yönetim ve ekonomi araştırmaları dergisi
journal of management and economics research

Cilt/Volume:24 Sayı/Issue:1 Mart/March 2026 ss. /pp. 100-115
M. Güneş, N. E. Sadek, http://dx.doi.org/10.11611/yead.1567505

FACTORS AFFECTING THE PROFITABILITY OF PUBLICLY TRADED COMPANIES: EVIDENCE FROM BORSA ISTANBUL

Asst. Prof. Mehmet GÜNEŞ (Ph.D.)*

Std. Nour Eldin SADEK**

ABSTRACT

This study investigates the factors influencing the profitability of companies listed on Borsa Istanbul following their Initial Public Offering (IPO). Using a sample of 28 firms that went public in 2022, excluding real estate and investment companies, we examine the impact of firm age, size, price-to-book ratio, and debt ratio on post-IPO profitability, measured by change in return on assets. Data was collected from the Public Disclosure Platform, and outliers are removed using the ±3 standard deviation method. Through multiple linear regression analysis, the study reveals that these factors do not significantly predict changes in profitability except for the P/B ratio which has some effects on the first year, highlighting the complexity of post-IPO performance in emerging markets like Türkiye. The findings offer valuable insights for investors, analysts, and policymakers interested in understanding the financial dynamics of newly public companies and contribute to the broader discussion on post-IPO profitability determinants.

Keywords: *IPO, Return on Assets (ROA), Financial Performance, Profitability, Borsa Istanbul.*

JEL Codes: *M40, G10, G20.*

* Adana Alparslan Turkes Science and Technology University, Faculty of Economics, Administrative and Social Sciences, Department of International Trade and Finance, E-mail: mtgunes@atu.edu.tr.

**Adana Alparslan Turkes Science and Technology University, Faculty of Economics, Administrative and Social Sciences, Department of International Trade and Finance, E-mail: nourfahmy90@gmail.com.

Makale Geçmişi/Article History

Başvuru Tarihi / Date of Application : 15 Ekim / October 2024
Düzeltme Tarihi / Revision Date : 15 Aralık / December 2025
Kabul Tarihi / Acceptance Date : 29 Aralık / December 2025

Araştırma Makalesi/Research Article

1. INTRODUCTION

The Initial Public Offering (IPO) acts as a significant milestone in a company's history converting it from private to public ownership. Besides being an opportunity for raising capital, IPOs lead companies to be observed by investors, agencies, and analysts. A crucial factor to be checked is profitability, a company's profitability ratios can strongly affect investors' decisions whether to invest in it or not. While most research discuss post-IPO profitability in terms of stock performance, we investigate the companies' profitability directly to address growth from institutions' point of view rather than investors. We shed light on the Turkish stock market named "Borsa Istanbul" or "BIST" which is having an increasing number of public companies in the previous years. From two companies going public for the first time in 2017 to 52 in 2021 and 40 in 2022 Çalışkan (2022). Companies going public for the first time in the calendar year 2022 are included in our sample. Profitability of these companies is checked for as a result of four variables which are the firm's age, size, price-to-book ratio (P/B), and debt ratio. It is of high importance to understand the factors affecting companies' profitability especially for decision makers in the investment field and our research may provide additional factors to be considered and a new application in evaluating investing opportunities.

Variables included are utilized by investment institutions and researchers to evaluate investment opportunities and they are considered from the basis of fundamental analysis. For example, Fama and French (1992) include them in their cross-section analysis to find out possible relationships between such variables and stock returns in the U.S. specifically on NYSE, AMEX, and NASDAQ stocks. In our research, we use a similar approach but instead of applying it on stock returns, we use it for evaluating companies' profitability. In an emerging market like Türkiye we believe that understanding the factors affecting companies' profitability is crucial for the country's future economic position and defining them may act as a catalyst to its way to economic growth.

All the dependent and independent variables are gathered and calculated for each company then a multiple linear regression is applied between them to check for possible relationships, simultaneously considering the influence of all factors. This approach is employed to distinguish between the factors, allowing us to identify which ones show correlation and which do not. Results are summarized and presented through tables and charts. The rest of the paper is structured as follows: the literature review section will discuss previous research related to stock performance predictability and factors used to forecast companies' performance and profitability post-IPOs. The methodology section shows the collection method of data with the formulas used and their calculations in addition to analysis to be performed. The findings section will present the results of the regression analysis followed by an interpretation of them. Finally, the conclusion will summarize the key findings, show limitations, and suggest areas for future research.

2. LITERATURE REVIEW

Many research efforts are directed to predict the movements of stock prices and find the factors which affect them the most. Even though our approach can be considered different since we focus on firms' profitability while most research shows changes in stock prices, there is still main literature in which we refer to in our study. Stock markets are well-known for their high volatility and difficulty in expecting their direction, therefore research in our literature tries to figure out what possible factors can affect stock performance after IPOs. Bhabra and Pettway (2003) show that offering, financial, and operating characteristics have limited relation to the one-year stock returns which is similar to our findings but on the stock price instead of company's profitability.

