effect on stock returns.

Furthermore, the studies were examining the factors that explain idiosyncratic volatility are still rare and commonly using data from developing countries. Rajgopal & Venkatachalam (2011) found that the quality of financial statements is negatively associated with idiosyncratic volatility. Meanwhile, Chichernea, Petkevich, & Reca (2013) suggested that short-term institutional shareholders have a positive effect on idiosyncratic volatility, while long-term

institutional owners have a positive influence on idiosyncratic volatility. Liu, Di Iorio, & De Silva (2014) provided evidence that dividend policy has a positive effect on idiosyncratic risk. The study also suggested that valuations measured by price-earnings ratio, firm size, leverage, and profitability have a negative impact on idiosyncratic risk. Anwar, Singh, & Jain (2015) concluded that the announcement of the cash dividend proves to reduce the stock return volatility. The studies which examine other idiosyncratic volatility are carried out by such as Tan & Liu (2016), who found that high managerial strength (CEO) negatively affects idiosyncratic volatility. Li, Hou, & Zhang (2019) found that intangible assets are negatively associated with idiosyncratic volatility. Tzouvanas et al. (2020) found that environmental disclosure is negatively related to idiosyncratic volatility.

The study which examined the factors that explain idiosyncratic volatility using developing country data is conducted by Kumari, Mahkud, & Hiremath (2017), who use India's non-financial companies' data. The study proved that firm size, momentum has a negative influence on idiosyncratic volatility, while the book to market ratio, liquidity, cash flow to price has a negative effect on idiosyncratic volatility. Kumari et al. (2017) stated that investors could have an undiversified portfolio because of the determination of idiosyncratic risk as a component of total risk in a particular portfolio in imperfect capital markets. Problems with financial markets in emerging markets, such as physical and institutional infrastructure, are underdeveloped, weak governance, uncertain legal environment, political instability, and lack of transparency, resulting in capital markets becoming inefficient (Ali & Asri, 2019). Therefore, investment risks in the capital market also increase.

In Indonesia, research that examines factors that can capture idiosyncratic volatility in Indonesia was conducted by Monica & Ng (2018). The study found that foreign ownership, managerial

ownership, and public ownership negatively affect special risks. Pujianto & Wibowo (2019) found that herd behavior mainly occurs in stocks that have high idiosyncratic risk and occur in normal periods, not during crisis periods. The studies did not consider the firm's fundamental factors on idiosyncratic volatility. Therefore, it is necessary to investigate idiosyncratic risk with fundamental elements of the firm using Indonesia companies' data.

This study aims to examine the fundamental factors of firm size, price to earnings ratio, dividend policy, profitability, operating performance using company data in Indonesia. This fundamental factor is also used by Liu et al. (2014) using company data in Australia as a developed country. Meanwhile, this study employs company data in Indonesia as a developing country. Previous idiosyncratic volatility testing in developing country was also carried out by Kumari et al. (2017) using company data in India. Meanwhile, using data from developing counties, Aziz & Anshari (2017), Noviayanti & Husodo (2017), Chowdury & Hossain (2019), and Vo et al. (2020) examined idiosyncratic volatility on stock return.

This study employs banking sector company data because the economy in the emerging market is highly dependent on banks including in Indonesia. These conditions attract investors to invest in banking stocks as well as the banking sector is susceptible to macroeconomic conditions (Hamid, 2008). Furthermore, Gang et al. (2016) concluded that when the interbank market interest rate is low, the banking companies have lower debt costs indicating that the bank is holding a low liquidity risk. Conversely, when the interbank market rates are high, banking companies have high debt costs that show a high level of liquidity risk as well as systematic. Banking industries reflect institutions that have a direct activity financially and are very closely related to deposit rates (Ferranti & Yunita, 2015). Thus, to examine the impact of macroeconomic conditions on idiosyncratic volatility in the Indonesian

banking sector, then this study also investigate interest rates on idiosyncratic volatility. Also, this study includes institutional ownership on idiosyncratic volatility because institutional shareholders have a profound role in emerging market countries as active investors and are super players in the market (Vo, 2016). A study examining the effects of individual interest rates and institutional ownership on idiosyncratic volatility has not been conducted in previous studies both in the international and Indonesian levels including Liu et al. (2014) and Kumari et al. (2017).

