

Research Article

Whether Profitability Intervenes The Possibility of Leverage on the Firm Valuation in Eastern Europe?

¹Dea Nabila Hasna, ²Indah Yuliana

^{1,2}Management Department, Islamic State University of Malang, Indonesia.

Received Date: 28 January 2024

Revised Date: 07 February 2024

Accepted Date: 16 February 2024

Published Date: 26 February 2024

Abstract: This paper intends to identify the influence of leverage on corporate value with profitability as an intervening variable in developing countries of Eastern Europe. This research employs an associative approach methodology. The demographic sample for this research comprises exclusively construction and real estate enterprises that are publicly included in the Warsaw Stock Exchange and Bucharest Stock Exchange. The samples were collected from his 44 enterprises utilizing a targeted sampling method. The writers utilized the data disseminated by the firm on the official websites of the Stock Exchange. The data utilized in this investigation comprises quantitative data acquired from secondary sources. The research employed path analysis as the methodology and the Smart PLS version 3.0 program as the tool. From the outcomes of this research, it can be inferred that leverage does not influence firm value through profitability in both sectors of Poland, both sectors of Romania, the Real Estate sector of Poland, the construction sector of Romania and the real estate sector of Romania. Contrary, Leverage affects firm value through profitability in the Construction sector of Poland. This research exclusively examines the entities included in a specific list of construction and real estate firms in developing countries of eastern Europe. It is expected that this paper will provide suggestions for corporate management regarding the importance of profitability for improving corporate value. This research examines the influences of leverage on company value, with profitability as an intervening variable, among the Construction and Real Estate enterprises listed in Poland and Romania.

Keywords: Poland, Romania, Leverage, Profitability, Firm Value.

I. INTRODUCTION

The construction and real estate industries in Eastern European developing nations are expanding rapidly, with the real estate sector projected to reach \$11.85 trillion by 2023. The residential real estate sector is expected to dominate, with a market value of \$9.4 trillion in 2023. The market is expected to grow at a compound annual growth rate (CAGR) between 2023 and 2028, reaching \$15.48 trillion by 2028. China is projected to generate the highest real estate value globally, reaching \$131.2 trillion by 2023. The source of the information is the website: <https://www.mordorintelligence.com>.

Considering the evident prevalence of market flaws in developing economies (see, e.g. Bondzie Afful & Opoku, 2021; Demir, 2009; Kiyimaz, 2013; Varela, 2017), the study examines firms in Poland and Romania's construction and real estate industries from 2018-2022. Both countries are experiencing growth in their sectors, focusing on modern and environmentally friendly commercial real estate infrastructure. Poland is expected to expand further in 2023. Both countries are recognized as successful players in the market, with ongoing projects in office, retail, and green spaces. The growth of local real estate markets depends on establishing modern and environmentally friendly infrastructure.

Misconceptions arise when a surge in stock prices is mistakenly seen as a boost in corporate profits, leading to increased value. Company managers aim to maximize profitability, which can be achieved by investing in projects with superior returns on capital and improving sales volume. As profits rise, shareholders expect dividends, reflecting the company's reputation and the expectation of increased profits. (Mangesti Rahayu et al., 2020). Debt investments, such as debt and fresh stock issues, offer entrepreneurs capital and a broader range of possibilities for growth without relying on private funds. They also increase tax revenue by reducing profits deducted from taxes. However, debt can also impose financial hardships, such as interest and principal payments, influencing a company's financial flexibility. Prioritizing external capital through debt increases the risk of firm insolvency due to poor decision-making, while corporate bonds increase operational risk during periods of declining profits. (Groth & Anderson, 1997) Efficient layouts can reduce capital costs, increasing profitability and corporate value. However, relying solely on debt can accumulate liabilities, leading to insolvency. There is currently no precise algorithm for finding the ideal balance between debt and equity in a company's capital structure. Weston et al. (1996) said, "Increased debt increases a firm's risk as it requires specific earnings before interest and tax threshold". Companies with high debt are more precarious. However, if economic conditions improve, they can achieve greater earnings. Businesses must maintain financial equilibrium by establishing an optimal debt-to-equity ratio, as debt and equity represent a corporation's capital structure. The



optimal capital structure hypothesis was proposed by (Modigliani & Miller, 1963). Larger ownership stakes are recommended to avoid cash flow disruptions in low-earning companies. Debt financing is efficient and generates profits. The trade-off theory suggests corporations balance tax benefits with financial difficulties. Management failure occurs when agency costs rise due to insolvency or loss of credibility. The ideal debt ratio is achieved by obtaining the highest tax shield. (Myers & Majluf, 1984) Financially successful organizations often have lower debt levels due to their ample internal resources. However, incorrect capital structure decisions can lead to significant negative outcomes. Overutilization of external money through debt can result in increased expenses and financial jeopardy if the company cannot meet interest or installment obligations. This research aims to examine leverage's influence on company value, with profitability serving as an intermediary variable.

This research drew upon other earlier studies as individual references, specifically examining the influence of leverage on profitability. (Chen et al., 2019; Grau & Reig, 2021; Mahmudin et al., 2019; Meghanathi & Chakrawal, 2021), leverage on firm value (Admi, 2019; Amin & Mollick, 2021; Bosch-Badia et al., 2017; Chow et al., 2018; Karimi, 2020; Saputri & Bahri, 2021; Zhang & Zhou, 2020) and profitability on firm value (Fransisca & Herijawati, 2022; Mahdi & Khaddafi, 2020; Nanda & Panda, 2018; Tarsono, 2021). This research uniquely includes the leverage-variable Debt-to-Assets Ratio (DAR) as an indicator. This is significant because previous studies have shown conflicting results and employed other indicators. A comparable analysis was carried out on Debt-to-Equity (DER). Nevertheless, we employed Return on Assets (ROA) and Return on Equity (ROE) as indicators for the profitability characteristics. In light of this context, the findings of this research make a valuable addition to the existing body of research on the influence of leverage on business value in developing nations of Eastern Europe. Moreover, the anticipated outcomes are likely to have significant ramifications for the financial worth of shareholders in Eastern Europe, a rapidly expanding economy in transition.

II. LITERATURE REVIEW

A) *Leverage on Profitability*

The trade-off principle states that a business can use external debt to increase profitability since the tax deduction for interest paid on such debt (Modigliani & Miller, 1963). Conversely, according to the pecking order hypothesis, corporations tend to favor external debt over stock due to the relatively lower costs of information asymmetry associated with debt as compared to equity. (Myers, 1984; Silva Serrasqueiro & Rêgo Rogão, 2009). From this idea, the market would probably underestimate the value of a company's newly issued shares due to the unequal distribution of information between management and investors regarding a company's investment prospects. (Myers & Majluf, 1984).

Monetary leverage can increase or decrease profitability, depending on the trade-off, pecking order, and agency cost theories. Contradictory conclusions regarding the correlation between leverage and profitability have been found in literary works from industrialized nations such as the US, the UK, France, Belgium, Italy, Germany, and Norway (Berger & Bonaccorsi di Patti, 2006; Frank & Goyal, 2003; Margaritis & Psillaki, 2007; Molina, 2005; Phillips & Sipahioglu, 2004; Wald, 1999). In this context, some of the prior studies (Berger & Bonaccorsi di Patti, 2006; Jensen, 1986; Kraus & Litzenberger, 1973; Margaritis & Psillaki, 2007; McConnell & Servaes, 1990; Ruland & Zhou, 2005; Wald, 1999). Discover that the utilization of financial leverage has a beneficial influence on profitability. Conversely, a portion of the research (Baker & Wurgler, 2002; Booth et al., 2001; Gill et al., 2011; Goddard et al., 2005; Krishnan & Moyer, 1997; Miller, 1977; Myers, 1977; Opler & Titman, 1994; Phillips & Sipahioglu, 2004; Rajan & Zingales, 1995; Roy & Witt, 1976; Titman & Wessels, 1988) Establish a negative correlation from financial leverage and profitability. Additionally, there is a continuous flow of studies. (Bae et al., 2017; Campello, 2006; Pattitoni et al., 2014; Weill, 2008) These findings demonstrate a non-linear correlation between the financial structure of a company and its performance in industrialized nations. The following is the formulation of the investigation's first hypothesis:

H1: Leverage significantly influences profitability.

