

Impact of the Free Float Ratio on Dividend Yield and Capital Decisions

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Abstract

In this study, the effect of the free float ratio on dividend payout ratio, dividend yield, and paid capital increase in companies traded in Borsa Istanbul is investigated. In the study, data of companies traded on Borsa Istanbul between 2008 and 2022 were used. In the research, OLS, Logit and Probit regression analyzes and cross-table analyzes were applied. According to the results of the research, as the free float ratio increases, the dividend payout ratio and dividend yields decrease, and the probability of paid capital injection increases. As the return on assets of the companies positively affects the dividend yield, it reduces the possibility of making a paid capital increase. The growth rate of companies' sales is also a factor that increases the possibility of paid capital increase. The results of the research confirm the existence of agency costs in Borsa Istanbul.

Key Words: Free Float Ratio, Dividend Yield, Payout Ratio, Agency Costs

JEL Classification: G11, G23, G34

Halka Açıklık Oranının Temettü ve Sermaye Kararlarına Etkisi

Öz

Bu çalışmada, Borsa İstanbul'da işlem gören şirketlerde halka açıklık oranının temettü dağıtım oranı, temettü verimi ve ödenmiş sermaye artırımına etkisi araştırılmıştır. Çalışmada 2008-2022 döneminde Borsa İstanbul'da işlem gören şirketlerin verileri kullanılmıştır. Araştırma EKK, Logit ve Probit regresyon analizleri ve çapraz tablo analizlerinden faydalanılmıştır. Araştırma sonuçlarına göre halka açıklık oranı arttıkça temettü dağıtım oranı ve temettü getirisi azalmakta, ödenmiş sermaye artırma olasılığı artmaktadır. Şirketlerin aktif karlılıkları temettü verimini olumlu etkilediği için ödenmiş sermaye artırımını yapma olasılığını azaltmaktadır. Şirketlerin satışlarının büyüme hızı da ödenmiş sermaye artırımını olasılığını artıran bir unsurdur. Araştırma sonuçları Borsa İstanbul'da vekalet maliyetlerinin varlığını teyit etmektedir.

Anahtar Kelimeler: Halka Açıklık Oranı, Temettü Verimi, Kâr Payı Dağıtım Oranı, Vekalet Maliyetleri

JEL Sınıflandırması: G11, G23, G34

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1. Introduction

One of the most important rights that stock investors have is the payment of dividends. The share of dividends in the SP500's total return between 1940 and 2016 was 27% (Advisor Perspectives, 2016). Some investors consider the dividend payout ratio in their investment decisions (Jiang, 2022). The dividend discount model is widely used to calculate the fair value of a stock. This shows that many investors pay attention to the dividend yield (Han et al., 2021; Miller & Modigliani, 1961). Firms that start paying dividends show higher performance in the long run, while firms that stop paying dividends experience a decline in their long-term returns (Akhigbe & Madura, 1996; Boehme & Sorescu, 2002; Michaely, Thaler, & Womack, 1995).

Different theories in the literature have dealt with the dividend distribution decisions of companies and the relationship between dividend yield and firm value. Modigliani and Miller (1961) argued that the financial structures and dividend policies of companies are not important for investors and stated that the value of a company depends only on the efficiency of its business activities. Lintner (1956) drew attention to the stability in the behavior and policy of companies. Among the important factors in determining the dividend policy are the dividend expectations of the shareholders and the amount of dividends distributed in the past years. According to the financial flexibility theory, the financial structure of companies is one of the determining factors in dividend payment decisions. Myers and Majluf (1984) stated that firms can create fiscal slack by limiting dividends when their investment requirements are modest. According to tax preference theory, investors may not prefer stocks with higher dividend yields due to the relative tax disadvantage of dividends compared to capital gains (Brennan, 1970). Business Cycle Theory states that if large, mature firms overinvest, the dividend payout ratio will decrease. In this case, shareholders may consume less due to the reduction in dividend income and not receive an adequate reward for additional savings. As a result, the public offering of shares of new companies will be limited, and the rate of economic growth will decrease (Mueller, 1972). Signal theory states that managers can make certain decisions to influence external stakeholders. Investors with little knowledge may consider dividend decisions as a signal for their future cash flow (Bhattacharya, 1979). According to the bird in hand theory, investors see dividends as a sure thing because they represent a tangible return on investment (Gordon, 1963; Lintner, 1962). In describing agency theory, Jensen and Meckling (1976) reported that zero agency costs are possible in firms managed by a controlling shareholder that owns 100% of the shares. Shareholder representation in dividend payment decisions can encourage companies to pay higher dividends.

Recent articles examining dividend distribution and ownership structure in the literature have generally focused on the profile of the controlling shareholder. While some studies indicate a positive relationship between family ownership and dividend yield (Al-Najjar & Kilincarslan, 2016; Hasan vs., 2023), others indicate a negative relationship (Kilincarslan, 2021; Rajput & Jhunjhunwala, 2020). There is a positive relationship between board size and dividend distribution (Khan, 2022; Kilincarslan, 2021). The presence of an audit committee increases dividend payouts (Kilincarslan, 2021). Dividend payouts increase with institutional ownership (Bataineh, 2021; Boshnak, 2021; Khan, 2022). There is a positive relationship between concentrated ownership and

dividend payouts (Berzins, Bøhren, & Stacescu, 2018; Lee, 2022; Mancinelli & Ozkan, 2006; Wei & Xiao, 2009). On the other hand, some studies have shown that the dividend payout ratio increases with minority shareholders (Al-Najjar & Kilincarslan, 2016; Hasan et al., 2023; Lee, 2010; Lin et al., 2023; Maury & Pajuste, 2002; Ramli, 2010; Yung & Jian, 2017). Barros et al. (2020) reported that higher free float increases the likelihood of firms paying dividends. CEO duality is negatively related to dividend policy (Boshnak, 2021; Khan, 2022). Managerial ownership has a negative relationship with dividend payouts (Boshnak, 2021; Florackis, Kanas, & Kostakis, 2015; Lin, Huang, & Lee, 2023; Maury & Pajuste, 2002). Academic findings are inconsistent in the relationship between government ownership and dividend payout. Al-Najjar & Kilincarslan (2016), Duqi, Jaafar, & Warsame (2020), and Hasan et al. (2023) stated that government ownership negatively affects dividend payment. On the other hand, Bradford, Chen, & Zhu (2013) and Wang, Manry, & Wandler (2011) reported a positive relationship between government ownership and dividend payout.