2. Hypothesis Development

Generally, investors or potential investors will pay more attention to information from companies that have a larger size because these companies can represent the condition of the company in a country, including Indonesia. Liu et al. (2014) and Kumari et al. (2017) suggested that firm size has a negative effect on idiosyncratic volatility. Barell et al. (2011) found that banks with larger sizes have a higher risk. Hock Ng, Chong, & Ismail (2013) stated that the existence of moral hazard distorts market discipline and leads to substantial risks by larger financial firms due to the certainty of a bailout policy by the Government if large financial sector firms fail. As a result, the company will conduct expansion activities to reach larger sizes to get a government bailout in case of bankruptcy in the future. The total failure of financial sector firms especially in banking industries can harm and disrupt the overall stability of the financial system. Therefore, the first hypothesis in this study is:

H_1:   firm size has a positive effect on idiosyncratic volatility

According to Arslan & Zaman (2014), PER indicates future market returns, so investors can easily predict stock returns in the future through PER. It also applies to predict future corporate risks. Liu et al. (2014) proved that PER has a negative effect

on idiosyncratic volatility. The result indicates that the higher the PER value, the investor believes that the future risk of the company is getting smaller, and investors will assume that the company has been able to lower the systematic risk of the company. Through a high PER indicates that banking companies can diversify their risks well. Therefore, the second hypothesis in this study is:

H_2:   PER has a negative effect on idiosyncratic volatility

The dividend policy can be reflected in the number of dividends paid in the financial statements that can be compared with the ordinary share price commonly referred to as dividend yield. Some investors use dividend yields as a measure of risk, and as an investment filter, for example, they will attempt to invest their money in stocks that generate high dividend yields. Companies that provide dividends indicate to investors that the company is still able to provide a return to investors. Arslan & Zaman (2014) proved that companies that declare cash dividends could reduce the volatility of stock returns (risk). The condition reflects that firms that give dividends to investors indicate that the company's financial situation is stable and is unlikely to experience uncertainty or bankruptcy. Therefore, the third hypothesis in this study is:

H_3:   dividend policy has a negative effect on idiosyncratic volatility

Profitability information, especially for banking companies, contributes that the company will continue to grow. It shows that the company can reduce uncertainty about the future as well as bankruptcy. Profitability also indicates the level of performance performed by the company. Liu et al. (2014) proved that higher corporate profitability could indicate a low level of idiosyncratic corporate volatility. It suggests that successful companies gaining high profits assure investors that the company continues to grow, thereby reducing the risk of corpo-

rate bankruptcy. With a high level of profitability indicates that managers can earn better corporate profits to minimize the risk of bankruptcies that may occur in the future. Therefore, the fourth hypothesis in this study is:

H_4: profitability has a negative effect on idiosyncratic volatility

The amount of operating cash flow generated by the company provides essential information to investors including the opportunity to acquire productive assets to increase productivity. On the contrary, if the company has a negative operating cash flow, it indicates that firms are less able to generalize cash flow from operating activities that impact on more considerable corporate risks. Dutt & Jenner (2013) proved that firms with low stock return volatility show that firms have better operating performance. When a company receives a sum of cash flows from operating activities, it allows the company to have an investment in fixed assets or to pay off its maturing liabilities. Companies with operating performance that avoids the risks of a company's inability to meet its maturity obligations or the sale of production assets that may aggravate the company's future condition. Therefore, the fifth hypothesis in this study is:

H_5: operating performance negatively affects idiosyncratic volatility

Information on institutional ownership in a company is fascinating because the presence of institutional ownership can have a monitoring function to the manager. The role can force managers to perform well and minimize the risk of bankruptcy.

