Fundamental Factors and Stock Prices: Evidence from Indonesia Oil and Gas Companies
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Abstract
The purpose of this research is to find out the influence of various fundamental factors (EPS, PER, PBV, DER) in determining the stock price of oil and gas companies listed on the Indonesia Stock Exchange period 2012-2017. The population in this research was 10 companies and the sample in this study consists of 7 oil and gas companies in Indonesia Stock Exchange (BEI) selected based on specific criteria using purposive sampling method. The method of analysis used in this research is panel data regression. The results showed EPS, PER, PBV & DER simultaneously significantly influence the stock price. Partially EPS have a positive and significant effect on stock price, while PBV PER and DER have no effect on stock price in oil and gas companies listed on the Indonesia Stock Exchange period 2012-2017.

Keywords: Fundamental factor, stock price, oil and gas companies.

INTRODUCTION
The capital market is a meeting place between requests and offers for various long-term financial instruments. From a company perspective, the existence of a capital market helps with long-term funding needs, while from an investor's perspective it is a means to invest funds in all sectors of investment activities. One of the financial instruments in the capital market that is most in demand by investors is the stock instrument. One of the guidelines for investors in investing in stocks is to look at the stock price index [1].

The Indonesia Stock Exchange (IDX) or the Indonesian Stock Exchange (IDX) is a capital market in Indonesia. The number of companies listed on the Indonesia Stock Exchange in 2017 was 557 items, with 45 listed companies including mining sector companies. The mining sector is one of the pillars of economic development of a country, because of its role as a provider of energy resources that are indispensable for a country's economic growth. Natural resource exploration activities undertaken in the context of developing the mining sector require enormous capital. For this reason, many mining companies enter the capital market to absorb investment to strengthen their financial position [2].

The mining sector on the Indonesia Stock Exchange is one sector that is quite reliable because Indonesia is a country rich in natural resources. Mining sector consists of coal mining sub-sectors which in 2017 were 25 companies (in 2012 only 21 companies), crude petroleum and natural gas production (crude oil and natural gas production) in 2017 as many as 10 companies (in 2012 only 7 companies), metal and mineral mining sub-sector (metal and mineral mining) in 2017 there were 9 companies (in 2012 only 7 companies) and land / stone quarrying sub-sector (land / stone mining) in 2017 there were only 1 company. Share prices in the mining sector are listed on the Indonesia Stock Exchange (IDX) for the period 2012 to 2017 which can be seen in Figure 1.
Based on Figure 1, it can be seen that from 2012 to 2015, the share prices of coal companies and other metal and mineral companies appear to continue to decline, then to rise again in 2016 to 2017, while the share prices of mining companies in the oil and gas sub-sector and the rock sub-sector companies tended to experience a significant increase in 2014 when share prices in other mining sub-sectors weakened. It is even the first time that the share price of an oil and gas sub-sector mining company has been above the average share price of the mining sector in the last 5 years.

After rising in 2014, to touch the highest share price over the past 5 years, the share prices of mining companies in the oil and gas sub-sector tend to continue to fall from 2015 to slump in 2017 when the company's stock prices in the mining sector, including the stone sector- the rock is actually crawling up. This becomes interesting to be studied so that it can be known the factors that influence it.

In Indonesia, companies engaged in the oil and gas mining sub-sector include PT. Apexindo Pratama Duta Tbk (APEX), PT. Ratu Prabu Energi Tbk (ARTI), PT. Thanks to Integra Tbk (BPII), PT. Elnusa Tbk (ELSA), PT. Energi Mega Persada Tbk (ENRG), PT. Surya Esa Perkasa Tbk (ESSA), PT. Medco Energi International Tbk (MEDC), PT. Perdana Karya Perkasa Tbk (PKPK), PT. Radiant Utama Interisco Tbk (TINS), and PT Mitra Investindo Tbk (MITI).