B) *Leverage on firm value*

Modigliani & Miller (1963) said, When discussing the economy of Arrow-Debreu, it is said any alterations in company value caused by increases in debt might be eliminated with the counterbalancing exchange transactions (MM proposition I). Arbitration is feasible because any modification in a company's stock return resulting from variations in leverage can be entirely attributed to alterations in a distinct set of systematic attributes that make up the stock's risk. Therefore, in markets without friction, any positive influence of leverage on stock returns would be completely negated by altering their level of risk (according to MM proposition II). During their presentation of the fundamental concepts, MM admitted the existence of market flaws that could potentially disrupt the arbitrage process. (Modigliani & Miller, 1958). In practical terms, outside of the realm of modern portfolio theory, alterations in financial leverage may not be advantageous if they are entirely ascribed to previously identified systematic causes and might thus exert an independent influence on the value of a corporation. The literature provides evidence of many processes by which leverage influences business value, as outlined below. Traditionally, the deductibility of taxes and the expenses associated with bankruptcy influence enterprises to make a trade-off in order to select

the most advantageous level of debt that maximizes their value. (see, e.g. Kraus & Litzenberger, 1973; Miller, 1977; Modigliani & Miller, 1963). Companies take into account various costs associated with altering their leverage in order to optimize their worth. (see, e.g. Baker & Wurgler, 2002; DeAngelo & Roll, 2015; Ho Et Al., 2020; Liu Et Al., 2020; Nguyen Et Al., 2021). Moreover, the utilization of leverage can also influence funding and expansion opportunities, which in turn can influence equity performance. (see e.g. Gilje, 2016; Lin, 2015).

(Modigliani & Miller, 1963) Stated that “utilizing debt to finance activities enhances corporation values due to the increased tax shield resulting from interest payments on the loan”. (Granzer et al., 2006) Additionally, it was stated that the capital structure enhances the overall company's valuation. (Cheng et al., 2010) It is noteworthy because any alterations to the debt proportion exist. A direct influence on the overall value of the company, either favourably or negatively. Furthermore, (Kodongo et al., 2014) discovered that capital structure exerts a favorable influence on Tobin's Q. The second assumption of this inquiry is outlined as follows:

H2: Leverage significantly influences firm value.

C) Profitability on Firm Value

The market capitalization ratio is a metric that can be used to quantify corporate worth. The market capitalization ratio is a significant metric that indicates the relationship between share prices and a company's profitability and corporate worth. This indicator enables firm management to comprehend the creditors' response to the company's performance and future prospects. (Mahdi & Khaddafi, 2020) Simultaneously, the net revenue margin, operational earnings margin, and gross earnings margin exerted a noteworthy and beneficial influence on the stock price.

However, in certain instances, the net profit margin and gross profit margin did not exhibit a favorable influence on the stock price, and their influence was minimal. (Tarsono, 2021) Discovered that Return On Equity influences stock prices. In addition, (Fransisca & Herijawati, 2022) Discovered that the level of profitability, which directly influences the gross earnings margin, directly influences the stock price. Put simply, a company's worth increases in direct proportion to its earnings. The high earnings of a firm indicate positive future prospects and lead to an increase in demand for the company's stock among investors. The profitability ratio assesses a company's capacity to create profit through its operational activities. This enables investors to evaluate the efficacy utilized by a corporation that employs its assets in its commercial activities to generate profits. The profit margin is the outcome of a company's diverse policies and decisions. When there is an increase in demand for a company's stock, the company's value also grows. According to this interpretation, the third assumption of the current investigation is outlined as follows.

H3: Profitability significantly influences firm value.

According to relationship between leverage on profitability (c; Grau & Reig, 2021; Mahmudin et al., 2019; Meghanathi & Chakrawal, 2021), leverage on firm value (Admi, 2019; Amin & Mollick, 2021; Karimi, 2020; Saputri & Bahri, 2021; Zhang & Zhou, 2020) and profitability on firm value (Fransisca & Herijawati, 2022; Mahdi & Khaddafi, 2020; Nanda & Panda, 2018; Tarsono, 2021). This research examines the influence of profitability on the correlation between leverage and business value. From the explanation provided, the fourth hypothesis of this investigation is stated as follows:

H4: Profitability significantly influences the influence of leverage on the value of a corporation

III. MATERIAL AND METHODS

This research employs the associative approach methodology. The research methodology employed is quantitative research, characterized by its fundamental nature and encompassing the collection and analysis of quantitative data, which is subsequently validated by statistical techniques. The study's population comprises all construction and real estate enterprises, which are noted on both the Warsaw Stock Exchange and the Bucharest Stock Exchange. A targeted sampling method was utilized to gather samples from a total of 44 firms.

To obtain the requisite data for this investigation, the authors utilized the data made accessible on the authorized websites of the Warsaw Stock Exchange, as published by the company (www.gpw.pl) and the Bucharest Stock Exchange (www.bvb.ro), in addition to the following sources: Employing data documenting methodologies. Corporate annual report. The study utilized quantitative data derived from secondary sources. The research employed path analysis as the data analysis approach and the SmartPLS version 3.0 program as the instrument. A hypothesis is a provisional inference requiring empirical verification to establish validity. The criterion for accepting or rejecting a hypothesis in this research is to evaluate the T statistic or T table's statistical significance. The t-statistic value can be evaluated against the critical threshold derived from the t-table.

Table 1: Sample Selection Outcomes

No.	Criteria (Poland)	Amount	No.	Criteria (Romania)	Amount
1	Construction Sector companies listed and reporting financial statements on the Warsaw IDX in 2018-2022	43	1	Construction Sector companies listed and reporting financial statements on the Bucharest Stock Exchange 2018-2022	25
2	Real Estate Sector companies that are listed and report financial statements on the Warsaw IDX in 2018-2022	28	2	Real Estate Sector companies listed and reporting financial statements on the Bucharest Stock Exchange 2018-2022	21
3	Construction Sector companies that experienced losses in 2018-2022	(27)	3	Construction companies that experienced losses in 2018-2022	(15)
4	Real Estate Sector companies that experienced losses in 2018-2022	(18)	4	Real Estate Sector companies that experienced losses in 2018-2022	(13)
	Total Sample of Companies	26		Total Sample of Companies	18
	Total data processed (5 years)	130		Total data processed (5 years)	90

IV. RESULTS AND DISCUSSION

A) Results

The authors analyze two sectors in two emerging eastern European countries, Poland and Romania, together (Construction and real estate industries in Poland and Romania) and separately (construction sector in Poland, real estate sector in Poland, construction sector in Romania and real estate sector in Romania).

a. Descriptive Statistic

The purpose of the descriptive statistics analysis employed in this research is to present or explain the parameters in research through frequency tables that display The values of least, highest, average, and standard deviations. The findings of the descriptive statistical assessment appear in Table 2 below.

