Determinants of Company Value (PBV) And Their Impact on Share Returns: A Case Study of Stock Price Index in Mining Companies Listed on the Indonesia Stock Exchange (IDX) 2017–2020

M. Noor Salim and Andreas Prasetia

ABSTRACT

The author conducted this research to comprehend and analyze the company's performance which will focus on the financial ratio, they are Total Asset Turnover Ratio (TATO), Debt to Equity Ratio (DER), Current Ratio (CR) which influenced by company value and the impact on Stock Returns (SR). The value of the company in this research is calculated using Price to Book Value (PBV). The research data is taken from companies active on the Indonesia Stock Exchange from 2017 to 2020, especially in the mining sector. This research uses a selected sample of 29 companies with panel data analysis method which is processed using the "Eviews 11" data processing program. The research results show that stock returns (SR) are not influenced by CR, but TATO, DER and PBV have a significant effect on stock returns (SR). TATO, DER, and CR together have a significant effect on SR and also on PBV. The impact on the dependent variable (SR) which is influenced indirectly by the independent variable (CR, DER TATO) is proven to be more dominant than the direct effect.

Keywords: Current Ratio (CR), Debt to Equity Ratio (DER), Price to Book Value (PBV), Stock Returns (SR), Total Asset Turnover ratio (TATO).

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I. INTRODUCTION

The Indonesia Stock Exchange (IDX) is the main platform of capital market transactions in Indonesia and makes it an alternative market for funding for all corporate sectors in Indonesia. As it is known that one of the alternative funding is through the issuance and sale of shares on the stock exchange. In general, the stock index on the IDX is divided into 10 sectors they are Trade & Services, Property, Mining, Manufacturing, Infrastructure, Finance, Consumer Goods, Basic Industry, Agriculture and Miscellaneous.

Specifically, the stock price index of the mining sector listed on the Indonesia Stock Exchange from 2017 to 2020 is volatile (Fig. 1) that tend to be unstable, this mining sector is a sector that experienced a declining trend from 2017 and experienced the highest decline compared to other sectors in 2019, however, while all sectors had difficulty increasing their value in 2020, the mining sector managed to take advantage of the current situation to increase its value significantly. This is inseparable from the important role played by the mining sector as a provider of energy resources needed for the country's economic growth, in the form of natural resources that can be utilized in generating electricity. Because of the energy demand that currently commonly needed by other industry, this sector is very attractive in various aspects ranging from foreign investment (PMA), domestic investment (PMDN), export activities, foreign exchange earnings, state revenues, and gross domestic product.

Hence, with increasing demand, employment opportunities and employment will increase, which will reduce unemployment and require large enough capital to meet the company's needs from investor funding.
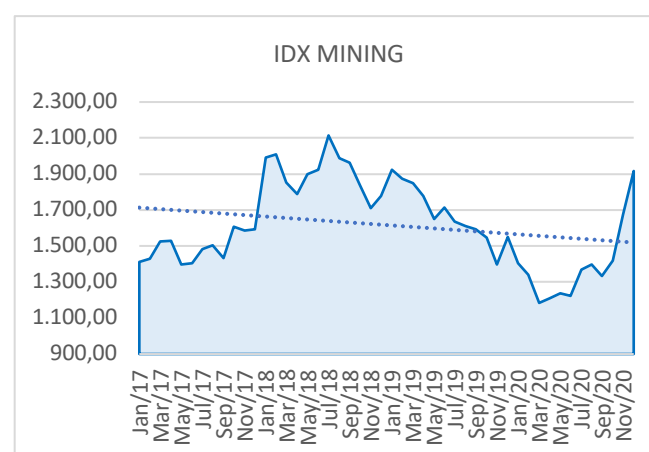

Fig. 1. Mining Sector Stock Prices 2017-2020.

"When investors choose to invest their funds in stocks, an appropriate return is expected, therefore it is necessary to conduct an analysis that can affect stock returns. Investors expect to invest in shares other than being the owner of a company with a certain proportional ownership, the invested shares are expected to be able to provide a certain rate of return or return" (Kristiana & Sriwidodo, 2012).

In developing its business, a company needs investors to provide additional capital for its business development, on the other hand investors want to see the return on their investment, of course they need to base their investment decisions on certain analysis. Stock returns are certainly influenced by the company's performance and prospects in the future. Financial performance is an important factor in measuring and knowing the financial condition of a company. Therefore, the measurement and assessment of a company's financial performance is generally done by looking at its financial ratios.

