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Capital Structure (CS), Profitability (P), and Firm Age (FA): Impact on Firm Value (FA)

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Abstract---Firm value (FV) is an important metric for describing the current state of the firm, but the variable declined because of the COVID-19. Therefore, this research objective is to measure the impact of capital structure (CS), profitability (P), and firm age (FA) value of property and real estate firms registered in Indonesia Stock Exchange (IDX) in 2018-2021. Secondary data was used, presented as annual financial reports between 2018-2021 and sourced from the IDX web. The population were 83 firms and a purposive sampling method was employed to obtain 16 firms in line with the criteria, while multiple linear regression (MLR) analysis, coefficient of determination (R²) and F-test, as well as t-test were calculated using SPSS software. The results exhibited that CS, P and FA had a positive and significant impact on FV with a 0.960 coefficient of determination (R²). In this context, 96.0% of the price to book value (PBV) was impacted by debt to equity ratio (DER), return on equity (ROE) and FA, while 4.0% was impacted by external factors.

Keywords---Capital Structure (CS), Profitability (P), Firm Age (FA), Firm Value (FV).

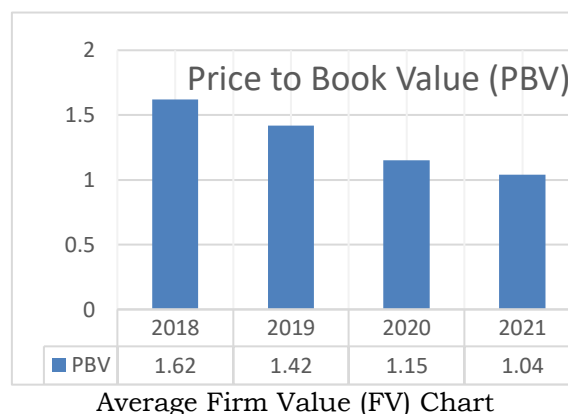
Introduction

Global business competition is triggered by the development of an economy, socio-politics, and technological advances. Each firm strives to increase competitiveness in different sectors by managing the management functions properly based on the long-term objective of enhancing firm value (FV). The

maximization of FV should be improved to increase shareholder prosperity (Arniwita et al., 2021).

Property and real estate firms have a key role in economic development to show the improvement of infrastructure. Firms are also the main choices in investing funds because the shares are considered to offer potential increases and excellent business prospects in the future. This is supported by Bank Indonesia's statement regarding the annual commercial property price index in the 4th quarter of 2021. This index for the 4th quarter of 2021 increased by 0.60%, higher than 0.35% and 0.12% in the 3rd and 4th quarters of 2020. Therefore, the commercial property price index always experiences an increase in the price index (bi.go.id, 2022).

Firm value can be measured in different methods, such as the calculation of PBV (Suwardika & Mustanda, 2017). Meanwhile, the ability of firm to develop value relative to the capital investment is shown by PBV.



The COVID-19 pandemic has influenced economic conditions, including property and real estate firms. The purchasing power during the pandemic was relatively low, which caused difficulty for property investment in the last few years. This has an impact on investors' interest in investing capital. The PBV ratio of average firm value (FV) above shows a decreasing graph from 2018 to 2021 during the pandemic. This means that a continuous increase in FV has not been achieved by firm. This decrease shows an indication of the low interest of investors in firm.

Several factors can affect FV, such as Capital Structure (CS), which is the quantity of debt and equity employed to fund operations and finance the assets. Furthermore, CS is expressed as DER (similar to debt to capital) (Komarudin & Tabroni, 2019). In addition, this variable is the proportion of funding with firm debt. Firm with a large level of business development requires a large source of funds to increase needs in the business development process and this can increase value (Dhani & Utama, 2017). According to (Muliana & Ahmad, 2021) and (Kusumawati & Rosady, 2018), CS impact FV. The results of (Sintyana & Artini, 2018) stated that the variable had no impact on FV.

Another factor impacting FV is profitability, which is an effort to maintain the operational activities in running the business over many years (Hery, 2017). Firm

with large profits is in high demand because investors always strive to benefit from the investments (Dhani & Utama, 2017). Meanwhile, (Kristanti, 2020) and (Kusumawati & Rosady, 2018) showed that profitability (P) impacted FV. Other research reported different results conducted by (Zuraida, 2019), (Izzah et al., 2019), and (Anggraini & MY, 2021) where P did not affect FV.

FA may be a factor for shareholders in carrying out investment strategies (Riyadi et al., 2021). This variable covers the establishment time until the current operation. Firm with a longer age has excess information and experience compared to those with few years old (Yumiasih & Isbanah, 2017). Previous research conducted by (Hamdani, 2020) showed that the variable affected FV. Different results were reported by (Zuliyana & Valendra, 2021) where FA did not affect FV.