Table 2: Descriptive Statistic Outcomes

Variables	N	Minimum	Maximum	Mean	SD
Construction and Real Estate sectors in Poland					
Tobin's Q	130	0.094	2620.440	294.656	426.873
PBV	130	0.072	6612.227	649.058	1031.064
ROA	130	0.001	0.311	0.063	0.048
ROE	130	0.001	0.531	0.120	0.093
DAR	130	0.179	1604.910	18.138	139.962
DER	130	0.019	9.165	0.983	1.337
Construction and Real Estate sectors in Romania					
Tobin's Q	90	0.016	1201.140	168.303	271.768
PBV	90	0.171	5579.684	562.475	864.824
ROA	90	0.002	0.248	0.071	0.056
ROE	90	0.000	0.725	0.129	0.114
DAR	90	0.239	66.127	5.867	8.617
DER	90	0.001	4.685	0.850	0.937
Construction sector in Poland					
Tobin's Q	80	0.160	2417.946	449.034	431.805
PBV	80	257.727	6612.227	1244.096	1218.805
ROA	80	0.006	0.239	0.068	0.043
ROE	80	0.016	0.725	0.150	0.109
DAR	80	1.143	10.163	2.632	1.740
DER	80	0.109	6.977	1.430	1.379
Real Estate sector in Poland					
Tobin's Q	50	0.707	2620.440	348.983	375.114
PBV	50	28.794	4150.024	707.412	650.017
ROA	50	0.003	0.127	0.065	0.032
ROE	50	0.005	0.290	0.139	0.075
DAR	50	0.179	4.904	0.899	0.845
DER	50	0.218	9.615	1.314	1.316
Construction sector in Romania					
Tobin's Q	50	0.094	1.009	0.465	0.196
PBV	50	0.072	1.311	0.356	0.220

ROA	50	0.001	0.240	0.057	0.060
ROE	50	0.000	0.531	0.098	0.120
DAR	50	2.116	1604.910	39.261	223.742
DER	50	0.001	0.896	0.330	0.261
Real Estate sector in Romania					
Tobin's Q	40	0.016	7.588	1.438	1.635
PBV	40	0.224	13.661	2.105	2.838
ROA	40	0.002	0.311	0.079	0.068
ROE	40	0.004	0.252	0.085	0.070
DAR	40	1.910	66.127	16.687	13.271
DER	40	0.015	1.099	0.193	0.277

The descriptive statistics table above displays six results regarding Poland's building and real estate industry. Notably, the average amount for Tobin's Q is 294.656. The minimal value was 0.094; the greatest amount is 2620.44, while the standard deviation is 426.873. The average PBV is 649.058, which ranges from a low of 0.072 to a highest of 6612.227, with a standard deviation of 1031.064. The mean ROA is 0.063, with a range of values from 0.001 to 0.311 and a standard deviation of 0.048.

On the other hand, the mean ROE is 0.120, with a range of 0.001 to 0.531 and a standard deviation of 0.093. The mean DAR value is 18.138, with the lowest value of 0.179 and the highest of 1604.910. The standard deviation is 139.962. The mean value of DER is 0.983, with a lowest value of 0.019, a highest value of 9.165, and a standard deviation of 1.337.

b. Data Interpretation

i. Outer Model for Measurement

The measuring model refers to a framework or system used to quantify or assess certain aspects or variables of interest to assess the accuracy and consistency of the model. Reviewing the external model using reflective indicators entailed assessing the convergent and discriminant validity of the latent construct indications and the composite reliability of the indicator blocks.

ii. Convergent Validity

Suggests the extent to which several Indicators of the identical concept are positively related to each other. The assessment of convergent validity involved the analysis of loading factor values. In confirmatory studies, loading factor values must exceed 0.7; however, in exploratory investigations, loading factor values within the range of 0.6 to 0.7 are deemed suitable. Nevertheless, Latan and Ghozali (2012, p.78) state that loading factor values ranging from 0.5 to 0.6 are still deemed satisfactory in initial research endeavors for constructing measurement scales. Table 5 displays the outcomes of the convergent validity tests.

Table 3: Loading Factors Outcome

Variables	Firm Value	Leverage	Profitability
Construction and Real Estate Sectors in Poland			
Tobin's Q	0.893		
PBV	0.980		
ROA			0.592
ROE			0.999
DAR		-0.198	
DER		0.991	
Construction and Real Estate Sectors in Romania			
Tobin's Q	0.759		
PBV	0.950		
ROA			0.761
ROE			0.999
DAR		-0.678	
DER		0.951	
Construction Sector in Poland			
Tobin's Q	0.740		
PBV	0.951		
ROA			0.741
ROE			0.983
DAR		-0.726	

DER		0.975	
Real Estate Sectors in Poland			
Tobin's Q	0.993		
PBV	0.974		
ROA			0.980
ROE			0.943
DAR		0.973	
DER		0.807	
Construction Sector in Romania			
Tobin's Q	0.981		
PBV	0.949		
ROA			0.778
ROE			0.990
DAR		-0.298	
DER		0.967	
Real Estate Sectors in Romania			
Tobin's Q	0.867		
PBV	0.930		
ROA			0.983
ROE			0.987
DAR		-0.871	
DER		0.889	

According to the data processing results by Smart PLS 3.0 shown in Table 3 above, the load factor results showed values exceeding 0.5. Consequently, the model does not omit indications of leverage, profitability, and firm value factors specifically for Real Estate firms in Poland. Specific indicators characterize the variables. The leverage variable is made of two indicators, namely DAR and DER (Shaferiet al., 2020; Lestari, 2021). The profitability variable is determined by two indicators, namely ROA and ROE. (Adhityaet al., 2016; Pramanaetal., 2016). In addition, the variable representing the firm's value comprises two indicators: PBV and Tobin'sQ (Hadiyanti, 2016).

iii. Distinctiveness of Measures:

To evaluate discriminant validity, we conducted a comparison of the square root of the AVE for each construct with the correlation values from the components in the model. (Fornell & Larcker, 1981) If the square root of the AVE for each construct exceeds the correlation from latent variables in the model, then the model demonstrates strong discriminant. The minimum acceptable AVE value must exceed 0.5. This score indicates that over 50 percent of the variability in the indicator can be accounted for (Chin & Dibbern, 2010). The outcomes of the discriminant validity assessments appear in Tables 4 and 5 below.

Table 4: AVE and the Square Root of AVE Outcome

Variables	AVE	Square Root AVE
Construction and Real Estate sectors in Poland		
Firm Value	0.879	0.938
Leverage	0.511	0.715
Profitability	0.675	0.882
Construction and Real Estate sectors in Romania		
Firm Value	0.739	0.860
Leverage	0.682	0.826
Profitability	0.789	0.888
Construction sectors in Poland		
Firm Value	0.726	0.852
Leverage	0.739	0.860
Profitability	0.758	0.871
Real Estate sectors in Poland		
Firm Value	0.967	0.983
Leverage	0.799	0.894
Profitability	0.926	0.962
Construction sectors in Romania		
Firm Value	0.931	0.965

Leverage	0.512	0.716
Profitability	0.793	0.890
Real Estate sectors in Romania		
Firm Value	0.809	0.899
Leverage	0.775	0.880
Profitability	0.971	0.985

From Table 3 above, we can see that the AVE value for each configuration is higher than 0.5. On the other hand, the square root AVE values of each structure in the Polish construction sector are, for example, 0.852, 0.860, and 0.871. In addition, the results of the square root AVE values and the correlations from the constructs in Table 5 suggest that:

Table 5: Latent Variable Correlation Outcome

Variables	Firm Value	Leverage	Profitability
Construction and Real Estate sectors in Poland			
Firm Value	1.000	0.439	0.413
Leverage	0.439	1.000	0.296
Profitability	0.413	0.296	1.000
Construction and Real Estate sectors in Romania			
Firm Value	1.000	0.593	0.551
Leverage	0.593	1.000	0.442
Profitability	0.551	0.442	1.000
Construction sector in Poland			
Firm Value	1.000	0.379	0.660
Leverage	0.379	1.000	0.352
Profitability	0.660	0.352	1.000
Real Estate sector in Poland			
Firm Value	1.000	-0.128	-0.031
Leverage	-0.128	1.000	-0.231
Profitability	-0.031	-0.231	1.000
Construction sector in Romania			
Firm Value	1.000	0.626	0.215
Leverage	0.626	1.000	0.393
Profitability	0.215	0.393	1.000
Real Estate sector in Romania			
Firm Value	1.000	0.318	0.415
Leverage	0.318	1.000	-0.242
Profitability	0.415	-0.242	1.000

The square root of the AVE value (0.852) in the Firm Value variable is higher than the correlation between Firm Value and Leverage (0.379) and Profitability (0.660) variables. The square root of the average (AVE) value in the Leverage variable (0.860) is higher than the correlation between the Leverage variable and the Firm Value (0.379) and Profitability (0.352) variables. The square root of the AVE value (0.871) in the Profitability variable is higher than the correlation values between Profitability and the Firm Value (0.660) and Leverage (0.352) variables. The aforementioned findings demonstrate that each concept exhibits strong discriminant validity, as evidenced by the AVE value of each construct exceeding 0.5 and the square root AVE value surpassing the correlation from the constructs in the model.

iv. Composite Reliability

Refers to the degree of consistency and accuracy in measuring a construct or variable using multiple indicators or items. The assessment of the reliability of constructs with reflected indicators was conducted according to the findings of composite reliability. The frequently accepted guideline for evaluating construct reliability is that the composite reliability value for confirmatory studies should exceed 0.7 and fall within the range of 0.6 to 0.7. Suitable for conducting investigatory research. The outcomes for composite dependability are displayed in Table 6 below.

