# CAN INDICATORS FROM ASSET GROWTH , DIVIDEND PAYOUT RATIO AND EARNINGS VOLATILITY M RESOLVE STOCK PRICE VOLATILITY PROBLEMS 

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#### Abstract

This study aims to determine the effect of asset growth, earnings volatility and dividend payout ratio on stock price volatility in non-financial publicly listed companies on the Indonesia Stock Exchange for the 2018-2020 period. The data used are the financial statements of each sample company published on the website www.idx.co.id. The sampling method used is purposive sampling with a total sample of 58 companies. The analytical method used in this study is the causality method, with classical assumption testing, as well as multiple linear regression statistical analysis using SPSS version 25 . Based on the results of the study, it can be concluded that partially only asset growth has an effect on stock price volatility. Meanwhile ,earnings volatility and dividend payout ratio have no effect on stock price volatility. However, simultaneously earnings volatility, dividend payout ratio, and asset growth have an effect on stock price volatility.


Keywords: asset growth, earnings volatility (EVOL), dividend payout ratio (DPR),stock price volatility

## PRELIMINARY

Investment is the investment of funds in one or more investment objects that are owned to get profits in the future. One form of investment in financial assets made in the capital market is shares. Stocks play an important role in financial instruments. Shares can be used to make money, either by the issuer of the shares, investors or third parties.

Investors in carrying out their investment activities always look at two main factors, namely the stock return and risk factors. Investment decisions made by investors not only consider two main factors such as return and risk, but investors need to collect information about the company, both information about stock prices and company performance. Stock prices are influenced by information contained in the capital market at that time, this information can affect the behavior of investors to sell or buy shares, thus affecting the stock price. This is the background for the occurrence of stock price fluctuations and investors who invest must also really pay attention to all the risks that exist in investing so that it is safer and not stuck only the resulting return (Jannah and Haridhi, 2016).

This will also attract investors to invest in non-financial go public companies, because the stock price movements are tempting. However, in 2018-2020 non-financial publicly listed companies showed unstable performance, so that the development of share prices in these nonfinancial publicly listed companies fluctuated from 2018-2020.

If the stock price of non-financial go public companies decreases, it will have an impact on decreasing investor interest in investing in non-financial go public companies because investors think this is less profitable, so the company will have difficulty running the company.

The cause of volatility or price fluctuations is due to factors that affect the economy and factors that have a direct impact on the company itself, such as differences of opinion about where the company's profitability is going. When many people think that the profitability of a company is decreasing, more people will sell their shares so the price will also decrease . And vice versa can also happen. The higher the level of stock price volatility, the higher the possibility of uncertainty about the return on investment. Even so, some investors tend to like stocks with a high level of volatility because of the opportunity to get capital gains on the other hand, the greater the risks that will be obtained.

Asset growth is an indicator of how much the company uses its funds. (Anastassia and Firnanti, 2014), so the higher the growth rate of a company's assets, the lower the risk that investors will face, because the funds provided by investors can be guaranteed by the size of the assets owned by the company.So investors tend to choose to keep the shares they own.Based on the research results of Anastassia and Firnanti (2014), stated that asset growth has a negative effect on stock price volatility. While the research of Chaudry, Iqbal, and Butt (2015), states that asset growth has a positive and significant effect on stock price volatility. And the research of Surahmat, Swandari, and Dewi (2017), shows different results that asset growth has no effect on stock price volatility.

Earnings volatility is the level of volatility or rapid changes in the profits earned and shows the rise and fall of profits and the level of risk of a company is also influential.Companies whose income levels are unstable and varied will experience high price volatility. The results of research by Chaudry, Iqbal, and Butt (2015), Jannah and Haridhi (2016), state that earnings volatility has a positive and significant effect on stock price volatility. While the results of this study are different from the results of research by Surahmat, Swandari, and Dewi (2017), Mobarak and Mahfud (2017), which state that earnings volatility has a negative and significant effect on stock price volatility.

