

Identification of Factors Associated with Firm Value in the Mexican Stock Market

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Abstract: This research aims to explore the factors associated with the firm's value in Mexico. A database is built with companies listed on the Mexican stock exchange during the period 2015 to 2019 to avoid the data from being influenced by the effect of COVID-19. Financial companies were excluded. Both cross-sectional and panel regression models were carried out in which the dependent variable is the firm value and the explanatory variables are some financial ratios. Total assets, asset turnover, net income, return on assets, and working capital ratio were significant positive in different models. On the other hand, the variables receivables days and cash conversion cycle were significant negative. It is concluded that adequate management of working capital has a relevant impact on the firm value. It is observed that an increase of one percent in receivable days decreases the firm value by up to 0.49 percent; and that a one percent increase in the cash conversion cycle decreases the company value by up to 0.63. It is concluded that both variables are value drivers of the value of the companies.

Keywords: Firm value, working capital, receivable days, cash conversion cycle, Mexican stock exchange.

INTRODUCTION

One of the main goals in corporate finance is to maximize the value of the company for shareholders. However, to properly carry out a valuation it is necessary to analyze the company's fundamentals, the industry and its competitive environment, and the economy in general, for which different internal and external factors intervene. For this reason, it is important to know what these factors are, and how they are associated with the value of the company. Thorough knowledge of the main factors related to firm value, companies can make decisions to focus their efforts on their strategies for value creation.

These efforts should be a priority for companies, especially considering their future growth plans (Putra et al., 2021), because investor perceptions of the future value creation will influence the value of companies' shares on the stock market.

The value of companies, however, can be measured directly through their market value, or by using ratios or measurements that compare the market share price with its book value, which can help investors or analysts make investment decisions (Sudiyatno et al., 2020).

Although investment decisions depend on multiple factors and considerations that must be analyzed, the main source of information to carry out a detailed analysis of the financial situation of a company is its financial statements (Rajabi & Ebrahimi, 2020), for which in this work, financial

ratios are used to try to explain the value of companies. Furthermore, the factors over which the company's management has control or greater influence are internal or endogenous (Gharaibeh & Qader, 2017).

The objective of this research is to explore the factors associated with the value of publicly-traded companies in the Mexican stock market. In the first part, a literature review is carried out to discover the factors that have been significant for the value of companies in different markets. Then, the construction of the database, the chosen variables, and the development and interpretation of different econometric models are explained. Finally, some conclusions are offered.

STUDIES ON FIRM VALUE IN THE WORLD IN RECENT YEARS

This section explores the main findings in scientific journals related to firm value. To develop a systematic literature review, a search is performed in the Scopus database with the syntax shown in Table 1. Mainly the term "firm value" and its equivalents "company value" and "enterprise value" were searched, as well as the words "factors" or "determinants". The search is limited from the year 2018 to 2023.

With the previous strategy, 42 articles published in journals were found. Three papers were excluded because their dependent variable was not related to the market firm value, and three papers were excluded because the document could not be accessed. Table 2 shows a list of the different authors, as well as dependent variable, methodologies, and main findings (significant variables of the value of the company, both positive and negative).

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Table 1. Search Syntax.

Database	Syntax	Results
Scopus	TITLE (("firm value" OR "company value*" OR "enterprise value") AND ("determinants" OR "factors" OR "drivers")) AND (LIMIT-TO (SRCTYPE, "j")) AND (LIMIT-TO (DOCTYPE, "ar")) AND (LIMIT-TO (LANGUAGE, "English")) AND (LIMIT-TO (PUBYEAR, 2023) OR LIMIT-TO (PUBYEAR, 2022) OR LIMIT-TO (PUBYEAR, 2021) OR LIMIT-TO (PUBYEAR, 2020) OR LIMIT-TO (PUBYEAR, 2019) OR LIMIT-TO (PUBYEAR, 2018))	42

Source: authors with information from Scopus database.

Table 2. Factors that impact Firm Value.