Vo (2016) proved that institutional shareholders have a role in improving corporate governance in influencing management to increase shareholder value. If the interests of shareholders are met, then the manager of the company will try to minimize the risk of the company that occurred. Supervision

by shareholders resulted in managers to perform optimally and reduce opportunistic actions that are detrimental to investors as shareholders of the companies. Therefore, the sixth hypothesis in this study is:

H_6: institutional ownership has a negative effect on idiosyncratic volatility

The low-interest rates lead to increased bank risk, and high-interest rates can prevent the accumulation of bank risk (Kim, 2014; Angeloni, Faia, & Lo Duca, 2015). Jiménez, et al. (2014) proved the uncertainty of the interest rate on bank risk. Interest rates have a smaller impact on bank risk assets with more capital but have a more significant impact on banks with far more liquid business. Gang et al. (2016) proved that the interest rate has a positive effect on banking risk. It is related to financial stability and the effectiveness of the monetary policy. The banking companies should pay great attention to the impact of interest rate changes as the higher the interest rate, the higher the risk to establish a comprehensive early warning system on the risks and establish a model by which commercial banks can assess the risks caused by changes in interest rates. The efforts made by the banking companies to overcome this matter become increasingly burdensome. Therefore, the seventh hypothesis in this study is:

H_7: interest rates have a positive influence on idiosyncratic volatility

3. Methods, Data, Analysis

This type of research in this study is a quantitative research using secondary data sourced from financial statements and stock prices of companies listed on the Indonesia Stock Exchange (www.idx.co.id). Data testing conducted in this study using the panel data regression. The research data uses secondary data derived from financial statements and annual reports of companies within

seven years (2012-2018). Also, there are stock price data sourced from www.finance.yahoo.com.

This study uses a population of banking sector companies listed on the Indonesia Stock Exchange. The sample selection used a non-random sampling technique (purposive sampling), with the criterion. First, banking sector companies that have listed their shares on the Indonesia Stock Exchange before the period January 1, 2012. Second, the banking companies have complete audited financial statements from 2012 through 2018. Third, after fulfilling the first and the second criteria, the banking sector companies trade shares at least two times a month in the period January 1, 2012, up to December 31, 2018. Total sample in this study amounted to 168 observations (firm-year).

The dependent variable in this study is idiosyncratic volatility. This study defines idiosyncratic volatility as a standard deviation of residual regression of the Fama & French (1993) three-factor model as Liu et al. (2014). The first stage is to create a category of companies by the size of market capitalization and book to market equity. Portfolio size distribution consists of 50 percent of large companies and the remaining 50 percent are categorized as small companies based on previous year market capitalization. The book market equity ratio consists of each 1/3 of large, medium, and small companies. Every year t, companies are ranked and sorted into portfolios according to their size and book to market equity ratio in December of year t-1. Returns from daily size portfolios are calculated as daily returns from large portfolios minus daily returns from small company portfolios. The daily return of the market equity portfolio is calculated as the daily return of the book value equity ratio divided by the market value of equity in the high group minus the large group. Accordingly, a daily regression for the equation must be conducted as follows:

$$Rt - Rft = \beta 0 + \beta 1(Rmt - Rft) + \beta 2 SMBt + \beta 3 HMLt + \varepsilon t$$

Where: *Rt*: daily stock return; *Rf*: risk-free by using the daily yield of 10-year government bonds; *Rmt*: daily market stock return; *SMB*: daily return of portfolio size calculated the daily return of large size portfolio minus the daily return of small size portfolio. For *SMB* portfolio are grouped into two according to their market capitalization; *HML*: book to market daily ratio. For the data of the book of equity derived from t-1 financial statement data. The portfolio is divided into 3 with the book to market equity of the previous year into three groups of high, medium, and small.