Understanding the intricate relationships between various financial metrics is crucial for investors, policymakers, and corporate decision-makers. This study seeks to shed light on the interactions within companies traded on Borsa Istanbul, with a specific focus on the impact of the free float ratio on key dividend-related metrics. The findings of this research are anticipated to provide valuable insights into the behavior of companies listed on Borsa Istanbul. The study hypothesizes that an increase in the free float ratio may lead to a potential decrease in dividend payout ratio and dividend yields. Furthermore, the study explores the correlation between the free float ratio and the likelihood of companies resorting to paid capital increases. In the study, return on assets is examined as a control variable, and thus, companies with high and low profitability levels are analyzed within themselves, eliminating the effect of an important external factor in dividend distribution. Additionally, the growth rate of companies' sales is investigated as a contributing factor that may heighten the probability of paid capital increases. Through a comprehensive analysis of these relationships, the research aims to validate the presence of agency costs within the context of Borsa Istanbul. The confirmation of such costs would underscore the importance of corporate governance mechanisms in mitigating potential conflicts of interest and optimizing shareholder value. By uncovering the relationships between the free float ratio and dividend related metrics, the research endeavors to offer practical insights that can inform strategic decision-making for investors, corporate boards, and regulatory authorities alike.

This article has various contributions to literature. (1) A recent period between 2008 and 2022 was used in the study. Considering that the number of investors in Borsa Istanbul has increased rapidly, especially in the post-2019 period, we have had the opportunity to test the relationship between free float rate and dividend distribution decisions in various periods. (2) In addition to regression analyzes such as Probit and Logit, which are widely used in the literature, cross-table analyzes were also used in the research. In this way, it was possible to analyze the validity of the research findings both in different years and in companies with free float rates at different 10% percentiles. (3) Another contribution of the article to the literature is related to the selection of dependent and independent variables. In the literature, the relationship between the profile of the controlling shareholder and the dividend policy has been examined frequently. However, the relationship between the free float ratio and dividend policy is a relatively understudied area. In

this study, the free float ratio of companies traded on Borsa Istanbul was used. It has been investigated whether the free float ratio affects the dividend payment and capital increase decisions of the companies. The inclusion of paid capital increase decisions, which have not been examined in many other studies, is one of the important contributions of the study. (4) Finally, the fact that the research was conducted on Borsa Istanbul is one of the contributions to literature. Publicly traded companies in Borsa Istanbul are mostly under the control of certain families or the government (Orbay & Yurtoglu, 2006). The existence of preferred shares with management control is quite common in Borsa Istanbul (Ünal & Derdiyok, 2020). In addition, the low financial literacy among investors and the fact that Borsa Istanbul is the market with the highest transaction frequency in the world (Ünal, 2022) create a suitable environment for agency costs.

This paper is organized as follows. A literature review is presented in Section 2. The data and research methods are presented in Section 3. Empirical analysis and findings are presented in Section 4. Robustness tests are presented in Section 5. Last section concludes the article.

2. Literature Review and Hypothesis Development

There is a positive relationship between the share held by the controlling shareholders who have management rights in a company and the protection of shareholder interests (Jensen & Meckling, 1976). Persons who have the power to control the assets of companies can use these funds for their own interests without benefiting minority shareholders in various forms such as direct theft, misuse of company resources, high salaries, asset sale, asset transfer to other related companies (Al-Najjar & Kilincarslan, 2016; Jensen, 1986; Shleifer and Vishny, 1997; Johnson et al., 2000). Many studies in the literature show that the cost of agency decreases as the control level of majority shareholders or external actors such as banks increases (Ang, Cole, & Lin, 2000; Fleming, Heaney, & McCosker, 2005; Singh, & Davidson, 2003). The negative relationship between ownership concentration and corporate environmental responsibility is noteworthy (Chen et al., 2021). If the controlling shareholder has a large share in the company, the same investor has both majority shareholding and control. On the other hand, as the free float ratio increases, the difference between the shareholding ratio and the controlling power widens. This can be a source of motivation for the controlling shareholder to put his own interests above the interests of the company and other shareholders. This situation creates conditions against minority shareholders regardless of the profile of the controlling shareholder (La Porta et al., 2000). Therefore, examining the agency costs based on the free float ratio would be a good choice in terms of representing the interests of the controlling shareholder.

According to the capital asset pricing model, cash flow received today is more valuable than cash flow received in future years (Sharpe, 1964). Although the company can grow and generate higher cash flows in the future if the company uses its current cash effectively by keeping it to itself, the future is full of uncertainties for the non-controlling minority shareholders. Therefore, dividend payments of minority shareholders reduce the risk they take in investment.

Rozeff (1982) reported that increasing dividend payout reduces agency costs, but external financing increases transaction costs. The optimum dividend payout minimizes the sum of these

two costs. Black and Scholes (1973) stated that the dividend policy of companies will also affect the sharing of the total value of the company between bonds and stocks. If the company distributes all its cash resources as dividends to its shareholders, the risk of the company will increase and the value of the company's bonds will decrease. This, in turn, will lead to the depreciation of the assets of the bondholders who lend to the company. Even for modestly sized dividends, a higher dividend is always in favor of shareholders at the expense of the bondholders. Easterbrook (1984) also drew attention to the conflict of interest between bondholders and stockholders. Managers can change the firm's risk by changing the debt-equity ratio. The lower the debt-to-equity ratio, the lower the firm's risk of going bankrupt. Lenders take this into account when deciding what interest rate to charge. If managers repay debt first and then finance new projects from retained earnings, the debt-to-equity ratio will fall. The lower the debt/equity ratio, the lower the risk for managers. In this way, the risk taken by the lenders decreases, but they continue to receive interest. Therefore, shareholders want to encourage managers to take more risks so as not to give away wealth to bondholders. Shareholders can do this by receiving more dividends.

La Porta et al. (2000) reported that if investors are not effectively protected, insiders can easily steal a firm's profits. As investor protection evolves, insiders must engage in more difficult and complex practices, such as establishing intermediary companies from which they can transfer profits. When investor protection is so good, the most insiders can do is overpay themselves, put relatives in management, and take on some wasteful projects. From this point of view, dividend payment means distributing the company's profit to the shareholders and also has the effect of reducing agency costs. Because the resources that can be used by insiders or those who have control of the company are decreasing. Dividend payment not only reduces the cash amount of the company but also limits the managers' range of action, making it difficult for them to make unfair money transfers to themselves without adversely affecting the company's operations. Hussain and Akbar (2022) have shown that dividend payments reduce a firm's cash flows and this diminishes managers' opportunistic behavior toward earnings management practices.

Different results were obtained in articles examining the dividend policies of companies specifically in Borsa Istanbul. According to Kuzucu's (2015) study at Borsa Istanbul between 2006 and 2013, the relationship between leverage, growth rate, profitability and family control with dividends is negative, while the relationship between size, age and P/E ratio is positive. Aydın and Cavdar (2015) reported that there is an insignificant relationship between corporate governance and dividend policy. Takmaz et al. (2021) reported that, according to the results they obtained in their study examining Borsa Istanbul between 1999 and 2015, when investors demanded dividends, companies preferred to meet the request and distribute dividends, and on the contrary, when there was no demand, companies preferred not to pay dividends.

In light of this information, the controlling shareholders may prefer to distribute the excess cash of the company as dividends and reduce the risk they take on the company if they own a large share. On the other hand, as the share ratio of the controlling shareholder decreases, the motivation to distribute dividends will decrease. Because if the cash stays in the company, the controlling shareholder will be able to manage this money as he wishes and use it for his own interests, even

if it is not ethical. Therefore, there will be a negative relationship between the free float ratio and the distribution of company profits as dividends.

