Dividend Reputation, Dividend Yield, and Stock Returns in Korea

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Abstract

Although it has often been studied in finance research, the relationship between dividend yields and stock returns remains an unresolved issue, especially in the Korean stock market. When firms continue to pay non-decreasing dividends for three or five years, they may establish a dividend reputation, which could affect this relationship. I find firms that pay more dividends, larger firms, older firms, more profitable firms, less leveraged firms, firms with less volatile returns, firms with foreign holdings of more than 5%, and firms with more concentrated ownership build dividend reputations. I also find that the relationship between dividend yields and future stock returns depends on a firm's dividend reputation. The evidence shows that when firms with higher yields have dividend reputations, they produce higher future returns, whereas there is no significant relationship between yields and returns for firms with no reputation. These results are inconsistent with the findings of studies that use developed market data. In addition, when larger firms with higher growth potential and firms with less concentrated ownership have dividend reputations, future returns are higher.

Keyword: Dividend, Reputation, Dividend yield, Stock returns, Growth opportunity

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1. Introduction

There are conflicting opinions in finance regarding the relationship between dividend yields and stock returns. Although Gordon and Shapiro's (1956) well-known "Gordon growth model" and Campbell and Shiller's (1988) dividend-ratio models suggest that dividend yield is predictive of stock returns, empirical studies have found a variety of relationships between dividend yields and stock returns. In an aggregated level, Fama and French (1988), Hodrick (1992), Kothari and Shanken (1997), Naranjo, Nimalendran, and Ryngaert (1998), Lewellen (2004), Campbell and Yogo (2006), Chiquoine and Hjalmarsson (2009), Ferreira and Santa-Clara (2011), and Golez (2014) indicate that dividend yields have a strong positive relationship with expected returns on the market On the other hand, Goetzmann and Jorion (1993), Wolf (2000), Lanne (2002), and Welch and Goyal (2008) find no significant evidence indicating that dividend yields can forecast stock market returns. Goyal and Welch (2003) argue that prior to 1990, the conditional dividend yield could reliably predict future equity premia in-sample, however, this predictive ability of dividend ratios is no longer applicable. Ang and Bekaert (2007) find that dividend yields predict excess returns only at short horizons and do not have any long-horizon predictive power.

Studies using data from individual securities also report conflicting findings. Litzenberger and Ramaswamy (1979), Blume (1980), and Keim (1985) show that returns for dividend-paying stocks tend to increase as dividend yield increases. In this regard, practitioners use high dividend yield strategies as one profitable style to outperform market returns in many markets. McQueen, Shields and Thorley (1997) and Visscher and Filbeck (2003) show that high dividend yield stocks outperform the market. Chen, Grundy, and Stambaugh (1990) utilize a single stock market factor model to document the positive relationship between dividend yields and expected stock returns, but they find no reliable cross-sectional relationship between dividend yields and risk-adjusted expected returns. Furthermore, Miller and Scholes (1982) report no significant relationship between expected returns and dividend yields. Filbeck and Visscher (1997) also demonstrate that high dividend yield stocks do not systematically outperform the market index using the U.K. data.

Prior studies suggest various reasons for these mixed results. For instance, Keim (1985) proposes it is due to the tax effect on dividend income, while Maio and Santa-Clara (2015) show that there is a positive relationship between dividend yields and stock returns for the aggregate stock market, but not for portfolios of small and value stocks.

Further, Chen, Grundy, and Stambaugh (1990) find that at least part of the relationship between stock returns and dividend yields can be attributed to dividend-related changes in risk measures. As another possible reason, this study examines the dividend reputation effect on the relationship between dividend yields and stock returns. That is, the relationship is expected to differ depending on whether or not a firm has established a dividend reputation.

Wilson (1985) and Gillet, Lapointe, and Raimbourg (2008) explain that a reputation is the result of people's perceptions of a firm, which are based on observed past behavior and especially on the assumption that this behavior will continue in the future. Thus, they describe a reputation as built over time, based on observable behaviors or firm characteristics. Further, it is generally known that companies consider dividend reputations when determining their dividend policies. In this regard, Lintner (1956), Fama and Babiak (1968), Brav et al. (2005), and Leary and Michaely (2011) indicate that firms are obviously concerned with the stability of dividends. The companies tend to keep their stream of dividend payments stable despite transitory shocks in their earnings. Syed, Zainir, and Isa (2018) claim that this tendency has direct implications for a firm's market reputation as a payer, thus, that the literature views a reputation as an essential consideration to decide dividend policy. For example, La Porta, Lopez-de-Silanes, Shleifer, and Vishny (2000) introduce their substitution model that firm insiders pay high and steady dividends to establish their market reputation.