The idiosyncratic volatility is the annual estimate of the standard deviation of the residuals from the regression equation above. In this study excluded a company with negative book value and had trade on low and delisted stocks from initial samples as Liu et al. (2014).

Furthermore, the independent variables in this study are company size, price-earnings ratio, dividend policy, profitability, operation performance, institutional ownership, and interest rate. Companies with large amounts of assets generally attract the attention of investors to invest funds in the company so that they can quickly obtain the source of funds (Ratnasari & Budiyanto, 2016). In this study, the company size uses natural logarithm total assets followed Ratnasari & Budiyanto (2016), as follows:

$$SIZE = Natural\ Logarithm\ in\ Rupiahs\ Total\ Asset$$

Price Earnings Ratio (*PER*) is used to calculate the return on capital invested in a stock. In this study, PER followed by the proxy used by Liu et al. (2014), as follows:

$$PER = \frac{Stock\ Price\ per\ Share}{Earnings\ Per\ Share}$$

The dividend policy is proxied by dividend yield which is the ratio used to measure how much

profit is a dividend that can be generated from investments in shares as proxy used by Liu et al. (2014) as follows:

$$Dividend\ Yield = \frac{Dividend\ Per\ Share}{Market\ Price\ Per\ Share}\ X\ 100\ percent$$

Profitability in this study is represented by Return on Equity (ROE), which reflects how big the company can generate profit and loss for the interests of investors. In this study, the ROE proxy follows Liu et al. (2014) and Kumari et al. (2017) as follows:

$$ROE = \frac{Income\ after\ Tax}{Stockholder's\ Equity}\ X\ 100 percent$$

The proxy for calculating the operating performance in this study is by the proxy used by Rajgopal & Venkatachalam (2011), as follows:

$$CFO = \frac{Cash\ Flow\ From\ Operating}{Average\ total\ Asset} x100\ percent$$

In this study, institutional ownership is a share of share ownership by financial institutions such as insurance companies, pension fund companies, or other financial companies divided by total shares as the measure used by Vo (2016), as follows:

$$Institutional\ Ownership =$$

$$\frac{the\ number\ of\ shares\ owned\ by\ financial\ institutions}{total\ company's\ shares} x100\ percent$$

The proxy used for the interest rate in this study is the quarterly deposit interest rate issued by the banking company on average for one year, namely:

$$Interest\ Rates = \frac{\sum_{t}^{4} b.three - month\ deposit\ interest\ rates\ t}{4}$$

In this study, the hypothesis testing model is formulated in the regression equation below by adding insert independent variable in its effect on the dependent variable, as follows:

$$IVOLit = \beta 0 + \beta 1 SIZEit + \beta 2 PERit + \beta 3 DivYield3it$$
$$+ \beta 4 ROEit + \beta 5 CFO5it + \beta 6 INS6it$$
$$+ \beta 7 INT7it + \varepsilon it$$

Where: *IVOL*= idiosyncratic volatility; *SIZE*= company size; *PER*= price to earnings ratio; *DivYield*= dividend policy; *ROE*= profitability; *CFO*= operating performance; *INS*= institutional ownership; *INT*= interest rate

4.   Results

The banking companies used in this study amounted 24. Based on the BUKU (commercial banks based on business activities) category, the study sample consisted of 16 private banks, four state-owned banks, three mixed banks, and one regional development bank. The descriptive statistical analysis in this study is described by using the mean, maximum, minimum, and standard deviation. The summary of the results of descriptive statistics on the variables data in this study presented in Table 2.

Furthermore, the summary of the correlation test between variables in this study presented in Table 3. The table suggests that there is no correlation between each other variables, so each value of proxies is different from others. Thus, all independent variables can be examined on the dependent variable.

Based on the equation examining conducted, the model chosen for the regression equation estimation in this study is a random-effect model, presented in Table 3.

