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H. Kent Baker, Erhan Kilincarslan



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Why Companies Do Not Pay Cash Dividends: The Turkish Experience***H. Kent Baker**

American University
Kogod School of Business
Department of Finance and Real Estate
4400 Massachusetts Avenue, NW.
Washington, DC, 20016 USA
Email: kbaker@american.edu

Erhan Kilincarslan

University of Huddersfield
Huddersfield Business School
Department of Accountancy, Finance and Economics
Queensgate, HD1 3DH
Huddersfield, UK
Email: e.kilincarslan@hud.ac.uk

Corresponding Author:

H. Kent Baker

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Abstract

This study uses a survey approach to examine the views of corporate managers of non-dividend-paying firms listed on the Borsa Istanbul (BIST) in order to identify the factors leading to the decision not to pay cash dividends in Turkey. Our survey results show that cash constraints, growth opportunities, low profitability and earnings, and the cost of raising external funds (debt) are the major reasons inducing BIST firms not to pay dividends. Additionally, non-dividend-paying firms consider their shareholder preferences when setting a policy of paying no cash dividends. Yet, they neither view taxes as an important factor for paying no dividends nor perceive that stock repurchases are substitutes for cash dividends. Statistical analysis using secondary data of publicly-traded BIST firms reveals whether the actual corporate actions are consistent with the managerial views revealed by our survey research. These tests show that growth opportunities and debt level have a negative effect on the dividend payment decisions of BIST firms. Also, large blockholders and the existence of multiple large shareholders reduce the likelihood and intensity of paying a cash dividend in the Turkish market. Overall, the evidence suggests that non-dividend-paying companies are likely to be smaller in size, relatively younger (in the earlier stage of their life cycle) with high-growth opportunities or with a low level of profitability (or even loss) and small (negative) earnings. By contrast, highly-profitable, mature and large-size corporations are more likely to pay cash dividends.

JEL Classification: G35

Keywords: Dividend policy; cash dividends; survey research; Borsa Istanbul; Turkey.

Why Companies Do Not Pay Cash Dividends: The Turkish Experience

1. Introduction

Why firms pay dividends, also called the dividend puzzle by Black (1976), has long been one of the greatest enigmas of corporate finance. Yet, conventional wisdom suggests that dividend policy decisions play an important role in overall corporate strategy and firm value creation. Today, corporations follow many different dividend payout policies. Some firms pursue a stable dividend policy while others follow a residual policy of paying out whatever remains after funding desired investments. Still others distribute dividend payments as an internal disciplinary tool for reducing agency problems or to signal good financial performance. Others pay no or low dividends to avoid or lessen shareholders' tax burden. More mature and profitable companies often maintain higher payout levels, whereas their smaller and highly levered counterparts are unwilling to distribute the profit as a cash dividend. Alternatively, some corporations recognize the shifts in investor demand and adopt dividend policies accordingly. However, others pay no cash dividends. In summary, no single or "one-size-fits-all" explanation adequately describes why firms pay dividends.

Although the dividend literature contains numerous theoretical and empirical studies on the dividend puzzle, researchers have generally paid very little attention to why some firms consistently pay no cash dividends. Furthermore, in studying dividend policy, they have largely relied on economic modelling approaches and have typically attempted to model dividend behavior mathematically and relate dividend policy to share-price levels. Without obtaining direct evidence from actual policy makers, economic modelling using statistical analysis of published financial data can explain only apparent reality but cannot measure motivation, which is the primary power behind generating such data. As Frankfurter et al. (2002, p. 202) note, "... one cannot understand the motivation and perception of people by simply analyzing market data." According to Chiang et al. (2006), the cardinal thrust of academic research must turn toward learning about motivation and on what perceptions this motivation is based.

In this respect, some researchers use a survey-based approach to provide insights into corporate managers' motivation and perceptions about dividend decisions involving different countries – both developed and developing (emerging) markets. Despite the increase in the amount of survey research on dividend policy, the extant survey studies have mainly investigated the views of financial managers who are responsible for making such decisions to enhance our understanding of why corporations pay dividends but survey evidence on why companies do not pay cash dividends is limited. To date, Baker (1989) and Baker et al. (2012) are the only survey-based studies that focus exclusively on non-dividend-paying firms, presenting evidence from developed markets, the United States and Canada, respectively.

To the best of our knowledge, no existing survey research directly examines why firms pay no cash dividends in an emerging market context. Consequently, the paper's primary purpose is to extend survey-based research into an emerging market and to provide important new insights about why firms do not pay cash dividends in such a market. Specifically, we focus on Turkey and survey corporate managers of the Borsa Istanbul (BIST)-listed firms with a long-standing policy of paying no cash dividends. Given potential difficulties associated with using primary data, we supplement our survey findings by statistically analyzing accounting and financial data. This triangulation approach helps lessen the inherent weaknesses of a single approach. Triangulation is a powerful technique that facilitates validation of data through cross verification from two or more sources. In particular, it refers to the application and combination of several research methods in the study of the same phenomenon.

As previously noted, Frankfurter et al. (2002) maintain that researchers cannot understand the dividend puzzle by analyzing secondary (market) data because such an approach cannot directly detect motivations. As Bruner (2002, p. 50) states "The task must be to look for patterns of confirmation across approaches and studies much like one sees an image in a mosaic of stones." Baker et al. (2011) indicate that using multiple approaches or methodologies to confirm dividend determinants is likely to produce more generalizable

findings than relying on a single approach. Accordingly, our study contributes to the dividend literature by using a triangulation approach.

Turkey is one of the most important emerging economies, strategically located between Europe and the Middle-East, and a candidate member of the European Union (EU). As discussed later, Turkey provides a relevant setting for the study because the ownership structures of listed firms are highly concentrated. Turkey has a bank-based financial system and differential tax rates exist between dividend income and capital gains among investors. These features differ substantially from well-developed markets such as in the United States and the United Kingdom. Turkish authorities implemented major economic and structural reforms in the early 2000s to integrate with world markets. These authorities also made major changes in the regulatory framework of cash dividend payment rules by abolishing compulsory minimum dividend payout requirements beginning in the 2009. This action gave BIST corporate managers the freedom to make their own dividend policy decisions.

Our study contributes to the dividend policy literature in several ways. First, we extend the growing body of behavioral studies that provide “micro” investigations of dividend behavior by focusing on how managers of non-dividend-paying companies make dividend policy decisions in an emerging market context. Second, we not only report survey-based evidence from corporate managers on why their firms pay no cash dividends but also report findings from regression analysis about the factors leading to the decision to pay or not to pay dividends based on our survey results as well as the related literature. Third, our study of non-dividend payers complements studies by Baker et al. (2017) who examine the classic question of why companies pay dividends by surveying a sample of dividend-paying BIST-listed firms. We believe that this research provides the first comprehensive study in an emerging market using both survey-based (primary data) and statistical evidence (secondary data) from publicly listed non-dividend-paying firms.

2. Research Questions in the Turkish Context

The Turkish stock market, originally called the Istanbul Stock Exchange (ISE), started its operations on January 3, 1986. On April 3, 2013, the ISE became the Borsa Istanbul (BIST). Turkish authorities imposed heavy compulsory dividend policy rules (known as the “first mandatory dividend policy”) on publicly listed firms when the ISE started operations. According to these rules, ISE firms had to pay at least 50% of their distributable profit as a cash dividend. Adaoglu (2000) and Aivazian et al. (2003a) conducted studies during early periods in Turkey that identified current year earnings as the sole determinant of cash dividends, as forced by the first dividend rule. These studies also report that the levels of current cash dividends directly reflect any volatility in current earnings. Thus, ISE firms did not pay cash dividends when their earnings were low or negative due to existing rules.

The Capital Markets Board (CMB) of Turkey made important changes in the regulatory framework of dividend policy rules in early 2000s. Specifically, the CMB employed more flexible mandatory dividend policy rules, as compared to the first regulation, and eventually decided not to set a minimum payout ratio. As a result, compulsory dividend payment requirements ended beginning in the 2009 fiscal year. Consequently, this action gave corporate managers the freedom to make their own dividend policy decisions. This development also suggests that other scenarios may exist in explaining a Turkish-listed firm’s rationale for paying no cash dividends, rather than only its poor financial performance.

Previous studies show that, unlike the highly diffused ownership settings in the Anglo-American capital markets where companies usually rely on arm’s-length contracting by uninformed and dispersed outside investors, publicly listed firms in Turkey generally had high ownership concentration. Founding families, who usually owned business groups affiliated with industrial (businesses and subsidiaries) and financial (banks) companies organized under the legal form of a “holding company”, dominated such concentrated ownership. Foreign investors, financial institutions, and the state were the other types of blockholders in the Turkish market (Glen et al., 1995; Yurtoglu, 2003; Caliskan and Icke, 2011; Al-Najjar and Kilincarslan, 2016, 2017). Moreover, Turkey had a bank-based financial

system where private sector banks characterized the market and were mainly part of bigger family-owned holding companies. The popularity of holding company structures led the Turkish financial system to operate around large family-controlled business groups with a group-owned bank. As a result of this infrastructure, families controlled not only many banks belonging to their business groups but also bank lending decisions. Hence, business groups used to obtain much of their funds from their own banks (Aivazian et al., 2003b; Ararat and Ugur, 2003; Erturk, 2003; IIF, 2005).

Some contend that cash dividends are a more valuable pre-commitment mechanism to reduce agency problems and to signal insider information in market-oriented economies, such as the United States and the United Kingdom, where the ownership structure is dispersed among small shareholders and the corporate control remains concentrated in the hands of managers (Dewenter and Warther, 1998; Aivazian et al., 2003a). Given the nature of the Turkish-listed firms' highly concentrated ownership forms and their characteristics of bank-centered financing, especially owner-bank-firm relations, this argument may function differently in Turkey. The rationale behind this view is that founding families and their direct involvement in the managements of their firms lead to greater supervision and fewer owner-manager conflicts as well as alleviating information asymmetry. Large shareholders (i.e., foreign investors, financial institutions and the state) can act as an alternate governance device and monitor managerial activities. Thus, such large shareholders can mitigate the free-rider problem of monitoring managers. Also, the presence of both controlling owners and strong blockholders might develop close ties, or even coalitions, between owner-manager and investors, which in turn could lessen the information asymmetries amongst the related parties. Hence, these features generally reduce the need for paying cash dividends as either an internal disciplinary device or a signaling tool.

Furthermore, the tax category circumstances and dividend sentiments of these large shareholders may not be homogenous or remain unchanged over time. Therefore, their dividend preferences can have major implications on dividend decisions of BIST-listed firms. Under the current Turkish tax regime, differences exist between the tax rate on capital gains

and cash dividends as well as the taxation of dividends among investors. For example, capital gains on equities are tax-free for foreign investors but they must pay a 15% withholding tax for their cash dividends received on the shares they hold (TCMA, 2016). Thus, such investors are likely to prefer capital gains and may force managers to retain cash rather than paying dividends in order to avoid the tax burden.