Conducting further analysis of the price of shares in the oil and gas sub-sector becomes important because investment in the mining shares of the oil and gas subsector is one of the attractive forms of investment but has a high risk, besides the price of shares traded on the Indonesia Stock Exchange (IDX) with the achievements of the company and the stock market conditions at the time. Company performance can be assessed from the company’s financial performance which can be observed from the financial statements issued by the company periodically. Simply put, the stock price reflects the change in investor interest in the stock. If the demand for a stock is high, the price of the stock will tend to be high. And vice versa, if the demand for a stock is low, then the share price will tend to fall [3].

In investing in shares, investors must first conduct an analysis before buying the desired stock or before making an investment decision. The goal is that investors get a clearer picture of the company's ability in the future. In addition, investors should also pay more attention to aspects of the credibility of the investment instrument issuing company, and not pay more attention to the investment instruments that are issued. Even though these investment instruments (for example stocks) are very attractive, because prices continue to skyrocket. If investment instruments issued by companies that are credible and healthy, then it is likely that the investment instruments issued are able to provide income [4].

Knowing the factors that affect stock prices is important because stock prices are one of the things that are considered by investors to invest or invest their funds in the capital market. Investment in the form of shares in companies that have gone public is indeed very interesting, because it promises two benefits, namely in the form of dividends and capital gains. Dividends are generally distributed to shareholders with the approval of the shareholders, which is obtained from the profits generated by the company. Capital gain itself is obtained from the positive difference between the selling prices of shares with the purchase price of the shares [5].

Issuers that can generate high profits will increase the level of returns obtained by investors, this is reflected in the company's stock price. Therefore, for investors who are pursuing high returns from capital gains, it is very important to know the development of stock prices and the factors that influence them in order to get a high selling price difference from the shares they have bought. Therefore, this study aims to analyze the effect of Earning per Share (EPS), Price Earning Ratio (PER), Price to Book Value (PBV), and Debt to Equity Ratio (DER) on stock prices of listed oil and gas companies on the Indonesia Stock Exchange 2012-2017.

**LITERATURE REVIEW**

Stock price. The stock price is the price that occurs on the exchange at a certain time [6]. The stock price is a reflection of investor expectations of earnings factors, cash flow and the level of return required by investors, which are also influenced by macroeconomic performance [7]. High stock prices are the result of good company performance. A good company performance can create a higher rate of return on investment invested by investors; this will attract investors' attention in increasing demand for shares.
Share price is one indicator of company management. Success in making profits will provide satisfaction for rational investors. High enough stock prices will provide benefits, in the form of capital gains and a better image for the company making it easier for management to get funds from outside the company.

In this case, investors and securities analysts link between the intrinsic value of shares and the current market value of the stock to assess whether the stock price offered by the issuer is in accordance with a fair, undervalued or overvalued price. If the intrinsic value is greater than the market value of the stock, then the share price is considered undervalued. In this condition, it is better to buy or hold if the shares have been owned. If the intrinsic value is smaller than the market value of the stock, then the share price is overvalued. So it is better not to buy or sell if the shares are already owned. If the intrinsic value is the same as the market value of the stock, then the stock is considered fair and usually the transaction tends to be absent for the stock.

High stock prices are the result of good company performance. A good company performance can create a higher rate of return on investment invested by investors; this will attract investors’ attention in increasing demand for shares.

Fundamental Analysis. Fundamental analysis is to compare between a market price and the stock in order to determine whether the stock market price can reflect its intrinsic value or not and to focus on a key fund in the company’s financial statements to consider in calculating whether a stock price has been properly appreciated and right. Where the intrinsic value is determined by fundamental factors [8]. In this study the fundamental factors that will be examined are EPS, PER, DER and PBV, because it is very easy to obtain financial ratio data from the four variables so that it will be easier for novice investors who want to invest in the stock market by first doing a fundamental analysis.