Furthermore, the hypothesis testing summary presented in Table 4.

From Table 4, it concludes that firm size, price-earnings ratio, dividend policy, profitability, and interest rates are negatively associated with idiosyncratic volatility. However, operating performance and institutional ownership are not associated with idiosyncratic volatility.

Tabel 1. Statistics descriptive

	IdRisk	Size	PER	Div Yield	ROE	CFO	Ins	Int
Mean	0.0239	31.87	23.024	0.0119	0.0868	0.1861	0.5600	0.0720
Median	0.0207	32.16	11.650	0.0000	0.0916	0.0233	0.5997	0.0711
Maximum	0.0915	34.80	825.51	0.1123	0.2880	2.5667	0.9729	0.0911
Minimum	0.0078	28.88	-83.300	0.0000	-1.0659	-0.1467	0.0000	0.0554
Std. Dev.	0.0124	1.577	81.102	0.0195	0.1305	0.5072	0.3416	0.0108
Obs.	168	168	168	168	168	168	168	168

Table 2. The correlation test

	Size	PER	Div Yield	ROE	CFO	Ins	Int
Size	1.0000	-0.1315	0.2203	0.4097	-0.0938	-0.3262	-0.0642
PER	-0.1315	1.0000	-0.0947	-0.1131	-0.0055	0.1337	0.1181
Div Yield	0.2203	-0.0946	1.0000	0.2916	-0.1096	-0.4465	-0.0084
ROE	0.4097	-0.1131	0.2916	1.0000	0.0884	-0.3654	-0.0930
CFO	-0.0938	-0.0055	-0.1096	0.0884	1.0000	0.1237	0.0245
INS	-0.3261	0.1337	-0.4465	-0.3654	0.1237	1.0000	0.0836
INT	-0.0642	0.1180	-0.0084	-0.0930	0.0245	0.0836	1.0000

Note: *SIZE*= company size; *PER*= price to earnings ratio; *DivYield*= dividend policy; *ROE*= profitability; *CFO*= operating performance; *INS*= institutional ownership; *INT*= interest rate

Table 3. Model selection test for panel data

Selection Test	Common Effect	Random Effect	Fixed Effect
Chow Test	-	-	x
LM Test	-	x	-
Hausman Test	-	x	-

Table 4. Hypothesis testing summary

Variable	Hypothesis	Coeff.	t-Stat	Prob.	Sig.
C		0.1146	4.7782	0.000	***
Size	+	-0.0022	-3.1483	0.001	***
PER	-	-1.32E-05	-1.4023	0.081	*
DivYield	-	-0.0750	-1.5539	0.061	*
ROE	-	-0.0341	-4.7017	0.000	***
CFO	-	-0.0017	-0.9761	0.165	
INS	-	-0.0026	-0.7806	0.218	
INT	+	-0.1653	-2.3901	0.009	***
R^2		0.2623			
Adj. R^2		0.2301			
F-statistic		8.1311			
Prob(F-stat)		0.0000			

Note: ***Significance at 5 percent; *Significance at 10 percent.
SIZE= company size; *PER*= price to earnings ratio; *DivYield*= dividend policy; *ROE*= profitability; *CFO*= operating performance; *INS*= institutional ownership; *INT*= interest rate