According to Harahap (2011: 190), "Financial statement analysis is the process of breaking down financial statement items (financial statements) into smaller units of information and seeing significant or meaningful relationships with each other, including quantitative and qualitative data. Non-quantification objective is to understand the deeper financial picture, which is very important in making the right decisions." According to Hanafi and Halim (2009:77), "There are five (5) ratios used to evaluate a company's financial performance, four (4) of which are Current Ratio (CR), Debt-to-Equity Ratio (DER), Total Assets Turnover (TATO) and return on equity (ROE)."

In this article, we consider the possible fundamental factors of the company in terms of financial ratios, namely Total Assets Turnover (TATO), Current Ratio (CR), Debt-to-Equity Ratio (DER). According to the theory, these variables are variables that can affect the stock return (SR) and book value (PBV) of the company, and according to previous research there is a phenomenon by including the variables CR, DER, TATO and profitability as the independent

variable, PBV as intervening variable, and stock returns as the dependent variable, the results are still found to be inconsistent with each variable, except that the previously research profitability ratio shows that the results are consistently positive and significant (see Table 1), so it is not necessarily further inspection. More for this profitability variable.

From the data in Fig. 1 above, the phenomenon that occurs in stock prices in the mining sector shows that the changes are not consistent, and based on the results of previous research (see Fig. 2), it still shows differences in research results except for profitability, the author intends to empirically test the effect of TATO, DER and CR that mediated by Price Book Value on Stock Returns in the mining sector listed on the Indonesia Stock Exchange for the period 2017 to 2020.

Based on this description, several problems that can be identified in this research are as follows:
1) Investment in capital market shares is expected to increase profits for the Owners shareholders and owners of capital, but this investment carries a high risk of uncertainty.
2) The phenomenon of the decline and increase in share prices in the mining sector is quite significant has a significant impact on the size of the return on shares obtained by investors, this incident can be a good or bad signal for investors. in the capital market.
3) The company's ability to manage debt effectively and efficiently compared to the value of its assets will have an impact on the decision of the owners of capital to invest.

TABLE 1: PREVIOUS RESEARCH

No	Author (Previous Research)	Significant Influence				
		PBV	CR	DER	TATO	Prf**
1	(Akhtar M *et al*., 2016)			(-)		
2	(Anggraeni & Salim, 2019) *		No	No	No	(+)
3	(Antara, 2012)	(-)				
4	(Azis *et al*., 2018)		No	No	No	(+)
5	(Bahraini *et al*., 2021)		(-)	(+)	(-)	
6	(Budiharjo, 2015)	(+)				
7	(Bustani *et al*., 2021)	(+)				
8	(Daniswara & Daryanto, 2019)	(+)				
9	(Djamaluddin *et al*., 2018)		(+)	(+)		
10	(Elfiswandi *et al*., 2020)		No	(+)		
11	(Firdaus, 2020)			(-)	(+)	
12	(Hasangapon *et al*., 2021)				(+)	
13	(Jang & Utomo, 2021)		(+)			
14	(Kahfi *et al*., 2018)		(+)	(-)	(+)	
15	(Kuswanto & Taufiq, 2015)	(+)				
16	(Lumoly *et al*., 2018)		(+)			
17	(Majid & Benazir, 2016)	(-)				
18	(Malebana, 2019)		(+)			
19	(Manik, 2017)		(-)			(+)
20	(Murni *et al*., 2019)			(-)		
21	(Najmiyah *et al*., 2014)	No		No		
22	(Nguyen *et al*., 2021)		(-)			
23	(Nugroho, 2013)		No	No	No	
24	(Nurhasanah, 2013)					(+)
25	(Purnamaningsih & Wirawati, 2014)	(+)				
26	(Putra & Lestari, 2016)		(+)			
27	(Salim & Firdaus, 2020)*	(+)	No	No		
28	(Salim & Santosyah, 2019)*		No	No		
29	(Sausan *et al*., 2020)			(+)	(+)	
30	(Sinaga, 2014)			No		
31	(Verawaty *et al*., 2015)			No		

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** Profitability.

4) The ability of company governance in maintaining the effectiveness of performance in managing company assets to increase revenue and profits will have an impact on investor decisions. in managing their capital.

The problems that will be investigated and become the focus of this research are divided into 9 problem formulations, namely:
1) How does the Current Ratio influence the company's stock return?
2) How does the Debt to Equity Ratio influence the company's stock return?
3) How does the Total Asset Turnover Ratio affect the company's stock return?
4) How does the Current Ratio affect the Company Value (PBV)?
5) How does the Debt to Equity Ratio affect the Firm Value (PBV)?
6) How does the Total Asset Turnover Ratio affect the Firm Value (PBV)?
7) How does Firm Value (PBV) affect Stock Return?
8) How do the Current ratios, Debt to Equity ratios, and Total Assets Turnover Ratios together affect the Company Value (PBV)?
9) How do Current Ratio, Debt to Equity Ratio, and Total Asset Turnover Ratio together affect Stock Return?