Table 6: Composite Reliability Outcome

Variables	Composite reliability
Construction and Real Estate sectors in Poland	
Firm Value	0.936
Leverage	0.391
Profitability	0.796

Construction and Real Estate sectors in Romania	
Firm Value	0.848
Leverage	0.105
Profitability	0.880
Construction Sectors in Poland	
Firm Value	0.839
Leverage	0.106
Profitability	0.860
Real Estate Sectors in Poland	
Firm Value	0.983
Leverage	0.894
Profitability	0.962
Construction Sectors in Romania	
Firm Value	0.964
Leverage	0.315
Profitability	0.883
Real Estate Sectors in Romania	
Firm Value	0.894
Leverage	0.001
Profitability	0.985

According to the information provided in Table 6, the composite dependability of each construct is greater than 0.7; as a whole, there are only Real Estate sectors in Poland. This indicates that all study constructs are dependable.

v. Structural Model (Inner Model)

The internal model, also known as the structural equation model, was evaluated by examining the R-squared percentage for each exogenous latent factor used as an indicator in the framework. A model with an R-squared value of 0.75 is considered strong, whereas a model with an R-squared value of 0.50 is considered intermediate, and a model with an R-squared value of 0.25 is considered weak. The R-squared value in Partial Least Squares (PLS) indicates the proportion of variations in the construct explained by the model. The R-Square findings obtained from using Smart PLS 3.0 are presented in Table 7.

Table 7: R-Square outcome

Variables	R square
Construction and Real Estate sectors in Poland	
Firm Value	0.281
Profitability	0.087
Construction and Real Estate sectors in Romania	
Firm Value	0.455
Profitability	0.196
Construction sectors in Poland	
Firm Value	0.461
Profitability	0.124
Real Estate sectors in Poland	
Firm Value	0.020
Profitability	0.053
Construction sectors in Romania	
Firm Value	0.393
Profitability	0.154
Real Estate sectors in Romania	
Firm Value	0.359
Profitability	0.059

According to Table 6 above, The Construction and Real Estate enterprises in Romania had the highest R-Square value of 0.455 for the Firm Value variable. This outcome indicates that 45.5 percent of the Firm Value variable may be attributed to the influence of profitability variables, while the remaining 54.5 percent is attributable to other variables. In addition, the profitability variable achieved an R-squared value of 0.196. The findings indicate that 19.6 percent of the profitability variable may be attributed to the influence of the leverage variable, whilst the remaining 80.4 percent is

influenced by other variables unrelated to the firm's value.

The model's suitability in this research is contingent upon its substantiation by empirical evidence. In PLS analysis, the fitness of a structural model is commonly evaluated by calculating the predicted value association (Q2), which is derived from the R2 value of each endogenous variable. The estimated Q2 relevance value is calculated as $1 - (1 - 0.196)(1 - 0.455) = 0.56182$, equivalent to 56.18 percent. To clarify, the model accounts for 56.18 percent of the explanation for Profitability and Firm Value, with the remaining 43.82 percent attributed to external variables not included in the model. According to Hair et al. (2011), a Q2 value of more than 50 percent demonstrates that the model has a satisfactory fit and is appropriate for additional study.

The hypothesis is tested using the values obtained from the output of the path coefficients, specifically the mean, standard deviation, and T-value. The T-statistic results can be utilized to ascertain the acceptance or rejection of the given hypothesis. The limits for rejecting or accepting the proposed hypothesis are specified in the t-table (significance level = 5 percent). If $t\text{-statistic} > t\text{-table (one-sided)}$, The alternative hypothesis (H_a) is considered valid, and the assumption of nullity (H_0) is denied. Yet, if the t-statistic is less than H_0 , then H_0 is denied. For a t table (one-sided), The null assumption (H_0) is affirmed, while the alternative hypothesis (H_a) is denied. The T-statistic results can be found in the following table, along with the path coefficients (mean, STDEV, T-value):

The outcomes of depicting a comprehensive structural equation model in data processing are displayed below in Figures 1.1 to 1.6.

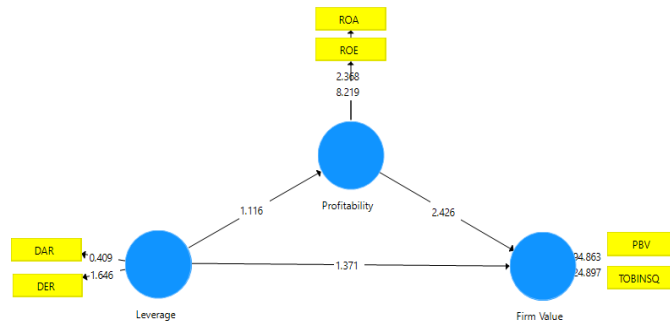


Figure 1: Structural Equation Model (Construction and Real Estate Firms in Poland)

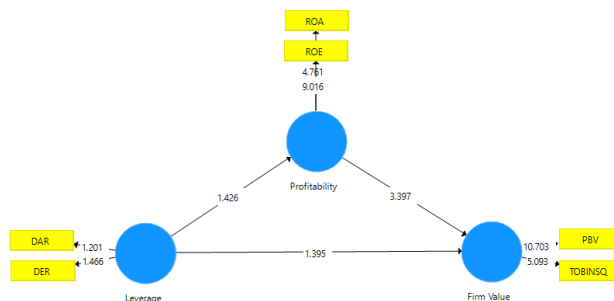


Figure 2: Structural Equation Model (Construction and Real Estate Firms in Romania)

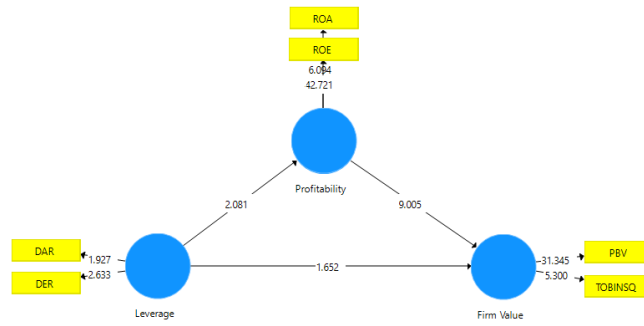


Figure 3: Structural Equation Model (Construction Firms in Poland)

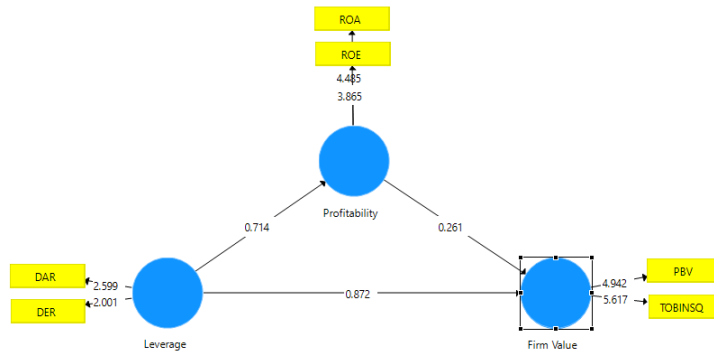


Figure 4: Structural Equation Model (Real Estate Firms In Poland)