Dividend policy is an integral part of corporate funding. Information on dividends is determined by the greater the retained earnings, the less profit the company allocates in the form of dividends to investors.Company policy plays a major role in the dividend payout ratio, because it relates to earnings and dividends distributed. Information on dividend levels.Based on the results of research by Chaudry, Iqbal, and Butt (2015), Mobarak and Mahfud (2017), the results show that dividend policy, namely the dividend payout ratio, has a positive and significant effect on stock price volatility. Meanwhile, the results of research by Anastassia and Firnanti (2014), and Surahmat, Swandari, and Dewi (2017), state that dividend policy, namely dividend payout ratio and dividend yield , has a negative effect on stock price volatility.

Many variables affect stock price volatility. This study will examine several variables, including: asset growth, earnings volatility and dividend policy. Although a number of studies on the factors that influence stock price volatility have been widely carried out, research in this area is still considered an interesting problem to study because of the inconsistency of the results of previous studies (research gap).Based on the background and research gap, the
authors take the title of the study "The effect of asset growth, earnings volatility and dividend payout ratio on Stock Price Volatility".

## LITERATURE REVIEW

## Signaling Theory

Signaling theory (signal theory) suggests how a company should give signals to users of financial statements. According to Brigham and Houston (2014: 184) a signal is an action taken by the company to provide instructions for investors about how management views the company's prospects. This signal is in the form of information about what management has done to realize the owner's wishes. The information issued by the company is important, because of its influence on the investment decisions of parties outside the company. This information is important for investors and business people because the information essentially presents information, notes or descriptions, both for past, present and future conditions for the survival of the company and how it will affect the company.

## Stock Price Volatility

Stock price volatility is the up and down movement of stock prices on the stock exchange (Anastassia and Firnanti, 2014).Stock price volatility is the distance between fluctuations or fluctuations in stock prices. Volatility is also often viewed negatively because it expresses uncertainty and risk. However, as a trader, it is necessary to understand that if the results are large, there is usually a high risk. Volatility can occur due to the entry of new information into the market or exchange. As a result, market participants reassess the traded assets. In an efficient market, the price level will adjust quickly so that the price formed reflects the new information.

## Asset Growth

Asset growth is defined as the annual change in total assets. An increase in assets followed by an increase in operating results will further increase the confidence of outsiders in the company. With increasing trust from outsiders (creditors) in the company, the proportion of the use of debt sources is getting bigger than the own capital. This is based on the creditor's belief that the funds invested in the company are guaranteed by the amount of assets owned by the company (Tandi, Tommy, Untu, 2018).

## Earnings Volatility

Earnings Volatility is a measure that describes the extent to which the level of stability of earnings or income generated by the company from year to year. However, profits or earnings are also difficult to predict and even more difficult to predict when volatility is high. The higher the level of profit or income volatility, the capital gains that will be obtained by investors will be greater when profits reach the maximum level. So investors tend to keep their
shares for the future. Therefore, there are not many sales that occur, so the level of stock price volatility tends to be low.

## Dividend Payout Ratio

Dividend Payout Ratio (DPR) is the percentage of profit paid to shareholders as dividends per year. Companies that have a low dividend payout ratio are considered more valuable because they have the potential to grow. However, at the same time, companies that are experiencing growth certainly have a greater level of uncertainty (risk) regarding the future cash flows of new investment projects in comparison to the rate of return that has been placed on assets. This makes the company more risky to invest. Therefore, companies with low dividend rates will make their stock price movements unstable (Mobarak and Mahmud, 2017).

## Framework

Based on the theory and previous research, the following research model was developed:


## Research Hypothesis

1. Asset Growth Affects Stock Price Volatility
2. Earnings Volatility affects Stock Price Volatility
3. Dividend Payout Ratio has an effect on Stock Price Volatility
4. Asset Growth, Earnings Volatility and Dividend Payout Ratio have an effect on Stock Price Volatility

## RESEARCH METHODS

The research method used in this research is associative research. Associative research is research that aims to determine the relationship between two or more variables, this method is to explain, predict, and control all events. In this associative research using a quantitative approach. Quantitative research is a research method based on the philosophy of positivism
because it has met scientific/empirical principles that are concrete/empirical, object, measurable, rational and systematic (Sugiyono, 2014:7).
Population and Sample
Population means the object that is used as research. The population used in this study are non-financial companies listed on the Indonesia Stock Exchange for the 2018-2020 period as many as 58 companies, the sampling technique in this study uses proposive sampling, the sampling technique is proposive sampling, namely the sample is taken based on certain criteria in accordance with the research objectives. considered to represent research as follows:

## Sampling Criteria

| No | Sample Criteria | Amount |
| :---: | :--- | :---: |
| 1 | Non-Financial Go Public Companies listed on the <br> Indonesia Stock Exchange for the period 2018-2020 | 521 |
| 2 | Companies that do not use rupiah currency in the 2018- <br> 2020 period | $(85)$ |
| 3 | Companies that do not issue financial statements as of <br> December 31 | $(3)$ |
| 4 | Companies that suffer losses in the 2018-2020 period | $(167)$ |
| 5 | Companies that do not distribute dividends during the <br> $2018-2020$ period | $(138)$ |
| 6 | The company does not have complete information | $(70)$ |
|  | Amount | $\mathbf{5 8}$ |
|  | Number of research samples for 3 years | $\mathbf{1 7 4}$ |

## Definition of Operational Variables and Their Measurement

1. Dependent Variable

The dependent variable is the variable that is influenced or that becomes the result, because of the independent variable. In this study, the dependent variable is Stock Price Volatility (Y).Stock price volatility is the up and down movement of stock prices in the stock exchange. To measure it, take the annual range from the highest and lowest monthly stock prices then divided by the average highest and lowest stock prices.

$$
P V O L=\sqrt{\sum \frac{\left(\frac{(H I-L i)}{\left(\frac{H I+L i}{2}\right)}\right)^{2}}{12}}
$$

## 2. Independent Variable

The independent variable is the variable that affects or is the cause of the change or the emergence of the dependent variable. In this study there are three independent variables, namely asset growth, earnings volatility and Dividend Payout Ratio .

Asset growth is an indicator to see how much funds the company uses in its growth. Total assets in year $t$ with the previous total assets.

$$
\text { Growth }=\frac{(t)-(t-1)}{(t)}
$$

Earnings volatility is the level of volatility or rapid changes in the profits obtained by the company. The measurement uses the standard deviation of earnings before interest and tax with total assets. So the formula is as follows:

$$
E V O L=S T D \frac{E B I T}{\text { Total Asset }}
$$

Dividend Payout Ratio is the percentage of company profits that are distributed to shareholders or investors to the company's total profit. With the following formula:

$$
D P R=\frac{\text { Dividend }}{\text { Net Income }}
$$

## Data analysis technique

The process of data analysis in this study is to process data using the SPSS ( Statistical Product and Service Solution ) version 25 application, and the data analysis technique uses multiple linear regression. Multiple linear regression analysis in multiple linear regression model as follows:

$$
\mathbf{Y}=\mathbf{a}+\mathbf{b}_{1} \mathbf{X}_{1}+\mathbf{b}_{2} \mathbf{X}_{2}+\mathbf{b}_{3} \mathbf{X}_{3}+\mathbf{e}
$$

Information:
Y = Stock Price Volatility
a = Constant
b1, b2, b3 = Regression Coefficient
$\mathrm{X}_{1}=$ Asset Growth
$\mathrm{X}_{2}=$ Earning Volatility
$\mathrm{X}_{3}=$ Dividend Payout Ratio
e = epsilon (error term)
The hypothesis was tested with a significance level of $5 \%$. The criteria for acceptance or rejection will be based on the sig value ( $p$-value ) with an alpha of $5 \%$ where a $p$-value of $<5 \%$ indicates that the hypothesis is accepted or there is a significant effect of the independent variable on the dependent variable.

## DATA ANALYSIS AND DISCUSSION

## Descriptive statistics

Descriptive statistical tests in this study were used to see the minimum, maximum, mean, and standard deviation values, while the results of the descriptive statistical tests were as follows:

## Descriptive Statistics

|  | N | Minimum | Maximum | mean | Std. Deviation |
| :--- | :---: | :--- | :--- | :--- | :--- |


| PVOL | 174 | .00 | .29 | .0330 | .04358 |
| :--- | ---: | ---: | ---: | ---: | ---: |
| GROWTH | 174 | .01 | .27 | .0936 | .05490 |
| EVOL | 174 | .02 | .71 | .1158 | .12205 |
| DPR | 174 | .73 | 350.84 | 39.1481 | 40.99048 |
| Valid N <br> (listwise) | 174 |  |  |  |  |

1. Stock Price Volatility

Based on the data processing of the dependent variable Stock Price Volatility the average value of 0.0330 with the highest value of 0.29 and the lowest value of 0.00 and the standard deviation of 0.04358 .
2. Asset Growth

Based on data processing the independent variable Asset Growth has an average value of 0.0936 with the highest value of 0.27 and the lowest value of 0.01 and a standard deviation of 0.05490 .
3. Earnings Volatility

Based on data processing, the independent variable Earnings Volatility has an average value of 0.1158 with the highest value of 0.71 and the lowest value of 0.02 and a standard deviation of 0.12205 .