Researchers	Dependent Variable	Method	Positive Relationship	Negative Relationship
(Susbiyani, A. et al, 2023)	Firm Value	Data of the independent board of commissioners, profitability, ISR disclosure and firm’s value of 24 companies. The research model used path analysis.	Independent board of commissioners.	
(Sadiq et al., 2023)	Tobin's Q	Panel regression with data of 56 listed companies in Amman stock exchange covering a time of 2012 to 2016.	Board size, agency cost, price to book value ratio and market capitalization.	Debt.
(Panda et al, 2023)	Firm Value	Linear, non-linear, and non-parametric panel regression models.	Effective tax rates, inflation rates, capital structure and profitability.	
(Abbas et al., 2023)	Tobin's Q	Three-panel data regression models with data of manufacturing firms on the Indonesia Stock Exchange (IDX) between 2014 and 2018.		Leverage.
(Al-Issa et al., 2022)	Tobin's Q	Unbalanced panel data of 386 firms from the S&P 500 index.	ESG engagement, firm’s board size, board diversity, and social engagement.	
(Falzon & Micallef, 2022)	Tobin's Q	Fama & French portfolio formation method and a panel regression with publicly listed firms on the S&P Mid Cap 400, S&P 500, and the S&P Small Cap 600 Index.	ESG score.	
(Febrianto et al., 2022)	Tobin's Q	Fixed-effect model (FEM) and robust standard error with data of listed commercial banks in Indonesia.	Interest rate, ROA, and ROE.	Credit risk and liquidity risk.
(Velte, 2022)	Firm Value	Literature review of 85 quantitative peer-reviewed archival studies.	Integrated reporting adoption and integrated reporting quality.	
(Nicolau & Sharma, 2022)	Firm Value	Review of the literature on the event study methodology applied to tourism and hospitality.	Pro-social activities outside of their profit-centered area of operations.	
(Poretti & Heo, 2022)	Tobin's Q	Data for 194 listed tourism firms from 2012 to 2019, using an event study methodology.	Profitability and productivity.	
(Khan et al., 2021)	Firm Value	Multiple regression with data from listed banks in Bangladesh (2008–2014).	Green disclosure.	
(Olaere et al., 2021)	Firm Value	Panel data technique with data from 63 Asian commercial banks.	Capital adequacy, asset quality, liquid asset ratio and deposit ratio.	Efficiency ratio.
(Meskovic & Zaimovic, 2021)	Tobin's Q	Ordinary least squares (OLS) model using data of Bosnia and Herzegovina.	Risk management model. (A unique index for risk management was created).	

Table 2. Contd...

Researchers	Dependent Variable	Method	Positive Relationship	Negative Relationship
(Yondrichs et al., 2021)	Tobin's Q	Panel data regression analysis, using data of companies listed on the Indonesia Stock Exchange and indexed by IDX30.	Liquidity (current ratio) and profitability (Return on Equity).	Leverage (Debt to Equity Ratio).
(Ignatyuk et al., 2021)	Enterprise Value	Optimal control problem.	Use of leasing to finance investments, diversification of production, and attraction of long-term loans.	
(Anggraini & Zulkifli, 2021)	Tobin's Q	Panel data regression analysis, using data of five cement companies listed on the Indonesia Stock Exchange (IDX).	Return on Equity.	Debt to Equity Ratio.
(Putra et al., 2021)	Tobin's Q	Panel Data Regression using data of companies in the agricultural sector listed on the Indonesia Stock Exchange in the 2013-2018 period.	Profitability (Return on Assets), leverage (Debt to Assets), and firm size (Total Assets).	
(Sudiyatno et al., 2020)	Tobin's Q	Panel data, with data of manufacturing companies listed on the Indonesia Stock Exchange from 2016 to 2018, using multiple regression analysis.	Firm size (Total Assets) and profitability (Return on Equity).	Capital structure (Debt to Equity Ratio) and managerial ownership (percentage of share ownership).
(Kartika et al., 2020)	Tobin's Q	Multiple regression analysis (least square).	Size (Total Assets).	Debt to Equity Ratio.
(Moeljadi, 2020)	Firm Value	Path analysis from 30 banking sector companies listed on the Indonesia Stock Exchange in the 2015-2018 period.	Net interest margin, return on assets (ROA).	
(Liachovicus et al., 2020)	Enterprise Value	Surveys with experts, stakeholders, and based on literature review.	Business model, expertise of the people working in the company and management system, financial performance.	
(Rajabi & Ebrahimi, 2020)	Tobin's Q	OLS and Analytic Hierarchy Process method using data of five companies among ten active industries sector in the Tehran Stock Exchange from 2009 to 2015.	Inflation rate, liquidity growth rate, profit sustainability, opportunity growth, rate of the total price of goods and services.	Financial leverage (Debt to Assets), firm size (Total Assets), profitability (Return on Assets).
(Seok et al., 2020)	Tobin's Q	Two-stage analysis using data of all manufacturing firms in Korea from 2005 to 2014.	The extent of hedging with derivatives (nominal value of derivatives to Total Assets).	Futures/forwards use and swaps use (firms that use derivatives to total number of firms).
(Lestari et al., 2020)	Price to Book Value	Data panel regression using all companies listed on the Indonesia Stock Exchange from 2012 to 2017.	Profitability (Return on Assets) and company size (Total Assets).	Leverage (Debt to Equity).
(Putri & Maksum, 2020)	Tobin's Q	Multiple linear regression analysis using data of manufacturing companies listed in the Indonesia Sharia Stock Index from 2014 to 2018.	The ratio of independent commissioners, profitability (Return on Assets), financial leverage (Debt to Equity), and firm size (Total Assets).	Total audit committee.
(Sugianto et al., 2020)	Tobin's Q	Random effects regression panel model with data of 42 banks listed on the Indonesia Stock Exchange during the period 2010-2015.		Non-performing loans.

Table 2. Contd...