H1a. The free float ratio has a negative relationship with the dividend payout ratio.

Regardless of the net profit of the companies, the motivations of the managers to distribute the dividends may be directly related to the shares of the controlling shareholders in the company. Therefore, similar to the dividend payout ratio, there will be a similar relationship for dividend yield.

H1b. The free float ratio has a negative relationship with dividend yield.

Cash dividend distribution reduces the equity of the company and increases the cash in the personal accounts of the shareholders. The opposite is true for a paid capital increase. If the controlling shareholder owns the whole of the company, he/she will make the entire capital increase out of his own pocket, in case he/she decides to increase the paid capital. On the other hand, if the share of the controlling shareholder in the company is low, it will be easier to take this decision since the share of the paid capital increases will be low. Therefore, the higher the free float ratio, the higher the probability of the controlling shareholder deciding to make a paid capital increase.

H2. The free float ratio has a positive relationship with the paid capital increase.

3. Methodology

3.1. Data

In this study, the data of the stocks traded in Borsa Istanbul covering the period 2008-2022 is used. The companies to be included in the study are required to be traded for at least 3 years. This requirement arises because newly public companies often go public due to the need for funds, and their free float rates are often lower compared to other companies. Therefore, it may not be prudent to examine the relationship between the free float ratio and dividend yield for newly public companies. Holdings, finance companies, and investment partnerships are not included in the scope of the research. The number of companies included in the research after meeting the necessary conditions is 271. Annual frequency data is used in the research. The number of observations analyzed within the scope of the research is 3299. The distribution of the companies examined within the scope of the research by years is presented in Table 1.

Table 1. Distribution of the Sample by Years

Year	# of Firms	Year	# of Firms	Year	# of Firms
2008	162	2013	209	2018	255
2009	163	2014	217	2019	260
2010	170	2015	222	2020	271
2011	184	2016	222	2021	271
2012	198	2017	224	2022	271

3.2. Variables

The dividend payout ratio and dividend yield variables are used as dependent variables to determine the dividend distributions of the companies. The paid capital increase is another dependent variable used in equations. With these three variables, it was tried to measure the motivations of companies to pay dividends and increase their paid capital.

Many factors other than shareholder structure can be decisive in dividend distribution decisions. Therefore, different factors are included in the equations using a rich set of control variables. The control variables used take into account growth, capital structure, market value, valuation, profitability, tangibility, and retaining earnings.

First of all, if a company has a high debt ratio, it is an ideal situation that it prefers to improve its capital structure rather than distribute dividends. Therefore, debt-to-assets and interest coverage ratios have been added to the equation. Although the debt-to-earnings ratio is used in some studies (Bodnaruk & Östberg, 2013), the equity item in the financial statements is not very healthy because inflation accounting is not applied in Turkey and the fixed assets of many companies do not show the real value. This ratio shows serious volatility, especially in companies where the equity value is close to zero or negative. A similar problem applies to the debt-to-assets ratio, but its effect is more limited. On the other hand, the ratio of operating profit to interest expenses emerges as an important ratio in terms of the ability to pay debts and generate cash flow.

It is expected that fast-growing companies add their profits to their working capital or make new large investments. Therefore, the sales growth rate variable is included in the equations.

The size of the market values of the companies is one of the important factors that determine the risk they carry and the expected return potential. Companies with a low market value have a lower valuation compared to other companies due to the excess risk they have (Fama & French, 1992). On the other hand, institutional investors and foreign investors prefer companies with a higher market value in Borsa Istanbul (Bolak, Diyarbakirlioglu & Süer, 2013). The market cap variable of the companies also includes the effect of the preferences of institutional investors and foreign investors into the equation.

Another control factor used in the research is valuation. The fact that a company is traded at a premium relative to its profit or book value may indicate rapid growth potential (Chen, Petkova & Zhang, 2008). It would be preferable for a company with a high growth potential not to distribute the profit but to keep it to itself. Due to the high valuation of growth companies, the dividend yield will naturally be low. Variables commonly used in the literature to determine the valuation level include Price to Book (Fama & French, 1992; Bodnaruk & Östberg, 2013), Price to Earnings (Agrawal et al., 2010), and Tobin's Q (Wang, 2015). These variables are added to the equations.

Another factor that affects dividend yield is the profitability of companies. While it is natural for a profitable company to distribute dividends, a loss-making company will not be able to distribute dividends. Another dimension of profitability is related to growth. A company that uses its assets effectively has a high growth potential and it is a reasonable choice to use its profits for growth instead of distributing profits. The return on Assets (ROA) variable is used for profitability.

Some companies have to invest more in fixed assets and capital than other companies. An increase in the amount of fixed assets such as buildings and equipment may also lead to an increase in depreciation. In this case, although companies have high profits, their ability to generate free cash flow is eroded due to their capital investments. The tangibility variable was used to include this effect in the research.

Companies can distribute dividend from their profits in the current year, as well as from the profits they have accumulated in the past years. Some companies do not have the opportunity to distribute profits because they cannot report profits, while some companies do not use this opportunity even though they have it. Retained earnings/shareholder equity variable is used for this dimension.

FFFR, SGR, DTA, ICR, P/B, P/E, TQ, ROA, TAN, and REE variables were winsorized at 1% and 99%. Variables used in the research have been summarized in Table 2.

Table 2. Variables Used in the Research

Acronym	Variable Name	Formula
<i>Dependent Variables</i>		
DPR	Dividend Payout Ratio	Annual Dividends per Share / Earnings per Share
DY	Dividend Yield	Annual Dividend per Share / Stock Price
PCI	Paid Capital Increase	Dummy variable. 1 if the company made a paid capital increase for the specified year, otherwise= 0.
<i>Independent Variables</i>		
FFR	Free Float Ratio	Publicly Traded Shares / Total Outstanding Shares
FFFR	The Change in the Share Float	(FFR2 - FFR1) / FFR1
<i>Control Variables</i>		
SGR	Sales Growth Rate	(Current Period Sales - Prior Period Sales) / Prior Period Sales
DTA	Debt-to-Asset Ratio	Total Liabilities / Assets
ICR	Interest Coverage Ratio	Net Operational Profit / Interest Expense
ln(MC)	Natural Logarithm of Market Capitalization	ln(Market Capitalization)
P/B	Price-to-Book Ratio	Share Price / Book Value per Share
P/E	Price-to-Earnings Ratio	Share Price / Earnings per Share
TQ	Tobin's Q	(Total Market Value of Assets - Total Liabilities) / Total Market Value of Outstanding Stock
ROA	Return on Assets (ROA)	Net Income / Total Assets
TAN	Tangibility	Fixed Assets divided by Total Assets
REE	Retained Earnings / SharesHolder Equity	(Previous Year's Retained Earnings + Current Year's Net Income - Dividends Paid) / Shares Holders Equity
SXX	Industry Average of Dependent Variable	Industry Average of Dependent Variable

3.3. Empirical Approach

In this study, panel data analysis was performed because both cross-section and time series were included in the data set of research. In the research, time and cross-section factors were taken into account by using dummy variables for years and companies. In the first stage of the research, OLS methodology was applied with an unbalanced data set. While analyzing the PCI dummy variable, Logit and Probit models were used. The equations tested in the research are presented below.