The history of the factors affecting the profitability of publicly traded companies has developed over time, with scholars examining various variables influencing firm performance. The relationship between capital structure and profitability was the central focus, with Modigliani and Miller (1958) suggesting that capital structure should not affect firm value in perfect markets. However, later research, such as that by Titman and Wessels (1988), challenged this view by emphasizing the role of firm-specific characteristics like size and debt ratios in shaping capital structure decisions. The importance of firm age in profitability also gained recognition, with older firms often showing more stability but lower profitability compared to younger, high-growth firms Kim et al. (2004). Research on IPOs further expanded the understanding of profitability, with studies by Zaremba and Szyszka (2016) and Berk and Peterle (2015) exploring the effects of size, age, and debt ratios on post-IPO performance. Firm size, age, P/B ratio, and debt ratios have consistently been examined as key factors affecting profitability and stock returns. Smaller firms tend to offer higher returns due to their higher risk, while the P/B ratio is often used to predict stock returns, with higher ratios signaling potential overvaluation and lower future returns Fama and French (1992). The age of a firm, reflecting its stage in the business lifecycle, also influences profitability, as older firms typically have more established operations and lower growth potential, affecting their capital structure and profitability Titman and Wessels (1988). Debt ratios, which indicate the level of financial risk, are critical in understanding profitability, with higher debt ratios generally associated with increased risk and reduced profitability, especially in volatile markets Rajan and Zingales (1995). Together, these studies highlight the strength and importance of these factors when analyzing the profitability of publicly traded companies, particularly in the IPO context. Many of these studies, particularly those examining multiple interacting factors, employ various regression models to accurately capture the complex relationships between firm characteristics and performance.

In this study, financial institutions and real estate firms are excluded from the analysis due to their different financial structures, accounting practices, and regulatory frameworks. Financial institutions, such as banks and insurance companies, uses balance sheets filled by financial assets and liabilities, which leads to different capital structures and financial ratios compared to non-financial firms Fama and French, (1992); Demirgüç-Kunt and Huizinga (2000). Additionally, the accounting standards applied to

financial firms, particularly regarding the recognition of income, asset valuation, and provisioning, make it difficult to compare with other industries Penman (2012). Real estate firms also operate under specific dynamics and regulations related to property rights and valuation, which differentiate them from other sectors Claessens and Laeven (2003). These factors, combined with different reporting and disclosure requirements, can negatively affect cross-industry comparisons, making the inclusion of these firms in profitability analyses problematic Dietrich and Wanzenried (2010). As such, following established literature Levine (2005); Damodaran (2012), these sectors are excluded to ensure consistency and accuracy in evaluating the relationship between firm characteristics and profitability.

Research by Arik and Mutlu (2015) covers 120 companies going public between the years 2007 and 2013 in Borsa Istanbul and testing for their operational performance in detail. Operating income measures are calculated with a main base over assets by using cross-sectional regressions. Metrics used includes net income, operating income, and sales all relative to assets. Results supported previous literature by showing operating performance to be declining after IPO. Possible reasons are agency cost, window dressing, and window of opportunity. Authors suggested pre-IPO years to be accessible, the development of new corporate governance practices to increase transparency and reduce the effect of agency cost. They also suggested that their results can be an indicator for the performance of accounting and reporting.

In Taiwan, Lin et al. (2008) compares returns of different stocks having different listing methods by being listed on different indexes. Briefly explained, stocks in Taiwan used to enter a prep-market before trading on the main one and this is supposed to help them perform better. Stocks going public between the years 1997 and 2006 were used by being divided into two samples, first from 1997 to 2001 and second from 2002 to 2006 with the biggest sample having 320 companies. Findings support the hypothesis that companies having longer IPO processes perform better. We understand from this research that continuous flexibility is not necessarily better for companies and their performance**.** Similar approach in the UK presented by Khurshed et al. (2005) showing the benefits of using alternative markets for recently publicly offered companies to prevent their devaluation. Kim et al. (2004) compares pre- and post-IPO performance of firms in Thailand. Results show that firms going public between 1987-93 perform better before going public, suggesting that managers of small firms especially need to plan enough before going public.

Zaremba and Szyszka (2016) present research considering more markets with a sample of more than 1100 stocks from 11 Central and Eastern European (CEE) countries for the years 2002 to 2014. This paper tests factors in which we use like firms' valuation whether stock prices are overvalued or undervalued. The Capital Asset-Pricing model (CAPM) is used to see the stocks' productivity. Findings show that market newcomers are in better financial position and the fact that IPO firms do not perform worse than non-issuing companies after controlling for size and the book-to-market ratio effects. The focus of this paper is on long-term performance instead of short one. This research helps us find variables

to check for that may also affect companies' performance. By using some of these variables we can implement a similar approach on Borsa Istanbul**.** Berk and Peterle (2015) compares IPO underpricing and long-run underperformance in CEEs and EUs developed capital markets between 2000 and 2009. Findings show that CEEs have higher volatility post-IPO with greater underpricing. Kutsuna et al. (2002) shows how firm management, size, age can affect post-IPO performance in the Japanese market. Carter et al. (2011) provide research with more than six thousand IPOs considering factors like firm size, investment liquidity, and book-to-market ratio.