Researchers	Dependent Variable	Method	Positive Relationship	Negative Relationship
(Endri & Fathony, 2020)	Tobin's Q	Panel data regression using companies of the financial sector listed on the Indonesia Stock Exchange from 2013 to 2017.	Dividend policy (<i>Dividend Payout Ratio</i>) and profitability (Return on Assets).	
(Mandala et al., 2019)	Enterprise value	Panel regression model using data of 52 listed Indian manufacturing companies on BSE period of five years from 2013/14 to 2017/18.	Net income, operating cash flow, and age of the company.	Liquidity (current ratio), interest coverage ratio.
(Endri, 2019)	Tobin's Q	Panel data regression model, using data of manufactory companies from Indonesia Stock Index, from 2011 to 2017.	Audit committee (dummy variable) and investment opportunity (Total Asset – Total Equity + (Number of shares outstanding X Stock Closing Price)).	
(Farida et al., 2019)	Price to Book Value	Path analysis using data from 15 insurance issuers listed on the Indonesia Stock Exchange from 2013 to 2017.	Enterprise Risk Management (dummy variable), audit opinion (dummy variable).	
(Ibrani et al., 2019)	Tobin's Q	Logistic regression analysis using data of 42 non-bank and financial companies listed on the Indonesia Stock Exchange (IDX) from 2010 to 2017.		Non-GAAP earnings management (dummy variable).
(Mariana et al., 2019)	Price to Book Value	Multiple linear regression analysis, using data of Real State Sector companies on the Indonesia Stock Exchange from 2015 to 2017.	Leverage (Debt to Equity Ratio) and profitability (Return on Assets).	
(Yuniningsih et al., 2019)	Company Value	Two-stage least-squares using data of 30 companies incorporated in the Jakarta Islamic Index From 2013 to 2016.	Investment and dividends.	
(Kolsi & Attayah, 2018)	Market-to-book ratio	Multiple regression model on 61 companies listed on the Abu Dhabi Stock Exchange from 2010 to 2014.	Corporate Social Responsibility disclosures do not affect firm value.	
(Jati & Anggoro, 2018)	Tobin's Q	Content analysis from the annual report of manufacturing companies in Indonesia from 2012 to 2016.	Disclosure of the Internal Control Structure.	
(Saona & San Martín, 2018)	Sector-adjusted market-to-book ratio	Panel data analysis using data of 609 firms from Argentina, Brazil, Chile, Colombia, Mexico, and Peru from 1997 to 2013.	Ownership concentration (percentage of outstanding shares in the hands of the controlling shareholder), legal enforcement, and regulatory systems (governance performance indexes).	Development of the financial system.

Source: Authors with information from Scopus database.

After analyzing the most relevant literature, we find that the main factors that impact the value of companies are profitability (measured through ROE and ROA), size (measured through the market value of assets), liquidity (measured through current ratio), and leverage (measured through Debt to Equity Ratio). However, no research about enterprise value in the Mexican stock market was detected in this search strategy. Likewise, regardless of the stock market, no findings were found on the importance of proper working capital management in the value of the company.

To measure enterprise value, it was found that variables such as Tobin's Q, the market value, and the Price to Book Value are used. Regarding the methodologies, the use of

panel data was mainly detected, as well as regression analysis. For the above, different databases were used, mainly information from stock markets in different countries during defined time ranges.

MODEL TO ESTIMATE FIRM VALUE IN MEXICO

To explore the factors that impact the value of companies in the Mexican stock market, a database is built with the dependent variable enterprise value (EV) and the explanatory variables return on equity (ROE), return on assets (ROA), total assets (ASSETS), debt to equity ratio (DE), current ratio (CURR_RATIO), receivable days (REC_DAYS), cash

Table 3. Variables, sources, and descriptive statistics.

Variable	Description	Units	Mean	Median	Standard Deviation	Minimum	Maximum
Enterprise value (EV)	Value of the company	Millions of Mexican pesos	91,044	25,704	205,711.73	197.1	1'600,196.33
Return on assets (ROA)	Net income / Total average assets	%	3.17	2.98	6.22	-12.89	31.39
Return on equity (ROE)	Net income / Equity	%	1.56	6.33	35.46	-310.2	72.5
Total assets (ASSETS)	Company assets	Millions of Mexican pesos	80,146	27,927	174,892.72	188.1	1'451,779.6
Debt to equity ratio (DE)	Total debt / Average equity	%	151.6	66.31	376.4	0.52	3,000
Current ratio (CURR_RATIO)	Current assets / Current liabilities	Times	2.19	1.64	2.84	0.26	26.92
Receivable days (REC_DAYS)	Accounts receivable / sales * 360	Days	95.67	60.42	107	6.28	596.4
Cash conversion cycle (CCC)	Receivable days + inventory days – payable days	Days	126.3	68.29	188.7	-73.74	924.6
Beta (BETA)	$Cov(R_i, R_m) / Var(R_i)$	Slope	0.60	0.53	0.53	-1.41	2.05
Asset turnover (AT)	Sales / Total assets	Times	0.68	0.66	0.45	0.04	2.3
Net income margin (MARGIN)	Net income / Sales	%	12.56	4.43	99.57	-98.18	987.3
Equity multiplier (EM)	Total Assets / Total Equity	Times	3.121	2.2	5.11	-25.6	34.59

Source: Authors with information from Factset.

conversion cycle (CCC), beta (BETA), asset turnover (AT), net income margin (MARGIN), equity multiplier (EQ_MULTIPLIER). It is important to note that the data used are the averages of the aforementioned variables from the years 2015 to 2019, excluding financial companies. Table 3 shows the variables, their description, the units or scale, and some statistics such as the mean, median, standard deviation, minimum, and maximum.