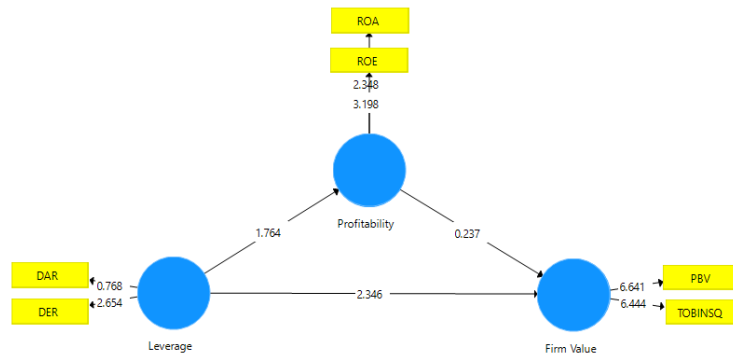


Figure 5: Structural Equation Model (Construction Firms in Romania)

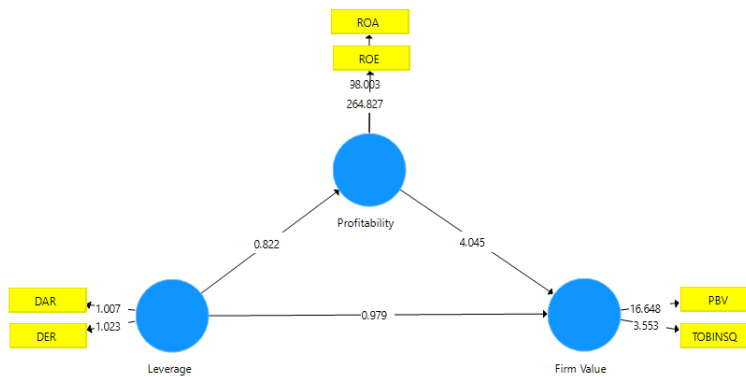


Figure 6: Structural Equation Model (Real Estate Firms in Romania)

Table 8: Path Coefficients Outcomes

Variables	Original sample (O)	Sample mean (M)	SD (STDEV)	T statistics (O/STDEV)	T table	P Values
Construction and Real Estate Companies in Poland						
Leverage -> Firm Value	0.348	0.276	0.253	1.371	1.71	0.085
Leverage -> Profitability	0.296	0.238	0.265	1.116	1.71	0.132
Profitability -> Firm Value	0.310	0.294	0.128	2.426	1.71	0.008
Construction and Real Estate Companies in Roman						
Leverage -> Firm Value	0.435	0.314	0.312	1.395	1.75	0.082
Leverage -> Profitability	0.442	0.375	0.310	1.426	1.75	0.077
Profitability -> Firm Value	0.358	0.333	0.105	3.397	1.75	0.000
Construction Companies in Poland						
Leverage -> Firm Value	0.167	0.148	0.101	1.652	1.77	0.050
Leverage -> Profitability	0.352	0.338	0.169	2.081	1.77	0.019
Profitability -> Firm Value	0.601	0.623	0.067	9.005	1.77	0.000
Real Estate Companies in Poland						
Leverage -> Firm Value	-0.143	-0.138	0.164	0.872	1.89	0.192
Leverage -> Profitability	-0.231	-0.144	0.323	0.714	1.89	0.238
Profitability -> Firm Value	-0.064	0.019	0.245	0.261	1.89	0.397
Construction Companies in Roman						
Leverage -> Firm Value	0.640	0.578	0.273	2.346	1.89	0.010
Leverage -> Profitability	0.393	0.347	0.223	1.764	1.89	0.019
Profitability -> Firm Value	-0.036	-0.022	0.152	0.237	1.89	0.406
Real Estate Companies in Roman						
Leverage -> Firm Value	0.445	0.075	0.455	0.979	2.01	0.164
Leverage -> Profitability	-0.242	0.053	0.295	0.822	2.01	0.206
Profitability -> Firm Value	0.523	0.559	0.129	4.045	2.01	0.000

Table 8 indicates that the t statistic value for the influence of leverage on profitability is bigger than the critical t value at the given significance level of 5 percent; there is only one category, it is Construction Companies in Poland, 2.081. Therefore, from the criteria for accepting or rejecting the aforementioned hypothesis, the findings of this research confirm the initial notion that leverage substantially influences profitability.

Furthermore, the t statistic for the influence of leverage on firm value exceeds the critical value from the t table at the given significance level of 5 percent, which is only in one category. It is a Construction Company in Romania, 2.346. From the acceptance and rejection criteria outlined in the hypothesis, the research's result confirms that leverage considerably influences business value.

Besides, the t-statistics value for the influence of profitability on company value exceeds the critical t-value at the given level of significance of 5 percent; there are four categories: Construction and Real Estate Companies in Poland, 2.426; Construction and Real Estate Companies in Roman, 3.397; Construction Companies in Poland, 9.005; Real Estate Companies in Roman, 4.045. Therefore, According to the hypothesis acceptance and rejection criteria mentioned above, the findings of this research confirm the third hypothesis that profitability significantly influences company value.

In addition, this research aimed to examine the influence of leverage on company value by analyzing its relationship with profitability. The results of his fourth hypothesis test using Smart PLS 3.0 are shown in Table 9 below.

Table 9: Testing the Influence of Intervention

Variables	Original Sample	Standard error	T statistics	T table	Conclusion
Construction and Real Estate Companies in Poland					
Leverage -> Profitability -> Firm Value	0.092	0.076	1.212	1.71	Rejected
Construction and Real Estate Companies in Roman					
Leverage -> Profitability -> Firm Value	0.159	0.105	1.504	1.75	Rejected

Construction Companies in Poland					
Leverage -> Profitability -> Firm Value	0.212	0.109	1.945	1.77	Accepted
Real Estate Companies in Poland					
Leverage -> Profitability -> Firm Value	0.015	0.084	0.176	1.89	Rejected
Construction Companies in Roman					
Leverage -> Profitability -> Firm Value	-0.014	0.066	0.215	1.89	Rejected
Real Estate Companies in Roman					
Leverage -> Profitability -> Firm Value	-0.127	0.170	0.744	2.01	Rejected

From the above calculation, we can see that the obtained calculated t-value exceeds the critical value from the t-table at a 5 percent significance level. There is only one category, 1.945 construction companies in Poland. This shows that intermediate parameters are important. Therefore, according to the hypothesis acceptance and rejection criteria mentioned above, the findings regarding this research confirm the fourth hypothesis that leverage has a considerable influence on firm value through profitability.

B) Discussions

a. The Influence of Leverage on Profitability

The acceptance of H1, which asserts that leverage substantially influences profitability, has been confirmed in Poland's construction sector. There is a negative link between leverage and profitability, indicating that increases in leverage result in corresponding changes in profitability. A negative correlation implies that more leverage results in decreased profitability. The results of this investigation support the results of an earlier study. (Chen et al., 2019) and (Gau & Reig 2021), researchers who investigated the influence of capital structure on profitability. The findings of this investigation suggest that managers should expect higher rates of return when using debt to finance business operations. On the other hand, in both sectors of Poland, both sectors of Romania, the Real Estate sector of Poland, the construction sector of Romania, and the real estate sector of Romania states are rejected. This correlation is positive, meaning that changes in leverage do not cause changes in profitability. A positive direction means that higher leverage increases profitability. The results of this research support those of previous studies. (Bae et al., 2017) and (Pattitoni et al., 2014). The findings demonstrate a non-linear correlation between the capital structure and firms' achievement in industrialized nations.