Literature Review and Hypothesis Development

CS includes firm's funding that uses the amount of debt and equity to fund the activities. Based on signaling theory, the variable is a form of signal to attract investors by analyzing the prospect of firm. In addition, firm with good prospects can use greater debt to cut the cost of tax income incurred (Suwardika & Mustanda, 2017).

H1: Capital structure (CS) has a positive impact on firm value (FV).

Profitability (P) is defined as the ability to generate profits in relation to sales, total assets, and equity. A high P ratio is related to firm's good prospects which trigger investors to purchase shares. In addition, a high share price can impact FV (Ramdhonah et al., 2019). Based on signaling theory, signals are provided in the form of information about good conditions compared to others.

H2: Profitability (P) has a positive impact on firm value (FV)

FA is an indicator of the length of establishment (Yulianto & Wiyasasi, 2020) and the variable can be measured by the maturity level. In this context, investors easily trust firm with longer establishment age. The survival and continuity of the operational activities can be maintained to generate optimal profits (Rely & Arsajah, 2018). Based on signaling theory, FA is an important signal for attracting the interest of investors because the variable provides information on firm experience.

H3: Firm age (FA) has a positive impact on firm value (FV)

CS is the ratio between the amount of debt and capital. Meanwhile, P is the capacity to generate profits and the variable serves to measure the level of profit earned. A higher amount of profits better reflects the effectiveness of the management in running the firm. Older FA makes investors more confident in generating higher profits. Investors are interested in investing capital when firm has high profits and this certainly affects FV.

H4: Capital structure (CS), profitability (P), and firm age (FA) simultaneously impact firm value (FV).

Methods

Property and real estate firms registered on the IDX between 2018-2021 was used. The population amounted to 83 firms and 16 of the samples were analyzed using purposive sampling method. Data collection was conducted using documentation and library research while the analysis was performed using the adoption of multiple linear regression using the SPSS software.

Results and Discussion

Descriptive Statistics

The descriptive statistics are outlined below:

Table 1
Descriptive Statistic

	N	Min	Max	Mean	Std. Deviation
DER	64	0,043	3,688	0,69705	0,677671
ROE	64	0,001	0,244	0,07757	0,052938
FA	64	5	49	32,25	11,832
PBV	64	0,186	6,203	1,30761	1,240854
Valid N (listwise)	64				

Secondary Data, 2023

The number of samples was 64 with the DER variable having the lowest and highest values of 0.043 and 3.688, as well as an average and standard deviation (SD) of 0.69705 and 0.677671. ROE has the lowest and highest values of 0.001 and 0.244, with an average and SD of 0.07757 and 0.052938. FA has the lowest and highest values of 5 and 49, with an average and SD of 32.25 and 11.832. PBV has the lowest and highest values of 0.186 and 6.203, with an average and SD of 1.30761 and 1.240854, respectively.

Normality test

Data normality testing was Executed using the Kolmogorov-Smirnov (K-S) test for each variable (Ghozali, 2018), as reported in Table 2.

Table 2
Normality Test

	Unstandardized Residual
N	64
Test Statistic	0,148
Asymp. Sig. (2-tailed)	0,090

Secondary Data, 2023

According to the normality test using K-S test, the Asymp value. Sig. (2-tailed) is 0.090. Since the value obtained is higher than 0.05, the residual data is normally distributed.

Multicollinearity Test

In the regression model between the independent variables, the level of correlation was analyzed using multicollinearity test (Ghozali, 2018).

Table 3
Multicollinearity Test

Variable	Collinearity Statistics	
	Tolerance	VIF
DER	0,364	2,747
ROE	0,366	2,731
FA	0,975	1,025

Secondary Data, 2023

The tolerance value obtained from every variable is higher than 0.10, according to the multicollinearity (Table 3). The same results seen from the VIF value also fulfil other requirements of the multicollinearity test, where the VIF value must be <10.00. According to Table 3, there are no indications of multicollinearity among the independent variables.

Heteroscedasticity Test

Heteroscedasticity tests for unequal variance in the regression model among the residuals across different observations.

Table 4
Heteroscedasticity Test

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.089	.054		-1.628	.109
	DER	.045	.040	.173	1.131	.263
	ROE	1.735	.509	.521	.409	.901
	FA	.003	.001	.201	1.143	.236

The heteroscedasticity test using the Glejser test in Table 4 show that DER, ROE and FA each have a significance value higher than 0.05. Therefore, no symptoms of heteroscedasticity are reported as shown in Table 4.

Autocorrelation Test

Autocorrelation or serial correlation are not found in a good regression model. The test is used with the Durbin-Watson test (DW test) and the result is established on time series data.

Table 5
Autocorrelation Test

R	R Square	Adjusted R Square	Std. Error of the Estimate	DW
.980 ^a	.960	.958	.254624	1.746

Secondary Data, 2023

The autocorrelation test using the DW-test indicate value of 1.746 with the number of independent variables being 3, N=64, dU=1.6946 and dL= 1.4990.

$$\begin{aligned} du &< dw < 4-du \\ 1.6946 &< 1.746 < 4-1.6946 \\ 1.6946 &< 1.746 < 2.3054 \end{aligned}$$

Based on the calculation, the DW value is 1.746 and the location is $du < d < 4-du$ ($1.6946 < 1.746 < 2.3054$). Therefore, the data does not have autocorrelation.