The author conducted this research with the aim of examining the effect of financial ratios (TATO, DER and TATO) on stock returns either separately or jointly, either directly or indirectly mediated by the PBV value.

II. REVIEW OF RELATED LITERATURE

The basic understanding used as the philosophical basis in this research is the basic principles of stock returns, TATO, DER, CR and PBV as well as the concepts put forward by experts. According to Tandelilin (2010:341) "stock prices are a reflection of investors' expectations of the factors of income, cash flow, and the rate of return needed by investors, where these three factors are also strongly influenced by macroeconomic conditions of a country and global economic condition". According to Jogiyanto (2014:236) "total return is the overall return from an investment in a certain period". The total return consists of capital gains and proceeds as follows.

$$Share\ Return\ = \frac{P_t - P_{t-1}}{P_{t-1}} = \frac{P_1 - P_0}{P_0}$$

According to Tandelilin (2001:194) "The relationship between stock market price and book value per share can also be used as an alternative approach to determining the value of a stock, because theoretically the market value of a stock must reflect its market value from book value" so that the calculation of Price to Book Value (PBV) can be done as follows:

$$PBV = \frac{Stock\ price\ per\ share}{Book\ Value\ per\ share}$$

"Current ratio is a ratio to measure the company's ability to pay obligations or short-term debts that are due immediately when fully billed. In other words, how much current assets are available to cover short-term obligations that will soon mature" (Kasmir, 2016:134). The high and low level of CR can be used as a measure of the company's capacity to pay its debt obligations, if CR is low, it can be said that the company lacks capital to pay its debts. However, if the results of the CR measurement are high, it does not mean that the company's capacity is in good condition. This phenomenon is possible because cash is not used effectively. The following is the formula for obtaining the Current ratio (CR):

$$CR = \frac{Current\ Assets}{Current\ Liabilities}$$

In his book on "portfolios and investments", Tandelilin (2010:378) explains that "debt to equity ratio reflects the company's ability to meet its obligations as indicated by a portion of the capital own or equity used to pay debts".

$$DER = \frac{Total\ Liabilities}{Total\ Equity}$$

Total Asset Turn Over (TATO) shows how effective the company is in using its overall assets to increase sales value and increase profits. Brigham, *et al* (2010:139) "opinion that the total asset turnover ratio, measures the turnover of all company assets, and is calculated by dividing sales by total assets". This ratio can be calculated using the following calculation formula:

$$TATO = \frac{Net\ Sales}{Total\ Asset}$$

In this research, the author uses the framework presented in the following figure.

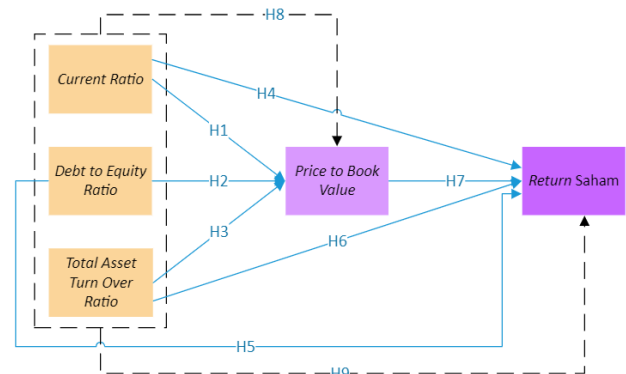

Fig. 2. The Conceptual Model.

Notes:
→ : Partial Effect.
- - → : Simultaneous Effect.

Based on the framework of Fig. 2, the authors propose the following hypothesis:
1) H1: It is suspected that there is an effect of CR on stock returns.
2) H2: It is suspected that there is an effect of DER on stock returns.
3) H3: It is suspected that there is an Effect of TATO on stock returns.
4) H4: It is suspected that there is an effect of CR on PBV.
5) H5: It is suspected that there is an effect of DER on PBV.

6) H6: It is suspected that there is an effect of TATO on PBV.
7) H7: It is suspected that there is an effect of PBV on Stock Returns.
8) H8: It is suspected that there is an effect of CR, DER and TATO simultaneously on PBV.
9) H9: It is suspected that there is an effect of CR, DER and TATO simultaneously on stock returns.

III. RESEARCH METHODOLOGY

A. Population and Sample

Types and sources of information used in this research are quantitative data with secondary data types. The data collection method used in this research is through documentation by collecting, recording, and reviewing secondary data in the form of stock prices and annual financial reports of sector mining companies listed on the Indonesia Stock Exchange for the 2017-2020 period and calculating financial ratios.