Capital structure primarily concerns the source of funds obtained from either internal or external sources. Internal funding sources refer to the financial resources originating from the company's earnings. In the meantime, external funds could be raised by the creditors. The greater the percentage of debt in the capital structure, the greater the liability a company has to bear, as it has to pay installments and interest on the debt. The level of interest rates on borrowed capital reduces corporate profits and lowers corporate profitability. This finding is consistent with researchers who researched this topic (Abor, 2005); the findings indicate that LTDTA has a detrimental influence on Return on Equity.

b. The Influence of Leverage on Firm Value

The outcome aligns with hypothesis H2, which posits that leverage exerts a substantial influence on the value of a corporation. The results offer concrete proof that leverage plays a significant role in determining the value of companies in the Polish construction industry. The path coefficient demonstrates that leverage exerts a positive and statistically significant influence on the firm's value. Consequently, when debt levels rise in the capital structure, the corporation's overall value also increases. This phenomenon arises due to the inverse relationship between debt levels in the capital structure and tax liabilities, resulting in a perceived reduction in the amount of interest paid on the debt. This exerts a favorable influence on the stock price within the stock market, ultimately augmenting the company's overall worth. The findings of this research align with the financial decision theory put forward by (Modigliani & Miller, 1963). Using debt to finance a firm enhances its worth by lowering tax obligations and reducing interest payments on debt. This finding supports (Mangesti Rahayu et al., 2020) Discovered that capital structure exerts a favorable and substantial influence on the overall worth of a corporation. (Granzer et al., 2006) It was also discovered that the method of increasing capital enhances the worth of a company. (Cheng et al., 2010) Offered empirical evidence indicating that alterations in debt ratios can either positively or negatively affect the value of a company. Nevertheless, this research finds that leverage significantly does not influence the firm value in both sectors of Poland, both sectors of Romania, the Real Estate sector of Poland, the construction sector of Romania, and the real estate sector of Romania.

The results of this investigation corroborate the pecking order theory and the presence of information asymmetry. The hierarchy of financial utilization within the capital system, i.e., earnings, debt, and new issues, must be maintained to avoid negative investor perceptions. Debt utilization in the capital structure is usually popular with investors because it has a beneficial influence on the stock price and ultimately increases the company's value. If a company issues stock to finance its operations, investors will react negatively because existing shareholders will not view the stock issuance as a good thing.

Issuing new shares in response to financial needs augments the number of shares within a firm, resulting in A reduction in the price of the shares and amplification of the shares, ultimately leading to a decline in the stock price in the market. Therefore, investors often have a positive perception of incorporating debt into the capital structure as that positively affects the rise in stock price, thus enhancing the company's value.

c. The influence of Profitability on Firm Value

Empirically, the findings show that firm profitability is a decisive factor influencing the valuation of a company in both sectors in Poland, in both sectors in Romania, in the construction sector in Poland, and the real estate sector in Romania. This result is consistent with H3's prediction that profitability significantly correlates with firm value. This result also supports (Nagano, 2003); he finds companies are more inclined to utilize internal metrics to increase corporate profitability than external measures to increase shareholder value. Then (Mardiyati et al., 2012) confirmed that profitability positively influences corporate value. The direction of this correlation is positive, indicating that all factors related to firm profitability have a positive and significant influence on firm value. This positive sign suggests that improved profitability empirically increases firm value in Indonesian manufacturing industries. Profitability is a company's capacity to earn revenues by asset management and sales, so Profitability is a key determinant of company value.

Investors may utilize a company's profitability as a gauge of the company's future potential in order to make investment decisions (according to signaling theory). High profitability is indicative of exceptional efficiency. As the level of profitability rises, there is a corresponding growth in internal funds. The study's findings demonstrate that profitability, inside an empirical framework, serves as a variable that can be utilized to ascertain or forecast the worth of manufacturing companies in Indonesia.

d. The influence of Leverage on Firm Value through Profitability

This result is consistent with H4, which predicts the substantial influence of profitability on the relationship between leverage and company value. This finding provides empirical evidence that utilizing leverage does not influence the value of a company through profitability in both sectors of Poland, both sectors of Romania, the Real Estate sector of Poland, the construction sector of Romania, and the real estate sector of Romania. Contrary, Leverage influences the valuation of a company through profitability in the Construction sector of Poland. The finding of this research support correlation of previous studies which tests the relationship between leverage on profitability (c; Grau & Reig, 2021; Mahmudin et al., 2019; Meghanathi & Chakrawal, 2021), leverage on firm value (Admi, 2019; Amin & Mollick, 2021; Karimi, 2020; Saputri & Bahri, 2021; Zhang & Zhou, 2020) and profitability on firm value (Fransisca & Herijawati, 2022; Mahdi & Khaddafi, 2020; Nanda & Panda, 2018; Tarsono, 2021).

V. CONCLUSION AND SUGGESTIONS FOR FURTHER RESEARCH

From the findings of this research, it can be inferred that: (1) Leverage has no influence on profitability in both sectors of Poland, both sectors of Romania, the Real Estate sector of Poland, the construction sector of Romania, and the real estate sector of Romania. Otherwise, Leverage has an influence on profitability in the Construction sector of Poland. (2) Leverage has no influence on firm value in both sectors of Poland, both sectors of Romania, the Real Estate sector of Poland, the construction sector of Romania, and the real estate sector of Romania. Contrary, Leverage has an influence on firm value in the Construction sector of Poland (3) Profitability has no influence on firm value in the construction sector of Romania and the Real Estate sector of Poland. Otherwise, Profitability influences firm value in both sectors of Poland, both sectors of Romania, the Construction sector of Poland and the real estate sector of Romania. (4) Leverage does not influence firm value through profitability in both sectors of Poland, both sectors of Romania, the Real Estate sector of Poland, the construction sector of Romania, and the real estate sector of Romania. On the Contrary, Leverage influences firm value through profitability in the Construction sector of Poland.

Although many other variables may have some influence on firm value, The factors that were examined in this research were restricted to debt and profitability. Therefore, for further research, the hypothesized variables are expected to influence profitability as a mediator and directly for companies listed in the construction and real estate sector during the 2018-2022 period. It is not generated for all companies. The next authors may be able to describe in detail the economic conditions of each country to make it easier to compare each sector of the country.

VI. REFERENCES

- [1] Abor, J. (2005). The influence of capital structure on profitability: an empirical analysis of listed firms in Ghana. *The Journal of RiskFinance*, 6(5), 438–445. <https://doi.org/10.1108/15265940510633505>
- [2] Admi, A. P. (2019). *The Influence Of Liquidity, Leverage Ratio, Activities And Profitability On Stock Prices With Dividend Policy As Intervening Variables In Manufacturing Companies In Indonesia And Malaysia 2015-2017*. <https://api.semanticscholar.org/CorpusID:229285561>
- [3] Amin, M. R., & Mollick, A. V. (2021). Stock returns, oil prices and leverage: evidence from US firms. *International Journal of Managerial Finance*, 229–245. <https://doi.org/10.1108/IJMF-06-2021-0257>