5. Discussion

The effect of firm size on idiosyncratic volatility

Hypothesis test suggests that firm size is negatively associated with idiosyncratic volatility. The results of this study are in line with previous studies using data from non-financial companies and financial companies in developed and developing countries e.g. Liu et al. (2014), Khumari et al. (2017). However, the results of this study are different from the research of Barell et al. (2011), Hock Ng et al. (2013), which concluded that the size of a banking company has a negative effect on total risk. The results of this study indicate that banking sector companies are more aware of the risks associated with company policy itself. It is suspected that banking companies in Indonesia will be more careful concerning government policy to conduct a bailout if a banking sector company fails (Hock Ng et al., 2013). Therefore, banking sector companies will be more cautious in making policies that have an impact on the economy in Indonesia because banking companies are considered to play an essential role in economic policy in Indonesia. The experience of the economic crisis that occurred in Indonesia around 1998-1999 resulted in banking companies supporting government policies in improving financial system stability (Zhou, 2010). This study is dominated by private banks where private banks that have high total assets already have a strategy in reducing their specific risks such as BBCA. The results of this study are proven that, BBCA as private banks, is a large banking company but has low idiosyncratic volatility. BBCA, which is expected to have the policy to carry out conventional banking practices, which results in minimizing risk for the company.

The effect of PER on idiosyncratic volatility

Hypothesis testing suggests that PER is negatively associated with idiosyncratic volatility. It is

in line with research conducted by Liu et al. (2014). PER can be used to measure the value of a company and interpret how much investors pay a certain amount of funds for the profits generated by the company because PER is closely related to the company's capital structure. In general, companies with high leverage tend to have low PER because leverage affects earnings and stock prices. Investors will pay lower the profits generated by the company to compensate for the risk of more significant bankruptcy through share prices.

Some investors consider that companies with high PER mean high performance. In contrast, other investors consider companies that have too high PER to be less attractive to investors because stock prices are stagnant and do not increase in the next period, which has an impact on capital smaller gain. Meanwhile, for companies that have a low PER, some investors consider that the quality of the company's shares to below, but some other investors when the company has a small PER is an opportunity to be able to buy shares at low prices because it is possible for more significant capital gains in the future. The higher the PER of a company indicates the company's shares will be more expensive to net income per share (Arisona, 2013). Investors' expectations of the company's future profits are reflected in the price of the stocks they are willing to pay for the company's shares.

The effect of dividend policy on idiosyncratic volatility

Hypothesis testing result suggests that dividend policy is negatively associated with idiosyncratic volatility. It is in line with Liu et al. (2014). Companies that provide dividends indicate that the company is in a stable condition. As the company's policy in paying dividends is a signal of investor welfare in the future, dividend policies can indicate management's optimistic forecasts in generating corporate profits in the future (Liu et al., 2014).

Based on testing in this study, dividend information is useful news information so that investors respond positively to the dividend policy. The dividend policy for banking companies in Indonesia can be an indication in assessing idiosyncratic volatility. The company's prospects can be determined from the company's dividend policy because companies that pay dividends should be able to increase the company's leverage. In Indonesia are still very few banking companies which distribute dividend to the investors. However, the information on the provision of dividends by banking companies can be an indication for investors in assessing the unsystematic risk.

The effect of profitability on idiosyncratic volatility

Hypothesis testing suggests that profitability is negatively associated with idiosyncratic volatility. It is in line with research conducted by Liu et al. (2014) but different from the study conducted by Armi (2013). Based on the results of this test show that banking companies that have high profitability tend to have low unsystematic risk. Profitability shows how well a company uses its equity to generate profits. Companies with higher profitability can reduce idiosyncratic volatility because companies will be better at lowering company-specific risks that are expected.

In the banking sector, profitability plays a role in reducing unsystematic risk. Profitability shows the level of company performance to generate profits. Hence, the higher level of profitability demonstrates that the banking sector company successfully uses its equity and assets optimally in the company's operations. The high degree of profitability shows the level of the company's ability to guarantee the certainty of the company's future so that the response of investors considers that the level of profitability reflects how much the company is to reduce investment risk, especially risk not systematic.