Table 4 shows the correlation matrix of the variables. We found that there is a high correlation between variables associated with profitability such as ROA and ROE, as well as ROA and MARGIN. Likewise, there is also a high degree of association between the variables equity multiplier (EM) and debt to equity ratio (DE); and cash conversion cycle (CCC), and receivable days (REC_DAYS). It is important to note

that the highest correlation is between enterprise value (EV) and total assets (ASSETS).

In the following section, econometric models are carried out to estimate the value of the company based on the explanatory variables analyzed above.

MODELS AND RESULTS

Different econometric models were carried out to estimate the enterprise value and determine which variables have a significant impact on it, as well as its direction and magnitude. It should be noted that these first models are carried out with the averages of the variables from the years 2015 to 2019, excluding financial companies. The models that resulted in a better fit and that complied with the validation tests are shown in Table 5.

Table 4. Correlation matrix.

	EV	ROA	ROE	ASSETS	DE	CURR_RATIO	REC_DAYS	CCC	BETA	AT	MARGIN	EM
EV	1											
ROA	0.10	1										
ROE	0.11	0.58	1									
ASSETS	0.95	0.03	0.07	1								
DE	-0.00	-0.18	-0.49	0.01	1							
CURR_RATIO	-0.10	0.10	0.09	-0.1	-0.04	1						
REC_DAYS	-0.15	-0.15	-0.32	-0.13	0.03	0.36	1					
CCC	-0.19	0.05	-0.14	-0.17	0.08	0.39	0.76	1				
BETA	0.21	0.19	0.42	0.23	-0.02	-0.02	-0.19	-0.17	1			
AT	0.10	0.16	0.18	0.03	-0.07	-0.18	-0.43	-0.39	-0.10	1		
MARGIN	-0.03	0.54	0.48	-0.03	-0.08	-0.03	0.23	0.40	-0.04	-0.10	1	
EM	0.03	-0.06	0.30	0.04	0.98	-0.03	-0.11	-0.14	0.22	0.06	-0.07	1

Source: Authors with information from Factset.

Table 5: Estimated regression model for enterprise value.

-	(Model 1*)	(Model 2*)	(Model 3*)	(Model 4)	(Model 5)
-	ln_EV	ln_EV	ln_EV	ln_EV	ln_EV
Constant	-0.123620 (0.7490)	-0.121611 (0.7501)	0.0465947 (0.8962)	12.5861 (0.0000)	11.9531 (0.0000)
ln_ROA	-	0.205287 (0.0028)	0.218260 (0.0011)	0.330628 (0.0354)	0.374997 (0.0169)
ln_ASSETS	1.02343 (0.0000)	1.02008 (0.0000)	1.01012 (0.0000)	-	-
ln_CURR_RATIO	0.169043 (0.0097)	0.125296 (0.0353)	-	-	-
ln_REC_DAYS	-	-	-0.110769 (0.0403)	-	-0.499247 (0.0159)
ln_CCC	-0.117946 (0.0089)	-0.116572 (0.0052)	-	-0.626221 (0.0000)	-
ln_AT	0.302641 (0.0097)	-	-	-	-
ln_MARGIN	0.192981 (0.0024)	-	-	-	-
Observations	65	65	81	65	81
R ² coefficient	0.95	0.95	0.94	0.28	0.18
Adjusted R ²	0.95	0.95	0.93	0.26	0.16
<i>p</i> -value normality test	0.09	0.21	0.88	0.48	0.21
<i>p</i> -value Ramsey Reset test	0.72	0.82	0.66	0.06	0.35
<i>p</i> -value White test	0.02	0.03	0.00	0.29	0.11
<i>p</i> value Breusch Pagan test	0.47	0.82	0.71	0.16	0.14
VIF ln_ROA	-	1.028	1.109	1.005	1.093
VIF ln_ASSETS	1.291	1.254	1.090	-	-
VIF ln_CURR_RATIO	1.180	1.182	-	-	-
VIF ln_REC_DAYS	-	-	1.150	-	1.093
VIF ln_CCC	1.539	1.417	-	1.005	-

VIF ln_AT	1.409	-	-	-	-
VIF ln_MARGIN	1.291	-	-	-	-

Notes: p-value in parenthesis. *Robust standard deviations to correct heteroscedasticity.

Source: Authors with information from Factset.

Model 1 is carried out with logarithmized variables and with robust standard deviations given the presence of heteroscedasticity. ASSETS, CURR_RATIO, AT, and MARGIN are positive significant at one percent. While CCC is significant negative at one percent. The coefficient of determination R squared is 0.95, which indicates high goodness of fit. The model complies with normality and correct specification. It is considered that the model does not have relevant multicollinearity problems given the variance inflation factors (VIF) of less than 10.

In model 2, the logarithmized variables ROA, ASSETS, CURR_RATIO, and CCC are used. The ROA and ASSETS variables are significant positive at one percent. REC_DAYS is significant positive at five percent; and CCC is significant negative at one percent. The coefficient of determination is 0.95, which implies high goodness of fit. The model complies with normality and correct specification. Robust standard deviations are used because the model does not have homoskedasticity. VIFs less than 10 suggest that there are no multicollinearity problems.