The population that is used as the object of research is all mining sector corporations that are active on the IDX for the period 2017 to 2020, totaling 29 companies. Data collection is carried out with the following criteria:

1) Companies in the mining sector are listed on the IDX for the last ten years, from 2011 to 2021;
2) Listed on the IDX with observations from 2017 to 2020;
3) Actively providing financial reports on the IDX
4) Actively traded in the 2017 to 2020 period

As a result, we have 29 data sample or research objects were obtained with observations from 2017-2020. The number of samples for four years is 116 (29x4) sample data.

B. Operational Variables

variables studied were CR, DER, TATO as independent variables, PBV as mediating independent variable, and stock return as dependent variable. The definition of operating variables is shown in Table II.

TABLE II: OPERATIONAL VARIABLES

Type	Definitions	Measurement
Dependent Stock Return (Y)	Return is the overall return from an investment in a certain period (Jogiyanto, 2014:236)	$\dfrac{P_1 - P_0}{P_0}$
Independent Current Ratio (X1)	Is a ratio to measure the company's ability to pay short-term obligations or debts that are due immediately when billed as a whole (Kasmir, 2016:134)	$\dfrac{Current\ Asset}{Current\ Liabilities}$
Debt to Equity Ratio (X2)	Reflects the company's ability to fulfill its obligations as indicated by some part of its own capital or equity used to pay debts (Kasmir, 2016:158)	$\dfrac{Total\ Liabilities}{Total\ Equity}$
Total Asset Turn Over Ratio (X3)	Measures the turnover of all company assets, and is calculated by dividing sales by total assets (Brigham et al, 2010:139)	$\dfrac{Net\ Sales}{Total\ Asset}$
Intervening Price to Book Value (Z)	The relationship between stock market price and book value per share can also be used as an alternative approach to determining the value of a stock, because theoretically, the market value of a stock must reflect its book value (Tandelilin, 2001:194)	$\dfrac{Stock\ price}{Book\ Value}$

C. Data Analysis Method

Research information is obtained in the form of documents, they are data that have been obtain from the company's annual financial statements and stock indexes. Data was collected by searching on the internet by downloading of each sample data at the website addresses www.idx.co.id, Yahoo Finance.com and www.investing.com.

The research tests included: descriptive statistical analysis, panel data regression analysis (in the form of Chow, Hausman and Lagrange tests), classical hypothesis testing (in the form of normality, multicollinearity and heteroscedasticity and autocorrelation tests), multiple regression analysis and hypothesis testing (in the form of F-test, t-Test, coefficient of determination R2, and path analysis).

IV. RESULT

The List of Mining Sector Companies that are used as data samples are presented in Table III.

TABEL III: SAMPLE DATA

#	Code	Nama Perusahaan
1	ADRO	Adaro Energy Tbk
2	ARII	Atlas Resorces Tbk
3	BSSR	Baramulti Sukses Sarana Tbk
4	BUMI	Bumi Resources Tbk
5	BYAN	Bayan Resources Tbk
6	DOID	Delta Dunia Makmur Tbk
7	DSSA	Dian Swastatika Sentosa Tbk
8	HRUM	Harum Energy Tbk
9	INDY	Indika Energy Tbk
10	ITMG	Indo Tambangraya Megah Tbk
11	KKGI	Resource Alam Indonesia Tbk
12	MBAP	Mitrabara Adiperdana Tbk
13	MYOH	Samindo Resources Tbk
14	PTBA	Bukit Asam Tbk
15	PTRO	Petrosea Tbk
16	SMMT	Golden Eagle Energy Tbk
17	TOBA	TBS Energi Utama
18	ANTM	Aneka Tambang Tbk
19	CITA	Cita Mineral Investindo Tbk
20	DKFT	Central Omega Resources Tbk
21	INCO	Vale Indonesia Tbk
22	MDKA	Merdeka Cooper Gold Tbk
23	PSAB	J Resources Asia Pasifik Tbk
24	TINS	Timah Tbk
25	ELSA	Elnusa Tbk
26	ENRG	Energi Mega Persada Tbk
27	MEDC	Medco Energi International Tbk
28	PKPK	Perdana Karya Perkasa Tbk
29	RUIS	Radiant Utama Interinsco Tbk

Source: www.idx.co.id.