In Poland research by Jewartowski and Lizińska (2012) took place showing short and long-term performance of companies going public between the years 1998 and 2008. To check for volatility, standard deviation of early aftermarket returns for 25 days after offering excluding the IPO day was measured. Gains in the short-term are relatively high, while those for the long-term are seen to be decreasing. Long-term performance analysis uses variables in which we use some of them in our study including firm size, market-to-book value, return on equity, and volatility. A significant three-year underperformance can be observed in the long run by using the BHAR model. Firms with smaller size show an increased underperformance compared to bigger ones and more profitable companies underperform the market much more than less-profitable companies in the long-term. Aggarwal and Rivoli (1990) explain the abnormal returns of recently offered stocks to be resulted by firms underpricing their stocks. Another reason can be the possible early aftermarket inefficiency as suggested by the research.

More recent paper by Çalışkan (2022) focusing on companies going public in Borsa Istanbul in the year 2021 provides strong evidence of abnormal returns followed-up by a relatively strong decrease in stock prices. The author suggests that companies do act in a way in the valuation process, so they offer their stocks with prices that are lower than their current value resulting in the stock being undervalued. It mentions the observable decrease in the share of foreign investors in Borsa Istanbul which drives the Turkish government to motivate public companies to go public. This approach leads to a possible decrease in the quality of shares being offered, therefore authors suggest that investors do enough research and analysis prior investing in an IPO. It is suggested that investors sell their newly offered stocks after 30 days of the IPO as the results show, since there is a high probability of the stocks' prices falling after that period. Although this research focuses on factors affecting stock prices, it provides our study with certain points to focus on like valuation, size, profitability measures, and the possible uncertainty of newly offered stocks in the Turkish market.

Methods used in other studies are also investigated supporting this paper in building the hypothesis and looking for relatable variables representing the sample we are testing. We see in the literature that studies took place in different parts of the world showing various results which shows that companies' performance and their determinants have different ways to be assessed. Next section discusses the evaluation of these determinants and their effects on profitability of companies.

3. EVALUATION OF FACTORS THAT MAY INFLUENCE PROFITABILITY

3.1. Methodology

Panel data for all 40 companies going public in 2022 is collected from their prospectus and the Public Disclosure Platform (PDP). Due to their different operations, real estate and investment companies are excluded from the sample. Raw data collected includes firm's age, total assets and liabilities as recorded on the prospectus, IPO price, number of common shares, total assets and net incomes for the previous three years. In the next section there are more information about the data and how they are calculated and used. The ±3 standard deviation method is used to detect and eliminate outliers. Outliers are identified by calculating z-scores, which are determined using the formula:

$$z = \frac{X - \mu}{\sigma} \qquad (1)$$

Where X represents the individual data point, μ is the mean of the dataset, and σ is the standard deviation. Data points with z-scores beyond +3 or -3 are considered outliers and were excluded from the analysis. Four companies are detected as outliers and are removed from the final sample which includes 28 firms.

We use multiple linear regression to observe possible relationships between the four factors representing the independent variables in our model and profitability measures as dependent variables. This approach provides comprehensive evidence regarding the combined and individual potential effect of these factors on profitability, while controlling for the influence of other variables in the model. It also helps in assessing the factors simultaneously, allowing for a more robust identification of those that are correlated. The formula used is expressed as:

$$Y = \beta_0 + \beta_1 \cdot X_1 + \beta_2 \cdot X_2 + \beta_3 \cdot X_3 + \beta_4 \cdot X_4 + \epsilon \qquad (2)$$

Where Y represents each dependent variable (ΔROA1 and ΔROA2), and the terms X_1, X_2, X_3, and X_4 represent each of the independent variables: firm age, company size, P/B ratio, and debt ratio, respectively. The coefficient β_0 is the y-intercept, showing the baseline level of the dependent variable when all independent variables are zero. The coefficients β_1, β_2, β_3, β_4 represent the slopes for each independent variable, indicating how much Y changes for a one-unit change in that specific independent variable, while holding all other independent variables constant. The error term ϵ accounts for the variability in Y that is not explained by the model. The following section offers an in-depth analysis of the variables applied into the model, elaborating on their definitions, measurements, and the rationale behind their inclusion in the study.