Model 3 includes the variables in logarithm ROA, ASSETS, and REC_DAYS. ASSETS and CURR_RATIO are significant positive at one percent; and REC_DAYS is significant negative at five percent. The R squared coefficient is 0.94. The model complies with normality and correct specification. However, standard deviations robust to heteroscedasticity are used. There are no obvious problems of multicollinearity since the VIFs are less than 10.

In model 4, the variables ROA and CCC are used. ROA is significant positive at five percent; and CCC is significant negative at one percent. The coefficient of determination R squared is 0.28. The model complies with normality, correct specification, and homoskedasticity. No multicollinearity problems are detected.

In model 5, the logarithmized variables ROA and REC_DAYS are considered. The ROA variable is significant positive at five percent; while REC_DAYS is significant negative at five percent. The coefficient of determination R squared is 0.18. The model complies with normality, correct specification, homoscedasticity, and non-multicollinearity.

To have more data, a data panel is carried out with the available information of the previously analyzed variables of the non-financial companies listed on the stock exchange from the years 2015 to 2019. It is important to note that models with fixed and random effects were run. However, the coefficients were not significant, or the signs of some of them were not consistent with the literature. The models with the best fit are reported in Table 6.

In the first panel regression model, ASSETS, CURR_RATIO, CCC, AT, and MARGIN are used as logarithmized explanatory variables, to explain the logarithm of enterprise value (EV). The logarithmized variables ASSETS, AT, and MARGIN are significant positive at one percent;

and, at five percent, the CURR_RATIO variable. In contrast, the CCC variable is negatively significant at five percent. The model complies with the assumptions of ordinary least squares except for homoscedasticity. For this reason, robust standard deviations were used. Similarly, it is assumed that there are no multicollinearity problems since the VIFs are less than 10. The coefficient of determination R squared is 0.93.

In the second panel model, the logarithmized variables ASSETS, AT, and MARGIN are positively significant, at one percent. However, the REC_DAYS variable is negatively significant at five percent. To achieve normality, it was necessary to eliminate the “Urbi Desarrollos Urbanos SAB de CV” observation for the years 2016 and 2017. The model complies with the correct specification but not with homoscedasticity, so it is necessary to use robust standard deviations. Judging by the VIFs, there is no multicollinearity. The coefficient of determination R squared is 0.92.

Regarding the third model, the logarithmized variables ROA and ASSETS are positively significant at one percent, while CURR_RATIO is significant at ten percent. However, the CCC variable is negatively significant at five percent. To achieve normality, it was necessary to eliminate the “Urbi Desarrollos Urbanos SAB de CV” observation for the year 2017. The model complies with the correct specification but not with homoscedasticity, so it is necessary to use robust standard deviations. Based on VIF indicators, there are no multicollinearity problems. The coefficient R squared is 0.93.

In model 4, the log variables ROA and CCC are contemplated. The first is significant positive at one percent; and the second is significant negative at one percent. The model presents an R squared of 0.26 and complies with normality and correct specification. Robust standard deviations are needed in the presence of heteroscedasticity. There is no evidence of multicollinearity when observing the VIF indicators.

Model 5 only includes the logarithmized variable CCC, which is significant negative at one percent, and by itself generates an R-squared coefficient of 0.19. The model complies with normality and correct specification. It is necessary to use robust standard deviations in the presence of heteroscedasticity.

Considering the exposed models, we can observe that a one percent increase in the return on assets (ROA) increases the value of the company between 0.18 and 0.37 percent. An increase of one percent in ASSETS increases between 1.01 and 1.03 percent the firm value. An increase of one percent in CURR_RATIO increases between 0.13 and 0.17 percent the company value. An increase of one percent in REC_DAYS decreases between 0.11 and 0.49 percent the enterprise value. An increase of one percent in CCC decreases between 0.11 and 0.63 percent the value of the company. An increase of one percent in AT increases between 0.24 and

Table 6. Panel regressions to estimate enterprise value.

	(Model 1*)	(Model 2*)	(Model 3*)	(Model 4*)	(Model 5*)
	ln_EV	ln_EV	ln_EV	ln_EV	ln_EV
Constant	-0.238887 (0.5272)	-0.0507599 (0.8813)	-0.190012 (0.6148)	12.5527 (0.0000)	12.6564 (0.0000)
ln_ROA			0.185211 (0.0001)	0.299328 (0.0077)	
ln_ASSETS	1.03369 (0.0000)	1.02426 (0.0000)	1.02911 (0.0000)		
ln_CURR_RATIO	0.145298 (0.0212)		0.125510 (0.0550)		
ln_REC_DAYS		-0.116286 (0.0477)			
ln_CCC	-0.112218 (0.0162)		-0.115145 (0.0136)	-0.620451 (0.0000)	-0.594769 (0.0000)
ln_AT	0.239350 (0.0063)	0.257795 (0.0017)			
ln_MARGIN	0.181628 (0.0000)	0.203503 (0.000)			
Observations	305	391	304	305	378
R ² coefficient	0.93	0.92	0.93	0.26	0.19
Adjusted R ²	0.93	0.92	0.93	0.26	0.19
<i>p</i> -value normality test	0.11	0.06	0.18	0.32	0.35
<i>p</i> -value Ramsey Reset test	0.52	0.56	0.42	0.10	0.46
<i>p</i> -value White test	0.00	0.00	0.00	0.00	0.01
VIF ln_ROA	1.290		1.024	1.003	
VIF ln_ASSETS		1.059	1.260		
VIF ln_CURR_RATIO	1.203		1.198		
VIF ln_REC_DAYS		1.454			
VIF ln_CCC	1.839		1.436	1.003	
VIF ln_AT	1.503	1.913			
VIF ln_MARGIN	1.227	1.452			

Notes: *p*-value in parenthesis. *Robust standard deviations to correct heteroscedasticity.