In another scenario, strong blockholders, especially controlling owners, may seek long-run growth potential instead of short-term dividend income. This situation would encourage their management to use low cost and easily accessible internal funds for expansion. Conventional wisdom suggests that, other things being equal, if a firm exploits positive net present value (NPV) projects for investments, the market may view a no cash dividends policy favorably (La Porta et al., 2000; Hu and Kumar, 2004) because this policy will have a positive effect on earnings growth and profitability.

Accordingly, we set forth the following major research questions based on these unique characteristics of the Turkish market:

1. What are the most important factors influencing decisions of corporate managers of BIST-listed firms to pay no cash dividends?
2. Do corporate managers of BIST-listed firms consider their shareholders' preferences in setting a no cash dividends policy?
3. What are the perceptions of corporate managers of BIST-listed firms about the relation between a no cash dividends policy and common share prices?
4. Do corporate managers of BIST-listed firms perceive that paying no cash dividends is associated with such factors as signaling, tax rates, concentrated ownership, flotation costs, and transaction costs?

3. Sample Description

Using the Public Disclosure Platform (KAP) (2017) of BIST, we identified 301 companies listed on the BIST-All Shares Index as of March 15, 2016. We then excluded financial sector corporations and utilities because they are governed by different regulations

and follow arguably different investment and dividend policies. These criteria result in 216 industrial (non-financial and non-utility) firms from 14 broad industries of which the most common types are industrial goods and services (16.7%), personal and household goods (14.8%), construction and materials (13.9%), and food and beverage (10.6%), which constitute about 56% of all firms.

Table 1 illustrates the patterns of cash dividend payments and net earnings of our sample of 216 BIST-listed industrial firms between 2009, when the CMB of Turkey decided to not impose any compulsory dividend payment requirement, and 2016. The evidence shows that the proportion of dividend-paying firms in Turkey increases between 2009 and 2016. Almost 28% of the sample distributed a cash dividend in 2009, and the percentage of dividend payers peaked at 47% in 2015 and stayed around 45% in 2016. We further observe that the real aggregate cash dividends and net earnings (after taxes) followed a similar increasing pattern. Specifically, cash dividends and net earnings in 2009 were, on average TL25 million (where TL refers to the Turkish Lira) and TL55 million, respectively. These figures rose to TL65 million and TL101 million in 2015, but decreased to TL55 million and TL82 million in 2016.

(Insert Table 1 about here)

Regarding the firm-level data of BIST firms, the results reveal that the average dividends per share of our sample show an increasing trend from TL0.09 in 2009 to TL0.36 in 2016, with a slight downward fluctuation in 2014. The average earnings per share of BIST industrials, however, dropped to TL0.30 in 2016 from TL0.45 in 2009, with some major fluctuations over the entire period. Likewise, the average dividend payout ratio increased with some fluctuations to 29% in 2012 from 11% in 2009, and then sharply rose up to 44% in 2013, followed by a dramatically declining pattern to about 17% at year-end 2016. Conversely, the dividend yield level of our sampled firms increased from 1.1% in 2009 to 2.5% in 2016, with a slight decline in 2014. Overall, the evidence generally suggests an increasing pattern in the percentage of dividend-paying firms and a tendency to pay more in

terms of both aggregated and per share forms between 2009 and 2016. Yet, some firms consistently do not pay cash dividends and are the subject of our study.

4. Survey Analysis

4.1 Survey Design

Our survey provides the primary data needed to investigate our research questions in the Turkish market. Although modelled after questionnaires by Baker (1989) for the U.S. market and Baker et al. (2012) for the Canadian market, our questionnaire incorporates some minor modifications to reflect the Turkish environment. Using a similar questionnaire permits comparing the views of corporate managers of BIST firms with those reported in the two previous studies related to the determinants of paying no cash dividends. The survey instrument is available from the authors on request.

Our questionnaire consists of three sections. The first section contains four closed-ended questions about the background information of managers and their firms. The second section asks respondents to express the importance level of 18 factors in determining their firm's no cash dividend policy (hereafter called F1 through F18), using a five-point scale where 0 = none, 1 = low, 2 = moderate, 3 = high, and 4 = very high. To augment the information obtained from responses to the 18 factors, we include two open-ended questions asking respondents (1) to state whether other factors are important besides those previously mentioned, and (2) to indicate the three major reasons their firms do not pay cash dividends. The third section comprises 13 questions about various dividend policy issues of the responding firms and those of firms in general. Of the 13 questions, 11 statements (hereafter called S1 through S11) ask participants to respond by indicating "Yes," "No" or "Don't Know". We also offer an executive summary of our findings to all interested respondents.

4.2 Data Collection and Response Rate

From the initial 216 industrial BIST-listed firms, 89 paid no cash dividends between January 2011 and January 2016. The Public Disclosure Platform of Borsa Istanbul (2017) was the source for the names, e-mail addresses, and telephone numbers of the financial

officers/directors of the 89 non-divided payers. The first mailing of the cover letter and questionnaire to the top manager of each of these firms occurred during the first week of April 2016, followed by second copy of the survey to non-respondents at the beginning of May 2016. Starting in June 2016, we contacted the remaining non-respondents by telephone call to give them the option to answer the questionnaire over the telephone. By the end of July 2016, we received usable responses from 51 managers (28 by email and 23 by telephone) from the 89 BIST-listed non-dividend payers, resulting in a 57.3% response rate. The response rate is relatively high compared to rates obtained in similar studies such as Baker (1989) (38.9%), Baker et al. (2012) (32.9%), and Baker et al. (2017) (45.2%) that targeted dividend-paying firms in Turkey.

4.3 Potential Limitations

Survey research may be subject to potential limitations. Despite a high response rate, non-response bias could still be present. Testing for non-response bias involved the common technique of comparing the characteristics of responding (51) and non-responding (38) firms on 10 firm characteristics using 2016 data: number of employees, market value, total assets, sales, family ownership, foreign ownership, return on assets (ROA), market-to-book ratio, debt ratio, and current ratio. As Table 2 reveals, the results of the *t*-tests for equality of means show no significant differences between respondent and non-respondent firms on each characteristic at any conventional significance level. The results of the Wilcoxon test support this finding. Because the firm characteristics of the two groups are statistically similar, this finding lessens concern about non-response bias.

(Insert Table 2 about here)

Besides non-response bias, survey research methodology may be the source of other potential drawbacks. For instance, the respondents could misunderstand the questions and so the questionnaire might not elicit the appropriate information sought by researchers, or even the respondents might not answer truthfully or carefully. However, we base the current survey on several well-known dividend surveys. Given that the survey is confidential

and only presents data in summary form, measurement errors are likely to be minimal. In this respect, conducting telephone surveys not only increased the response rate and reduced potential non-response bias but also showed no evidence that respondents answered untruthfully or misunderstood the questions.

The survey instrument involves a trade-off between the information needed and the response rate. The survey design was to limit the length, scope, and types of questions asked to increase the response rate for both email and telephone surveys. The telephone survey used the same questionnaire but we allowed respondents to elaborate only on open-ended questions.

Another potential concern is that responses involve only one manager within each firm. Although multiple individuals are typically involved in setting dividend decisions, identifying and surveying all participants would be impractical. Finally, the study is limited to non-dividend-paying firms and therefore generalizing our findings requires caution.

4.4 Profile of Respondents and Firms

Of the 89 surveys, 51 responding firms represent a broad cross-section of 12 industries. The most frequently represented industries are industrial goods and services (19.6%) and food and beverage (19.6%), followed by personal and household goods (17.6%). Each of the remaining industry groups represents less than 10% of the responses. However, the distribution of the respondents shows similar frequencies with the total sample regarding lines of business. Of the 51 respondents, 76.5% confirm that they are actively involved in determining their companies' dividend policy. The most common titles of the respondents are director of finance (52.9%), chief financial officer (CFO) (29.4%), and chief executive officer (CEO) (7.8%), whereas the remaining respondents hold positions such as director of investor relations, chief accountant, and general manager (finance). Hence, survey participants represent top managers who are generally involved in making decisions involving dividend policy.

Of the responding firms, about 70.6% of the managers state that either the CEOs (60.8%) or CFOs (9.8%) are the most influential in developing firm dividend policies; whereas 17.6% indicate that the opinions of all directors on the board are equally important in making such decisions. According to 11.8% of the respondents, the chairman of their company or president of their business groups, who are the main owners and mostly members of the founding families, are the sole decision-makers regarding dividends. Moreover, most managers (74.5%) expressed that they re-examine their firms' dividend policies annually, compared with 11.8% that reported every 3 to 5 years, 3.9% that said every 6 months, 5.9% stated that they reconsider dividend decisions when necessary, 2.0% indicated that they will re-examine dividend policy only when the firm becomes profitable, and the other 2.0% specified that they will review their payout policies if a regulatory change occurs.

Finally, the questionnaire asked surveyed managers whether their firms inform shareholders that paying no regular cash dividends is a corporate policy. About 90% of the respondents answered affirmatively. These respondents pointed out that they use different and multiple media to convey such information. For instance, annual and/or quarterly reports (94.1%) and companies' official websites and/or the Public Disclosure Platform of BIST (64.7%) are the two most popular methods to inform shareholders, followed by shareholder meetings (21.6%), a prospectus (9.8%), and shareholder letters (7.8%). Presentations (3.9%) and press releases (3.9%) are the least frequently used ways for this purpose.

4.5 Factors for Not Paying Cash Dividends

To address our first research question, the questionnaire asked respondents to identify the most important factors affecting the decision not to pay cash dividends. Table 3 shows the level of importance given by respondents to 18 potential factors by reporting the descriptive statistics (percentages, mean, and standards deviation). It also reports the results for each of the 18 factors ranked by their mean score along with their corresponding *t*-statistic for the null hypothesis that the mean response equals 2 (moderate importance).

(Insert Table 3 about here)

As Table 3 illustrates, at least half of the responding managers identify eight factors (with the positive and statistically significant t -values at the 1% level) as being of high/very high importance (F1, F2, F3, F4, F6, F8, F10, and F11). The three most highly ranked factors are the availability of cash (F1), the preference to reinvest cash flows instead of paying cash dividends (F11), and the level of current earnings (F2) (88.3%, 86.3%, and 80.4%, respectively). The fourth and fifth highest ranked factors are the anticipated level of future earnings (F6) (66.7%) and the availability of profitable investment opportunities (F8) (76.4%). Three of the five highest ranked factors for not paying cash dividends relate to cash and earnings levels (i.e., the firm's profitability). This finding implies that poor profitability means low levels of earnings and is associated with less availability of cash, or even cash flow shortages. Because cash generally serves as the basis for paying dividends, low profitability firms and those incurring losses are unwilling to distribute cash dividends. Of the five most influential factors for a no cash dividend policy, two involve growth/investment opportunities. Companies with strong growth opportunities typically need more funds to finance their expansion. Hence they tend to use their internally generated earnings for investment projects rather than paying cash dividends.