In Model 1, F_k shows the fixed effect of the firm, Y_k the fixed effect of the year, i the examined company, t the examined year, ε the error term, $SDPR_{it}$ shows the average dividend payout ratios of the companies in the sector in which the relevant company is in the relevant year.

Model 1:

$$DPR_{it} = F_k + Y_k + \beta_1 FFR_{it} + \beta_2 FFFR_{it} + \beta_3 SGR_{it} + \beta_4 DTA_{it} + \beta_5 ICR_{it} + \beta_6 \ln(MC)_{it} + \beta_7 PB_{it} + \beta_8 PE_{it} + \beta_9 TQ_{it} + \beta_{10} ROA_{it} + \beta_{11} TAN_{it} + \beta_{12} REE_{it} + \beta_{13} SDPR_{it} + \varepsilon_{it} \quad (1)$$

Model 2 is set up for the dividend yield dependent variable, similar to Model 1.

Model 2:

$$DY_{it} = F_k + Y_k + \beta_1 FFR_{it} + \beta_2 FFFR_{it} + \beta_3 SGR_{it} + \beta_4 DTA_{it} + \beta_5 ICR_{it} + \beta_6 \ln(MC)_{it} + \beta_7 PB_{it} + \beta_8 PE_{it} + \beta_9 TQ_{it} + \beta_{10} ROA_{it} + \beta_{11} TAN_{it} + \beta_{12} REE_{it} + \beta_{13} SDPR_{it} + \varepsilon_{it} \quad (2)$$

Paid Capital Increase (PCI) has been defined as dummy variable. So, Probit and Logit models have been used to test PCI variables.

Model 3:

$$Probit(PCI)_{it} = \alpha + \beta_1 FFR_{it} + \beta_2 FFFR_{it} + \beta_3 SGR_{it} + \beta_4 DTA_{it} + \beta_5 ICR_{it} + \beta_6 \ln(MC)_{it} + \beta_7 PB_{it} + \beta_8 PE_{it} + \beta_9 TQ_{it} + \beta_{10} ROA_{it} + \beta_{11} TAN_{it} + \beta_{12} REE_{it} + \beta_{13} SDGR_{it} + \sum_1^n \beta_i Firm_{it} + \sum_1^T \beta_t Year_{it} + \varepsilon_{it} \quad (3)$$

Model 4:

$$Logit(PCI)_{it} = \alpha + \beta_1 FFR_{it} + \beta_2 FFFR_{it} + \beta_3 SGR_{it} + \beta_4 DTA_{it} + \beta_5 ICR_{it} + \beta_6 \ln(MC)_{it} + \beta_7 PB_{it} + \beta_8 PE_{it} + \beta_9 TQ_{it} + \beta_{10} ROA_{it} + \beta_{11} TAN_{it} + \beta_{12} REE_{it} + \beta_{13} SDGR_{it} + \sum_1^n \beta_i Firm_{it} + \sum_1^T \beta_t Year_{it} + \varepsilon_{it} \quad (4)$$

Year dummy variables and firm fixed effects were applied to all models. In addition, sector-specific effects are included by adding sector averages to the equations. While impeccable, this approach alleviates endogeneity concerns arising from unobserved and time-invariant factors at the firm level.

4. Empirical Analysis

Descriptive statistics have been shown in Table 3. Average values are 19.9% for DPR and 1.8% for DY. These values were reported as 25.6% and 2.6%, respectively, by Khan (2022), who examined the companies in the BIST100 index between 2013 and 2019. Al-Najjar and Kilincarslan

(2016), who included the majority of companies in Borsa Istanbul in their work during the 2003-2012 period, reported these values as 24.3% and 2%, respectively. Unlike other studies, this study also includes the period of 2020-2022, when the effects of the Covid-19 pandemic are dominant. If the values for the period 2020-2022 are excluded from this study, DPR is 21.2% and DY is 2.0%, and these values are consistent with other studies in the literature. Saeed and Sameer (2017), in their study covering the 2007-2014 period for India, China, and Russia, found DPR values of 27%, 25%, and 24%, respectively, and DY values of 3.3%, 3%, and 2.8%, respectively. Based on these data, we can assume that the dividend payout ratio and dividend yield in Borsa Istanbul are relatively low in comparison with other important emerging markets.

Table 3. Descriptive Statistics

Description	Mean	Median	Max	Min	SD
Dividend Payout Ratio	0.199	0.000	18.731	0.000	0.556
Dividend Yield	0.018	0.000	1.022	0.000	0.040
Free Float Ratio	0.366	0.324	1.000	0.003	0.220
The Change in the Share Float	0.006	0.000	0.773	-0.940	0.088
Paid Capital Increase	0.051	0.000	1.000	-0.001	0.220
Sales Growth Rate	0.311	0.176	4.000	-1.000	0.654
Debt-to-Asset Ratio	0.527	0.522	2.000	0.006	0.296
Interest Coverage Ratio	7.077	1.542	100.000	-20.000	19.537
Natural Logarithm of Market Capitalization	5.794	5.699	12.425	0.762	2.026
Price-to-Book Ratio	2.904	1.572	32.000	0.109	4.536
Price-to-Earnings Ratio	33.113	12.969	400.000	0.108	62.338
Tobin's Q	1.287	0.644	15.000	0.000	2.030
Return on Assets (ROA)	0.043	0.038	0.400	-0.400	0.113
Tangibility	0.482	0.477	0.997	0.000	0.235
Retained Earnings / Shareholder Equity	-0.005	0.124	5.000	-5.000	1.045

Table 4 presents ordinary correlation matrix of variables in the study. All of the independent and control variables have lower than 0,5 correlation which suggests that multicollinearity is not a problem in the study.