We use four different factors that can affect a company's profitability rates after its shares being publicly offered. These factors are firm's age, size, price-to-book ratio, and debt ratio. The firm's age refers to the number of years since the company was officially registered as a commercial entity at the

time of its IPO. How long the firm has been processing is expected to be with high relevance to its profitability given the experience earned in its field and its potential customer loyalty. It is viewed by some literature as a positive indicator and others as negative since companies with new structures have higher flexibility and adaptability giving them an advantage over older firms. While old companies may have increased customer loyalty and high reputation.

The company's size shows the firm's total assets in Turkish Liras "TRY" as noted on its prospectus which is one of the required documents prior to an IPO. A larger company is expected to perform better due to its capabilities like utilizing economies of scale to receive higher margins. Also, larger firms have more financial freedom whether to invest in R&D departments or to join other corporation in mega projects, they can be involved in activities with higher risk than smaller firms. They are less volatile to market downturns since they usually have large and diversified portfolios hedging them from possible risks.

The Price-to-Book ratio is used to show whether a stock's initial price used in the IPO makes it overvalued or undervalued related to its book value. This indicator is used in previous research and is commonly known as a strong valuation metric. It is calculated by dividing the IPO's price by the book value which is calculated by using data collected from the company's prospectus. This ratio can be a good indicator for the company's status in terms of expected profitability since an overvalued price means that the company is expecting higher profits while an undervalued price shows lower expected profits after publishment. Price-to-Book ratio for company *i* can be explained in the following formula:

$$\text{P/B Ratio}_i = \frac{P_i}{B_i} \qquad (3)$$

Where P_i and B_i denote the IPO price per share and the book value per share, respectively, for company *i*. The book value per share is determined by:

$$B_i = \frac{A_i - L_i}{S_i} \qquad (4)$$

Where A_i and L_i are the total assets and total liabilities of company *i* respectively as recorded on the IPO's prospectus. S_i is the number of outstanding shares of company *i*. By substituting B_i into the P/B Ratio formula, we get:

$$\text{P/B Ratio}_i = \frac{P_i}{\frac{A_i - L_i}{S_i}} \qquad (5)$$

Debt ratio shows how leveraged is a company prior going public and it is calculated by dividing total liabilities by total assets as recorded on the company's prospectus. Again, debt ratio can show the potential for higher profits by more leveraged companies having broader investment opportunities with increased expected returns and vice versa. Debt ratio for company *i* is calculated through the following formula:

$$\text{Debt Ratio}_i = \frac{L_i}{A_i} \quad (6)$$

Since we are testing for profitability, the yearly percent changes in ROA are used to assess the potential effects of the factors earlier. Due to the data available on PDP, we gather total assets and net income for each company for the end of calendar years 2021, 2022, and 2023. Dividing the net income by the corresponding total assets for company *i* we calculate the ROA for year *n*:

$$ROA_{i,n} = \frac{NI_{i,n}}{TA_{i,n}} \quad (7)$$

Where $NI_{i,n}$ represents net income of company *i* in year *n*, and $TA_{i,n}$ represents the total assets of company *i* in year *n.* Then, we calculate the percentage change in ROA from year *n* – 1 to year *n* for company *i* using the following formula:

$$\Delta ROA_{i,n} = \frac{ROA_{i,n} - ROA_{i,n-1}}{ROA_{i,n-1}} \times 100 \quad (8)$$

Where $ROA_{i,n}$ represents the return on assets for company *i* in year *n,* and $ROA_{i,n-1}$ represents the return on assets for the previous year *n* – 1. These formulas provide us with the variables we need to test for potential effect on companies' profitability after an IPO. In the next section we apply the methodology mentioned earlier on these variables to detect whether there is a relationship between the variables or not.

3.2. Findings

Table 1 shows the list of companies in the sample together with both independent and dependent variables calculated according to the formulas described in the previous section. Using the values in this table, we check for the possibility of independent variables affecting dependent ones through multiple linear regression. Data are arranged according to date of IPO where SDTTR is the first company to offer its shares and PNLSN is the last for the year 2022. We notice that the percentage change in ROAs is negative for a big part of the sample, and this is due to the Turkish Ministry of Treasury and Finance requiring inflation accounting in financial reports to have more accurate and realistic numbers (Hazine ve Maliye Bakanlığı, 2023). This may affect our regression results but since the change is relative to the company's profitability we can still find a relationship if our variables are correlated.

We test the combined effect of all independent variables on the two dependent ones using multiple linear regression, as seen in Table 2 for the percentage change in ROA for year one (ΔROA1) and Table 3 for year two (ΔROA2). In Table 2 we see that the variables are not fitting for the percentage change in ROA for year one and the weak relationship between them. Except for the P/B ratio which shows weak significance at 10%. In Table 3 we look for possible effects on the second dependent variable which is percentage change in ROA between 2022 and 2023, in other words one year after IPO.

For the second year, variables show a fit weaker than first one which gives us clue that firms' performance act in different ways compared to the independent variables.