## 4. Dividend Payout Ratio

Based on data processing, the independent variable Dividend Payout Ratio has an average value of 39.1481 with the highest value of 350.84 and the lowest value of 0.73 and a standard deviation of 40.99048 .

## Classic assumption test

Kolmogorov-Smirnov Test . One-Sample Normality Test

|  |  | Unstandardized <br> Residual |
| :--- | :--- | ---: |
| N | mean | 174 |
| Normal Parameters ${ }^{\text {a,b }}$ | Std. Deviation | .0000000 |
| Most Extreme Differences | Absolute | .43287803 |
|  | Positive | .041 |
|  | negative | .041 |
| Test Statistics |  | .037 |
| asymp. Sig. (2-tailed) | .041 |  |

Based on the results in the table above, it can be seen that the significance value of Asymp. Sig. (2-tailed) is 0.200 . It can be seen that the significance value is greater than 0.05 and it can be concluded that the data is normally distributed.

## MulticollinearityTest

Coefficients ${ }^{\text {a }}$

|  | Collinearity Statistics |  |  |
| :--- | :--- | :--- | :---: |
|  | Tolerance | VIF |  |
| 1 | (Constant) |  |  |


|  | EVOL | .910 | 1,099 |
| :--- | :--- | ---: | ---: |
|  | DPR | .848 | 1.180 |
|  | GROWTH | .922 | 1.085 |

From the data in the table above, it can be concluded that there is no symptom of multicollinearity between the independent variables as indicated by the tolerance value of each independent variable greater than or equal to 0.1 and the VIF value less than or equal to 10 . So it can be concluded that further analysis can be done using multiple regression models.

Heteroscedasticity Test


Regression Standardized Predicted Value
The scatterplot graph above shows that there is no certain pattern on the graph. The points on the graph are relatively evenly distributed, which means that there is no heteroscedasticity disorder in the model in this study.

## Autocorrelation Test

Model Summaryb

| Model | R | R Square | Adjusted R <br> Square | Std. Error of <br> the Estimate | Durbin-Watson |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | $.220^{\mathrm{a}}$ | .048 | .031 | .03321 | 2,037 |

Based on the table above at $5 \%$ significance, with a total sample of 174 and the number of independent variables $3(\mathrm{k}=3)$, the Durbin-Watson table ( DW test) will give the values $\mathrm{dl}=$ 1.7171 and $\mathrm{du}=1.7872$. The value of dw 2.037 is greater than $4-\mathrm{du}(4-1.7872=2.2128)$ and less than 4 -dl $(4-1.7171=2.2829)$ or formulated with $(1.7872<2.037<2.2128)$ it can be concluded that there is no positive or negative autocorrelation.

## Hypothesis testing

## Multiple linear regression

Coefficients ${ }^{\text {a }}$

| Model | Unstandardized <br> Coefficients |  | Standardized Coefficients |
| :---: | :---: | :---: | :---: |
|  | B | Std. <br> Error | Beta |
| (Constant) | .015 | .006 |  |
| EVOL | .022 | .022 | .078 |
| DPR | $-4.849 \mathrm{E}-5$ | .000 | -.059 |
| GROWTH | .115 | .048 | .187 |

The regression equation obtained based on the table above is as follows:

$$
\text { PVOL }=0.015+0.022 \text { EVOL }-4.849 \text { DPR }+0.115 \text { GROWTH }
$$

1. The constant value is 0.015 . This shows that if the variables of earnings volatility, dividend payout ratio, and asset growth are assumed to be constant, then the stock price volatility variable will increase by 0.015 .
2. The value of asset growth is 0.115 . This shows that if the asset growth variable increases by 1 with the assumption that the earnings volatility and dividend payout ratio variables do not exist, then the stock price volatility variable will increase by 0.115 .
3. The value of earnings volatility is 0.022 . This shows that if the variable earnings volatility increases by 1 with the assumption that the dividend payout ratio and asset growth variables do not exist, then the stock price volatility variable will increase by 0.022 .
4. The value of the dividend payout ratio is 4.849 . This shows that if the dividend payout ratio variable increases by 1 with the assumption that there is no earnings volatility and asset growth variable, then the stock price volatility variable will decrease by 4.849 .