A. Descriptive Statistic

The results of the descriptive statistical tests are presented in Table IV below:

TABLE IV: STATISTIC DESCRIPTIVE FOR RESEARCH DATA

|	CR	DER	TATO	PBV	SR
Mean	4.2380	2.2298	0.6511	1.7762	0.1180
Median	1.6025	0.9280	0.604	1.0925	-0.022
Max	146.13	34.056	1.668	18.671	2.948
Min	0.208	0.097	0.005	0.25	-0.864
Std. Dev	16.8329	4.3558	0.4309	2.2361	0.5988

Source: 2022 data processing.

From Table IV above, the average (mean) value of the stock returns of the 116 samples is 0.1180, the highest mean value of the stock return is achieved by PT Indika Energy Tbk

with value 2.948 in 2017, and the lowest value is -0.864 by PT Energi Mega Persada Tbk in 2017, the table 4 above show that the standard deviation is greater than the mean value, hence it can be concluded that the data is variable or relatively heterogeneous.

The table also shown that the standard deviation value of the other variables unless TATO are higher than the mean value, so it can be concluded that the information obtained or being used is varied or relatively heterogeneous. At the same time, because the standard deviation of TATO is lower than the mean value, it can be concluded that the data is relatively homogeneous.

B. Classical Assumption Test Result
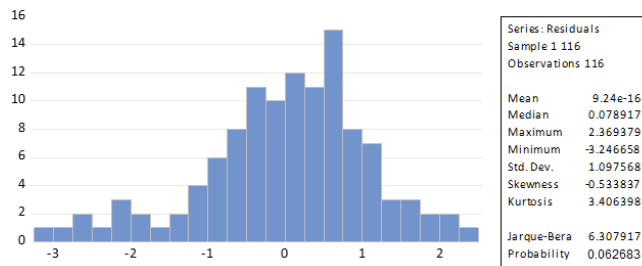
Source: 2022 data processing

Fig. 3. Normality Test Results Equation 1.
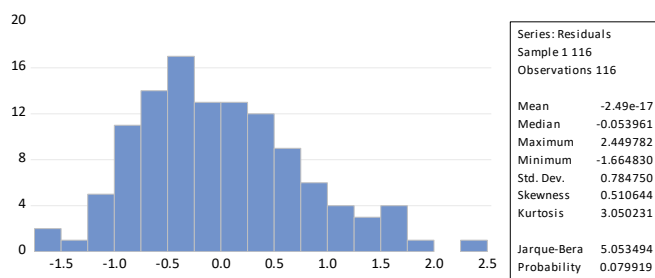
Source: 2022 data processing

Fig. 4. Normality Test Results Equation 2.

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	0.020616	1.933385	NA
LOG(CURRENTRATIO)	0.013234	1.554947	1.300587
LOG(DEBTTOEQUIT...	0.012140	1.479455	1.478180
LOG(TOTALASETTU...	0.012570	1.862948	1.173834

Fig. 5. Multicollinearity Test Results Equation 1.
Source: 2022 data processing.

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	0.102307	4.681795	NA
CURRENTRATIO	7.99E-05	1.092192	1.026556
DEBTTOEQUITYRATIO	0.001291	1.405463	1.111626
TOTALASETTURNO...	0.134921	3.753432	1.136634

Fig. 6. Multicollinearity Test Results Equation 2.
Source: 2022 data processing.

Heteroskedasticity Test: Glejser
Null hypothesis: Homoskedasticity

F-statistic	0.879363	Prob. F(3,112)	0.4542
Obs*R-squared	2.669430	Prob. Chi-Square(3)	0.4454
Scaled explained SS	2.862951	Prob. Chi-Square(3)	0.4132

Fig. 7. Heteroscedasticity Equation 1 Test Results.
Source: 2022 data processing.

Heteroskedasticity Test: Glejser
Null hypothesis: Homoskedasticity

F-statistic	1.208159	Prob. F(3,112)	0.3102
Obs*R-squared	3.636248	Prob. Chi-Square(3)	0.3035
Scaled explained SS	3.657826	Prob. Chi-Square(3)	0.3009

Fig. 8. Heteroscedasticity Equation 2 Test Results.
Source: 2022 data processing.

Breusch-Godfrey Serial Correlation LM Test:
Null hypothesis: No serial correlation at up to 2 lags

F-statistic	1.661880	Prob. F(2,110)	0.1945
Obs*R-squared	3.402254	Prob. Chi-Square(2)	0.1825

Fig. 9. Autocorrelation Test Results Equation 1.
Source: 2022 data processing.

F-statistic	2.005336	Prob. F(2,109)	0.1396
Obs*R-squared	4.081272	Prob. Chi-Square(2)	0.1299

Fig. 10. Autocorrelation Test Results Equation 2.
Source: 2022 data processing.