Table 1. Variables for Borsa Istanbul Companies that Went Public in 2022 After Calculation

Independent Variables					Dependent Variables	
Stock Symbol	Age	Size	P/B Ratio	Debt Ratio	ΔROA1*	ΔROA2**
SDTTR	17	549,062,326	1.36	0.48	-68%	50%
ONCSM	14	148,267,172	1.05	0.33	-111%	-297%
PLTUR	20	1,809,790,794	0.51	0.51	-10%	-93%
OZSUB	27	555,967,473	1.30	0.79	81%	-111%
SNICA	40	1,380,597,549	2.39	0.76	-40%	109%
ALFAS	11	971,886,678	2.47	0.78	117%	-14%
AZTEK	26	744,789,528	1.03	0.64	-51%	21%
HKTM	24	279,757,919	1.30	0.64	-132%	66%
BARMA	29	831,362,314	0.94	0.51	-61%	-59%
OBASE	27	164,086,129	1.94	0.54	-107%	-478%
KRPLS	33	433,952,524	2.28	0.63	-169%	-956%
KCAER	38	4,173,285,264	1.22	0.70	109%	19%
MAKIM	15	139,216,553	1.41	0.19	-55%	-4%
EUREN	29	977,325,277	1.17	0.52	6%	-19%
SUNTK	17	1,823,997,242	1.40	0.71	11%	-67%
YYLGD	26	2,825,336,799	1.15	0.73	-70%	-42%
BMSTL	24	604,434,233	1.00	0.69	39%	-91%
IMASM	33	661,577,214	0.55	0.42	57%	-95%
KMPUR	7	2,208,353,772	1.69	0.74	-62%	25%
CONSE	8	2,279,066,366	1.14	0.64	-13%	155%
LIDER	12	942,220,103	1.48	0.73	39%	-36%
SMRTG	8	671,606,992	3.85	0.79	-84%	505%
ENSRI	29	288,264,510	1.27	0.67	-122%	966%
GRSEL	14	444,318,160	1.22	0.67	-17%	170%
GZNMI	7	116,500,979	5.85	0.79	211%	-120%
HTTBT	28	242,845,665	2.55	0.29	-9%	33%
HUNER	8	1,906,810,887	0.35	0.65	-69%	-83%
PNLSN	18	398,063,910	1.75	0.69	-67%	131%

Notes: Data used for calculating the P/B and Debt ratios, and all dependent variables are provided in the Appendix section. *Percentage change in ROA between 2021 and 2022 (Year 1), **Percentage change in ROA between 2022 and 2023 (Year 2).

In Table 2, we present the results for the first year post-IPO profitability (ΔROA1). The overall model is not statistically significant at conventional levels, suggesting that the combined set of independent variables does not significantly predict ΔROA1. The R-squared value of 0.2102 indicates

that approximately 21.02% of the variance in ΔROA1 can be explained by the model, though the Adjusted R-squared is lower at 0.0729 (7.29%), suggesting that the model's explanatory power is modest given the number of predictors. Examining the individual variables, the P/B ratio (Coefficient = 0.2978, p-value = 0.0886) demonstrates a positive and statistically significant relationship with ΔROA1 at the 10% level, holding other variables constant. This suggests that a higher P/B ratio at IPO is weakly associated with an increase in ROA in the first year post-IPO. However, Firm Age, Size, and Debt Ratio do not show statistically significant effects on ΔROA1.

Table 2. Summary of Multiple Linear Regression Results for ΔROA1

Independent Variable	Coefficient (β)	Standard Error	t-Statistic	P-value	R-Squared	Adjusted R-Squared
Intercept	-1.0664382	0.774298763	-1.3772954	0.18167799	0.21021567	0.07286187
Age	-0.0043059	0.016767783	-0.2567934	0.79962145		
Size	2.6998E-10	1.96214E-10	1.3759382	0.18209223		
P/B Ratio	0.29778197	0.167446004	1.77837612	0.08856582*		
Debt Ratio	0.28424631	1.171095099	0.24271838	0.810375		

Notes: The table reflects the uncertainty taking place during the year in which companies went public related to the year before. *Significant at the 10% level (P < 0.10).

Table 3. Summary of Multiple Linear Regression Results for ΔROA2 by Independent Variables

Independent Variable	Coefficient (β)	Standard Error	t-Statistic	P-value	R-Squared	Adjusted R-Squared
Intercept	-1.192069	3.082689837	-0.3866977	0.70253462	0.05763962	-0.1062491
Age	-0.0420279	0.066757015	-0.6295653	0.53518343		
Size	-1.917E-10	7.8118E-10	-0.2454413	0.80829161		
P/B Ratio	-0.3062774	0.66664719	-0.4594295	0.65023871		
Debt Ratio	4.30884299	4.662441856	0.92416016	0.36499782		

Notes: No statistically significant relationship is seen between the variables. P-values are above typical thresholds for significance and R-squared values are very low.