Other factors having at least half of the responding managers' view as important are the cost of raising external funds (F4), stage in the firm's life cycle (F3), and concern about maintaining a target capital structure (F10) (66.6%, 60.8%, and 54.9%, respectively). Two of these factors relate to a firm's financing decisions. This evidence suggests that firms prefer to retain earnings because using internal cash to finance investments is less expensive and less risky than raising external funds. If firms distribute their profits as cash dividends, they might have to raise additional debt, which increases default risk. Responding managers are sensitive to preserving their target capital structures. They are likely to have alternative uses of earnings that they view as more appropriate than paying dividends. This evidence may also infer that smaller and younger firms view paying dividends as costly. Paying dividends could result in raising costly external equity to finance projects rather than using less

expensive internally generated funds. Finally, about 55% of the respondents indicate the phase of their firm's life cycle is another important concern leading to a no cash dividend policy. Consistent with the maturity (firm life cycle) hypothesis developed by Grullon et al. (2002), this finding suggests that firms in their growth stage have many positive NPV projects that could benefit from using internally generated funds to fund growth and expansion instead of paying dividends.

To complement the results obtained from the 18 closed-end questions shown in Table 3, the questionnaire asked respondents to identify whether other factors exist leading to a firm not paying cash dividends. Although about 80% of the respondents answered "No" (72.6%) and "Don't Know" (7.8%), the majority of the remaining 20% of the participating managers emphasized their poor financial performance as the major reason for not paying dividends. Our telephone surveys provided more insights into this issue. Respondents confirmed that incurring losses resulted in insufficient cash to pay dividends. Also, obtaining debt to cover their past year deficits prevented them from distributing cash as a dividend because they had to repay their debt whenever generating internal funds. Overall, firms do not pay cash dividends because they have insufficient cash flows due to their poor financial performance, the need to repay debt obtained to cover their deficits and their vulnerable condition.

From a list of eight possible reasons for not paying dividends, our survey asked participants to select the three major reasons. As Table 4 shows, the overwhelming reason selected is low profitability and earnings (74.5%), followed by the need of funds for growth and expansion (60.8%), the preference to limit raising external funds due to costs (45.1%), and small excess cash flows (41.2%). These findings are similar to those results reported in Table 3, especially regarding the most important factors for a no cash dividend policy. Of the eight possible reasons, two other reasons cited by more than 10% of the respondents are investor preferences (19.6%) and contractual constraints such as debt covenants (13.7%). However, the reasons of industry practice and the preference to distribute cash using stock repurchases receive the lowest supports from the managers of non-dividend-paying firms

(5.9% and 2.0%, respectively). Unlike several studies suggesting that share repurchases may substitute cash dividends (Grullon and Michaely, 2002; Skinner, 2008; Gaspar et al., 2013), our evidence corroborates the view that repurchases are not perfect substitutes for cash dividends in the Turkish market.

Besides these eight reasons, our survey offers an “Other” option for managers who may want to state other major reasons for not paying dividends, rather than the given eight reasons. A total of 37.3% of the respondents opted for “Other” and indicated reasons such as losses from current and past years, repaying debt and/or debt level, instability of financial condition, smaller business size, and earlier stages in their life cycle, which are also consistent with our previous results.

(Insert Table 4 about here)

Overall, in response to the first research question, our survey evidence clearly shows that the main reasons for BIST-listed firms not paying cash dividends involve cash constraints, availability of profitable investment opportunities, poor profitability and earnings, and cost of raising external funds (debt). These findings suggest that non-dividend-paying BIST firms are likely to be smaller in size, relatively younger (in the earlier stage of their life cycle) with high-growth opportunities, or with a low level of profitability (or even loss) and small (negative) earnings. Finally, these major factors leading to a no cash dividend policy appear very similar (in fact, almost identical) to those reported in survey studies investigating non-dividend-paying firms by Baker (1989) in the United States and Baker et al. (2012) in Canada. Similar results occur despite the differing characteristics of both these markets and firms operating in them such as adequate disclosure, laws and regulations, institutional environment, corporate governance practices and ownership structures, political, social and financial stability.

4.6 Shareholder Preferences

Table 4 reveals that about one-fifth of the respondents (19.6%) indicate that one of three most important reasons for their firms paying no dividends is investor preferences.

However, the questionnaire asked three more direct questions in order to find out how responsive BIST corporate managers are to shareholders' preferences while choosing not to pay cash dividends. As Panel A in Table 5 shows, the majority of participating managers (60.8%) perceive that their shareholders generally prefer a no dividend policy (S1). Further, more than half of the respondents (54.9%) think that shareholders in their firms prefer capital gains to dividends (S2). Finally, when asked whether their firms are responsive to shareholders' dividend preferences (S3), 68.6% of the respondents answered affirmatively. Hence, setting a low or no cash dividend policy would be consistent with this perception.

The questionnaire also asked participants if they wanted to make additional remarks about their firm's policy of paying no regular cash dividends. About 23.5% of them stated that corporate decisions set by a family-controlled business group are also crucial for their firm's no cash dividend policy. In general, our survey findings, in response to the second research question, show some evidence that shareholders' preferences affect the decision of BIST corporate managers to pay no dividends.

With this finding in mind, the evidence does not directly address several concerns. One concern is whether BIST firms do not pay cash dividends because their existing shareholders favor capital gains. Another concern is whether BIST firms attract such investors, who deliberately invest in non-dividend-paying stocks, after they already decided not to pay dividends. These issues are beyond the scope of our paper but could be a subject of future studies. Furthermore, our finding is also in line with Baker et al.'s (2017) survey evidence, which reports around 90% of the participating corporate managers of BIST-listed dividend-paying firms agree that they should be responsive to the dividend preferences of their shareholders. Taken together, the evidence from both studies indicates that a role exists for catering effects or market sentiment on corporate dividend decisions in the Turkish market. Again, this is a promising avenue of future research.

4.7 No Cash Dividends Policy and Stock Price

To investigate the third research questions, the questionnaire asked two questions (S4 and S5 as reported in Panel A of Table 5). When asked whether respondents believe “paying no dividends positively affects the price of their firm’s common stock (S4),” with 23.5% answering “Yes,” 58.8% indicating “No,” and the remaining 17.7% responding “Don’t Know.” These results suggest a lack of consensus among managers concerning the relation between a no cash dividends policy and stock prices. The questionnaire also asked whether responding managers think that their “firm’s stock price would increase upon announcing a cash dividend (S5),” with 39.2% opting for “Yes,” 41.2% responding “No,” and 19.6% answering “Don’t Know.” This distribution of responses also reveals mixed results. Overall, these findings provide inconclusive evidence. Thus, accurately identifying non-dividend-paying BIST corporate managers’ opinions about the relation between paying a no cash dividend, or even distributing dividends, and stock prices was not possible. In contrast, the survey findings reported by Baker et al. (2017) on dividend-paying BIST firms indicate that their respondents expressed relatively strong agreement with the notion that dividend policy affects a firm’s stock price, hence its market value.

(Insert Table 5 about here)

4.8 Signaling, Tax, Concentrated Ownership, Flotation, and Transaction Costs Effects

The results in Panel B in Table 5 relate to our fourth research question. The panel illustrates managers’ responses to five statements (S7 through S11) about various factors that might influence a firm in general to pay no cash dividends. The survey results show that non-dividend-paying BIST managers’ views on the issue of the potential signaling effect of a firm’s dividend policy are inconclusive. Asking whether responding managers believe “the firm having little need to signal its immediate prospects by paying dividends” (S9) yields mixed responses with 37.3% responding “Yes,” 39.2% answering “No,” and 23.5% stating “Don’t Know.” In fact, when asked another signaling question related to their firm’s no cash dividends policy, which is whether they believe “paying no dividends serves as a message

from management about the future prospects of their firm” (S6 in Panel A), the responses are fairly evenly divided with 43.1% “Yes” responses and 41.2% “No” responses. The results further reveal that BIST corporate managers do not perceive taxes as a major reason for a firm not paying dividends. Only 23.5% of the respondents believed that a firm would not distribute a cash dividend if “the majority of the firm’s owners have high marginal tax rates,” (S7) but almost half of the respondents (47.1%) disagreed with this statement. This response is also in line with our previous findings because 43.2% of the managers gave “None” to “Low” importance to characteristics of shareholders such as their tax circumstances (F12 in Table 3), and 31.4% of them ranked this factor as “Moderate.” Overall, these results are consistent with Baker et al. (2017) who report little or no support for tax-related explanations from dividend-paying BIST managers, although differences exist between the tax rate on capital gains and cash dividends as well as in the taxation of dividends among investors in Turkey. Unlike our finding about the signaling effect, Baker et al. (2017) find that corporate managers of dividend-paying BIST firms express strong support for signaling theory.

Moreover, respondents’ opinions on the influence of high concentration of ownership among insiders such as family members (S8) on the decision not to pay dividends are mixed, with 41.2% selecting “Yes” and 43.1% answering “No.” Similar results occurred when asking respondents whether a firm would not pay a cash dividend if “the majority of the owners face high transaction costs of selling their stocks (S11),” with 31.4% indicating “Yes,” 33.3% responding “No,” and 35.3% answering “Don’t Know.” Finally, the overwhelming majority of the respondents (82.4%) show strong agreement with the statement that a firm would not distribute dividends if it faces high flotation costs of raising new external capital (S10). This evidence supports our previous finding that the cost of raising external funds (debt) is one of the main reasons inducing BIST firms not to pay cash dividends.

5. Development of Research Hypotheses

So far, by providing direct evidence from respondents, the findings rely on survey data to measure the perceptions of managers of non-dividend-paying BIST-listed firms about their rationale for not paying cash dividends. However, as Dhanani (2005) points out, surveys measure perceptions and not necessarily corporate actions. Given this potential drawback associated with using primary data, our survey findings are supplemented by using secondary (published) data (i.e., accounting, financial, and ownership structure information) of publicly-traded BIST firms in order to identify whether the actual corporate actions are in line with the managerial views revealed by our survey research. Accordingly, we advance the following research hypotheses based on the previous survey results about no cash dividends policy, as well as considering the related dividend literature, in the Turkish market.

First, our survey results show that the availability of cash, level of current earnings, and anticipated level of future earnings are among the most important determinants inducing BIST-listed firms to pay no dividends. Given these factors relate to cash and earnings levels, this situation infers that poor profitability and even incurring losses influence BIST managers to set a no cash dividends policy. The rationale for this view is that low profitability means low earnings and is associated with less availability of cash, or even cash flow shortages. The dividend policy literature suggests that profitability is the main financial factor in determining dividend policy because dividends are the distributions of a firm's profit to its shareholders. Empirical studies such as Fama and French (2001), Aivazian et al. (2003b), and Ferris et al. (2006) generally report a positive relation between profitability and dividend payments.

For instance, signaling theory asserts that highly profitable firms are more likely to pay dividends to convey their better financial position and tend to distribute larger amounts of cash dividends as a good (credible) signal to the market. By contrast, their less or non-profitable counterparts cannot mimic such dividend payment behavior (Bhattacharya, 1979; Miller and Rock, 1985; John and Williams, 1985). As previously stated, beginning in fiscal

year 2009, the CMB of Turkey abolished mandatory minimum dividend payment requirements and allowed managers to reflect their own judgments when setting dividend policies. Based on the above discussion and considering this important development, we expect managers of profitable BIST firms to use cash dividends as a signaling tool to show their favorable insider information to outside investors.