C. Panel Data Regression and Hypothesis Result

1) Regression Result of Equation 1

$$RS = 1.342406 + 0.004862*CR + 0.220707*DER + 0.307998*TATO$$

2) Hypothesis Test Result of Equation 1

a) F-test

Based on the test results below, the F-statistic (3.657349) > F-table (2.68). While the probability value of F-statistics (0.010307) < 0.05, then Ho is rejected and Ha is accepted. This means the independent variables (CR, DER and TATO) simultaneously have a significant effect on Stock Return (Y).

b) Partial Significance Test (t-test)

From the regression results, it was found that with a significance level of 95% (α=5%) then t-table is 1.98137, the CR variable has a t-statistic (0.042261) < t-table (1.98137) and the probability value (0.9664) > 0.05, then Ho is accepted. It is concluded that the CR has no significant effect on Stock Return.

The DER variable has a t-statistic (2.003139) > t-table (1.98137) and the probability value (0.0476) < 0.05, then Ha is accepted. It is concluded that the DER has significant effect on Stock Return.

The TATO variable has a t-statistic (2.963256) > t-table 1.98137) and the probability value (0.0375) < 0.05, then Ha is accepted. It is concluded that the TATO has significant effect on Stock Return.

Dependent Variable: LOG(RETURNSAHAM)
Method: Least Squares
Date: 04/12/22   Time: 23:25
Sample: 1 116
Included observations: 116

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.342406	0.143583	9.349368	0.0000
LOG(CURRENTRATIO)	0.004862	0.115040	0.042261	0.9664
LOG(DEBTTOEQUITYRATIO)	0.220707	0.110181	2.003139	0.0476
LOG(TOTALASETTURNOVERRATIO)	0.307998	0.112117	2.963256	0.0375

R-squared	0.042506	Mean dependent var	1.415391
Adjusted R-squared	0.316859	S.D. dependent var	1.121666
S.E. of regression	1.112171	Akaike info criterion	3.084379
Sum squared resid	138.5355	Schwarz criterion	3.179330
Log likelihood	-174.8940	Hannan-Quinn criter.	3.122924
F-statistic	3.657349	Durbin-Watson stat	1.723693
Prob(F-statistic)	0.010307		

Fig. 11. Regression Data Panel Test Equation 1.
Source: 2022 data processing

3) Regression Result of Equation 2

$$PBV = 0.302393 + 0.004298*CR + 0.383677*DER + 0.921675*TATO$$

4) Hypothesis Test Result of Equation 2

a) F-test

Based on the test results below, the F-statistic (38.27775) > F-table (2.68). While the probability value of F-statistics (0.000000) < 0.05, then we may conclude that Ho is rejected and Ha is accepted. This means the independent variables (CR, DER and TATO) simultaneously have a significant effect on Price Book Value (Z).

b) Partial Significance Test (t-test)

From the regression results, it was found that with a significance level of 95% (α=5%) then t-table is 1.98137, the CR variable has a t-statistic (0.480911) < t-table (1.98137) and the probability value (0.6315) > 0.05, then Ho is accepted. It is concluded that the CR has no significant effect on Price Book Value.

The DER variable has a t-statistic (10.67644) > t-table (1.98137) and the probability value (0.0000) < 0.05, then Ha is accepted. It is concluded that the DER has significant effect on Price Book Value.

The TATO variable has a t-statistic (2.509219) > t-table 1.98137) and the probability value (0.0135) < 0.05, then Ha is accepted. It is concluded that the TATO has significant effect on Price Book Value.

Dependent Variable: PRICEBOOKVALUE
Method: Least Squares
Date: 04/12/22   Time: 23:23
Sample: 1 116
Included observations: 116

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.302393	0.319855	0.945408	0.3465
CURRENTRATIO	0.004298	0.008936	0.480911	0.6315
DEBTTOEQUITYRATIO	0.383677	0.035937	10.67644	0.0000
TOTALASETTURNOVERRATIO	0.921675	0.367316	2.509219	0.0135

R-squared	0.506245	Mean dependent var	1.776144
Adjusted R-squared	0.493020	S.D. dependent var	2.236041
S.E. of regression	1.592118	Akaike info criterion	3.801882
Sum squared resid	283.9022	Schwarz criterion	3.896833
Log likelihood	-216.5092	Hannan-Quinn criter.	3.840427
F-statistic	38.27775	Durbin-Watson stat	0.964303
Prob(F-statistic)	0.000000		

Fig. 12. Regression Data Panel Test Equation 2.
Source: 2022 data processing.