Source: Authors with information from Factset.

0.30 percent the value of the firm. An increase of one percent in MARGIN increases between 0.18 and 0.20 percent the value of the company.

The following section offers some conclusions on the analysis of the results obtained in the econometric models used as well as the variables that impact the value of listed companies in the Mexican stock market.

CONCLUSIONS

In this research, both cross-section (variable averages) and panel regression models are carried out to define which financial ratios have a significant impact on the value of Mexican listed companies. According to the results obtained, the variables return on assets (ROA), assets (ASSETS), current ratio (CURR_RATIO), asset turnover (AT), and net margin (MARGIN) are significant positive. On the other hand, the variables receivable days (REC_DAYS) and cash conversion cycle (CCC) are significant negative.

In the literature review, it was observed that the main factors that impact the value of companies are profitability (measured through ROE and ROA), size (measured through the value of assets), liquidity (current ratio), and leverage (debt to capital ratio). However, it is not detected that variables associated with the proper management of working capital are explored.

In this article, it is proposed to include, in addition to the variables suggested by the literature, indicators associated with working capital management such as receivable days and cash conversion cycle. In the understanding that these variables would result significant negative since they imply a lower capacity for collection and recovery of the cash invested in accounts receivable and inventories. It is considered that the relationship of these variables with enterprise value is the main contribution of this research.

The relationship between working capital management and the Free Cash Flow of companies listed on the stock market is strengthened with the idea that the greater the li-

quidity, the greater the Free Cash Flow and, therefore, the greater the present value of the company.

It is observed that an increase of one percent in receivable days decreases the firm value by up to 0.49 percent; and that a one percent increase in the cash conversion cycle decreases the company value by up to 0.63. It is concluded that both variables are value drivers of the value of the companies. (Nuño-Velasco & Mejía-Trejo, 2022).