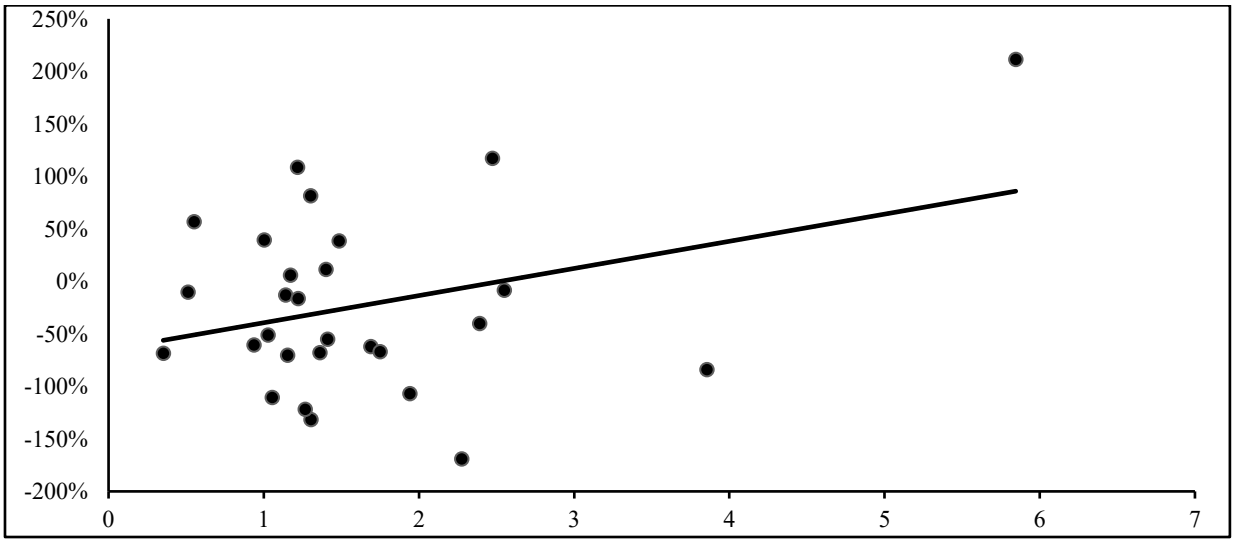
For the second year's profitability (ΔROA2), Table 3 indicates a much weaker model. The overall model is not statistically significant. The R-squared is very low at 0.0576 (5.76%), and the Adjusted R-squared is negative at -0.1062, strongly suggesting that the independent variables, as a group, explain virtually none of the variance in ΔROA2. This shows a significant reduction in predictive power from the first year, with the P/B ratio no longer showing any significant effect. The overall fit of our multiple regression models, as indicated by the R-squared and Adjusted R-squared values, remains relatively low, particularly for ΔROA2. This suggests that while we are considering multiple factors simultaneously, the combined set of variables explains only a small proportion of the variance in post-IPO profitability. There may be many reasons behind the results we find given that more companies are

now able to offer their shares to the public and the Turkish government's efforts to motivate local companies to offer their shares (Sermaye Piyasası Kurulu, 2013).

Although our primary analysis uses multiple linear regression, to further visualize the relationship for the only variable that showed possible significance in the first year's model the P/B ratio, Figure 1 illustrates its effect on ΔROA1. We notice that firms offering their shares with prices above book value tend to perform better in the year of the IPO. Although weak, we can see the slope showing a possible positive relationship between P/B ratio and increase in ROA for the first year given that the correlation coefficient is 0.33. This relation supports literature mentioning that undervaluation leads to underperformance and vice versa. A larger sample with more variables may provide more accurate results and help in understanding the possible relationship with higher correlation and stronger regression. Most of the results show weak or no relationship between the variables supporting the fact that performance of firms going public is hardly predictable.

Due to the result of our multiple linear regression models, we see that our chosen independent variables, when considered together, have no significant combined effect on the dependent variables, except for the P/B ratio which maintains a weak significance on affecting profitability for the year of the IPO. The firm's establishment date is not affecting its profitability so that older firms do not have higher profitability than younger ones and vice versa. The firm's size is not affecting its returns so large firms are not overperforming smaller ones.

Figure 1. The Effect of the Price-to-Book Ratio on the Annual Change in ROA for Firms That Conducted Initial Public Offerings in 2022



Debt ratio has no significant effect as well so companies with increased debt do not generate more income than ones with decreased debt. Only companies' P/B ratio at the time of the offering can affect their profitability on the year of the offering only with no significance for the year after that.

Even though being proved in earlier research, these results suggest that the performance of

companies going public in Borsa Istanbul cannot be predicted through the four variables we use. There are possible reasons which can lead to such results. First is the high uncertainty associated with the Turkish economy in terms of inflation and the devaluation of the Turkish Lira which forced the central bank to reapply inflation accounting standards in reporting financial reporting for corporations. This resulted in many companies re-adjusting their income statements to be negative which affects the ROA variables we use. Second is the Turkish government's efforts in catalyzing the IPO process aiming to attract foreign investments by increasing the number of local companies offering their shares to the public. In the next section we conclude our findings together with the limitations we face and suggestions for future research.