- [4] Bae, J., Kim, S.-J., & Oh, H. (2017). Taming polysemous signals: The role of marketing intensity on the relationship between financial leverage and firm performance. *Review of Financial Economics*, 33(1), 29–40. <https://doi.org/https://doi.org/10.1016/j.rfe.2016.12.002>
- [5] Baker, M., & Wurgler, J. (2002). Market Timing and Capital Structure. *The Journal of Finance*, 57(1), 1–32. <https://doi.org/https://doi.org/10.1111/1540-6261.00414>
- [6] Berger, A. N., & Udell, P. (2006). Capital structure and firm performance: A new approach to testing agency theory and an application to the banking industry. *Journal of Banking & Finance*, 30(4), 1065–1102. <https://doi.org/https://doi.org/10.1016/j.jbankfin.2005.05.015>
- [7] Bondzie Afful, K., & Opoku, W. (2021). Explaining stock market returns in Sub-Saharan Africa using an alternate uncovered interest rate parity framework. *International Journal of Emerging Markets*, 16(4), 865–882. <https://doi.org/10.1108/IJOEM-02-2019-0136>
- [8] Booth, L., Aivazian, V., Demircug-Kunt, A., & Maksimovic, V. (2001). Capital Structures in Developing Countries. *The Journal of Finance*, 56(1), 87–130. <http://www.jstor.org/stable/222464>
- [9] Bosch-Badia, M.-T., Montllor-Serrats, J., Panosa-Gubau, A.-M., & Tarrazon-Rodon, M.-A. (2017). Corporate real estate, capital structure and value creation. *Journal of European Real Estate Research*, 10(3), 384–404. <https://doi.org/10.1108/JERER-11-2016-0043>
- [10] Campello, M. (2006). Debt financing: Does it boost or hurt firm performance in product markets? *Journal of Financial Economics*, 82(1), 135–172. <https://doi.org/https://doi.org/10.1016/j.jfineco.2005.04.001>
- [11] Chen, Z., Harford, J., & Kamara, A. (2019). Operating Leverage, Profitability, and Capital Structure. *Journal of Financial and Quantitative Analysis*, 54(1), 369–392. <https://doi.org/DOI: 10.1017/S0022109018000595>
- [12] Cheng, Y., Liu, Y., & Chien, C. (2010). 10.5897@AJBM.9000127.pdf. *African Journal of Business Management*, 4(12), 2500–2507. <http://www.academicjournals.org/AJBM>
- [13] Chin, W. W., & Dibbern, J. (2010). An Introduction to a Permutation Based Procedure for Multi-Group PLS Analysis: Results of Tests of Differences on Simulated Data and a Cross Cultural Analysis of the Sourcing of Information System Services Between Germany and the USA BT - Handbook of Par (V. Esposito Vinzi, W. W. Chin, J. Henseler, & H. Wang (eds.); pp. 171–193). Springer Berlin Heidelberg. https://doi.org/10.1007/978-3-540-32827-8_8
- [14] Chow, Y. P., Muhammad, J., Bany-Arifin, A. N., & Cheng, F. F. (2018). Macroeconomic uncertainty, corporate governance and corporate capital structure. *International Journal of Managerial Finance*. <https://api.semanticscholar.org/CorpusID:158956960>
- [15] DeANGELO, H., & ROLL, R. (2015). How Stable Are Corporate Capital Structures? *The Journal of Finance*, 70(1), 373–418. <https://doi.org/https://doi.org/10.1111/jofi.12163>
- [16] Demir, F. (2009). Capital Market Imperfections and Financialization of Real Sectors in Emerging Markets: Private Investment and Cash Flow Relationship Revisited. *World Development*, 37(5), 953–964. <https://doi.org/https://doi.org/10.1016/j.worlddev.2008.09.003>
- [17] Fornell, C., & Larcker, D. F. (1981). Structural Equation Models with Unobservable Variables and Measurement Error: Algebra and Statistics. *Journal of Marketing Research*, 18, 382–388. <https://api.semanticscholar.org/CorpusID:57186647>
- [18] Frank, M. Z., & Goyal, V. K. (2003). Testing the pecking order theory of capital structure. *Journal of Financial Economics*, 67(2), 217–248. [https://doi.org/https://doi.org/10.1016/S0304-405X\(02\)00252-0](https://doi.org/https://doi.org/10.1016/S0304-405X(02)00252-0)
- [19] Fransisca, V., & Herijawati, E. (2022). The Influence of Interest Rate, Exchange Rate, Profitability, and Liquidity on Stock Prices. *ECo-Buss*. <https://api.semanticscholar.org/CorpusID:254556129>
- [20] Gilje, E. P. (2016). Do Firms Engage in Risk-Shifting? Empirical Evidence. *The Review of Financial Studies*, 29(11), 2925–2954. <https://doi.org/10.1093/rfs/hhw059>
- [21] Gill, A., Biger, N., & Mathur, N. (2011). The Influence of Capital Structure on Profitability: Evidence from the United States. *The International Journal of Management*, 28, 3. <https://api.semanticscholar.org/CorpusID:220769924>
- [22] Goddard, J., Tavakoli, M., & Wilson, J. O. S. (2005). Determinants of profitability in European manufacturing and services: evidence from a dynamic panel model. *Applied Financial Economics*, 15, 1269–1282. <https://api.semanticscholar.org/CorpusID:154650553>
- [23] Granzer, W., Kastner, W., & Neugschwandtner, G. (2006). EIBSec: A Security Extension to KNX/EIB. In *Proceedings KNX Scientific Conference 2006* (p. 13).
- [24] Grau, A., & Reig, A. (2021). Operating leverage and profitability of SMEs: agri-food industry in Europe. *Small Business Economics*, 57(1), 221–242. <https://doi.org/10.1007/s11187-019-00294-y>
- [25] Groth, J. C., & Anderson, R. C. (1997). Capital structure: perspectives for managers. *Management Decision*, 35(7), 552–561. <https://doi.org/10.1108/00251749710170529>
- [26] Ho, L., Lu, Y., & Bai, M. (2020). Liquidity and speed of leverage adjustment. *Australian Journal of Management*, 46(1), 76–109. <https://doi.org/10.1177/0312896220918913>
- [27] Jensen, M. C. (1986). Agency Costs of Free Cash Flow, Corporate Finance, and Takeovers. *The American Economic Review*, 76(2), 323–329. <http://www.jstor.org/stable/1818789>
- [28] Karimi, G. (2020). Influence of Financial Leverage on the Trend of Stock Pricing Fluctuations in Companies Listed in Tehran Stock Exchange. *Propósitos y Representaciones*. <https://api.semanticscholar.org/CorpusID:222226456>
- [29] Kiymaz, H. (2013). Stock returns, volatility spillover, and other financial issues in emerging markets. *International Journal of Emerging Markets*, 8(2). <https://doi.org/10.1108/ijoem.2013.30108baa.001>
- [30] Kodongo, O., Mokoaleli-Mokoteli, T., & Maina, L. K. (2014). Capital Structure, Profitability and Firm Value: Panel Evidence of Listed Firms in Kenya. *Corporate Finance: Capital Structure & Payout Policies EJournal*. <https://api.semanticscholar.org/CorpusID:53586539>
- [31] Kraus, A., & Litzenberger, R. H. (1973). A State-Preference Model of Optimal Financial Leverage. *The Journal of Finance*, 28(4), 911–922. <https://doi.org/10.2307/2978343>
- [32] Krishnan, V. S., & Moyer, R. C. (1997). Performance, capital structure and home country: An analysis of Asian corporations. *Global Finance Journal*, 8(1), 129–143. [https://doi.org/https://doi.org/10.1016/S1044-0283\(97\)90010-7](https://doi.org/https://doi.org/10.1016/S1044-0283(97)90010-7)
- [33] Lin, Q. (2015). Growth options influence on leverage: Evidence from China. *Pacific-Basin Finance Journal*, 34, 152–168. <https://doi.org/https://doi.org/10.1016/j.pacfin.2015.07.004>
- [34] Liu, H., Chiang, Y.-M., & Tsai, H.-J. (2020). The influence of loan rollover restrictions on capital structure adjustments, leverage deviations, and firm values. *Pacific-Basin Finance Journal*, 62, 101384. <https://doi.org/https://doi.org/10.1016/j.pacfin.2020.101384>
- [35] Mahdi, M. A., & Khaddafi, M. (2020). The Influence of Gross Profit Margin, Operating Profit Margin and Net Profit Margin on the Stock Price of Consumer Good Industry in the Indonesia Stock Exchange on 2012–2014. <https://api.semanticscholar.org/CorpusID:229535996>
- [36] Mahmudin, M., Lau, E. A., & Tandirerung, B. (2019). The Influence Of Current Ratio (Cr), Debt To Equity Ratio (Der), Total Asset Turnover (Tat) And Firms Size (Fs) To Return On Equity (Roe) In Mining Companies Listed On The Indonesia Stock Exchange In 2013 -2018. <https://api.semanticscholar.org/CorpusID:212935752>