Debt to Equity Ratio. Debt to Equity (DER) is a comparison between the debt held by a company and its total equity [9]. The DER reflects the company's ability to meet all of its obligations as indicated by some part of its own capital used to pay debts. In theory, when a company’s Debt to Equity Ratio (DER) is high, there is a possibility that the company's stock price will be low because if the company makes a profit, the company tends to use that profit to pay its debt compared to dividend dividing [10]. Debt to Equity Ratio is a ratio to measure how much a company is financed by the creditor compared to capital. The formula to calculate Debt to Equity Ratio is as follows:

$$\text{Debt to Equity Ratio (DER)} = \frac{\text{Total Debt}}{\text{Total Equity}}$$

Earning per Share. Earning per Share (EPS) is the ratio between net income after tax and the number of shares [6]. In theory, if the company’s Earning per Share (EPS) is high, more investors will want to buy these shares, causing the stock price to be high [9]. The formula for calculating earnings per share is as follows:

$$\text{Earning Per Share (EPS)} = \frac{\text{Net Earning}}{\text{Outstanding Share}}$$

Price to Book Value. Price to Book Value (PBV) is another indicator used to assess company performance. The greater the PBV ratio, the higher a company is valued by investors compared to the funds invested by the company. PBV is used to measure the performance of stock prices against the book value. In theory, for a company that runs well, the PBV ratio generally reaches above one, which indicates that the market value of the stock is greater than the book value, so that it will be followed by an increase in stock prices. The formula to calculate Price to Book Value is as follows:

$$\text{Price to Book Value (PBV)} = \frac{\text{Market Price}}{\text{Book Value}}$$

Price earning ratio. Price earning ratio (PER) is the ratio or comparison between the price of shares on the Exchange with earnings per share [11]. Price Earnings Ratio (PER) is an indicator to measure how far investors are willing to pay shares for each rupiah of income generated by the company which is the ratio between the market price per share with earnings per share. The higher the PER the higher the share price, the lower the PER, the lower the share price, but earnings per share are relatively high [12]. The formula for calculating Price earning ratio is as follows:

$$\text{Price Earning ratio (PER)} = \frac{\text{Price Per Share}}{\text{Earnings Per Share}}$$

Signal Theory. Signal Theory is a theory put forward by Ross [13]. In this theory it is stated that the company's executives will have better information and tend to provide that information to potential investors. The information in the form of "good news" owned by the company related to future prospects is expected to increase the company's stock price.

Broadly speaking, the availability of information is closely related to signaling theory. Information is an important tool for business people and
investors, through information can be known about the current state of the company, the past, or even the company's future prospects. Relevant, accurate, timely and complete information is an important thing that investors must have as an analytical tool in investment decisions in the capital market. Through the publication of information or information that is announced in the media will later be used by investors as a bad signal or a good signal on investment decision efforts. Market reaction at the time the announcement is received is expected when the announcement contains a good signal [14].

The volume of stock trading will reflect market reaction. The company has good prospects in the future, if there is a good signal in the information submitted. Thus investors will be interested in trading shares. This is reflected in changes in stock trading volume where the market reaction is positive. Market efficiency will show the relationship between published information related to information in the form of financial, political, environmental, and social reports on fluctuations in trading volume [15]. An efficient capital market can be interpreted as a market where the price of a security has reflected relevant information.

According to Ross [13], the announcement of accounting information gives a signal that the company has good prospects in the future (good news) so that investors are interested in trading shares, thus the market will react as reflected in changes in stock trading volume. Thus the relationship between the publication of information financial statements, financial conditions or political social to fluctuations in the volume of stock trading can be seen in market efficiency.

Signaling theory explains why companies have the drive to provide financial statement information to external parties. The company's impulse to provide information is because there is information asymmetry between the company and outsiders because the company knows more about the company and future prospects than outside parties (investors and creditors). Lack of information for outsiders about the company causes them to protect themselves by giving low prices to the company. Companies can increase company value by reducing information asymmetry. One way to reduce information asymmetry is by giving signals to outsiders [16].