Therefore, the literature implies that not only is building a dividend reputation among existing and potential investors a crucial factor in corporate dividend policies, but investors' evaluations of corporate dividend policies also differ depending on whether firms have built dividend reputations. That is, the relationship between dividend yields and stock returns is expected to vary by firm dividend reputation.

The important issue in this study is how to measure a dividend reputation. Prior studies focusing on corporate reluctance to cut or change dividends associated with a reputation primarily investigates dividend smoothing, which assumes that companies adjust the dividend in the given year based on dividend only in the previous year. As Wilson (1985) and Gillet et al. (2008) explain, however, a reputation is established over a long period of time, not just one year. We need to observe a dividend stream for several years to identify whether firms earn a reputation from their dividend. Additionally, most methodologies of studies on dividend smoothing weigh increases and reductions in dividends equally, although Brav et al. (2005) report that firm managers express a strong desire to avoid

dividend cuts except in extraordinary circumstances. Indeed, investors prefer increases of dividend payments to decreases.

On the other hand, Kang, Kim, and Oh (2019) propose a measure for a dividend reputation, complementing this existing literature. They distinguish firms with a dividend reputation which pay non-decreasing dividends for several years (e.g., at least three years) from firms that experience reductions in dividends for the same period more than once, thus, cannot build a reputation. Their assumption is that investors expect that firms will keep or increase its dividends in the next period based on observed past behavior of steadily paying non-decreasing dividends over time; consequently, the firms establish a dividend reputation. As their measure takes long-term dividend series and the firms' reluctance to reduce dividends into account, its identification of dividend reputations closely corresponds to investors' practical expectations and companies' payout policies. Thus, I use their measure to investigate factors that affect whether firms build dividend reputations and how a dividend reputation influences the relationship between dividend yields and stock returns.

This study uses data from the Korean financial markets, where there is a very unclear relationship between dividend yields and stock returns. Choi (2016) finds that the dividend price ratio of Korean stocks does not predict next year's stock return. Kim and Kim (2004), and Chung and Kim (2010) also show that dividend yields in the Korean stock market do not have the predictive power on stock returns. Kim and Seo (2011) cannot find any significant relationship between the dividends and returns on individual stocks. Further, while Kim (2018) reports that a high dividend yield portfolio outperforms the Korean stock market from 1987 to 2017, the KRX High Dividend index that consists of 50 stocks with high dividend yields among the KOSPI and KOSDAQ universe since October 2014 produce a cumulative monthly return of 6.60% from the beginning to December 2019, less than the KRX 100 index of 13.25% for the same period. This ambiguous association in the Korean market is more severe than in developed countries, which could be attributed to several emerging market features. According to Jeong (2013), Korea has experienced massive economic growth over the decades, and firms with high growth opportunities are attracted to paying dividends in order to signal their information to outside investors, at the same time, to retain a large part of earnings to assist with their efficient projects. Indeed, Korean firms are known to tend to pay extremely less dividends in comparison with the developed markets. Moreover, Kim and Yi (2006), Jeong (2013), and Kang, Lee, Lee, and Park (2014) discuss that many of Korean firms belong to business groups linked with their

affiliated firms via circular-shareholdings, thus, they are likely to have a large discrepancy between voting rights (control) and cash flow rights (ownership) of controlling shareholders. They argue that this has the possibility to cause agency problems, in which controlling shareholders expropriate minority shareholders' wealth. Even Korea also has relatively weak protections for outside minority shareholders (Bae et al., 2002). Consequently, emerging market firms with poor corporate governance such as Korean stocks might pay dividends to mitigate high agency costs. On the other hand, Lee (2011) documents that corporate dividends in family business groups sometimes act as a means of transferring capital within a business group in the Korean market. With these emerging market features, as various market reactions to stock dividend yields may be offset in the Korean stock markets, the relationship between dividend yields and stock returns is unclear. Consequently, I suggest that a dividend reputation has an important influence on the relationship and is an important dividend policy for companies in emerging markets.