Table 4. Correlation Matrix

	1,00	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1 Dividend Payout Ratio	1.00	0.78	-0.03	-0.13	-0.03	0.01	0.03	-0.03	0.07	-0.01	-0.05	-0.03	-0.02	0.09	-0.24
2 Dividend Yield	0.78	1.00	-0.04	-0.14	-0.01	0.02	-0.01	0.06	0.11	-0.07	-0.15	-0.04	0.11	0.02	-0.13
3 Paid Capital Increase	-0.03	-0.04	1.00	0.02	0.00	0.09	0.05	-0.03	0.00	0.12	0.01	-0.03	-0.02	-0.01	0.00
4 Free Float Ratio	-0.13	-0.14	0.02	1.00	0.13	0.03	0.11	-0.11	-0.15	-0.13	0.04	0.17	-0.13	-0.03	0.00
5 The Change in the Share Float	-0.03	-0.01	0.00	0.13	1.00	0.05	0.01	0.00	0.00	0.08	0.02	-0.01	0.03	-0.07	-0.09
6 Sales Growth Rate	0.01	0.02	0.09	0.03	0.05	1.00	0.15	0.05	0.34	0.30	-0.12	-0.07	0.41	-0.15	-0.11
7 Debt-to-Asset Ratio	0.03	-0.01	0.05	0.11	0.01	0.15	1.00	-0.33	0.23	0.17	0.03	0.46	-0.37	-0.18	-0.15
8 Interest Coverage Ratio	-0.03	0.06	-0.03	-0.11	0.00	0.05	-0.33	1.00	-0.04	0.14	-0.09	-0.18	0.40	-0.12	0.08
9 LN Market Cap.	0.07	0.11	0.00	-0.15	0.00	0.34	0.23	-0.04	1.00	0.27	-0.09	-0.24	0.18	0.25	0.14
10 Price-to-Book Ratio	-0.01	-0.07	0.12	-0.13	0.08	0.30	0.17	0.14	0.27	1.00	0.28	-0.23	0.33	-0.17	-0.05
11 Price-to-Earnings Ratio	-0.05	-0.15	0.01	0.04	0.02	-0.12	0.03	-0.09	-0.09	0.28	1.00	-0.01	-0.25	0.02	0.05
12 Tobin's Q	-0.03	-0.04	-0.03	0.17	-0.01	-0.07	0.46	-0.18	-0.24	-0.23	-0.01	1.00	-0.38	-0.21	-0.11
13 Return on Assets (ROA)	-0.02	0.11	-0.02	-0.13	0.03	0.41	-0.37	0.40	0.18	0.33	-0.25	-0.38	1.00	-0.18	-0.04
14 Tangibility	0.09	0.02	-0.01	-0.03	-0.07	-0.15	-0.18	-0.12	0.25	-0.17	0.02	-0.21	-0.18	1.00	-0.04
15 Retained Earnings / Equity	-0.24	-0.13	0.00	0.00	-0.09	-0.11	-0.15	0.08	0.14	-0.05	0.05	-0.11	-0.04	-0.04	1.00

In Table 5, companies are divided into 10 different deciles with an equal number of companies according to their free float ratios. The average dividend payout ratios for these deciles are reported over the years. There is a significant difference in average dividend payout ratios in different free float deciles. The highest dividend payout rates are found in lower free float deciles. This trend was valid for the majority of the years covered in the study. While this finding does not support the views of the theory of dividend irrelevance, stability theory, tax preference theory and signal theory; it supports the bird in hand theory and the agency theory. Finally, there are significant differences in dividend payout rates, even within the same free float ratio deciles in different years. This indicates that other factors beyond the free float ratio may influence dividend distribution decisions.

Table 5. Average Dividend Payout Ratios of the Shares Grouped in Accordance with the Free Float Ratio, by Year

	1	2	3	4	5	6	7	8	9	10
2009	1.5%	31.0%	15.4%	17.4%	4.8%	12.4%	17.3%	16.4%	22.2%	144.0%
2010	15.9%	29.3%	11.3%	74.2%	17.4%	25.1%	16.2%	19.5%	48.1%	36.2%
2011	12.8%	16.8%	19.1%	14.6%	33.1%	14.9%	24.8%	48.8%	24.4%	16.3%
2012	17.2%	9.9%	10.8%	35.6%	20.0%	20.4%	17.9%	27.9%	45.0%	15.1%
2013	10.1%	11.0%	15.4%	31.7%	21.9%	30.2%	29.3%	24.1%	34.9%	27.2%
2014	9.4%	7.9%	12.9%	21.3%	29.2%	16.3%	31.7%	26.9%	22.2%	19.0%
2015	14.7%	9.2%	28.6%	27.8%	37.9%	23.8%	19.5%	31.4%	27.1%	60.3%
2016	13.6%	13.0%	26.2%	18.0%	21.0%	7.7%	47.6%	22.8%	37.0%	31.4%
2017	31.1%	19.4%	15.2%	20.6%	17.8%	21.9%	32.3%	22.7%	21.6%	14.2%
2018	3.0%	7.9%	14.1%	8.1%	12.2%	25.0%	20.2%	22.6%	29.7%	23.9%
2019	4.3%	12.1%	13.6%	15.6%	11.2%	28.9%	21.5%	27.2%	24.5%	24.3%
2020	0.8%	2.8%	4.6%	5.4%	10.9%	12.7%	6.3%	18.2%	16.7%	6.4%
2021	1.1%	35.1%	8.0%	13.5%	25.6%	28.7%	7.8%	24.6%	42.1%	42.1%
2022	3.3%	10.6%	9.3%	5.6%	15.1%	24.2%	20.2%	19.0%	27.0%	28.0%

Average 9.9% 15.4% 14.6% 22.1% 19.9% 20.9% 22.3% 25.2% 30.2% 34.9%

Note: The table reports the average dividend payout ratios of shares in a given decile grouped by free float ratio in a given year. The deciles formed according to the free float ratios of the shares. 1: highest, 10: lowest.

In Table 6, companies are divided into 10 different groups with an equal number of companies according to their free float ratios. The average dividend yield of these 10 deciles by year is listed. From the table, we can observe that the average dividend yields vary significantly from year to year and in deciles with different free float ratios. In general, stocks with lower free float ratios tend to have higher dividend yields than those with higher free float ratios. Over the years, average dividend yields appear to have been quite volatile. The high dividend yield of companies with a low free float ratio is stable regardless of the year in which it is found. The same is true for companies with a very high free float ratio to have a much lower dividend yield.

Table 6. Average Dividend Yields of the Shares Grouped in Accordance with the Free Float Ratio, by Year

	1	2	3	4	5	6	7	8	9	10
2008	1.3%	1.6%	1.1%	1.3%	1.9%	1.9%	3.0%	4.0%	3.8%	2.0%
2009	0.1%	3.2%	2.0%	1.6%	0.9%	2.2%	2.5%	4.2%	5.3%	9.0%
2010	1.1%	0.6%	0.8%	3.2%	3.1%	1.9%	2.8%	1.5%	3.0%	2.9%
2011	0.7%	1.0%	1.6%	1.4%	2.2%	1.3%	2.2%	2.1%	1.6%	0.8%
2012	1.3%	1.5%	1.1%	3.5%	3.2%	2.6%	2.9%	2.4%	2.8%	2.3%
2013	1.0%	2.1%	1.7%	2.5%	1.6%	2.4%	2.3%	1.8%	1.9%	1.4%
2014	0.7%	0.6%	1.2%	3.2%	3.9%	1.2%	3.0%	2.4%	1.6%	1.3%
2015	1.3%	0.7%	2.6%	2.6%	2.3%	1.9%	1.4%	2.2%	1.6%	2.8%
2016	0.8%	1.6%	1.9%	1.7%	2.0%	1.0%	3.4%	1.5%	2.5%	2.3%
2017	0.8%	1.8%	1.8%	2.2%	1.9%	0.6%	2.9%	2.6%	1.5%	1.7%
2018	0.3%	0.4%	1.5%	1.1%	1.5%	2.3%	1.5%	1.9%	2.5%	2.8%
2019	0.8%	1.6%	2.2%	3.2%	2.0%	3.1%	1.8%	4.0%	3.3%	4.1%
2020	0.1%	0.2%	0.7%	0.7%	1.2%	1.1%	0.5%	1.5%	1.3%	0.7%
2021	0.1%	0.6%	0.6%	0.9%	1.4%	2.7%	0.6%	1.6%	2.7%	1.8%
2022	0.9%	1.2%	1.3%	0.6%	1.5%	3.3%	1.5%	1.7%	2.5%	3.1%
Average	0.8%	1.3%	1.5%	2.0%	2.0%	2.0%	2.2%	2.3%	2.5%	2.6%

Note: The table reports the average dividend yield of shares in a given decile grouped by free float ratio in a given year. The deciles formed according to the free float ratios of the shares. 1: highest, 10: lowest.