Information asymmetry occurs when managers have relatively more internal company information and know that information faster than external parties. This condition provides an opportunity for managers to use the information they know to manipulate financial statements in an effort to maximize their interests. Announcement of information in the form of financial statements and analysis of financial conditions can give a signal that the company states good prospects in the future so that investors or potential investors are interested in trading shares. Thus the market will react as reflected in the stock price.

**METHOD**

Data and Samples. The type of research approach that I use is quantitative as a scientific method because the data used are concrete, objective, measurable, rational, and systematic. The type of data used in this study is secondary data. Secondary data is data obtained not from direct research of an object, but obtained from financial reports that have been published by the Indonesia Stock Exchange or by the company directly. EPS, PER, PBV, DER and stock price data, in this study sourced from the financial statements of oil and gas mining companies on the Stock Exchange through the web www.idx.co.id for the period 2012 to 2017.

The determination of the sample in this study is based on the purposive sampling method, where the company sample is selected based on certain criteria. Understanding the sample according to Sugiyono [17] is part of the number and characteristics possessed by the population. The criteria for the oil and gas sub-sector mining companies that are sampled are the oil and gas sub-sector mining companies that have complete financial statements for the period 2012-2017. Based on these criteria, there were 7 companies that could be used as samples in this study.

The data analysis technique used is descriptive statistical analysis and panel data regression analysis. In the estimation method of regression models using panel data can be done through three approaches, namely pooled least square, fixed effect model, and random effect model. For the selection of the right model, several tests need to be done, namely the chow test, the hausman test, and the Lagrange multiplier test. After selecting the panel data regression model, the next step is to test the hypothesis. Hypothesis testing aims to find out how far the hypothesis that has been prepared can be accepted based on the data that has been collected. According to Nachrowi and Usman [18], hypothesis testing is useful for testing the significance of the regression coefficients obtained. Hypothesis testing is divided into model significance tests (F test), coefficient of determination (R2) and free variable significance tests (t-test).

**RESULTS AND DISCUSSION**

Descriptive statistics. The number of valid or valid data to be processed each year is 42 samples. Standard deviation as a measure to measure disperses or spread of data and show fluctuating numbers. The highest standard deviation value experienced by the DER variable is equal to 5.88, which means that the DER variable has a higher level of risk compared to
other variables used in the study. While the lowest standard deviation value is experienced by PBV variable, which is equal to 0.24 so it indicates that the level of deviation is quite low, so that the spread of data shows normal results and does not cause bias.

Model Test Results. Based on the results of paired testing using the Chow test, LM Breusch-Pagan test (BP), and Hausman test of the three panel data regression methods (Common Effect, Fixed Effect, Random Effect) it can be concluded that the panel data regression model used in estimating and analyzing the influence of factors that affect the stock prices of oil and gas mining sub-sector companies that have gone public and listed on the Indonesia stock exchange from 2012 to 2017 the fixed effect method.

Panel Data Regression Analysis. The estimated results of the effect of earning per share (EPS), price earning ratio (PER), price book value (PBV), and debt to equity ratio (DER) on stock prices of oil and gas mining sub-sector companies that have gone public and are listed in the Indonesia stock exchange from 2012 to 2017 using the fixed effect method can be seen in Table 2.

### Table 1: Conclusion Testing Panel Data Regression Model

<table>
<thead>
<tr>
<th>No</th>
<th>Method</th>
<th>Testing</th>
<th>Result</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>Chow-Test</td>
<td>Common Effect vs Fixed Effect</td>
<td>Fixed Effect</td>
</tr>
<tr>
<td>2</td>
<td>Lagrange Multiplier-BP</td>
<td>Common Effect vs Random Effect</td>
<td>Random Effect</td>
</tr>
<tr>
<td>3</td>
<td>Hausman Test</td>
<td>Fixed Effect vs Random Effect</td>
<td>Fixed Effect</td>
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Based on Table 2, obtained the multiple regression equation as follows:

\[ HS = 5.494771 - 0.003422 \times \text{DER} + 0.072864 \times \text{EPS} - 0.036627 \times \text{PBV} - 0.008499 \times \text{PER} \]

From the above equation, it can be explained that the regression model using the fixed effect model shows that EPS has a positive relationship with the share value. While DER, PBV, and PER have a negative influence on stock prices.