## Partial Test (T Test)

Coefficients ${ }^{\text {a }}$

| Model |  | t | Sig. |
| :--- | :--- | :---: | :---: |
| 1 |  |  |  |
|  | (Constant) | 2,397 | .018 |
|  | GROWTH | 2.403 | .017 |
|  | EVOL | .995 | .321 |
| DPR |  | -.725 | .470 |

The results of the $t$-statistical test in table 4.7 can be explained as follows:

1. The Effect of Asset Growth on Stock Price Volatility

The $t$-count value of the asset growth variable is $2.403>1.65387$ and the significance value is 0.017 (smaller than 0.05 ) meaning Ha is accepted and H 0 is rejected, that asset growth partially affects stock price volatility at the $95 \%$ confidence level.
2. Effect of Earnings Volatility on Stock Price Volatility

The $t$-count value of the earnings volatility variable is $0.995<1.65387$ and the significance value is 0.321 (greater than 0.05 ) meaning Ha is rejected and H0 is accepted, that earnings volatility partially has no effect on stock price volatility at the $95 \%$ confidence level.
3. The Effect of Dividend Payout Ratio on Stock Price Volatility

The t-count value of the dividend payout ratio variable is $-0.725<1.65387$ and the significance value is 0.470 (greater than 0.05 ) meaning Ha is rejected and H0 is accepted, that the dividend payout ratio partially has no effect on stock price volatility at the $95 \%$ confidence level.

## Simultaneous Test (F Test)

ANOVA ${ }^{a}$

| Model |  | Sum of Squares | df | Mean Square | F | Sig. |
| :--- | :--- | :---: | :---: | :---: | :---: | :---: |
| 1 | Regression | .010 | 3 | .003 | 2.875 | $.038^{\mathrm{b}}$ |
|  | Residual | .188 | 170 | .001 |  |  |
|  | Total | .197 | 173 |  |  |  |

Based on the table above, the calculated F value is 2.875 and $\operatorname{sig}$ is 0.038 . Because $\mathrm{F}_{\text {arithmetic }}>\mathrm{F}_{\text {table }}$ and sig 0.038 < sig 0.05 , then Ha is accepted, which means that earnings volatility ,dividend payout ratio, and asset growth have an effect on stock price volatility.

## Test ( $\mathbf{R}^{2}$ )

Model Summary ${ }^{\text {b }}$

| Model | R | R Square | Adjusted R <br> Square | Std. Error of <br> the Estimate | Durbin-Watson |
| :--- | :--- | ---: | ---: | ---: | ---: |
| 1 | $.220^{\mathrm{a}}$ | .048 | .031 | .03321 | 2,037 |

table above shows the Adjusted R Square of 0.31 , this means that $31 \%$ of the variation in stock price volatility can be explained by variations of three independent earnings volatility, dividend payout ratio , and asset growth and $69 \%$ is explained by other reasons. outside the regression model.

## DISCUSSION

## The Effect of Asset Growth on Stock Price Volatility

Based on the results of tests that have been carried out using a partial hypothesis test that the asset growth variable ishas no effect on stock price volatility.

The results of this study are in line with the researchers' expectations and are in line with the Signaling Theory that, the greater the assets, the greater the operational results generated by the company. Asset growth is defined as the annual change in total assets. An increase in assets followed by an increase in operating results will further increase the confidence of outsiders in the company. With increasing trust from outsiders (creditors) in the company, the proportion of the use of debt sources is getting bigger than the own capital. This is based on the creditor's belief that the funds invested in the company are guaranteed by the
amount of assets owned by the company. It also supports research conducted by Anastassia and Firnanti (2014) as well as Chaudry, Iqbal, and Butt (2015) which have the same research results as the results of this study, where asset growth affects stock price volatility.