4. CONCLUSION

In this paper we look for factors that may help forecasting the profitability of Turkish firms going public through checking four fundamental variables. These variables are firm's age, size, price-to-book ratio, and debt ratio at the time of IPO. The reason these variables are commonly used is due to their familiarity in financial markets, as the literature relies on them to demonstrate their potential impact on market returns and to identify investment opportunities. We test for profitability by using the firms' percentage change in ROA at the IPO year and one year after. After eliminating outliers with the ±3 standard deviation method, real estate and investment companies, a multiple linear regression model is used for factors for each of the two years' ROA separately bringing results for 28 firms going public in 2022. Our limitations include the relatively small sample size of 28 firms since a larger sample can provide more accurate and stronger results. Other variables can be used in future research other than the four we use to assess the situation from different perspectives. It is advised that future research include larger samples with more variables applying more complex regression models. The long-term results of these factors can be assessed as well not only on ROA, but on many other operational and profitability measures. The application of inflation accounting in Türkiye is affecting the results with more than 90% of our sample having corrected net income figures reducing their ROAs for the years after the offering. Results show lack of significant relationship highlighting the increased uncertainty associated with recently offered Turkish stocks.

Our multiple regression analysis indicates that firm's age, size, and debt ratios do not have a statistically significant effect on companies' profitability after going public, with all variables showing p-values above typical thresholds for significance when considered in the same model. The P/B ratio, however, maintains a weak positive significance at the 10% level with the percentage change in ROA for the offering's year (ΔROA1), showing the importance of valuation procedures for companies to be offered to the public. For the subsequent year (ΔROA2), the model's explanatory power significantly diminished, and none of the independent variables, including the P/B ratio, showed a statistically significant relationship with the change in ROA.

Our findings suggest that predicting profitability of recently offered companies is challenging especially by using the same variables. One of the main purposes of this research is to assess whether the factors affecting stock returns are the same as those influencing companies' profitability. Part of the literature suggests that stock prices generally increase when a firm has a larger size, an older establishment date, a higher P/B ratio, and lower leverage. While this has been proven correct in previous studies, our results show that the factors affecting stock returns are not the same as those influencing firms' profitability. These results lead us to question the factors behind the movement of newly listed stocks in Türkiye and whether we should forecast their prices in the same way as we do for stocks that have been in the market for years. Further research separating IPOs from older stocks will help identify the factors that indicate the expected profitability of companies going public. It is crucial for investors to identify reliable indicators that enable them to make rational investment decisions maximizing their returns. This topic holds significant importance, as capital must be allocated to the most profitable sources to ensure both efficiency and sustainability.

REFERENCES

Aggarwal, R., and Rivoli, P. (1990) "Fads in the Initial Public Offering Market?", Financial Management, 19(4), 45.

Akhigbe, A., Johnston, J., and Madura, J. (2006) "Long-term Industry Performance Following IPOs", The Quarterly Review of Economics and Finance, 46(4), 638-651.

Arik, E., and Mutlu, E. (2015) "Post–initial Public Offering Operating Performance and Its Determinants: Initial Public Offering Characteristics and Corporate Governance Practices", Emerging Markets Finance and Trade, 51(sup2), S62-S83.

Berk, A. S., and Peterle, P. (2015) "Initial and long-run IPO Returns in Central and Eastern Europe", Emerging Markets Finance and Trade, 51(sup6), S42-S60.

Bhabra, H. S., and Pettway, R. H. (2003) "IPO Prospectus Information and Subsequent Performance", Financial Review, 38(3), 369-397.

Carter, R. B., Dark, F. H., Floros, I. V., and Sapp, T. R. (2011) "Characterizing the risk of IPO Long-run Returns: The Impact of Momentum, Liquidity, Skewness, and Investment", Financial Management, 40(4), 1067-1086.

Çalışkan, U. (2022) "Son Dönemlerde Halka Arz Edilen Şirketlerin Hisse Senetlerinde Anormal Getirilerinin Varlığının Sınanması (Testing for the Presence of Abnormal Returns in the Stocks of Recently Publicly Listed Companies)", Avrasya Sosyal Ve Ekonomi Araştırmaları Dergisi (Eurasian Journal of Researches in Social and Economics), 9(4), 313-344.

Claessens, S., and Laeven, L. (2003) "Financial Development, Property Rights, and Growth", The Journal of Finance, 58(6), 2401-2436.

Damodaran, A. (2012) "Investment Valuation: Tools and Techniques for Determining the Value of Any Asset", Ed. 3rd., Wiley.

Demirgüç-Kunt, A., and Huizinga, H. (2000) "Financial Structure and Bank Profitability", Policy Research Working Paper Series 2430. The World Bank.