The effect of the company's operating performance on idiosyncratic volatility

Hypothesis testing suggests that operating performance is not associated with idiosyncratic volatility. It is not relevant to research conducted by Dutt & Jenner (2013). Even though the company has an excellent operating performance, but this has not succeeded in minimizing the risk of the company, which has an impact on increasing access to capital achieved by the company. Companies with high operating performance do not always suggest that it is in a stable condition so that these conditions cannot capture company-specific risks. Companies with high operating performance conditions can increase stock returns so that companies with higher operating cash flow show indications of having excellent manager performance and provide guarantees for investors in investing in these companies. However, it does not apply to bank companies in Indonesia. Operating performance should be related to how the company uses its cash flow to expand productive assets appropriately because the decision can reduce company-specific risks (Dutt & Jenner, 2013). However, it cannot reflect the condition of banking companies in Indonesia. Consequently, these actions are allegedly not responded by investors because these conditions are not related to changes in the company's stock price in the capital market.

The effect of institutional ownership on idiosyncratic volatility

Hypothesis testing suggests that institutional ownership is not associated with idiosyncratic volatility. This study is different from research conducted by Vo (2016). Institutional shareholders in Indonesia lack a role in controlling management to minimize company risk, especially company-specific risk, which is essential information that can attract the attention of many stakeholders in the financial markets. This result provides further information

on the specific risk level of companies in Indonesia. Based on the results of this test, institutional ownership lacks a role in monitoring company policies taken by management. Therefore, institutional ownership is less helpful in stabilizing company-specific risks. This study does not confirm the critical role of institutional ownership in emerging markets such as in Indonesia. The purpose of monitoring institutional shareholders is less vital in increasing the stability and sustainability of banking companies in the future, including identifying and mitigating risks. The implementation of lousy governance is implemented in Indonesia, encouraging institutional shareholders not to use their role in influencing the management of the company.

The effect of interest rates on idiosyncratic volatility

The hypothesis testing suggests that the interest rate interest rates are negatively associated with idiosyncratic volatility. The result of this study is relevant to studies conducted by Lo'pez et al. (2011) and Jim'enez et al. (2014). However, it differs from Kim (2014), Angeloni et al. (2015), who concluded that low-interest rates could reduce bank risk, and high-interest rates can increase bank risk. Interest rates have a more significant impact on the banking business that is far more liquid. Based on the test results in this study, the interest rates on deposits imposed by banking sector companies is one way to reduce unsystematic risk. The policy chosen by the companies in applying the deposit interest rates is in line with the company's risk mitigation against the company's uncertainty in the future. With higher deposit rates, it is expected that people will save their money according to a specific period that is different from regular savings. Also, by depositing public funds in deposits, banking companies have additional cash that can be used to extend loans to consumers such as the public and corporations.

6. Conclusion

This study suggests that large financial companies have small unsystematic risk. Profitability provides guarantees for investors because the banking companies that generate higher profits show a more stable corporate condition. Companies with high or low operating performance do not indicate that managers perform well, especially in managing cash from their operations, and can expand their productive assets appropriately. In Indonesia, dividend policy is an indication of a better company in the future. The PER value is still a measure of corporate risk since firms with high PER are still considered to have high performance. However, institutional stakeholders are not able to monitor corporate management in making the policy, which raises company-specific risks. On the contrary, high-interest rates that lead to smaller levels of risk are made possible financial stability, as well as monetary policy, is running effectively.

Still, this study has limitations. This study only employs banking-industry companies so that the result cannot generate the other financial companies and other sector companies. Future research can relate to this topic by increasing the number of research samples by increasing the number of other financial companies and other sector companies to obtain a larger sample of the study as well as compare the results with this study. Also, this study only uses data with the short period, so that the future study can add more extended periods to obtain better results. Future research also can add other fundamental corporate variables such as accruals, capital expenditure, financial leverage, liquidity, and sales growth, so there are other underlying fundamentals in assessing the company's specific risks.

For the Indonesia Financial Services Authority as the supervisor of the financial services industry needs to increase its role in investor protection related to the uncertainty of investment in the capi-

tal market. Accordingly, in making investment decisions in the Indonesia Stock Exchange, Indonesian investors can use the information which captures unsystematic risk for investment decision making.

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