REFERENCES

- Abbas, D. S., Ismail, T., Taqi, M., & Yazid, H. (2023). Determinant of company value: evidence manufacturing Company Indonesia. *Quality - Access to Success*, 24(192), 183–189. <https://doi.org/10.47750/QAS/24.192.21>
- Al-Issa, N., Khaki, A. R., Jreisat, A., Al-Mohamad, S., Fahl, D., & Limani, E. (2022). Impact of environmental, social, governance, and corporate social responsibility factors on firm's marketing expenses and firm value: A panel study of US companies. *Cogent Business and Management*, 9(1). <https://doi.org/10.1080/23311975.2022.2135214>
- Anggraini, D., & Zulkifli. (2021). Internal determinants of company value with leverage as a moderating variable. *International Journal of Enterprise Network Management*, 12(4), 312–324. <https://doi.org/10.1504/IJENM.2021.119661>
- Bouslah, K., Hmaïtane, A., Kryzanowski, L., & M'Zali, B. (2022). CSR Structures: Evidence, Drivers, and Firm Value Implications. *Journal of Business Ethics*. <https://doi.org/10.1007/s10551-022-05219-6>
- Choi, J. J., Ju, M., Kotabe, M., Trigeorgis, L., & Zhang, X. T. (2018). Flexibility as firm value driver: Evidence from offshore outsourcing. *Global Strategy Journal*, 8(2), 351–376. <https://doi.org/10.1002/gsj.1181>
- Dratwińska-Kania, B., Ferens, A., & Kania, P. (2023). Transparent Reporting on Financial Assets as a Determinant of a Company's Value—A Stakeholder's Perspective during the SARS-CoV-2 Pandemic and beyond. *Sustainability (Switzerland)*, 15(3). <https://doi.org/10.3390/su15032065>
- Endri. (2019). Determinant of firm's value: Evidence of manufacturing sectors listed in indonesia shariah stock index. *International Journal of Recent Technology and Engineering*, 8(3), 3995–3999. <https://doi.org/10.35940/ijrte.C5258.098319>
- Endri, E., & Fathony, M. (2020). Determinants of firm's value: Evidence from financial industry. *Management Science Letters*, 10(1), 111–120. <https://doi.org/10.5267/j.msl.2019.8.011>
- Falzon, J., & Micallef, R. (2022). ESG Factors: How Are Stock Returns, Operating Performance, and Firm Value Impacted? *Review of Economics and Finance*, 20(1), 144–153. <https://doi.org/10.55365/1923.x2022.20.16>
- Farida, A. L., Roziq, A., & Wardayati, S. M. (2019). Determinant variables of enterprise risk management (ERM), audit opinions and company value on insurance emittents listed in Indonesia stock exchange. *International Journal of Scientific and Technology Research*, 8(7), 288–293. <https://scopus.up.elogim.com/inward/record.uri?eid=2-s2.0-85071829919&partnerID=40&md5=ee041ca7ca31263dc6eca1bf1ef6a22a>
- Febrianto, G. N., Ratnawati, T., & Riyadi, S. (2022). The effect of macroeconomic factor, earning management and financial risk on firms' value: an empirical analysis of listed commercial banks. *International Journal of Economics and Finance Studies*, 14(2), 156–170. <https://doi.org/10.34109/ijefs.20220030>
- Gharabeh, A. M. O., & Qader, A. A. A. (2017). Factors influencing firm value as measured by the Tobin's Q: Empirical evidence from the Saudi Stock Exchange (TADAWUL). *International Journal of Applied Business and Economic Research*, 15(6), 333–358. <https://scopus.up.elogim.com/inward/record.uri?eid=2-s2.0-85019412767&partnerID=40&md5=3c0a6d35aa2d3b38d893256faace553>
- Huang, D. Z.-X. (2021). Environmental, social and governance factors and assessing firm value: valuation, signalling and stakeholder perspectives. *Accounting and Finance*. <https://doi.org/10.1111/acfi.12849>
- Huang, D. Z.-X. (2022). Environmental, social and governance factors and assessing firm value: valuation, signalling and stakeholder perspectives. *Accounting and Finance*, 62(S1), 1983–2010. <https://doi.org/10.1111/acfi.12849>
- Ibrani, E. Y., Faisal, F., & Handayani, Y. D. (2019). Determinant of non-GAAP earnings management practices and its impact on firm value. *Cogent Business and Management*, 6(1). <https://doi.org/10.1080/23311975.2019.1666642>
- Ignatyuk, A., Dikiy, A., Shevtsiv, L., Petlenko, Y., Klymash, N., & Zaitsev, O. (2021). Determination of the company's value under the influence of various factors. *Journal of Optimization in Industrial Engineering*, 14(1), 151–157. <https://doi.org/10.22094/JOIE.2020.677841>
- Jati, A. T., & Anggoro, R. W. (2018). Determinants of internal control disclosure and its impact on company value. *International Journal of Engineering and Technology(UAE)*, 7(3), 127–132. <https://doi.org/10.14419/ijet.v7i3.25.17530>
- Kartika, A., Sunarto, S., Rahman, F. R., & MacHmuddah, Z. (2020). Determinants of capital structure and their effect to company's value: Study in LQ 45 companies listed in Indonesia stock exchange. *Academic Journal of Interdisciplinary Studies*, 9(3), 156–165. <https://doi.org/10.36941/ajis-2020-0051>
- Khan, H. Z., Bose, S., Sheehy, B., & Quazi, A. (2021). Green banking disclosure, firm value and the moderating role of a contextual factor: Evidence from a distinctive regulatory setting. *Business Strategy and the Environment*, 30(8), 3651–3670. <https://doi.org/10.1002/bse.2832>
- Kolsi, M. C., & Attayah, O. F. (2018). Environmental policy disclosures and sustainable development: Determinants, measure and impact on firm value for ADX listed companies. *Corporate Social Responsibility and Environmental Management*, 25(5), 807–818. <https://doi.org/10.1002/csr.1496>
- Lestari, E. P., Astuti, D., & Abdul Basir, M. (2020). The role of internal factors in determining the firm value in Indonesia. *Accounting*, 6(5), 665–670. <https://doi.org/10.5267/j.ac.2020.6.018>
- Liachovicus, E., Skrickij, V., & Podvieszko, A. (2020). MCDM evaluation of asset-based road freight transport companies using key drivers that influence the enterprise value. *Sustainability (Switzerland)*, 12(18). <https://doi.org/10.3390/SU12187259>
- Mandala, G. N., Sirisetti, S., Srinivasa Rao, K., Gandreti, V. R. R., & Gupta, N. (2019). The influence of firm age on the relationship between the capital structure determinants and firm value. *International Journal of Scientific and Technology Research*, 8(11), 2958–2962. <https://scopus.up.elogim.com/inward/record.uri?eid=2-s2.0-85075312186&partnerID=40&md5=67267b10e19023bcb5b52f06cdbc35b1>
- Mariana, C., Andari, D., Susiani, R., & Saudi, M. H. M. (2019). Internal factors and firm value: A case study of Indonesia listed companies. *Journal of Advanced Research in Dynamical and Control Systems*, 11(3Special Issue), 412–416. <https://scopus.up.elogim.com/inward/record.uri?eid=2-s2.0-85069458210&partnerID=40&md5=7540c55139af4ae2105a946318e4a512>
- Meskovic, M. N., & Zaimovic, A. (2021). Risk Management Maturity, its Determinants and Impact on Firm Value: Empirical Evidence from Joint-Stock Companies in Bosnia and Herzegovina. *South East European Journal of Economics and Business*, 16(2), 132–149. <https://doi.org/10.2478/jeb-2021-0019>
- Nicolau, J. L., & Sharma, A. (2022). A review of research into drivers of firm value through event studies in tourism and hospitality: Launching the Annals of Tourism Research curated collection on drivers of firm value through event studies in tourism and hospitality. *Annals of Tourism Research*, 95. <https://doi.org/10.1016/j.annals.2022.103430>
- Nuño-Velasco, R. de J., & Mejía-Trejo, J. (2022). El Capital Intelectual y el Impacto Social de la Innovación Tecnológica para la Valuación de Patentes. *Scientia et PRAXIS*, 2(04), 59–74. <https://doi.org/10.55965/setp.2.04.a4>
- Olalere, O. E., Islam, M. A., Yusoff, W. S., & Mumu, F. E. (2021). Modeling the determinants of firm value of conventional banks: Empirical evidence from asean-5 countries. *Asia-Pacific Social Science Review*, 21(3), 122–136.