Table 7 presents the OLS regression analysis results of equation 1, where the dividend payout ratio is the dependent variable. When panel A is examined, the results of the analysis show that the free float ratio has a negative relationship with the dividend payout ratio and the results are statistically significant. It is seen that the dividend payout ratio decreases as the free float ratio increases. This finding is consistent with Maury and Pajuste (2002), Lee (2010), Ramli (2010), Al-Najjar and Kilincarslan (2016), Yung and Jian (2017), Hasan, et al. (2023) and Lin et al. (2023). In contrast, changes in the free float ratio, debt-to-asset ratio, interest coverage ratio, and Tobin's Q have no significant relationship with the dividend payout ratio. According to financial flexibility theory, there would be a statistically significant relationship between companies' debt ratios and dividend distributions. For this reason, financial flexibility theory was not supported according to research results. It is observed that the dividend payout ratio increases with the increase in the market value and return on assets ratio of the companies. This finding supports business cycle theory's views, which draw attention to the importance of dividend distribution of mature companies for the economy. The positive relationship between profitability and dividend payout ratio is consistent with other studies in the literature (Al-Ajmi and Hussain, 2011; Patra et al., 2012; C. Arko et al., 2014; Al-Najjar and Kilincarslan, 2016; Ankudinov and Lebedev, 2016; Al-Kayed, 2017; Khan, 2021). Other studies in literature also confirm the relationship between size and dividend distribution (Al-Najjar and Kilincarslan, 2016; Barros et al., 2020; Khan, 2021). In Panel B and Panel C, where firm-fixed and year-fixed dummy variables are used, it is seen that the relations regarding the free float ratio and market capitalization are still valid.

Table 7. Determinants of Dividend Payout Ratio

Code	Variable Names	Model 1 - Dividend Payout Ratio (DPR)					
		(Panel A)		(Panel B)		(Panel C)	
		Estimate	p-value	Estimate	p-value	Estimate	p-value
FFR	Free Float Ratio	-0.22	0.00	-0.16	0.06	-0.38	0.04
FFFR	The Change in the Share Float	0.07	0.73	0.17	0.44	0.19	0.43
SGR	Sales Growth Rate	-0.06	0.04	-0.01	0.62	0.02	0.58
DTA	Debt-to-Asset Ratio	-0.04	0.69	-0.02	0.87	-0.21	0.29
ICR	Interest Coverage Ratio	0.00	0.70	0.00	0.41	0.00	0.88
ln(MC)	Natural Logarithm of M. Cap.	0.04	0.00	0.06	0.00	0.09	0.04
P/B	Price-to-Book Ratio	-0.01	0.13	0.00	0.41	-0.01	0.16
P/E	Price-to-Earnings Ratio	0.00	0.13	0.00	0.29	0.00	0.26
TQ	Tobin's Q	-0.01	0.61	-0.01	0.55	0.00	0.89
ROA	Return on Assets (ROA)	0.27	0.37	0.47	0.12	-0.24	0.54
TAN	Tangibility	0.00	0.96	-0.03	0.72	-0.15	0.42
REE	Retained Earnings / Equity	-0.01	0.66	0.00	0.91	-0.04	0.30
SDPR	Industry Average of DPR	0.76	0.00	0.63	0.00		
N		1712		1712		1712	
R ²		0.07		0.09		0.27	
	Firm fixed (dummy variables)	None		None		Yes	
	Period fixed (dummy variables)	None		Yes		Yes	

OLS regression analysis results of equation 2, where dividend yield is the dependent variable, are presented in Table 8. There is a negative relationship between free float ratio and dividend yield, and the result is statistically significant. The correlation coefficients are low because the average of the dividend yields within the scope of the research is only 1.8%. Sales growth rate (-), companies' market cap (+), price-to-book ratio (+) and return on assets (+) variables have a statistically significant effect on dividend yield.

Table 8. Determinants of Dividend Yield

Code	Variable Names	Model 2 - Dividend Yield (DY)					
		(Panel A)		(Panel B)		(Panel C)	
		Estimate	p-value	Estimate	p-value	Estimate	p-value
FFR	Free Float Ratio	-0.01	0.00	-0.01	0.09	-0.02	0.08
FFFR	The Change in the Share Float	0.01	0.47	0.01	0.29	0.02	0.12
SGR	Sales Growth Rate	-0.01	0.00	0.00	0.04	0.00	0.38
DTA	Debt-to-Asset Ratio	-0.01	0.43	0.00	0.49	-0.02	0.04
ICR	Interest Coverage Ratio	0.00	0.25	0.00	0.53	0.00	0.03
ln(MC)	Natural Logarithm of M. Cap.	0.00	0.00	0.01	0.00	0.01	0.03
P/B	Price-to-Book Ratio	0.00	0.00	0.00	0.03	0.00	0.05
P/E	Price-to-Earnings Ratio	0.00	0.12	0.00	0.23	0.00	0.65
TQ	Tobin's Q	0.00	0.90	0.00	0.91	0.00	0.81
ROA	Return on Assets (ROA)	0.07	0.00	0.08	0.00	0.02	0.49
TAN	Tangibility	0.00	0.58	-0.01	0.17	-0.02	0.10
REE	Retained Earnings / Equity	0.00	0.67	0.00	0.53	0.00	0.79
SDY	Industry Average of DY	0.70	0.00	0.63	0.00		
N		1721		1721		1721	
R ²		0.14		0.17		0.40	
Firm fixed (dummy variables)		None		None		Yes	
Period fixed (dummy variables)		None		Yes		Yes	

Table 9 shows the results of the probit regression analysis of equation 3. According to these results, the free float ratio has a statistically significant and positive effect on paid capital decisions. The growth rate in sales and market capitalization are other factors that support capital increase decisions. It is expected that fast-growing companies will make a paid capital increase. On the other hand, there is a negative relationship between the ratio of debt to assets, retained earnings and return on assets, and paid capital increase. It is observed that companies that use debt intensively do not increase their paid capital. On the other hand, it is expected situation that profitable companies and companies that kept their profits from the past years do not make a paid capital increase.