Analysis of the Coefficient of Determination (R²)

The scope of the model's capacity to describe variations in the dependent variable is measured using the R² between 0 (zero) and 1 (one).

Table 6
Determination Analysis

R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
.980 ^a	.960	.958	.254624	1.746

Secondary Data, 2023

The R² value is 0.960 since 96.0% of PBV is influenced by DER, ROE and FA (Table 6). Meanwhile, 4.0% is influenced by external factors. The variables of DER, ROE, and FA account for nearly all the necessary information to explain variations in PBV.

Multiple Linear Regression (MLR) Analysis

The influence of CS, P and FA age was obtained using MLR analysis (Table 7).

Table 7
MLR Test

Variable	Unstandardized Coefficients		standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	0,028	0,107		0,258	0,797
DER	1,742	0,078	0,951	22,201	0,000
ROE	0,836	1,001	0,036	1,835	0,024
FA	3,080E-5	0,003	0,000	2,011	0,012

Secondary Data, 2023

The multiple linear regression (MLR) equation (Table 7) becomes:

$$Y = 0.028 + 1.742X_1 + 0.836X_2 + 3.080E-5X_3$$

Capital structure (CS), profitability (P), and firm age (FA) have a positive impact on FV in 2018-2021.

F-test

The F-test shows the combined impact of the independent on the dependent variable (see Table 8) (Ghozali, 2018).

Table 8
F-Test

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	93.112	3	31.037	478.728	.000 ^b
	Residual	3.890	60	.065		
	Total	97.002	63			

Secondary Data, 2023

The computed F value of 478.728 with a significant value of $0.000 < 0.05$ is reported by the F-test results in Table 8. Therefore, PBV is a variable influenced by DER, ROE and FA.

T-test

T-test objective is to analyze the influence of the independent on the dependent variable. The influence of DER on PBV shows a t value of 22.201 > t table of 1.67022 and a significant value of $0.000 < 0.05$. Therefore, DER has positive and significant impact on PBV, and H1 is accepted. The impact of ROE on PBV shows a t value of 1.835 > t table of 1.67022, and a significant value of $0.024 < 0.05$. ROE has a positive and significant impact on PBV and the H2 is accepted. The impact of FA on PBV reports a t-count of 2.011 > t table of 1.67022 and a significant value of $0.021 < 0.05$. Therefore, the variable has a positive and significant impact on PBV and the H3 is accepted.

Capital Structure (CS) on Firm Value (FV)

The impact of CS reveals that DER has a positive and significant impact on PBV and the first hypothesis (H1) is accepted. Therefore, the use of debt in CS increases FV. From an investor's perspective, the utilization of debt indicates the potential future prospects of the business. Before firm obtains a loan, the lender has to assess the condition and worthiness. Firm is considered capable of fulfilling the obligations in the future when the feasibility is high in accordance with the conditions set by the lender. This is supported by (Kusumawati & Rosady, 2018), (Muliana & Ahmad, 2021), and (Zuraida, 2019), where CS had a positive impact on FV.

Profitability (P) on Firm Value (FV)

The impact of P indicated that ROE has a positive and significant impact on PBV and the second hypothesis (H2) is accepted. Hence, ROE allows firm to generate profits with capital and the variable is directly proportional to the confidence of the investor. The result obtained describes the ability of firm to the investors. According to (Kristanti, 2020), (Suwardika & Mustanda, 2017), and (Himawan & Andayani, 2020), Profitability (P) has a positive impact on firm value (FV).

Firm age (FA) on firm value (FV)

FA has a positive and significant impact on PBV and the H3 is accepted. Therefore, the older firm, the higher value and experience. This is because the survival and the continuity of firm's operational activities can be maintained to produce more optimal profits and lower risks. This is supported by (Yumiasih & Isbanah, 2017) showing that FA has a positive impact on FV.

Capital structure (CS), profitability (P) and firm age (FA) on firm value (FV)

F-test results present the calculated F value is 478.728 with a significant value of $0.000 < 0.05$. Therefore, DER, ROE, and FA simultaneously influence PBV. CS is also the ratio between the amount of debt and capital. The use of debt shows that firm can gain greater profits. In this context, P functions to quantify the level of profit obtained. Therefore, the profit level of firm is directly proportional to the management of funds. Older firm increases the confidence level of investors due to the possession of assets used to generate higher profits. Investors are interested in investing capital with high profits or returns and this can affect FV.

Conclusions

Capital structure (CS), profitability (P), and firm age (FA) were reported to have a positive and significant impact on FV. Additionally, the use of CS and P should be maximized to maintain good FV. Investors also considered CS, P and FA in making investment decisions to obtain maximum returns.

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