H1: A positive association exists between profitability and dividend payment decisions of BIST-listed firms.

Our survey evidence also reveals other major influential factors for a no cash dividend policy in the Turkish market. These factors include the availability of profitable investment opportunities and thus preference to reinvest cash instead of paying dividends, and a firm's financing decisions, such as the cost of raising external finance (debt) and the concern about maintaining a target capital structure. These findings are consistent with the extant literature suggesting that strong growth (investment) opportunities reduce both the probability and magnitude of dividend payments. High-growth firms need more funds to finance their expansion and hence typically tend to use available cash for investments projects instead of distributing them as a cash dividend (Rozeff, 1982; Holder et al., 1998; Fama and French, 2001; Baker and Wurgler, 2004a, 200b; Ferris et al., 2006). This negative correlation is supported by the pecking order theory developed by Myers (1984) and Myers and Majluf (1984), which contends that firms with high growth opportunities use their internally generated earnings first to finance those investments. If the investment requires more than the available cash, they will then use debt and only raise equity capital as a last resort. Hence, high-growth firms should pay out low or no dividends. Similarly, previous studies commonly report an inverse relation between external financing (debt) and dividend policy. From the transaction cost theory perspective, debt leads to financial charges and fixed costs that firms have to repay, and the dependency on high degrees of external financing increases the risk of a firm's stock. Thus, highly levered firms often pay no or low dividends because they tend to retain their internal funds to pay their obligations and lower

external financing costs, rather than paying the cash to shareholders (Rozeff, 1982; Miller and Rock, 1985; Manos, 2002).

The Turkish capital markets underwent major economic and structural reforms in the early 2000s. One of the most important developments was that the CMB of Turkey implemented the Banking Sector Restructuring Program in May 2001 for restructuring public banks, rehabilitating the private banking system, and strengthening surveillance and supervision to increase efficiency in the sector. The CMB further introduced Regulation on Establishment and Operations of Banks in July 2001 to apply related enforcements to minimize credit risk concentration for a single business group and to prevent insider lending as a source of financing by considering direct and connected loans (IIF, 2005; BRSA, 2010). Given that most of the business group companies used to obtain much of their funds from their own banks in early periods, these amendments in banking sector regulations led BIST firms to seek more transparent financing in the capital markets. Accordingly, we expect that BIST firms find external funds that now provided from arm's-length parties more costly and thus those firms with high growth and/or more debt are less likely to pay cash dividends. Thus, we set forth the following two hypothesizes.

H2: A negative association exists between growth and dividend payment decisions of BIST-listed firms.

H3: A negative association exists between debt and dividend payment decisions of BIST-listed firms.

Responding managers of non-dividend-paying BIST firms further indicate that the earlier stage in their firm life cycle and smaller business size also lead them to choose not to pay cash dividends. In the same vein, the maturity (firm life cycle) hypothesis, proposed by Grullon et al. (2002), attempts to link firm age with dividend policy. This explanation suggests that firms in the growth stage typically have many positive NPV projects and thus require funds to finance fast growth and expansion, which in turn results in paying no dividends. However, as firms transit from growth to a more mature phase, they are more likely to pay higher dividends. This change is because their investment opportunities and growth rates

become slower or even decline, and they start generating larger amounts of free cash flow. DeAngelo et al. (2006) also support this positive relation between firm maturity and dividend payments.

Likewise, firm size is another important characteristic that appears to positively influence dividends in the related literature. Evidence shows that large firms are generally mature organizations with a steady earnings pattern that enables them to preserve a good level of funds, whereas small firms usually experience more volatile cash flows (Fama and French, 2001; Grullon et al., 2002). Larger firms have easier access to capital markets and can raise external financing at lower costs as compared to smaller firms, which reduces their dependence on internally generated earnings (Farinha, 2003; Ferris et al., 2006). Given the lower transaction costs and less reliance on internal funds, this evidence suggests that large-size firms are more likely to pay dividends and can afford to distribute higher cash dividends than their smaller counterparts.

The Turkish stock exchange is a comparatively young stock market whose history only dates back to 1986. Yet, companies trading on the BIST vary from old and well-established family-controlled business group companies whose roots trace to the 1920s to large holding companies generally founded in the 1970s (Bugra, 1994; Adaoglu, 2000; Yurtoglu, 2003) or even relatively young and growing firms that incorporated in the 2000s. We infer that the BIST corporation's life cycles and firm sizes differ dramatically from one another, which should affect how their managers make dividend policy decisions. Thus, we set forth the following hypotheses:

H4: A positive association exists between firm age and dividend payment decisions of BIST-listed firms.

H5: A positive association exists between firm size and dividend payment decisions of BIST-listed firms.

Our survey results also show some evidence that shareholder preferences also play a role in encouraging BIST corporate managers to set a no cash dividends policy. Considering highly concentrated ownership structures of BIST firms that are dominated by

large shareholders, especially families followed by foreign investors, domestic corporations, and the state, respondent managers tend to be responsive to the non-dividend preferences of their controlling blockholders. In fact, a broadly disputed notion is that dividend payments may be a useful pre-commitment internal device to alleviate agency problems in a widely-held firm, where the ownership is dispersed among small shareholders but the corporate control remains concentrated in the hand of professional managers. Cash dividends lessen the free cash from the managers' control that they might spend for unprofitable investments or even misuse for their own consumption and also force managers to enter the external capital markets for additional funding. This situation increases the screening and monitoring by the market (Jensen and Meckling, 1976; Rozeff, 1982; Easterbrook, 1984). However, this situation may not be the case in a market such as Turkey where publicly listed firms have concentrated ownership structures.

Prior studies indicate that large shareholders have the incentives and ability to act as an effective monitoring mechanism on management. Therefore, the existence of such large shareholders can mitigate the free-rider problem of monitoring managers, which reduces agency conflicts between managers and shareholders (Grossman and Hart, 1980; Demsetz and Lehn, 1985; Shleifer and Vishny, 1986). Especially, founding families and their direct involvement in the managements of their firms lead to greater supervision and few owner-manager agency conflicts (Fama and Jensen, 1983; La Porta et al., 1999; Setia-Atmaja et al., 2009). Hence, the nature of heavily concentrated ownership structures of BIST-listed firms minimizes the traditional agency cost problems (the principal-agent conflict) and thus generally reduces the need for paying cash dividends as an internal disciplinary device on corporate managers. In a recent study, Al-Najjar and Kilincarslan (2016) find that both family and other large non-family blockholders (i.e., foreign investors, domestic financial institutions, and the state) have a negative impact on dividend policy in the Turkish market. Our survey findings and the above discussion lead to the following hypothesize that:

H6: A negative association exists between ownership concentration and dividend payment decisions of BIST-listed firms.

6. Statistical Analysis

The statistical analysis focuses on our initially selected sample of 216 unique industrial BIST-listed firms from 14 broad industries between 2009 and 2016. Firms consist of two categories: 89 non-dividend-paying firms and 127 dividend-paying firms that paid a cash dividend at least once from January 2011 to January 2016. We obtained the data on accounting and financial variables from the S&P Capital IQ database and compiled the information on firm ownership and incorporation dates from the annual reports published in the Public Disclosure (KAP) of the BIST and firms' official websites.

6.1 Univariate Tests

To further examine the differentiating firm characteristics of non-dividend-paying and dividend-paying BIST-listed firms between 2009 and 2016, we use univariate analysis. We use a standard *t*-test of equality of means (without assuming equality of variance) and, for robustness, also employ non-parametric Wilcoxon rank-sum test, in order to identify whether the two sub-groups are similar or significantly different on each characteristic. Table 6 reports the results. We observe that compared with non-dividend payers, dividend-paying firms (1) are larger in size (significantly higher total sales, total assets, and market value) and more mature (significantly higher firm age); (2) have better profitability and cash reserves (significantly higher net earnings, cash availability, and return on assets); and (3) have fewer growth opportunities (significantly lower market-to-book ratio) and lower debt levels (significantly lower total debt-to-total assets ratio). These findings are consistent with our survey evidence that non-dividend-paying BIST firms appear to be smaller in size and relatively younger (in the earlier stage of their life cycle) with high-growth opportunities, low debt ratios, and low levels of profitability. These differentiating characteristics between dividend payers and non-dividend payers are also in line with such studies as Fama and French (2001), Grullon et al. (2002), Aivazian et al. (2003b), Ferris et al. (2006), and DeAngelo et al. (2006). Regarding ownership structure variables, Table 6 shows that both dividend-paying and non-paying BIST firms have high family concentrations, but such

concentration is even higher for non-dividend payers. Foreign investors are the second largest blockholders for both sub-groups and they hold, on average, higher percentages of shares in non-dividend-paying firms, whereas domestic (national) investors own higher fractions of total equity in dividend-paying BIST firms. Moreover, state ownership shows very little shareholdings in dividend-paying firms but no shares in non-paying firms. Lastly, minority (small) investors, who held less than the 5% threshold level, have a higher mean percentage of shares in non-dividend-paying BIST firms as compared to their dividend-paying counterparts.

(Insert Table 6 about here)

6.2 Research Design, Model, and Variables

To test our research hypotheses (H1 through H6) based on the association between selected firm characteristics and dividend payment decisions of BIST-listed firms, we design a model that helps determine the effects of these characteristics on the likelihood of paying a cash dividend by following Al-Najjar and Kilincarslan (2016, 2017). Specifically, we estimate a logit model because while making their dividend policy decisions firms have two options – to pay or not to pay dividends. Thus, a logit regression model is an appropriate econometric technique for estimating a binary variable (0/1). Then, we define a set of explanatory variables, which are based on the most common forms used in the related literature, proxying for the six research hypothesis. Given that large shareholders constitute a heavy concentration of BIST firms, we further introduce several interaction terms between ownership structure variables in the model to provide further insight on the moderating effects of large owners on dividend payment decisions. Because our research sample is drawn from 14 different industries and covers the relatively long time period between 2009 and 2016, we attempt to control for the industry-specific effects and unobserved time-varying factors by adding industry and year dummies, respectively, into our model. Finally, we also consider the issue of endogeneity. Specifically, we use one-year lagged values of each of the test variables in the model to ensure that firm characteristics are predetermined with

respect to the dividend payment decision in order to alleviate endogeneity concerns. We formulate the corresponding logit model (Model 1) as follows:

$$\begin{aligned} DPAY_{i,t} = & \alpha_0 + \alpha_1 ROA_{i,t-1} + \alpha_2 GROW_{i,t-1} + \alpha_3 DEBT_{i,t-1} + \alpha_4 AGE_{i,t-1} + \alpha_5 SIZE_{i,t-1} + \alpha_6 FMLY_{i,t-1} + \\ & \alpha_7 FRGN_{i,t-1} + \alpha_8 DMSTC_{i,t-1} + \alpha_9 (FMLY_{i,t-1} \times FRGN_{i,t-1}) + \alpha_{10} (FMLY_{i,t-1} \times DMSTC_{i,t-1}) + \\ & \alpha_{11} (FRGN_{i,t-1} \times DMSTC_{i,t-1}) + \sum_{j=1}^N \alpha_j INDUSTRY_{j,i,t} + \sum_{t=1}^T \alpha_t YEAR_{i,t} + \varepsilon, \quad (1) \end{aligned}$$

$$DPAY_{i,t} = \begin{cases} 0 & \text{if } DPAY_{i,t} = 0, \\ 1 & \text{if } DPAY_{i,t} > 0, \end{cases}$$

where DPAY is the probability of paying a cash dividend (dependent variable), which is a binary code (0/1) that equals 1 if the firm pays dividends and 0 otherwise. The explanatory (test) variables are as follows: ROA is the return on assets ratio (profitability); GROW is the market-to-book ratio (growth/investment opportunities); DEBT is the fraction of total debt to total assets (debt ratio); the AGE is the natural logarithm of the total number of years since the firm's incorporation date (firm age); SIZE is the natural logarithm of the firm's market capitalization (firm size); FMLY is the fraction of total shares of the firm owned by families (family ownership); FRGN is the percentage of total shares of the firm held by foreign investors (foreign ownership); DMSTC is the proportion of total shares owned by Turkish investors (domestic ownership); and (FMLY x FRGN), (FMLY x DMSTC), and (FRGN x DMSTC) are the individual interaction terms between family and foreign ownerships, family and domestic ownerships, and foreign and domestic ownerships, respectively. Regarding the control variables, INDUSTRY is a vector of dummy variables representing 14 different industry classifications and YEAR denotes yearly dummies for the years between 2009 and 2016, which take a value of 1 for the particular year and 0 otherwise.

(Insert Table 7 about here)

Panel A in Table 7 presents descriptive statistics for our research variables that are collected from a panel dataset (unbalanced) of 216 unique industrial BIST-listed firms including both dividend-paying and non-dividend-paying firms with 1,679 firm-year observations between 2009 and 2016. As observed, the mean DPAY (0.406) indicates that

BIST firms in our sample paid cash dividends in almost 41% of the total observations. Moreover, the average DEBT and ROA values reveal that firms had about 22.3% debt financing in their capital structures and had around a 3.7% of return on their total assets invested over the period. On average, BIST firms exhibited good prospects of growth opportunities as GROW shows a mean market-to-book ratio of 1.521, which is higher than unity, between 2009 and 2016. Considering corporate ownerships of all firms in our sample for this period, Turkish families own about 40% of the total shareholdings, whereas foreign and domestic investors hold around 12.2% and 8.4%, respectively, of the outstanding shares of the BIST-listed firms.

Panel B in Table 7 reports the results of Pearson's correlation and Variance Inflation Factor (VIF) values for the independent variables. The results illustrate significant correlations amongst the research variables. Nevertheless, no high correlation exists between any two of them, although a few variables are moderately correlated. For example, the highest Pearson's correlation figures (i.e., ROA-DEBT, FMLY-FRGN and FMLY-DMSTC) range from 40% to 45%. We also calculate the VIF and tolerance (measured as $1/VIF$) statistics in order to directly check the issue of multicollinearity. As a rule of thumb, a VIF greater than 10 and a tolerance value lower than 0.1 detect multicollinearity. Given that none of the VIFs exceeds 10 and none of the tolerance values are smaller than 0.1, our results suggest no multicollinearity problem exists between the independent variables.

6.3 Multivariate Tests

We compute our logit model (Model 1) to determine how the characteristics of BIST firms affect their decisions to pay or not to pay a cash dividend by applying pooled logit and random effects (panel) logit regressions estimates. We also calculate the marginal effects (economic significance) of the independent variables to provide further interpretations in addition to the coefficient estimates (statistical significance). The marginal effects indicate the marginal impact of each of the independent variables on the dependent variable at the mean values of other independent variables. Accordingly, Table 8 presents the results of the

pooled and random effects logit estimations on the probability of firms paying cash dividends in the Turkish market.

(Insert Table 8 about here)

The results show that when Model 1 is estimated by the pooled logit regression, it is overall statistically significant at the 1% level, as evidenced by the Wald χ^2 test. The Pseudo R^2 value 34.58% suggests a good indication as to the prediction power of the model. When using the random effects (panel) regression, the overall significance of the model is also highly significant at the 1% level, as reported by Wald χ^2 test. In this case, we look at the likelihood-ratio test, which is statistically significant at the 1% level, indicating that the panel-level variance component (ρ) value differs considerably from zero (0.5983). This finding suggests that the random effects logit estimates are more favorable than the pooled logit estimates in predicting the associations between firm characteristics and dividend payment decisions of the BIST-listed firms. Thus, we report our findings based on the random effects estimates, although we obtain very similar results using the pooled logit regression for the model.

The random effects logit estimates in Table 8 reveal a strong positive association between profitability (ROA) and the probability of paying a cash dividend. The coefficient on ROA ($z = 4.30, p < 0.01$) is positive and statistically significant. The marginal effect of this variable shows, all else being equal, that a 10 percentage point increase in ROA will increase the likelihood of paying dividends by about 11%. The evidence of this positive association between profitability and dividend payments is consistent with the extant studies such as Fama and French (2001), Aivazian et al. (2003b), and Ferris et al. (2006), suggesting that high profitability BIST firms are more likely to distribute dividends. This finding is also in accordance with our survey evidence, which indicates that poor profitability induces BIST managers not to pay a cash dividend. On the other hand, the logit estimates report a solid negative effect of growth/investment opportunities (GROW) on corporate dividend decisions, as its coefficient is negative and statistically significant ($z = -1.99, p < 0.05$). The marginal effect of GROW shows that the probability of paying a cash dividend will

decline by about 1.5% for an average firm, corresponding to a 10 percentage point increase in growth opportunities. This result is consistent with our survey finding that the availability of positive NPV investment projects is one of the main factors for a no cash dividends policy in the Turkish market. It also indicates that strong growth reduces the likelihood of paying dividends, consistent with such studies as Rozeff (1982), Myers and Majluf (1984), and Baker and Wurgler (2004a, 2004b). Because high-growth BIST firms need more funds to finance their expansion, they tend to use free cash for investments instead of paying it out as a cash dividend to shareholders.

Similarly, the results report another negative association, which is between debt (external financing) and dividend payment choices. The DEBT coefficient is highly significant and negative ($z = -3.64$, $p < 0.01$) and the marginal effect of the variable suggests, all else being equal, that a 10 percentage point increase in debt will decrease the probability of paying cash dividends by around 5.3%. This inverse correlation is consistent with our survey evidence and prior research such as Rozeff (1982), Miller and Rock (1985), and Manos (2002). This finding indicates that highly levered BIST firms are likely to maintain their earnings to pay their obligations and lower external financing costs, which in turn leads them to pay none or low dividends. Furthermore, we observe that firm age (AGE) and firm size (SIZE) positively influence the likelihood of paying a cash dividend of BIST-listed firms because the coefficients on AGE ($z = 1.76$, $p < 0.10$) and SIZE ($z = 8.49$, $p < 0.01$) are both positive and statistically significant. The marginal effects of these variables show that a 10 percentage point increase in AGE and SIZE will roughly result in a 0.4% and 1.9% increase in the likelihood of paying dividends, respectively. These findings are consistent with our survey evidence. Specifically, corporate managers of non-dividend-paying BIST firms express that the earlier stage in their firm life cycle and smaller business size also lead them to not pay cash dividends. Accordingly, our statistical results indicate that mature and large-size BIST firms are more likely to pay cash dividends, consistent with Fama and French (2001), Grullon et al. (2002), DeAngelo et al. (2006), and Ferris et al. (2006). This evidence might mean that such firms can sustain stable funds and have easier access to capital

markets and hence be less dependent on retained earnings, which enable them to distribute cash dividends.

The random effects logit estimates in Table 8 further display that both family ownership (FMLY) and foreign ownership (FRGN) have a negative impact on the dividend payment decisions of BIST firms ($z = -2.10$, $p < 0.05$ for FMLY and $z = -3.63$, $p < 0.01$ for FRGN). The marginal effects of these variables indicate that the probability of paying a cash dividend will drop by around 2.0% and 3.6% for an average BIST firm, corresponding to a 10 percentage point increase in family ownership and foreign stockholdings, respectively. However, we find that domestic ownership (DMSTC) alone has no significant influence on such decisions.

As previously mentioned, we add three interaction terms between our ownership variables to further examine the effect of the existence of multiple large shareholders on dividend payment decisions. The results show that the estimated coefficients on all three interaction terms are negative and statistically significant ($z = -2.67$, $p < 0.01$ for (FMLY x FRGN), $z = -2.44$, $p < 0.05$ for (FMLY x DMSTC), and $z = -1.77$, $p < 0.10$ for (FRGN x DMSTC)). The marginal effects of the interaction terms report, other things being equal, that the likelihood of paying dividends will decrease by about 0.26%, 0.18%, and 0.10%, corresponding to a 10 percentage point increase in the interactions between family and foreign ownerships (FMLY x FRGN), family and domestic ownerships (FMLY x DMSTC), and foreign and domestic ownerships (FRGN x DMSTC). Although our survey results indicate some evidence that shareholder preferences play a role in encouraging BIST managers not to pay cash dividends, our multivariate analysis reveals strong evidence that large shareholders have a negative influence on dividend policies of BIST-listed firms. Specifically, higher family and foreign ownerships lead to no or lower dividend payments in Turkey, consistent with Al-Najjar and Kilincarslan (2016). Additionally, the negative effects of all the interaction term variables suggest that the presence of multiple blockholders or higher ownership concentration also reduces the probability of paying a cash dividend. Consequently, this finding supports the notion that large owners can mitigate the free-rider

problem of monitoring managers. Additionally, the nature of heavily concentrated ownership structures lessens the need for paying cash dividends as an internal disciplinary device (Grossman and Hart, 1980; Demsetz and Lehn, 1985; Shleifer and Vishny, 1986; La Porta et al., 1999; Setia-Atmaja et al., 2009). Hence, high ownership concentration has a negative impact on dividend payment decisions of industrial firms traded in the BIST.