Table 9. Determinants of Paid Capital Increase (Probit Model)

Code	Variable Names	Model 3 - Probit- Paid Capital Increase (PCI)			
		(Panel A)		(Panel B)	
		Estimate	p- value	Estimate	p- value
FFR	Free Float Ratio	1.13	0.00	1.21	0.00
FFFR	The Change in the Share Float	0.84	0.19	0.72	0.25
SGR	Sales Growth Rate	0.19	0.01	0.22	0.00
DTA	Debt-to-Asset Ratio	-0.68	0.08	-0.74	0.05
ICR	Interest Coverage Ratio	0.00	0.38	0.00	0.26
LNMC	Natural Logarithm of M. Cap.	0.08	0.03	0.07	0.05
P_B	Price-to-Book Ratio	0.00	0.76	0.01	0.50
P_E	Price-to-Earnings Ratio	0.00	0.77	0.00	0.78
TQ	Tobin's Q	0.00	0.96	0.01	0.86
ROA	Return on Assets (ROA)	-4.57	0.00	-4.92	0.00
TAN	Tangibility	-0.15	0.61	-0.12	0.68
REE	Retained Earnings / Equity	-0.25	0.00	-0.27	0.00
SPCI	Industry Average of PCI	7.48	0.00		
N		1717		1717	
R ²		0.14		0.12	

Table 10 shows the logit regression analysis results of equation 4. The results here are in agreement with the results obtained in Table 9.

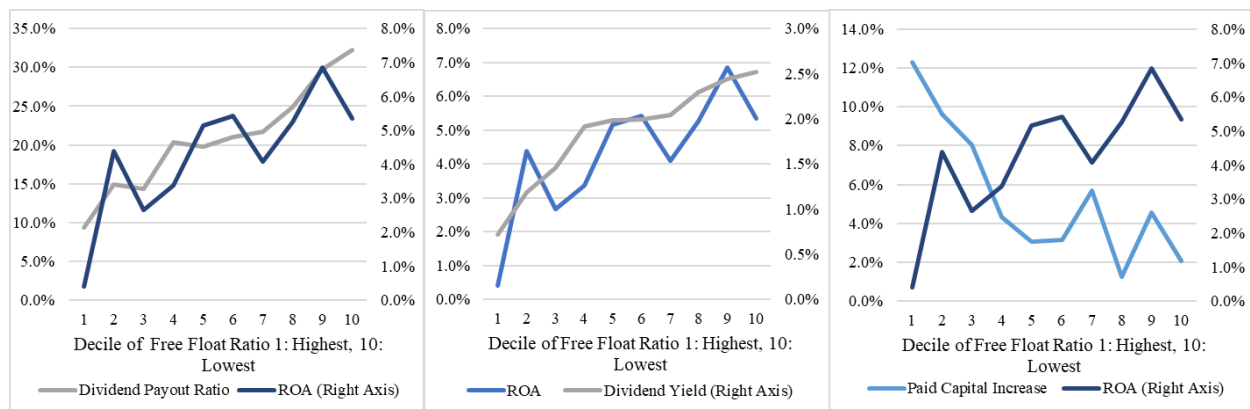
Table 10. Determinants of Paid Capital Increase (Logit Model)

Code	Variable Names	Model 4 - Logit- Paid Capital Increase (PCI)			
		(Panel A)		(Panel B)	
		Estimate	p- value	Estimate	p- value
FFR	Free Float Ratio	2.32	0.00	2.50	0.00
FFFR	The Change in the Share Float	1.88	0.16	1.64	0.21
SGR	Sales Growth Rate	0.32	0.02	0.39	0.01
DTA	Debt-to-Asset Ratio	-1.54	0.06	-1.71	0.04
ICR	Interest Coverage Ratio	0.01	0.34	0.01	0.22
LNMC	Natural Logarithm of M. Cap.	0.18	0.02	0.17	0.03
P_B	Price-to-Book Ratio	0.01	0.81	0.02	0.55
P_E	Price-to-Earnings Ratio	0.00	0.72	0.00	0.76
TQ	Tobin's Q	0.01	0.95	0.02	0.84
ROA	Return on Assets (ROA)	-9.36	0.00	-10.36	0.00
TAN	Tangibility	-0.31	0.61	-0.44	0.46
REE	Retained Earnings / Equity	-0.47	0.00	-0.50	0.00
SPCI	Industry Average of PCI	15.04	0.00		
N		1717		1717	
R ²		0.14		0.12	

5. Robustness

In Figure 1, the relationships between the return on assets ratios and dividend payout ratios, dividend yields, and paid capital increases of the stocks are presented graphically. As the free float ratio decreases, the return on assets, dividend payout ratio, and dividend yield increase. On the other hand, the probability of making a paid capital increase decision decreases as the free float ratio decreases. If the controlling shareholders prioritized the interests of all investors, it would be expected that there would not be such strong relationships between the free float ratio and other variables.

Figure 1 – Relation Between Dividend Payout Ratio, Dividend Yield, Paid Capital Increase and ROA



As the profitability of the companies increases, their dividend distribution potential also increases. A more profitable company has the opportunity to allocate more resources for dividend distribution. On the other hand, as profitability increases, the motivation to expand the existing business will also increase. This is, on the contrary, a factor that reduces the dividend payout rate. Unal and Derdiyok (2020), drawing attention to agency costs, reported that there is a negative relationship between the profitability ratios of companies and their free float ratios. To see the relationship between profitability, the free float ratio, and dividend distribution ratios, the cross-table analysis in Table 11 was performed. Table 11 presents the average dividend payout ratios of companies, grouped by their free float and ROA. It is seen that the dividend payout ratio increases as the free float ratio decreases and the ROA ratio increases. It is seen that there is still a negative relationship between the dividend payout ratio and the free float ratio within the companies with similar return on assets ratios. This confirms the negative relationship between the free float ratio and the company management's decision to distribute dividends. The effect of the free float ratio on dividend payout decisions decreases in the deciles where the return on assets ratio is very low. This is an expected result since profit distribution is not possible in companies with low profitability ratios.

Table 11. Average Dividend Payout Ratios of the Shares Grouped in accordance with Free Float Ratio and ROA

		Free Float Ratio (1: Highest, 10: Lowest)											
		1	2	3	4	5	6	7	8	9	10	Average 1-3	Average 8-10
Return on Assets (1: Highest, 10: Lowest)	1	0.21	0.03	0.24	0.26	0.37	0.32	0.36	0.40	0.56	0.29	0.16	0.41
	2	0.15	0.18	0.28	0.25	0.37	0.33	0.36	0.43	0.63	0.36	0.20	0.48
	3	0.05	0.21	0.25	0.35	0.24	0.27	0.27	0.38	0.40	0.47	0.17	0.42
	4	0.10	0.22	0.19	0.24	0.31	0.23	0.43	0.25	0.33	0.30	0.17	0.29
	5	0.25	0.68	0.15	0.18	0.13	0.21	0.14	0.26	0.20	0.38	0.36	0.28
	6	0.16	0.09	0.12	0.15	0.23	0.18	0.19	0.26	0.26	1.06	0.12	0.53
	7	0.04	0.10	0.20	0.18	0.14	0.30	0.18	0.17	0.16	0.15	0.11	0.16
	8	0.02	0.04	0.04	0.06	0.04	0.18	0.08	0.17	0.06	0.09	0.03	0.11
	9	0.11	0.03	0.01	0.41	0.07	0.11	0.05	0.05	0.03	0.07	0.05	0.05
	10	0.01	0.07	0.00	0.04	0.00	0.00	0.06	0.05	0.00	0.07	0.03	0.04

Note: The table reports the average dividend payout ratios of shares in a given decile grouped by free float ratio and return on assets ratios.