5) Regression Result of Equation 3

$$RS = 1.501275 + 0.948332*PBV$$

6) Hypothesis Test Result of Equation 2

a) F-test

Based on the test results below, the F-statistic (3.068337) > F-table (2.68). While the probability value of F-statistics (0.003509) < 0.05, then we may conclude that Ho is rejected, and Ha is accepted. This means the intervening variables (PBV) have a significant effect on Stock Return (Y).

b) Partial Significance Test (t-test)

From the regression results, it was found that with a significance level of 95% (α=5%) then t-table is 1.98137, the PBV variable has a t-statistic (2.033604) > t-table (1.98137) and the probability value (0.0435) < 0.05, then Ha is accepted. It is concluded that the PBV has significant effect on Stock Return.

Dependent Variable: LOG(RETURNSAHAM)
Method: Panel Least Squares
Date: 04/13/22   Time: 00:14
Sample: 2017 2020
Periods included: 4
Cross-sections included: 29
Total panel (balanced) observations: 116

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.501275	0.133178	11.27272	0.0000
PRICEBOOKVALUE	0.948332	0.346760	2.033604	0.0435

Root MSE	1.111558	R-squared	0.009284
Mean dependent var	1.415429	Adjusted R-squared	0.108594
S.D. dependent var	1.121599	S.E. of regression	1.121266
Akaike info criterion	3.083884	Sum squared resid	143.3250
Schwarz criterion	3.131360	Log likelihood	-176.8653
Hannan-Quinn criter.	3.103157	F-statistic	3.068337
Durbin-Watson stat	1.576234	Prob(F-statistic)	0.003509

Fig. 13. Regression Data Panel Test Equation 3.
Source: 2022 data processing.

D. Direct and Indirect Effects

This research uses coefficients determination and path analysis to test which level of dominance is more dominant between indirect and direct effects.

TABLE V: COEFFICIENT OF DETERMINATION R-*SQUARED*

No	Equation	R-*Squared*
1	RS = a1 + b1CR + b2DER + b3TATO + e	$R_1^2 = 0.316859$
2	PBV = a2 + b4CR + b5 DER + b6 TATO + e	$R_2^2 = 0.49302$
3	RS = a3 + b7PBV + e	$R_3^2 = 0.108594$

Based on the coefficient of determination R squared in table 5 above, the following results are obtained:

1) R_1^2 is the value of the direct effect of the independent variable on the dependent variable, with a value of 0.316859.
2) While the indirect effect can be calculated by $R_2^2 + R_3^2$, the indirect effect between the independent variable and the dependent variable mediated by the Price to Book Value (PBV) variable has a value of 0.601614.

Table V shows the results of calculating direct and indirect effects between independent variables on variables tied to the presence of a mediating variable. The direct effect value (R_1^2= 0.316859) is smaller than the indirect effect ($R_2^2 + R_3^2$= 0.601614).

TABLE VI: PATH ANALYSIS RESULT

Effect	Std. Koeff	Direct Effect	Indirect Effect	Total
X1 on Y	0.0048	0.0048×0.0048		2.36E-05
X2 on Y	0.2207	0.2207×0.2207		0.0487
X3 on Y	0.3079	0.3079×0.3079		0.0949
Z on Y	0.9483	0.9483×0.9483		0.8993
Total Direct Effect				1.0429
X1 on Y via Z	0.0042		0.0042×0.9483	0.0040
X2 on Y via Z	0.3836		0.3836×0.9483	0.3638
X3 on Y via Z	0.9216		0.9216×0.9483	0.8740
Total Indirect Effect				1.2419

Table VI above shows the calculation results to show the dominance of the dependent variable by direct and indirect effects between independent variables with the mediating variable. The direct effect (1.0429) was found to have a smaller main effect than the indirect effect (1.2419).

From Table IV and Table V it is known that the indirect effect has a greater value than the direct effect, it can be concluded that the indirect effect of the Independent Variables CR (X1), DER (X2), and TATO (X3) mediated by PBV (Y) on the Dependent Variable of Stock Returns (Z) proved to be more dominant. This shows that in predicting the movement of stock returns of mining companies in Indonesia, the indirect effect of the independent variables mediated by PBV is more dominant than the direct effect

V. DISCUSSION

Based on the results of the calculations that have been carried out and detailed in the previous section, the results obtained are that:

1) This research proves that the increase in CR(X1) does not significantly increase the Stock Return (Y). This proves that the company's ability to manage their current assets is not going well, so that many current assets are not optimal utilized by the company which results in a decrease in investor interest in investing their capital. The results of this study are consistent with previous research from Nugroho (2013), Salim and Santosyah (2020), Anggraeni and Salim (2019) and Elfiswandi *et al.* (2020) which said that the current ratio had no significant effect on stock returns.