We perform additional tests to check the robustness of our main findings. Specifically, we attempt to find out whether the above results also hold for the intensity (and not only the probability) of paying cash dividends. Hence, we employ two substitute dividend policy measures (i.e., two alternative dependent variables): (1) the dividend payout ratio, which is an accounting measure that is calculated as dividends per share to earnings per share, and (2) dividend yield, which is a market measure that is calculated as dividends per share to price per share. In this respect, a firm's dividend payout ratio or dividend yield will never be negative (it is left censored at zero) and has two outcomes – either zero (a discrete number), if the firm does not pay dividends, or a positive value (continuous numbers), in which case the firm pays dividends. Thus, we use the Tobit regression technique for estimating such dependent variables that are left censored at zero and contain a mixture of continuous and discrete values. Accordingly, Table 9 illustrates the results of the pooled and random effects Tobit estimations on the dividend payout ratio (denoted as DPOUT) by Model 2 and on the dividend yield (denoted as DYIELD) by Model 3 in the Turkish market. As Table shows, the Tobit coefficients and marginal effects on dividend payout ratio and dividend yield are in line with the logit estimates reported in Table 8. These results are consistent because the independent variables have the same directional signs and exhibit similar statistical significance behavior. Overall, this evidence confirms the robustness of our main findings and therefore provides support for *H1* to *H6*.

(Insert Table 9 about here)

7. Summary and Conclusions

We examine the trend in the propensity to pay cash dividends in the Turkish market between 2009, when the CMB of Turkey decided not to determine any mandatory dividend payment requirement, and 2016. In general, our results show an increasing pattern in the percentage of dividend-paying firms and a tendency to pay more in terms of both aggregated and per share forms over this period. Because some firms consistently do not distribute cash dividends, we survey corporate managers of the BIST-listed firms with a long standing policy of paying no cash dividends to gain insights about why some companies do not pay dividends. This approach differs from the extant survey studies that mainly investigate why corporations pay dividends. Accordingly, the findings of our survey of non-dividend-paying managers of BIST firms lead to several important conclusions.

First, our survey results reveal that major reasons behind BIST-listed firms' decision not to pay dividends are cash constraints, availability of profitable investment opportunities, poor profitability and earnings, and cost of raising external funds. The survey results generally suggest that non-dividend-paying BIST companies are likely to be smaller in size, relatively younger (in the earlier stage of their life cycle) with high-growth opportunities, or with a low level of profitability (or even loss) and small (negative) earnings. Second, the findings show some evidence that Turkish firms consider their shareholders' preferences in setting a no cash dividends policy. Third, we find that non-dividend-paying BIST managers do not perceive taxes as an important reason for paying no dividends, although differences exist between the tax rate on capital gains and cash dividends as well as in the taxation of dividends among investors in Turkey. Fourth, our survey findings indicate strong agreement to that a firm would not distribute dividends if it faces high flotation costs of raising new external capital. Yet, the results are inconclusive about how managers view the relation between paying a no cash dividend, and even distributing dividends, and stock prices, and the potential signaling role of dividend policy. Finally, contrary to the argument that firms use share repurchases as substitutes for cash dividends, managers of non-dividend-paying BIST

firms rank the preferences to distribute cash using stock repurchases instead of dividends as the lowest among 18 factors that may lead to pay no dividends.

Furthermore, we supplement our survey findings by statistical analysis using secondary (published) data of publicly-traded BIST firms in order to determine whether actual corporate actions are consistent with the managerial views revealed by our survey research. The use of a triangulation approach sets our dividend study apart from most others. In this respect, the results of our univariate tests show that, compared to dividend payers, non-dividend-paying BIST firms are smaller in size and relatively younger (in the earlier stage of their life cycle), have lower profitability and cash reserves, and experience higher growth opportunities and debt ratios. These differentiating characteristics are consistent with our survey evidence as well as previous studies in the literature. The univariate results also indicate that large shareholders, such as families, foreign, and domestic (national) investors, highly dominate both dividend-paying and non-paying BIST-listed firms but ownership concentration is even higher for non-payers.

The results of our multivariate analysis also provide several conclusions that are consistent with both our survey findings and the extant dividend policy literature. First, our results detect a negative relation between growth and dividend payments. This finding suggests that the availability of positive NPV investment projects is an important factor for a no cash dividends policy. The reason is because high-growth BIST firms appear to maintain corporate earnings to fund their investments instead of paying dividends. Second, the evidence from our regression tests shows that debt level has an inverse impact on dividend policy. This finding suggests that high-levered BIST firms are likely to choose to pay no or low dividends and use free cash to pay their obligations occurred from external financing or to cover their deficits from past years. Third, the results reveal that large blockholders, particularly family and foreign owners, reduce both the probability and intensity of paying a cash dividend in Turkey. Similarly, the existence of multiple large shareholders (i.e., higher ownership concentration) has a negative influence on dividend payment decisions of BIST-listed firms. This evidence may indicate that large owners can mitigate the free-rider problem

of monitoring managers. Additionally, the nature of heavily concentrated ownership structures lessens the need for paying cash dividends as an internal disciplinary device. Finally, our statistical findings show a strong positive effect of profitability, firm age, and size on dividend policy. These findings suggest that more profitable, more mature and large-size BIST-listed firms are more likely to pay cash dividends.

Overall, our survey results involving the major factors leading to a no cash dividend policy in the emerging market of Turkey appear very similar to those reported in survey studies investigating non-dividend-paying firms in developed economies by Baker (1989) in the United and Baker et al. (2012) in Canada. Yet, the characteristics of these markets and firms operating in such markets differ in many aspects such as adequate disclosure, laws and regulations, institutional environment, corporate governance practices and ownership structures, political, social, and financial stability.

Learning that some consistency exists in the findings of non-dividend paying firms between developing and emerging economies is meaningful. Without conducting our study, this information would not have been known. Hence, our findings are new for Turkey despite some being similar to evidence reported in other studies. In short, confirming results across different markets and time periods is important because it enables generalizing the findings.

We call for future studies from other emerging and developing markets to investigate non-dividend-paying firms or those firms with irregular patterns of cash dividends using the same or similar survey. By doing so, they could identify similarities and differences between the views of managers of publicly listed firms across different countries. Such research could help corroborate the empirical results and detect whether a universal set of determinants for paying no cash dividends exists. Our study can serve as a valuable benchmark for such studies.

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Table 1. Cash Dividends and Net Income Trends between 2009 and 2016

This table shows the patterns of cash dividends and earnings of our sample of 216 BIST-listed industrial (non-financial and non-utility) firms between 2009 and 2016. The S&P Capital IQ database is the data source. Column 2 displays the number of sample firms. Column 3 presents the percentage of dividend-paying BIST firms. Columns 4 and 5 report the real aggregate cash dividends paid and net earnings (after taxes), which are measured in real terms and normalized by the consumer price index (CPI) deflator using 2009 as a base year in order to remove the inflation effect. CPI deflator data are taken from the Central Bank of the Republic of Turkey (CBRT) database. Columns 6 and 7 illustrate average dividends per share and earnings per share, respectively. Columns 8 and 9 show the average dividend payout ratio and dividend yield for the sampled BIST firms across each year between 2009 and 2016.

Year	Number of Firms	Cash Dividend Payers (%)	Cash Dividends (million TL)	Net Earnings (million TL)	Dividends per Share (TL)	Earnings per Share (TL)	Dividend Payout Ratio (%)	Dividend Yield (%)
2009	192	27.60	24.82	55.43	0.09	0.45	11.30	1.09
2010	203	35.47	27.99	68.48	0.11	0.09	19.78	1.42
2011	213	39.44	30.98	73.43	0.18	0.42	16.20	1.72
2012	216	43.06	35.51	85.36	0.26	0.38	28.61	1.91
2013	216	42.59	42.29	87.50	0.28	0.37	43.87	2.24
2014	216	42.13	34.37	96.29	0.22	0.48	21.73	1.76
2015	216	47.22	64.55	101.37	0.30	0.45	17.53	2.53
2016	216	45.37	54.84	82.28	0.36	0.30	16.51	2.51
Mean	211	40.36	39.42	81.27	0.23	0.37	21.94	1.90
Std. Dev.	8.90	6.27	13.80	15.02	0.09	0.13	10.18	0.51

Table 2. Characteristics of Survey Respondents and Non-Respondents for Non-Dividend-Paying BIST-Listed Firms

This table presents descriptive statistics for the 51 responding and 38 non-responding firms on 10 characteristics and the tests for non-response bias. The S&P Capital IQ database was the source for obtaining data on accounting and financial variables, whereas the data on firms' ownership structures are compiled from the annual reports published in the Public Disclosure Platform (KAP) of the BIST and firms' official websites for each of the two groups for year 2016: (1) the number of employees includes both full- and part-time employees of the company; (2) market value equals the share price (year-end) multiplied by the common shares outstanding; (3) total assets refer to the sum of total current assets, long-term receivables, investment in unconsolidated subsidiaries, other investments, net property, plant and equipment, and other assets; (4) sales represent annual gross sales and other operating revenue less discounts, returns and allowances; (5) family ownership is defined as the total percentage of equity interest held by families (including family members, family managers, and family-controlled holding companies) owning more than 5% of the company's equity shares; (6) foreign ownership is the sum of total shares owned by foreign corporations and nationals at the 5% ownership disclosure threshold level; (7) ROA is return on assets, which is measured by net earnings to total assets; (8) market-to-book ratio is a firm's market value divided by its book value; (9) debt ratio is calculated as total debt to total assets; and (10) current ratio is current assets divided by current liabilities. No significant differences exist between respondent and non-respondent firms on each characteristic at any conventional significance level.

	Number of Employees	Market Value (million TL)	Total Assets (million TL)	Sales (million TL)	Family Ownership (%)	Foreign Ownership (%)	ROA (%)	Market-to-Book Ratio	Debt Ratio	Current Ratio
Mean										
Total sample	1,110.12	359.07	670.09	590.03	43.49	12.54	0.41	1.55	0.25	1.91
Non-respondents (n = 38)	1,005.69	365.13	779.14	623.46	41.19	14.69	0.51	1.56	0.22	2.18
Respondents (n = 51)	1,187.94	354.56	588.83	565.12	45.20	10.94	0.34	1.54	0.28	1.72
Medium										
Total sample	280.00	105.30	256.80	124.70	50.29	0.00	0.35	1.14	0.26	1.27
Non-respondents (n = 38)	286.00	110.40	191.65	148.10	49.92	0.00	0.49	1.13	0.21	1.36
Respondents (n = 51)	264.00	94.30	294.00	124.10	50.29	0.00	0.28	1.14	0.27	1.23
Standard deviation										
Total sample	3,398.74	659.30	1,394.75	1,589.37	31.46	28.17	4.30	2.17	0.21	1.99
Non-respondents (n = 38)	2,628.94	599.39	1,672.20	1,588.81	34.00	31.69	4.70	1.90	0.23	2.49
Respondents (n = 51)	3,898.95	706.49	1,157.06	1,605.13	29.65	25.43	4.03	2.38	0.19	1.51
t-test for equality of means										
Equality of variances assumed	-0.25	0.07	0.63	0.17	-0.59	0.62	0.18	0.30	-1.41	1.09
Equality of variances not assumed	-0.26	0.08	0.60	0.18	-0.58	0.60	0.17	0.32	-1.36	1.02
Wilcoxon test	-0.83	0.47	0.30	0.50	-0.48	0.36	0.74	0.52	-1.77	0.42

Table 3. Level of Importance Attached to 18 Factors Influencing a No Dividend Policy by Managers of BIST-Listed Firms

This table illustrates the survey responses of managers for 51 non-dividend-paying BIST firms on the importance of 18 factors affecting their dividend policy decisions. Responses are based on a five-point importance scale ranging from 0 (none) to 4 (very high). Columns 3 through 7 give the percentage of respondents by level of importance. Columns 8 and 9 display the mean and standard deviation for each factor. Column 10 reports the *t*-statistic for the null hypothesis that the mean response equals 2 (moderate level of importance). Column 11 lists the rankings of factors from highest to lowest based on the means of manager responses of non-dividend-paying BIST firms. Percentages may not add to 100% due to rounding. ** and * denote statistical significance at the 1% and 5% levels, respectively.