## Effect of Earnings Volatility on Stock Price Volatility

Based on the results of tests that have been carried out using a partial hypothesis test that the variable earnings volatility has no effect on stock price volatility. The reason that can cause earnings volatility to have no effect on stock price volatility is that stock price volatility is defined as risk but earnings volatility is not always interpreted as risk. Sometimes companies experience fluctuations following cyclical or seasonal patterns. So that volatility is not a significant part of the risk. This will not be a concern for investors, so the company's stock price will have no effect.

This result contradicts the Signaling Theorywhich indicates that the company will intentionally send information in the form of a signal to investors in order to attract investors to invest their capital. This is because companies that have unstable income levels indicate a signal to investors that the company has a very high level of risk which will affect changes in stock price movements very quickly. The results of this study are in line with research conducted by Anastassia and Firnanti (2014) as well as Santioso and Angesti (2019) whose results show that earnings volatility has no effect on stock price volatility .

## Effect of Dividend Payout Ratio on Stock Price Volatility

Based on the results of tests that have been carried out using a partial hypothesis test that the dividend payout ratio variablehas no effect on stock price volatility .The reason that causes the dividend payout ratio to have no effect on stock price volatility is the possibility that investors do not consider how much income they receive from the current year's profit in the form of dividends. This can happen due to several factors, for example, a decrease in dividends announced by the company so that this is indicated as a negative signal by investors, the existence of funds needed by the company to invest in the future where the company must set aside retained earnings first so that it has an impact the smaller the portion of dividend distribution to shareholders.
resultcontradicts the Signaling Theorywhich indicates that companies that have a low level of dividend payout ratio are considered more valuable because they have the potential to experience growth. However, at the same time, companies that are experiencing growth certainly have a greater level of uncertainty (risk) regarding the future cash flows of new investment projects in comparison to the rate of return that has been placed on assets. This makes the company more risky to invest. The results of this study are in line with research conducted byNasir and Mawardi (2018) as well as Mobarak and Mahfud (2017) that the dividend payout ratio has no effect on stock price volatility .

## The Effect of Asset Growth, Earnings Volatility and Dividend Payout Ratio on Stock Price Volatility

The F test table shows that the independent variables consisting of earnings volatility, dividend payout ratio, and asset growth have the opportunity to simultaneously affect stock price volatility (dependent variable).

Companies that have unstable and varied income levels will experience high price volatility, this can indicate a signal to investors that the company has a high risk to invest. In
addition, companies that are experiencing growth have a greater level of risk or uncertainty regarding future cash flows from new investment projects in comparison to the rate of return that has been placed on assets. This makes the company risky to invest. Therefore, companies with low dividend rates will make their stock price movements unstable. But if the bigger the dividend, the stronger the company's profitability, this will also reduce the risk in investment and affect the ups and downs of stock prices. Asset growth can be something that affects stock price volatility because the larger the company's assets tend to invest in debt so that it affects the value of the company's own shares, this can be an assessment for investors, because company capital is important for investment policies by investors.

## CONCLUSION

1. Asset growth has an effect on stock price volatility. This indicates that companies with small asset growth rates have the potential to have fluctuating stock prices because the company is still in the growth stage. Companies that are still in the growth stage tend to withhold their profits to be reinvested in new projects, so companies usually distribute dividends in small amounts or not at all.
2. Earnings Volatility has no effect on stock price volatility. Because sometimes companies experience fluctuations following cyclical or seasonal patterns. So that volatility is not a significant part of the risk. This will not be a concern for investors, so the company's stock price will have no effect.
3. Dividend payout ratio has no effect on stock price volatility. Because there is a possibility that investors do not consider how much income they receive from the current year's profit in the form of dividends. This can happen due to several factors.
4. It shows that the independent variables which consist of asset growth, earnings volatility and dividend payout ratio have the opportunity to influence the occurrence of stock price volatility (dependent variable) simultaneously.

## SUGGESTION

1. In further research to increase the number of samples of more companies. With a larger number of samples, it may give better results in researching the volatility of the company's stock price.
2. Using a period of time between 4 years or 5 years only, so that it can increase the number of samples of companies, especially those that pay dividends consecutively, and use a time period that is close to the time of the study so that there are complete and detailed annual financial reports.
3. Replace or add other variables as factors that can affect stock price volatility such as leverage, dividend yield, size, and other factors.

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