2) The results of this research prove that an increase in the value of DER(X2) has significantly increase stock returns. This proves that the company's ability to pay their long-term obligations will ensure convenience for the company to obtain additional loans that can be used to expand their company, this act create good will that increase interest from investor. This result is in line with previous research from Elfiswandi *et al.* (2020), and Sausan *et al.* (2017).

3) The results of this research prove that increasing the value of TATO(X3) will significantly increase the Stock Return. This proves that investors also use TATO as a measure of company performance to predict stock return, thus the larger the TATO proves that the company is more efficient in using its assets to increase sales. This is in accordance with the research of Sausan *et al.* (2017).

4) The research results prove that CR(X1) has no significant effect on PBV(Y). The above illustrates that the company's level of confidence in paying off its short-term debt in parallel will not have an impact on its ability to create value for shareholders as reflected in Price to Book Value. These results are in line with the research of Putra *et al.* (2016), Jang *et al.* (2021) and Bahraini *et al.* (2021).

5) DER has a significant effect on PBV. This means that the level of own capital used as collateral for the company's debt will have an impact on its capacity to create value for shareholders as reflected in Price to Book Value. The results of this study are in line with the research of Bahraini *et al.* (2021).

6) TATO has a significant effect on PBV. This means that the level of effectiveness of a company in managing its assets will affect the company's success in providing value to shareholders, which is reflected in the relationship between the price and the book value. If the asset turnover is slow down it means that the assets owned are too large compared to the ability to sell, this will reduce the price to book value. The results of this study are in line with the results of research from Bahraini *et al.* (2021) and Hasangapon *et al.* (2021).

7) Research results prove that PBV has a significant positive effect on stock returns, meaning that an increase in the PBV ratio of a company causes an increase in stock returns vice versa. So, it can be concluded that the PBV indicator has a significant effect on stock returns. This finding is consistent with the findings of Empirical, *et al* (2010), Pramukya *et al.* (2019), Kuswanto (2015), Budiharjo, R. (2015), and Daniswara *et al.* (2019).

8) The research results prove that the current ratio (CR), debt to equity ratio (DER) and total asset turnover ratio (TATO) simultaneously have a significant effect on PBV.

9) The results of the research prove that all independent variables (CR, DER, TATO) simultaneously have a significant effect on the dependent variable of Stock Returns, this is in line with research from (Salim & Firdaus, 2020) which found a significant effect of current ratio and debt to equity ratio on stock returns and research (Sausan *et al.*, 2020) found a significant effect of debt to equity ratio and total asset turnover ratio to stock returns.

10) The results of the calculation of the coefficient of determination R-squared and path analysis prove that the Price to Book Value variable successfully mediates the independent variable so that the indirect effect of the independent variable is more dominant or significant than the direct effect. The greater the PBV ratio, the higher the company is valued by investors relative to the funds that have been invested in the company.

VI. CONCLUSIONS AND RECOMMENDATIONS

Based on the research results and explanations described in the previous section above, we can take following conclusions:

1) CR doesn't have a significant effect on the stock return variable.

2) DER have a significant effect on the stock return variable.

3) TATO have a significant effect on the stock return variable.

4) CR doesn't have a significant effect on the intervening variable Company value (PBV).

5) DER have a significant effect on the intervening variable Company value (PBV).

6) TATO have a significant effect on the intervening variable Company value (PBV).

7) PBV proved to have a positive and significant effect on Stock Returns.

8) CR, DER and TATO were simultaneously proven to have a positive and significant effect on the stock returns.

9) CR, DER and TATO were simultaneously proven to have a positive and significant effect on the intervening variable PBV.

10) The indirect effect of the independent variables (CR, DER and TATO) on the dependent variable (stock returns) that mediated by the Price to Book Value have been proved to be more significant and more dominant than the direct effect.

Suggestions that are expected to be useful are as follows:

1) Companies in mining sector are advised to always focus on paying long-term debt and the ability to pay off all debts, company activities must utilize assets efficiently to generate sales and maintain turnover above the average of other mining companies.

2) Prospective investors who wish to invest in the mining sector on the Indonesia Stock Exchange are advised to consider and consider DER, TATO and PBV because these ratios have been shown individually and simultaneously in this study have a positive and significant impact on stock returns. The value of the listed company in mining sector on the Indonesia Stock Exchange between 2017 and 2020.

3) This study only uses the current ratio (CR) method to measure liquidity, the debt-to-equity ratio (DER) method to measure leverage, and the total asset turnover ratio (TATO) to measure activity, for further research it is recommended to examine at least two types of ratios and research for each type of longer cycle until 2021.

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