Factor	Level of Importance (%)					Mean	Std. Dev.	<i>t</i> -test	Rank
	None 0	Low 1	Mod 2	High 3	Very High 4				
F1 Availability of cash	0.0	0.0	11.8	47.1	41.2	3.29	0.672	13.75**	1
F11 Prefer to reinvest cash flows instead of paying dividends	2.0	2.0	9.8	54.9	31.4	3.12	0.816	9.78**	2
F2 Level of current earnings	0.0	3.9	15.7	47.1	33.3	3.10	0.806	9.73**	3
F6 Anticipated level of future earnings	0.0	5.9	27.5	45.1	21.6	2.82	0.842	6.99**	4
F8 Availability of profitable investment opportunities	2.0	5.9	15.7	62.7	13.7	2.80	0.825	6.96**	5
F4 Cost of raising external funds	5.9	7.8	19.6	49.0	17.6	2.65	1.055	4.38**	6
F3 Stage in the firm's life cycle	3.9	9.8	25.5	45.1	15.7	2.59	1.004	4.19**	7
F10 Concern about maintaining a target capital structure	2.0	9.8	33.3	39.2	15.7	2.57	0.944	4.30**	8
F5 Anticipated state of the economy	2.0	21.6	52.9	23.5	0.0	1.98	0.735	-0.19	9
F14 Contractual constrains such as dividend restrictions in debt contracts	21.6	17.6	37.3	19.6	3.9	1.67	1.143	-2.08*	10
F12 Characteristics of shareholders such their tax circumstances	21.6	21.6	31.4	21.6	3.9	1.65	1.163	-2.17*	11
F18 Tax disadvantage of dividends over capital gains	23.5	23.5	37.3	7.8	7.8	1.53	1.172	-2.87**	12
F9 Level of management ownership of the firm's stock	27.5	19.6	33.3	13.7	5.9	1.51	1.206	-2.90**	13
F13 Desire to follow the firm's historical practice of not paying dividends	19.6	37.3	25.5	13.7	3.9	1.45	1.083	-3.62**	14
F7 Desire to conform to industry dividend practice	17.6	47.1	19.6	11.8	3.9	1.37	1.038	-4.32**	15
F17 Desire to avoid using dividends as a signaling device to convey information to investors	33.3	33.3	29.4	3.9	0.0	1.04	0.894	-7.68**	16
F16 Concern about the ability to maintain an uninterrupted record of dividends	35.3	31.4	31.4	2.0	0.0	1.00	0.872	-8.19**	17
F15 Prefer to distribute cash using stock repurchases instead of dividends	39.2	27.5	29.4	3.9	0.0	0.98	0.927	-7.85**	18

Table 4. Reasons for Firms Not Paying Cash Dividends

This table shows the responses of 51 managers to the most important reasons that they decide not to pay dividends. The survey asks managers to select the three most important reasons that apply to their firms. Hence, the percentages add to more than 100% due to multiple responses.

Reasons	Respondents (%)
Low profitability and earnings	74.5
Need funds for growth and expansion	60.8
Prefer to limit raising external funds due to costs	45.1
Small excess cash flows	41.2
Investor preferences	19.6
Contractual constrains such as debt covenants	13.7
Industry practice	5.9
Prefer to distribute cash using stock repurchases	2.0
Other: Losses from current and past years, repaying debt and/or debt level, instability of financial condition, smaller business size, and earlier stages in their life cycle.	37.3

Table 5. Manager Responses to Statements related to Shareholder Preferences and Various Dividend Explanations

This table reports the responses of managers to 11 statements about the effect of shareholder preferences, signaling, taxes, concentration of ownership among insiders, and the high costs of raising external capital on a firm's decision to pay no dividends. Percentages may not add to 100% due to rounding.

Statements	Percentages		
	Yes	No	Don't Know
Panel A. For your firm, do you believe that:			
S1 Most of your shareholders prefer a no dividend policy.	60.8	11.8	27.5
S2 Your firm's shareholders prefer capital gains to dividends.	54.9	15.7	29.4
S3 Your firm is responsive to shareholders' dividend preferences.	68.6	17.7	13.7
S4 Paying no dividends positively affects the price of your firm's common stock.	23.5	58.8	17.7
S5 Your firm's stock price would increase upon announcing a cash dividend.	39.2	41.2	19.6
S6 Paying no dividends serves as a message from management about the future prospects of your firm.	43.1	41.2	15.7
Panel B. For firms in general, do you believe that the following factors would influence the decisions to pay no dividends?			
S7 The majority of the firm's owners have high marginal tax rates.	23.5	47.1	29.4
S8 The firm's ownership is heavily concentrated among insiders such as family managers.	41.2	43.1	15.7
S9 The firm has little need to signal its immediate prospect by dividends.	37.3	39.2	23.5
S10 The firm faces high flotation costs of raising new external capital.	82.4	7.8	9.8
S11 The majority of the owners face high transaction costs of selling their stock.	31.4	33.3	35.3

Table 6. Univariate Results

This table displays the differentiating characteristics of 127 dividend-paying and 89 non-dividend-paying BIST-listed firms between 2009 and 2016. The S&P Capital IQ database and annual reports published in the Public Disclosure Platform (KAP) of BIST and firms' official websites serve as the data sources. *Total sales* represent annual gross sales and other operating revenue less discounts, returns and allowances. *Total assets* refer to the sum of total current assets, long-term receivables, investment in unconsolidated subsidiaries, other investments, net property, plant and equipment, and other assets. *Market value* equals the share price (year-end) multiplied by the common shares outstanding. *Net earnings* represent annual income after all operating and non-operating income and expenses, reserves, income taxes, minority interest, and extraordinary items. *Cash availability* is measured as funds from operations less capital expenditures. *Return on assets* is the ratio of net income to total assets. *Market-to-book* ratio equals to a firm's market value divided by its book value. *Debt ratio* is the fraction of total debt to total assets. *Firm age* is the total number of years since the firm's incorporation date. *Family ownership* is the total percentage of equity held by families. *Foreign ownership* is the sum of total shares owned by foreign corporations and nationals at the 5% ownership disclosure threshold level. *Domestic ownership* is to the total percentage of shares held by Turkish corporations and nationals, whereas *state ownership* includes the central government and its wholly-owned enterprises shareholdings at the 5% threshold level. *Ownership dispersion* is the total percentage of shares owned by a large number of small (minority) shareholders who held less than 5% of the firm's outstanding shares. The real aggregate variables are measured in millions and normalized by the consumer price index (CPI) deflator using 2009 as a base year to remove the inflation effect. The CPI deflator data are taken from the Central Bank of the Republic of Turkey (CBRT) database. A standard *t*-test of equality of mean (without assuming equality of variance) is used to determine whether non-dividend-paying and dividend-paying BIST firms differ significantly on each characteristic. For robustness, the non-parametric Wilcoxon rank-sum test is also used. ***, ** and * denote statistical significance at the 1%, 5% and 10% levels, respectively.

Characteristics	Non-Dividend-Paying Firms	Dividend-Paying Firms	Mean Difference	t-test	Wilcoxon Test
	Mean (n = 687)	Mean (n = 992)		t-statistic	Z-statistic
Total sales (million TL)	430.82	2,021.39	-1,590.57	-8.95***	-16.61***
Total assets (million TL)	475.18	2,267.58	-1,792.40	-10.64***	-17.21***
Market value (million TL)	291.15	1,899.77	-1,608.62	-12.28***	-18.44***
Net earnings (million TL)	10.90	139.00	-128.10	-9.34***	-17.83***
Cash availability (million TL)	1.95	69.28	-67.33	-4.74***	-7.89***
Return on assets (%)	-0.44	6.61	-7.05	-13.35***	-16.53***
Market-to-book ratio (times)	1.61	1.46	0.15	2.16**	1.77*
Debt ratio (times)	0.27	0.19	0.08	7.54***	6.15***
Firm age (years)	29.52	46.62	-17.10	-7.31***	-6.99***
Family ownership (%)	42.90	38.00	4.90	3.20***	3.31***
Foreign ownership (%)	12.35	11.94	0.41	0.33	2.47**
Domestic ownership (%)	5.62	10.33	-4.71	-4.51***	-5.24***
State ownership (%)	0.00	1.76	-1.76	-4.75***	-6.67***
Ownership dispersion (%)	37.32	33.45	3.87	4.09***	3.97***

Table 7. Descriptive Statistics, Pearson's Correlations, and VIF Values

Panel A reports descriptive statistics for the research variables used in the multivariate analysis. The panel dataset (unbalanced) includes 216 unique BIST industrial firms with 1,679 firm-year observations between 2009 and 2016. Panel B shows the results of Pearson's correlation matrix, Variance Inflation Factor (VIF), and tolerance (1/VIF) values for the independent variables. ** and * indicate statistical significance at the 1% and 5% levels, respectively.

Panel A. Descriptive statistics for the research variables

<i>Variables</i>	<i>DPAY</i>	<i>ROA</i>	<i>GROW</i>	<i>DEBT</i>	<i>AGE</i>	<i>SIZE</i>	<i>FMLY</i>	<i>FRGN</i>	<i>DMSTC</i>
Mean	0.406	0.037	1.521	0.223	3.521	5.524	0.400	0.122	0.084
Median	0.000	0.035	1.171	0.191	3.664	5.354	0.447	0.000	0.000
Std. Dev.	0.491	0.112	1.411	0.209	0.606	1.732	0.309	0.255	0.211
Minimum	0.000	-1.604	0.252	0.000	0.693	0.445	0.000	0.000	0.000
Maximum	1.000	0.585	20.13	1.953	5.170	10.36	0.969	0.995	0.973
<i>Observations</i>	<i>1,679</i>	<i>1,679</i>	<i>1,679</i>	<i>1,679</i>	<i>1,679</i>	<i>1,679</i>	<i>1,679</i>	<i>1,679</i>	<i>1,679</i>

Panel B. Pearson's correlations and VIF values for the explanatory variables

<i>Variables</i>	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	<i>VIF</i>	<i>1/VIF</i>
(1) ROA	1.000								1.32	0.758
(2) GROW	-0.146**	1.000							1.10	0.909
(3) DEBT	-0.401**	0.037	1.000						1.25	0.800
(4) AGE	-0.058*	-0.040	0.073**	1.000					1.18	0.848
(5) SIZE	0.207**	0.133**	0.033	0.328**	1.000				1.28	0.781
(6) FMLY	0.015	-0.064*	-0.003	-0.131**	-0.108**	1.000			1.91	0.524
(7) FRGN	0.051*	0.144**	-0.099**	0.163**	0.216**	-0.427**	1.000		1.76	0.568
(8) DMSTC	0.019	0.073**	0.067**	0.156**	0.137**	-0.448**	-0.179**	1.000	1.71	0.585

Table 8. Results of the Logit Model Estimates for Dividend Payment Decisions

This table reports the estimated logit coefficients and marginal effects with the z-statistics in parentheses. The pooled model is tested using White's corrected heteroscedasticity robust regressions. Independent variables are one-year lagged. ***, ** and * stand for significance at the 1%, 5% and 10% levels, respectively.