Chichernea et al. (2015) reported that ignoring institutional heterogeneity may lead to incorrect results. Similarly, foreign investors differ from local investors in terms of investment behavior and adopt a long-term investment style. In addition, they do not prefer companies where insider trading and information asymmetry are possible (Batten & Vo, 2015). There is a very strong positive relation between institutional and foreign ownership and market capitalization in Borsa İstanbul (Sensoy, 2017). The publicly traded market value in Borsa İstanbul is also a very strong determinant of the valuation of the companies (Ünal & Çömlekçi, 2021). Table 12 presents the average dividend payout ratios of companies divided into 10% groups according to free float ratios and publicly traded market capitalization criteria. As can be seen in the table, the dividend payout ratios of the companies have increased due to the increase in the publicly traded market value. However, the negative relationship between free float ratio and dividend payout ratio is valid regardless of publicly traded market cap.

Table 12. Average Dividend Payout Ratios of the Shares Grouped in accordance with Free Float Ratio and Market Cap of Publicly Traded Shares

		Free Float Ratio (1: Highest, 10: Lowest)										Average	Average
		1	2	3	4	5	6	7	8	9	10	1-3	8-10
Market Cap. Of Publicly Traded Shares (1: Highest, 10: Lowest)	1	0.29	0.53	0.46	0.34	0.17	0.51	0.50	0.44	0.51	0.67	0.43	0.54
	2	0.30	0.31	0.17	0.42	0.34	0.35	0.51	0.37	0.38	0.58	0.26	0.44
	3	0.12	0.34	0.06	0.32	0.40	0.13	0.14	0.32	0.33	0.45	0.17	0.36
	4	0.07	0.07	0.22	0.23	0.30	0.20	0.21	0.21	0.22	0.32	0.12	0.25
	5	0.16	0.06	0.10	0.09	0.22	0.25	0.01	0.15	0.34	0.94	0.10	0.47
	6	0.00	0.16	0.05	0.50	0.16	0.14	0.18	0.12	0.30	0.13	0.07	0.18
	7	0.03	0.05	0.06	0.11	0.07	0.11	0.07	0.15	0.12	0.58	0.05	0.28
	8	0.02	0.06	0.08	0.04	0.12	0.11	0.06	0.23	0.23	0.37	0.05	0.28
	9	0.00	0.05	0.08	0.06	0.04	0.13	0.12	0.38	0.10	0.04	0.04	0.17
	10	0.00	0.00	0.01	0.02	0.00	0.08	0.04	0.05	0.35	0.10	0.00	0.17

Note: The table reports the average dividend payout ratios of shares in a given decile grouped by free float ratio and publicly traded market cap values.

6. Conclusion

In this study, the effect of the free float ratio on dividend payout ratio, dividend yield, and paid capital increase in companies traded in Borsa Istanbul in the period covering the years 2008-2022 is investigated. According to the results of the research, as the free float ratio increases, the dividend payout ratio and dividend yields decrease, and the probability of paid capital injection increases. There is a positive relationship between the market value of the companies and their dividend payout rates, dividend yields, and the probability of making a paid capital increase. As the return on assets of the companies positively affects the dividend yield, it reduces the possibility of making a paid capital increase. The growth rate of companies' sales is also a factor that increases the possibility of paid capital increase. All these findings are consistent with similar studies related to Turkish stock market (Al-Najjar & Kilincarslan, 2016; Khan, 2022). Unlike this study, Barros et al. (2020) found a positive relationship between free float ratio and dividend payment in their study where they examined companies traded on Euronext stock exchanges between 2000 and 2017. This may be due to the fact that companies listed on Euronext have different conditions in terms of corporate governance standards and management environments.

From a theoretical standpoint, the findings do not support the Modigliani and Miller (1961) theory of dividend irrelevance. As the free float ratio increases, the dividend payout ratio and dividend yield decrease, and the number of companies making paid capital injections increases. Considering Lintner's (1956) stability theory, as the free float ratio increases, dividend yield and stability gain importance, but the results do not confirm this situation. According to the financial flexibility theory, if the company's financial debt is high, the controlling shareholders will prefer to pay debts rather than distribute profits. However, according to the results of the research, there is no statistically significant relationship between dividend distribution and debt-to-assets and interest coverage ratio. According to the tax preference theory, a negative relationship is expected

between the increase in the controlling shareholder's share and the dividend yield. Because the controlling shareholders will prefer lower dividend distribution to avoid tax as their shares increase. This theory is not supported by the results of this research. The business cycle theory points to the importance of dividend distribution by large mature firms for economic activity in the market. The increase in dividend yields as the market cap of companies increases supports this theory. According to the signal theory, the high dividend yield is an important tool to influence external stakeholders, but the negative relationship between the free float ratio and dividend yield does not support this theory. Bird in hand theory states that investors value the cash they receive today more than the cash they will receive in the future. It can be thought that the incentive to distribute dividends will increase as the shares of the controlling shareholders in the company increase in line with their own interests. Research results support the bird in hand theory.

It is thought that the most important contribution of the research is within the framework of agency theory. The agency theory supports the positive relationship between controlling shareholder share and dividend distribution in three different ways. (1) Controlling shareholders may wish to withdraw cash from the company as quickly as possible, according to the bird in hand theory. The fact that they have this motivation while their share in the company is high shows that they prioritize their own interests, not all shareholders. (2) Since the controlling shareholders have control of the company, they also have the opportunity to manage the company's cash. While dividend distribution comes to the fore when their shares are high, it will be more advantageous for them to keep the cash in the company when their shares are lower. As stated by La Porta et al. (2000) it will be possible for them to transfer money unfairly to themselves through various relations in line with their own interests. (3) Dividend distribution of the company limits the cash resources of the company. Limited cash resources, on the other hand, have the effect of increasing productivity by tightening the movement area of company managers. Because mistakes to be made in a company with limited cash assets compared to a company with a high amount of cash will adversely affect the business continuity of the company. When these three factors are evaluated together, it is expected result that the controlling shareholders will support the dividend distribution as their shares increase. In this direction, the results of the research confirm the existence of agency costs in Borsa Istanbul.

According to the results obtained from this study, it is preferable for investors to invest in companies with low free float ratios because it makes their own interests and the interests of the controlling shareholders in line. On the other hand, it is thought that the research has beneficial results in terms of regulatory authorities. The results of this research can be used as a justification for decisions such as determining the index in which the companies will be located, related to allowing a paid capital increase or imposing an obligation to distribute dividends. In future studies on this subject, the relationship between the share of the controlling shareholders and the agency costs can be evaluated in terms of various dimensions such as investment preferences, leverage, and growth rates.

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