- <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85114989993&partnerID=40&md5=cbf9217cf2eed2be8aa4e36d464b81b4>
- Poretti, C., & Heo, C. Y. (2022). COVID-19 and firm value drivers in the tourism industry. *Annals of Tourism Research*, 95. <https://doi.org/10.1016/j.annals.2022.103433>
- Putra, I. G. S., Lestianto, A. A., Putri, D. F., Wijaya, I. D., Fatimah, H. H., & Saffanah, R. H. (2021). Testing of Internal Factors Financial Performance on Firm Value. *Review of International Geographical Education Online*, 11(6), 688–696. <https://doi.org/10.48047/rigeo.11.06.85>
- Putri, S. K., & Maksum, A. (2020). Determinants of firm value and earnings management in Indonesian sharia stock companies. *International Journal of Innovation, Creativity and Change*, 13(6), 305–324. <https://scopus.up.elogim.com/inward/record.uri?eid=2-s2.0-85087377408&partnerID=40&md5=c4d1946e26cce1d70aa395c52a6ec558>
- Rajabi, E., & Ebrahimi, I. (2020). Does financial and economic factors influence firm value of listed company in tehran stock exchange (TSE)? *Ikonicheski Izsledvania*, 29(1), 174–187. <https://scopus.up.elogim.com/inward/record.uri?eid=2-s2.0-85103253129&partnerID=40&md5=92ac62cc5aeb674e679121cbcf0fcde8>
- Sadiq, M., Yousaf, S. U., Anser, M. K., Rashid Khan, H. U., Sriyanto, S., Zaman, K., Van Tu, D., & Anis, S. N. M. (2020). The role of debt financing in the relationship between capital structure, firm's value, and macroeconomic factors: To throw caution to the wind. *Quarterly Review of Economics and Finance*. <https://doi.org/10.1016/j.qref.2020.11.001>
- Sadiq, M., Yousaf, S. U., Anser, M. K., Rashid Khan, H. U., Sriyanto, S., Zaman, K., Van Tu, D., & Anis, S. N. M. (2023). The role of debt financing in the relationship between capital structure, firm's value, and macroeconomic factors: To throw caution to the wind. *Quarterly Review of Economics and Finance*, 87, 212–223. <https://doi.org/10.1016/j.qref.2020.11.001>
- Saona, P., & San Martín, P. (2018). Determinants of firm value in Latin America: an analysis of firm attributes and institutional factors. *Review of Managerial Science*, 12(1), 65–112. <https://doi.org/10.1007/s11846-016-0213-0>
- Seok, S.-I., Kim, T.-H., Cho, H., & Kim, T.-J. (2020). Determinants of hedging and their impact on firm value and risk: After controlling for endogeneity using a two-stage analysis. *Journal of Korea Trade*, 24(1), 1–34. <https://doi.org/10.35611/jkt.2020.24.1.1>
- Sudiyatno, B., Puspitasari, E., Suwanti, T., & Asyif, M. M. (2020). Determinants of Firm Value and Profitability: Evidence from Indonesia. *Journal of Asian Finance, Economics and Business*, 7(11), 769–778. <https://doi.org/10.13106/jafeb.2020.vol7.no11.769>
- Susbiyani, A., Halim, M., & Animah, A. (2022). Determinants of Islamic social reporting disclosure and its effect on firm's value. *Journal of Islamic Accounting and Business Research*. <https://doi.org/10.1108/JIABR-10-2021-0277>
- Taschner, A. (2023). Returnable transport packaging as a company value driver. *Benchmarking*, 30(1), 196–214. <https://doi.org/10.1108/BIJ-06-2021-0311>
- Velte, P. (2022). Archival research on integrated reporting: a systematic review of main drivers and the impact of integrated reporting on firm value. *Journal of Management and Governance*, 26(3), 997–1061. <https://doi.org/10.1007/s10997-021-09582-w>
- Yondrichs, Muliati, Laupe, S., Mayapada, A. G., Jurana, & Ridwan. (2021). The effect of fundamental factors, sustainability reporting, and corporate governance on firm value. *Universal Journal of Accounting and Finance*, 9(6), 1503–1509. <https://doi.org/10.13189/ujaf.2021.090627>
- Yuniningsih, Y., Pertiwi, T. K., & Purwanto, E. (2019). Fundamental factor of financial management in determining company values. *Management Science Letters*, 9(2), 205–216. <https://doi.org/10.5267/j.msl.2018.12.002>

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