Dependent variable: $DPAY_{i,t} (0/1)$					
Model 1.	Pooled Logit		Random Effects Logit		
	Independent variables	Coefficient Estimates	Marginal Effects	Coefficient Estimates	Marginal Effects
Financial variables					
$ROA_{i,t-1}$	9.810*** (5.96)	1.196*** (7.40)	7.029*** (4.30)	1.079*** (4.72)	
$GROW_{i,t-1}$	-0.378** (-2.15)	-0.144** (-2.20)	-0.322** (-1.99)	-0.152** (-2.01)	
$DEBT_{i,t-1}$	-2.119*** (-4.91)	-0.511*** (-5.19)	-2.823*** (-3.64)	-0.534*** (-3.70)	
$AGE_{i,t-1}$	0.275* (1.81)	0.046* (1.83)	0.236* (1.76)	0.039* (1.77)	
$SIZE_{i,t-1}$	0.755*** (13.29)	0.177*** (12.67)	1.092*** (8.49)	0.189*** (8.12)	
Ownership variables					
$FMLY_{i,t-1}$	-0.597** (-2.00)	-0.142** (-2.03)	-0.772** (-2.10)	-0.204** (-2.14)	
$FRGN_{i,t-1}$	-1.368*** (-3.85)	-0.325 (-3.69)***	-1.311*** (-3.63)	-0.358*** (-3.38)	
$DMSTC_{i,t-1}$	-0.537 (-0.92)	-0.123 (-0.92)	-0.436 (-0.78)	-0.136 (-0.78)	
Interaction terms					
$FMLY_{i,t-1} \times FRGN_{i,t-1}$	-0.056*** (-3.33)	-0.023*** (-3.31)	-0.061*** (-2.67)	-0.026*** (-2.63)	
$FMLY_{i,t-1} \times DMSTC_{i,t-1}$	-0.046** (-2.36)	-0.020** (-2.38)	-0.042** (-2.44)	-0.018** (-2.47)	
$FRGN_{i,t-1} \times DMSTC_{i,t-1}$	-0.019* (-1.73)	-0.006* (-1.73)	-0.025* (-1.77)	-0.009* (-1.77)	
Control variables					
$INDUSTRY$	Yes	Yes	Yes	Yes	
$YEAR$	Yes	Yes	Yes	Yes	
Constant	-3.408*** (-6.15)		-4.179*** (-5.24)		
Number of observations	1,460	1,460	1,460	1,460	
Wald χ^2	283.87***		154.10***		
Pseudo R^2 (%)	34.58%				
ρ value			0.5983		
Likelihood ratio test			219.69***		

Table 9. Results of Tobit Model Estimates for Dividend Payout Ratio and Dividend Yield

Panel A presents the results of the pooled and random effects (panel) Tobit estimations on the dividend payout ratio. Panel B illustrates the results of the pooled and random effects (panel) Tobit estimations on the dividend yield. The table reports the estimated Tobit coefficients and marginal effects, and t/z statistics are in parentheses. The pooled models are tested using White's corrected heteroscedasticity robust regressions. Independent variables are one-year lagged. ***, ** and * stand for significance at the 1%, 5% and 10% levels, respectively. The models are constructed as below:

$$\text{Model 2. } DPOUT_{i,t} = \beta_0 + \beta_1 ROA_{i,t-1} + \beta_2 GROW_{i,t-1} + \beta_3 DEBT_{i,t-1} + \beta_4 AGE_{i,t-1} + \beta_5 SIZE_{i,t-1} + \beta_6 FMLY_{i,t-1} + \beta_7 FRGN_{i,t-1} + \beta_8 DMSTC_{i,t-1} \\ + \beta_9 (FMLY_{i,t-1} \times FRGN_{i,t-1}) + \beta_{10} (FMLY_{i,t-1} \times DMSTC_{i,t-1}) + \beta_{11} (FRGN_{i,t-1} \times DMSTC_{i,t-1}) + \sum_{j=1}^N \beta_j INDUSTRY_{j,i,t} + \\ \sum_{t=1}^T \beta_t YEAR_{i,t} + u,$$

$$DPOUT_{i,t} = \begin{cases} 0 & \text{if } DPOUT_{i,t} = 0, \\ DPOUT_{i,t} & \text{if } DPOUT_{i,t} > 0, \end{cases}$$

$$\text{Model 3. } DYIELD_{i,t} = \gamma_0 + \gamma_1 ROA_{i,t-1} + \gamma_2 GROW_{i,t-1} + \gamma_3 DEBT_{i,t-1} + \gamma_4 AGE_{i,t-1} + \gamma_5 SIZE_{i,t-1} + \gamma_6 FMLY_{i,t-1} + \gamma_7 FRGN_{i,t-1} + \gamma_8 DMSTC_{i,t-1} \\ + \gamma_9 (FMLY_{i,t-1} \times FRGN_{i,t-1}) + \gamma_{10} (FMLY_{i,t-1} \times DMSTC_{i,t-1}) + \gamma_{11} (FRGN_{i,t-1} \times DMSTC_{i,t-1}) + \sum_{j=1}^N \gamma_j INDUSTRY_{j,i,t} + \\ \sum_{t=1}^T \gamma_t YEAR_{i,t} + \omega,$$

$$DYIELD_{i,t} = \begin{cases} 0 & \text{if } DYIELD_{i,t} = 0, \\ DYIELD_{i,t} & \text{if } DYIELD_{i,t} > 0, \end{cases}$$

where $DPOUT_{i,t}$ is the dividend payout ratio (dividends per share to earnings per share) (Model 2) and $DYIELD_{i,t}$ is the dividend yield (dividends per share to price per share) (Model 3) for firm i at year t between 2009 and 2016. The independent variables have the same previous definitions as given in sub-section 6.2 Research Design, Model, and Variables.

Dependent variable:	Panel A. Dividend Payout Ratio ($DPOUT_{i,t}$)				Panel B. Dividend Yield ($DYIELD_{i,t}$)			
Models:	Model 2				Model 3			
	Pooled Tobit		Random Effects Tobit		Pooled Tobit		Random Effects Tobit	
Independent variables	Coefficient Estimates	Marginal Effects	Coefficient Estimates	Marginal Effects	Coefficient Estimates	Marginal Effects	Coefficient Estimates	Marginal Effects
Financial variables								
$ROA_{i,t-1}$	6.277*** (4.06)	1.155*** (7.51)	5.708*** (5.46)	0.948*** (5.58)	0.258*** (5.09)	1.486*** (7.87)	0.152*** (6.28)	0.841*** (7.13)
$GROW_{i,t-1}$	-0.223*** (-2.97)	-0.139*** (-2.83)	-0.182*** (-2.90)	-0.114*** (-2.76)	-0.008*** (-2.98)	-0.043*** (-3.03)	-0.007*** (-2.83)	-0.035*** (-2.88)

$DEBT_{i,t-1}$	-2.024*** (-5.25)	-0.336*** (-4.63)	-2.337*** (-4.24)	-0.379*** (-4.11)	-0.055*** (-4.39)	-0.319*** (-5.35)	-0.047*** (-3.24)	-0.275*** (-3.46)
$AGE_{i,t-1}$	0.261* (1.77)	0.016* (1.79)	0.254* (1.73)	0.012* (1.75)	0.024* (1.69)	0.050* (1.72)	0.037* (1.65)	0.058* (1.67)
$SIZE_{i,t-1}$	0.398*** (9.64)	0.208*** (10.91)	0.494*** (7.13)	0.247*** (7.45)	0.013*** (10.74)	0.075*** (12.99)	0.016*** (7.61)	0.086*** (8.96)
Ownership variables								
$FMLY_{i,t-1}$	-0.554** (-2.04)	-0.193** (-2.07)	-0.618** (-2.29)	-0.217** (-2.34)	-0.043** (-2.27)	-0.064** (-2.45)	-0.052** (-2.40)	-0.075** (-2.51)
$FRGN_{i,t-1}$	-0.436** (-2.36)	-0.172** (-2.31)	-0.405** (-2.15)	-0.150** (-2.11)	-0.027*** (-3.09)	-0.014*** (-2.97)	-0.034*** (-2.76)	-0.023*** (-2.69)
$DMSTC_{i,t-1}$	-0.305 (-0.83)	-0.101 (-0.83)	-0.281 (-0.62)	-0.084 (-0.62)	-0.014 (-1.41)	-0.001 (-1.43)	-0.010 (-1.12)	-0.001 (-1.14)
Interaction terms								
$FMLY_{i,t-1} \times FRGN_{i,t-1}$	-0.027** (-2.07)	-0.014** (-2.08)	-0.039** (-1.99)	-0.017** (-2.01)	-0.003*** (-3.16)	-0.007*** (-3.33)	-0.005*** (-3.00)	-0.008*** (-3.14)
$FMLY_{i,t-1} \times DMSTC_{i,t-1}$	-0.021* (-1.82)	-0.010* (-1.82)	-0.019* (-1.89)	-0.009** (-1.89)	-0.002*** (-2.95)	-0.010*** (-2.98)	-0.003*** (-2.96)	-0.011*** (-2.99)
$FRGN_{i,t-1} \times DMSTC_{i,t-1}$	-0.012* (-1.70)	-0.007* (-1.71)	-0.017* (-1.77)	-0.008* (-1.79)	-0.001** (-2.31)	-0.003** (-2.31)	-0.001** (-2.33)	-0.001** (-2.33)
Control variables								
$INDUSTRY$	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
$YEAR$	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	-2.336*** (-2.90)		-3.077*** (-4.12)		-0.161*** (-4.78)		-0.327*** (-3.15)	
Number of observations	1,428	1,428	1,428	1,428	1,460	1,460	1,460	1,460
F test	12.94***				26.88***			
Pseudo R^2 (%)	13.23%				11.85%			
Wald χ^2			138.12***				192.27***	
ρ value			0.3499				0.5141	
Likelihood ratio test			122.32***				289.00***	

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Why Companies Do Not Pay Cash Dividends: The Turkish Experience**Highlights**

- Firms pay no dividends due to cash constraints and investment opportunities.
- Firms do not pay dividends because of poor profitability and earnings.
- Firms avoid paying dividends due to the cost of raising external funds.
- Turkish firms consider shareholder preferences when setting dividends policy.
- Non-dividend-payers do not perceive taxes as a reason not paying dividends.

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