Dietrich, A., and Wanzenried, G. (2010) "Determinants of Bank Profitability Before and During the Crisis: Evidence from Switzerland", Journal of International Financial Markets, Institutions and Money, 21(3), 307-327.

Fama, E. F., and French, K. R. (1992) "The Ccross-section of Expected Stock Returns", The Journal of Finance, 47(2), 427-465.

Hazine ve Maliye Bakanlığı (Gelir İdaresi Başkanlığı) (2023, December 30) "Vergi Usul Kanunu Genel Tebliği", T.C. Resmî Gazete. DOI: https://www.resmigazete.gov.tr/eskiler/2023/12/20231230M2-13.pdf

Jewartowski, T., and Lizińska, J. (2012) "Short- and Long-term Performance of Polish IPOs", Emerging Markets Finance and Trade, 48(2), 59-75.

KAP. (n.d.) KAP. DOI: https://www.kap.org.tr/en/

Khurshed, A., Paleari, S., and Vismara, S. (2005) "The Operating and Shareprice Performance of Initial Public Offerings: The UK Experience", SSRN Electronic Journal. DOI: https://doi.org/10.2139/ssrn.727704

Kim, K. A., Kitsabunnarat, P., and Nofsinger, J. R. (2004) "Ownership and Operating Performance in An Emerging Market: Evidence from Thai IPO firms", Journal of Corporate Finance, 10(3), 355-381.

Kutsuna, K., Okamura, H., and Cowling, M. (2002) "Ownership Structure Pre- and Post-IPOs and the Operating Performance of JASDAQ Companies", Pacific-Basin Finance Journal, 10(2), 163-181.

Levine, R. (2005) "Finance and Growth: Theory and Evidence", Handbook of Economic Growth, 1, 865-934.

Lin, C. Y., Lee, H. T., and Lee, C. L. (2008) "One More Step, Some More Performance? An Empirical Study on Initial Public Offerings in The Taiwan Emerging Stock Market", Emerging Markets Finance and Trade, 44(4), 6-18.

Modigliani, F., and Miller, M. H. (1958) "The Cost of Capital, Corporation Finance, and the Theory of Investment", American Economic Review, 48(3), 261-297.

Penman, S. H. (2012) "Financial Statement Analysis and Security Valuation, Ed. 5th., McGraw-Hill Education.

Rajan, R. G., and Zingales, L. (1995) "What Do We Know About Capital Structure? Some Evidence from International Data", The Journal of Finance, 50(5), 1421-1460.

Sermaye Piyasası Kurulu (2013, June 22) "Pay Tebliği", T.C. Resmî Gazete. DOI: https://www.resmigazete.gov.tr/eskiler/2013/06/20130622-8.htm

Titman, S., and Wessels, R. (1988) "The Determinants of Capital Structure Choice", The Journal of Finance, 43(1), 1-19.

Zaremba, A., and Szyszka, A. (2016) "Is the Abnormal Post-IPO Underperformance Really Abnormal? The Evidence from CEE Emerging Markets", Emerging Markets Finance and Trade, 52(12), 2721-2739.

KATKI ORANI / *CONTRIBUTION RATE*	**AÇIKLAMA / *EXPLANATION***	**KATKIDA BULUNANLAR / *CONTRIBUTORS***
Fikir veya Kavram / *Idea or Notion*	Araştırma hipotezini veya fikrini oluşturmak / *Form the research hypothesis or idea*	Asst. Prof. Mehmet GÜNEŞ (Ph.D.) Std. Nour Eldin SADEK
Tasarım / *Design*	Yöntemi, ölçeği ve deseni tasarlamak / *Designing method, scale and pattern*	Asst. Prof. Mehmet GÜNEŞ (Ph.D.) Std. Nour Eldin SADEK
Veri Toplama ve İşleme / *Data Collecting and Processing*	Verileri toplamak, düzenlenmek ve raporlamak / *Collecting, organizing and reporting data*	Asst. Prof. Mehmet GÜNEŞ (Ph.D.) Std. Nour Eldin SADEK
Tartışma ve Yorum / *Discussion and Interpretation*	Bulguların değerlendirilmesinde ve sonuçlandırılmasında sorumluluk almak / *Taking responsibility in evaluating and finalizing the findings*	Asst. Prof. Mehmet GÜNEŞ (Ph.D.) Std. Nour Eldin SADEK
Literatür Taraması / *Literature Review*	Çalışma için gerekli literatürü taramak / *Review the literature required for the study*	Asst. Prof. Mehmet GÜNEŞ (Ph.D.) Std. Nour Eldin SADEK

Hakem Değerlendirmesi: Dış bağımsız.

Çıkar Çatışması: Yazar çıkar çatışması bildirmemiştir.

Finansal Destek: Yazar bu çalışma için finansal destek almadığını beyan etmiştir.

Teşekkür: -

Peer-review: Externally peer-reviewed.

Conflict of Interest: The author has no conflict of interest to declare.

Grant Support: The author declared that this study has received no financial support.

Acknowledgement: -