F. Test. Seen from Table 3, it is known that the p-value of the F-statistic is 0.000000 <0.05 (error rate \( \alpha = 5\% \)). Therefore, it can be concluded that EPS, PER, PBV and DER affect the stock prices of oil and gas sub-sector mining companies.

Coefficient of Determination (R^2). Based on the results of data processing in Table 3, the Adjusted R-Squared value is 0.875927, which means that variations in changes in the rise and fall of shares of mining companies in the oil and gas sub-sector listed on the Indonesia Stock Exchange from 2012 to 2017 can be explained by variable earning per share (EPS), price earning ratio (PER), price book value (PBV), and debt to equity ratio (DER) of 87.59 percent, while the rest, which is 12.41 percent can be explained by variables other variables outside the fixed effect model were applied in the study.

DISCUSSION

Effect of DER on Stock Prices. The results showed that changes in DER had no effect on the company's stock price. This is due to the asymmetry of information between managers and infestors. The manager announces a high DER with the intention to
show that the company has confidence in obtaining optimal profits in the future and the company has bright future prospects. This is expected to be a positive value so that the company's stock price will immediately rise, but investors do not consider a high DER as good news because a high DER shows the high dependency of the company's capital to outsiders, so the burden and risk of the company to go bankrupt is even greater. The high level of debt also shows that the greater the company's fund that must be spent to pay debts, so the possibility of dividends will be smaller companies [19].

The results of this study support the research conducted by Windarto [20] namely "The Influence of Fundamental Factors and Systematic Risk on Stock Prices in Companies that Enter in JII". The results of this study indicate that DER has no effect on stock prices. The results of this study are also in line with the findings of Dewi and Suarayana [21], Akbar [22], Rahayu and Utami [23], Fransiska and Trino [24] which state that DER has no significant effect on stock prices.

This ratio is a solvency ratio that measures the ability of a company's performance in returning its long-term debt by looking at the comparison between total debt and total equity. In Balancing theory it is stated that the decision to add debt does not only have a negative impact, but can also have a positive impact because the company must try to balance the benefits with the costs incurred due to debt. This is evidenced by the results of research conducted by Yumettsari et al. [25] concluding that DER has a significant positive effect on PER. The insignificant influence in this study shows that DER is not a major factor influencing the Oil and Gas Sub-Sector Mining Company Stock Prices, so that DER cannot be used as a reference in determining stock prices in this sector.

Effects of EPS on Share Prices. Based on empirical findings show that earning per share (EPS) has a positive and significant effect on the stock prices of oil and gas mining sub-sectors listed on the Indonesia Stock Exchange from 2012 to 2017. The results of this study mean that the increasing EPS variable indicates that the company has succeeded in increasing the level of investor prosperity. This encourages investors to increase the amount of capital invested in the company's shares. An increase in the number of requests for shares pushes share prices up. Thus, if EPS rises, the market will respond positively followed by an increase in stock prices. According to Benjamin and Endri [26] states that the Earning Per Share information contained in the company's published financial statements is the main concern by investors in making investment decisions, so that it affects the demand for the company's shares concerned which will ultimately affect the price stock, where if the investor considers that the Earning Per Share of the company is good enough and will produce a return commensurate with the risk that will be borne. Then the demand for company shares will increase, which means the price of company shares will also increase.