- [37] Mangesti Rahayu, S., Suhadak, & Saifi, M. (2020). The reciprocal relationship between profitability and capital structure and its influences on the corporate values of manufacturing companies in Indonesia. *International Journal of Productivity and Performance Management*, 69(2), 236–251. <https://doi.org/10.1108/IJPPM-05-2018-0196>
- [38] Mardiyati, U., Ahmad, G. N., & Putri, R. (2012). *Pengaruh Kebijakan Dividen, Kebijakan Hutang Dan Profitabilitas Terhadap Nilai Perusahaan Manufaktur Yang Terdaftar Di Bursa Efek Indonesia (Bei) Periode 2005-2010*. <https://api.semanticscholar.org/CorpusID:168578705>
- [39] Margaritis, D., & Psillaki, M. (2007). Capital Structure and Firm Efficiency. *Journal of Business Finance & Accounting*, 34(9–10), 1447–1469. <https://doi.org/https://doi.org/10.1111/j.1468-5957.2007.02056.x>
- [40] McConnell, J. J., & Servaes, H. (1990). Additional evidence on equity ownership and corporate value. *Journal of Financial Economics*, 27(2), 595–612. [https://doi.org/https://doi.org/10.1016/0304-405X\(90\)90069-C](https://doi.org/https://doi.org/10.1016/0304-405X(90)90069-C)
- [41] Meghanathi, P. D., & Chakrawal, A. K. (2021). Influence of Financial Leverage on Profitability of Reliance Industries LTD. *Journal La Bisecoman*. <https://api.semanticscholar.org/CorpusID:245242710>
- [42] Miller, M. H. (1977). DEBT AND TAXES*. *The Journal of Finance*, 32(2), 261–275. <https://doi.org/https://doi.org/10.1111/j.1540-6261.1977.tb03267.x>
- [43] Modigliani, F., & Miller, M. H. (1958). The Cost of Capital, Corporation Finance and the Theory of Investment. *The American Economic Review*, 48(3), 261–297. <http://www.jstor.org/stable/1809766>
- [44] Modigliani, F., & Miller, M. H. (1963). Corporate Income Taxes and the Cost of Capital: A Correction. *The American Economic Review*, 53(3), 433–443. <http://www.jstor.org/stable/1809167>
- [45] MOLINA, C. A. (2005). Are Firms Underleveraged? An Examination of the Influence of Leverage on Default Probabilities. *The Journal of Finance*, 60(3), 1427–1459. <https://doi.org/https://doi.org/10.1111/j.1540-6261.2005.00766.x>
- [46] Myers, S. C. (1977). Determinants of corporate borrowing. *Journal of Financial Economics*, 5(2), 147–175. [https://doi.org/https://doi.org/10.1016/0304-405X\(77\)90015-0](https://doi.org/https://doi.org/10.1016/0304-405X(77)90015-0)
- [47] Myers, S. C. (1984). The Capital Structure Puzzle. *The Journal of Finance*, 39(3), 575–592. <https://doi.org/10.2307/2327916>
- [48] Myers, S. C., & Majluf, N. S. (1984). Corporate financing and investment decisions when firms have information that investors do not have. *Journal of Financial Economics*, 13(2), 187–221. [https://doi.org/https://doi.org/10.1016/0304-405X\(84\)90023-0](https://doi.org/https://doi.org/10.1016/0304-405X(84)90023-0)
- [49] Nagano, M. (2003). *Determinants of Corporate Capital Structure in East Asia: Are there differences from the Industrialized Countries?* <https://api.semanticscholar.org/CorpusID:199482704>
- [50] Nanda, S., & Panda, A. K. (2018). The determinants of corporate profitability: an investigation of Indian manufacturing firms. *International Journal of Emerging Markets*, 13(1), 66–86. <https://doi.org/10.1108/IJoEM-01-2017-0013>
- [51] Nguyen, T., Bai, M., Hou, Y., & Vu, M.-C. (2021). Corporate governance and dynamics capital structure: evidence from Vietnam. *Global Finance Journal*, 48, 100554. <https://doi.org/https://doi.org/10.1016/j.gfj.2020.100554>
- [52] Opler, T. C., & Titman, S. (1994). Financial Distress and Corporate Performance. *The Journal of Finance*, 49(3), 1015–1040. <https://doi.org/10.2307/2329214>
- [53] Pattitoni, P., Petracci, B., & Spisni, M. (2014). Determinants of profitability in the EU-15 area. *Applied Financial Economics*, 24, 763–775. <https://api.semanticscholar.org/CorpusID:155080630>
- [54] Phillips, P. A., & Sipahioglu, M. A. (2004). Performance implications of capital structure: evidence from quoted UK organizations with hotel interests. *The Service Industries Journal*, 24, 31–51. <https://api.semanticscholar.org/CorpusID:154953210>
- [55] Rajan, R. G., & Zingales, L. (1995). What Do We Know about Capital Structure? Some Evidence from International Data. *The Journal of Finance*, 50(5), 1421–1460. <https://doi.org/https://doi.org/10.2307/2329322>
- [56] Roy, T. S., & Witt, R. C. (1976). Leverage, Exposure Ratios and the Optimal Rate of Return on Capital for the Insurer. *The Journal of Risk and Insurance*, 43(1), 53–72. <https://doi.org/10.2307/251609>
- [57] Ruland, W., & Zhou, P. (2005). Debt, Diversification, and Valuation. *Review of Quantitative Finance and Accounting*, 25(3), 277–291. <https://doi.org/10.1007/s11156-005-4768-0>
- [58] Saputri, D. R., & Bahri, S. (2021). The Influence Of Leverage, Profitability, And Dividend Policy On Firm Value. *International Journal of Educational Research & Social Sciences*. <https://api.semanticscholar.org/CorpusID:246381079>
- [59] Silva Serrasqueiro, Z. M., & Rêgo Rogão, M. C. (2009). Capital structure of listed Portuguese companies. *Review of Accounting and Finance*, 8(1), 54–75. <https://doi.org/10.1108/14757700910934238>
- [60] Tarsono, O. (2021). The Influence Of Debt Equity Ratio, Return On Equity, Net Profit Margin On Stock Prices. *International Journal of Social Science*. <https://api.semanticscholar.org/CorpusID:245060684>
- [61] Titman, S., & Wessels, R. (1988). The Determinants of Capital Structure Choice. *The Journal of Finance*, 43(1), 1–19. <https://doi.org/10.2307/2328319>
- [62] Varela, L. (2017). Sector heterogeneity and credit market imperfections in emerging markets. *Journal of International Money and Finance*, 70, 433–451. <https://doi.org/https://doi.org/10.1016/j.jimonfin.2016.09.006>
- [63] Wald, J. K. (1999). How Firm Characteristics Affect Capital Structure: An International Comparison. *Journal of Financial Research*, 22(2), 161–187. <https://doi.org/https://doi.org/10.1111/j.1475-6803.1999.tb00721.x>
- [64] Weill, L. (2008). Leverage and Corporate Performance: Does Institutional Environment Matter? *Small Business Economics*, 30(3), 251–265. <https://doi.org/10.1007/s11187-006-9045-7>
- [65] Weston, J. F., Besley, S., & Brigham, E. F. (1996). *Essentials of Managerial Finance*. Dryden Press. <https://books.google.co.id/books?id=I5orAQAAIAAJ>
- [66] Zhang, X., & Zhou, H. (2020). Leverage structure and stock price synchronicity: Evidence from China. *Plos One*, 15(7), e0235349. <https://doi.org/10.1371/journal.pone.0235349>