An increase in Earning per Share indicates that the company has succeeded in increasing the level of prosperity of investors and encouraging investors to increase the amount of capital invested in the company. The higher the value of Earning per Share will delight the shareholders because the greater the profit provided to shareholders and the resulting increase in profits, the share price will increase. Empirical evidence is in line with research conducted by Majanga [27], Kodithuwakku [28], Kinsman and Newman [29], and Sasongko and Wulandari [30], namely Earning per Share (EPS) significant and positive effect on stock prices.

Effect of PBV on Stock Prices. The results of this study do not support the hypothesis that PBV has a positive effect on share prices in oil and gas sub-sector mining companies listed on the Indonesia Stock Exchange in 2012-2017. In line with research conducted by Dwipratama [31] which shows that PBV has no effect on stock prices. This is due to the information asymmetry between managers and investors. The manager announces a low PBV with a view to showing the high security guarantees the company provides when the company is liquidated. In fact, a low PBV indicates that the market values company shares at a low price. This means that investor confidence in the company's aspects is also low. Low PBV. According to Brigham, companies that have relatively high returns on equity usually sell shares several times higher than the book value compared to companies with low returns. The emergence of this information asymmetry makes it difficult for investors to assess the quality of the company, so PBV is unable to explain variations in stock prices [32]. The results of this study are in line with the findings of Utama and Santosa [33] who also found that PBV has a negative relationship with stock prices.

PBV has an important role as a consideration for investors to choose the shares to be purchased and PBV can be used as an indicator of price / value of shares, but PBV is too high, risky and does not produce returns. PBV is closely related to stock returns, because changes in stock prices will change the magnitude of the PBV ratio. Thus changes in the PBV ratio are identical to changes in prices and stock returns, therefore investors' observations of PBV are very intense [34].

The results of this study are not in line with research conducted by Dewi and Suarayana [21] who found that the large PBV ratio had a positive and significant impact on stock prices. The higher PBV ratio indicates that the company is valued higher by
investors. If a company is valued higher by investors, the price of the company's shares will increase in the market, which in turn will return the stock will also increase. The higher PBV ratio of a company indicates the higher market value of a company's stock when compared to the book value. This will cause the company to be valued higher by investors. If a company is valued higher by investors, the price of the company's shares will increase in the market, which in turn will return the stock will also increase.

Effect of PER on Share Prices. The results of the study can be interpreted that changes in the price earning ratio do not affect the stock prices of companies in the oil and gas mining sub-sector. These results corroborate the results of research conducted by Harymami [32], and Sari [35]. Stocks that have a high PER are more risky to trade, because it is easier to deviate from high growth forecasts. Stocks with low PER tend to be in mature industries (low growth rates), in the undesirable stock group or in the superior stock group. Stocks with low PER generally have higher yields than stocks with higher PER which often do not pay dividends at all, so PER does not have much effect on the formation of stock prices on the exchange.

The insignificant influence in this study shows that PER is not a major factor influencing the Oil and Gas Sub-Sector Mining Company Stock Prices, so PER cannot be used as a reference in determining stock prices in this sector.

CONCLUSIONS

The conclusion from the results of this study is that EPS has a positive and significant effect on stock prices. While PER, PBV, and DER have no effect on the share prices of mining companies in the oil and gas sub-sector listed on the Indonesia Stock Exchange from 2012 to 2017 From the results of the study, some of the suggestions formulated are as follows: 1). For companies engaged in the oil and gas sector, it is necessary to be aware of EPS because in this study these variables have a significant effect on stock prices. 2). Investors who will invest in oil and gas companies need to be aware of EPS in considering investment decisions because in this study these variables have a significant effect on stock prices. 3). Further research can be expanded, especially for companies in other stock / industry / sector groups, so that a larger sample size can be obtained and comparisons can also be made between industries / sectors. This research can also be developed by adding internal factors to the company's performance and other external factors by increasing the time period of the study, so that it will get more complete information related to the factors that affect the company's stock price. Liquidity factors can also be a variable that is considered included in future research models that affect stock price movements.

REFERENCES