This study examines the determinants of dividend reputation-building for firms, and the association between dividend yields and stock returns for firms with and without dividend reputations. The evidence from logit regressions and Fama and MacBeth's (1973) cross-sectional regressions indicates that firms that pay more dividends, larger firms, older firms, more profitable firms, less leveraged firms, and firms with less volatile returns are more likely to establish dividend reputations, measured as no reduction in regular cash dividends over three, five, or seven years. These results are consistent with the literature discussing that mature firms tend to initiate or increase dividend payments with diminishing investment opportunities (Fama and French, 2001; Grullon, Michaely, and Swaminathan, 2002). Indeed, firms that are able to retain or increase regular dividend payments to build a dividend reputation would be mature, are likely to earn stable profits, and be less risky. Interestingly, the results for growth opportunities measured by sales growth and market-to-book ratio are mixed. Firms not reducing regular dividends over at least three years tend to have larger growth opportunities, both in terms of sales growth and market-to-book ratio, but the period for a reputation is expanded to more than five years, reputation-building firms have relatively lower sales growth and higher market-to-book ratio. Flavin and O'Connor (2017) argue that firms with larger growth opportunities (higher market-to-book ratio) in Korea tend to pay larger dividends to build a reputation, in contrast to the findings for firms in more developed regimes. Supporting their findings, the results in this paper imply that firms with larger growth opportunities are likely to build dividend reputation,

regardless of past growth performance. Moreover, I find that among small firms, firms with low market-to-book equity ratio are likely to build dividend reputation, but among bigger firms, firms with higher market-to-book ratio tend to build reputation. This results of this study, in which firms with foreign holdings more than 5% are apt to pay non-decreasing dividend streams, support this interpretation. In addition to corporate governance, firms with more concentrated ownership establish a dividend reputation. This result does not support the agency theory for corporate dividend policies (Jensen, 1986) or dividend smoothing (Leary and Michaely, 2011).

I also find that the relationship between dividend yields and future stock returns depends on a firm's dividend reputation. I divide firms within the KOSPI and KOSDAQ universe into two groups based on whether the firm establishes a dividend reputation, and investigate separately for each group the relation using panel regressions and Fama-MacBeth cross-sectional regressions. The evidence indicates there is a significantly positive relation between dividend yields and future returns (after including control variables) in reputation-established firms, whereas no reputation firms do not have any significant relation. Similarly, results from equal regressions using the entire sample of the one-year future stock return on the dividend reputation dummy variable, the dividend yield, and the interaction terms between the reputation dummies and some relevant variables including the dividend yield provide reliable evidence of the reputation effect on relation between yields and returns. Although the coefficients of the yield are not significant, those of interaction terms between the reputation dummy and the yield have significantly positive coefficients, which means that only reputation-established firms among those with higher yields are expected to produce higher future returns. This result runs counter to Kang et al (2019), that show interaction terms between the reputation dummy and yields have significantly negative coefficients in the regressions of monthly excess returns in the U.S. They document that firms with a dividend reputation tend to have less risk compared to firms without a dividend reputation, and the expected return of firms with a dividend reputation will be lower given the dividend yield, taking the positive relationship between yields and returns in the U.S. into account. However, Korean stocks, having rapidly grown, have no significant association between dividend yields and returns. Nevertheless, when reputation-established firms provide higher dividend yields in Korea, investors will be willing to expect their higher value. Especially when larger firms with higher market-to-book ratio have a dividend reputation, the future

returns are higher. That is, markets also positively react on mature firms with higher growth opportunities paying a non-decreasing dividend series as signals.

For ownership, although firms with more concentrated ownership are apt to build dividend reputation, their future returns tend to be lower when they have a dividend reputation. In other words, investors may react on these companies negatively in Korean markets. Since firms with more concentrated ownership have lower agency costs and need not solve the agency problem by paying non-decreasing dividend streams regardless of earnings, investors may regard these continuous non-decreasing dividend payouts as an expropriation of minority shareholders' wealth in the Korean environment with poor corporate governance and weak protections for minority shareholders. Additionally, I find that the interaction has no effect between foreign holdings and dividend reputation on stock returns.

The rest of the paper is organized as follows. Section 2 describes the data and variables in this study. Section 3 identifies the determinants of dividend reputation-building for Korean markets. Section 4 examines the reputation effect on the relationship between dividend yields and future returns. Section 5 concludes the paper.

2. Data and Variables

I use all firms traded on the KOSPI and KOSDAQ markets of the Korean Stock Exchange (KSE) from January 1998 to December 2019. Mutual funds, REITs, ETFs, SPACs, and preferred stocks are excluded. All financial data employed in this paper, including dividends, come from DataGuide. As most firms in Korea that regularly pay dividends make dividend payments once a year, the sample includes only common stocks that pay yearly regular cash dividends; firms that pay quarterly or semiannual regular cash dividends more than once during the sample period are excluded. I also eliminate firms that pay occasional special dividends or stock dividends more than once during the sample period. The presence of these dividends precludes determining whether firms have a dividend reputation because these may complement or substitute for regular cash dividends. To reduce the bias related to the market-microstructure, I only consider stocks with prices above 1,000 KRW during the sample period.

Following Kang et al. (2019), I divide the sample firms into two groups based on regular dividend streams: (1) *RPT* includes reputation-established firms that continue to pay non-decreasing dividends per share for at least five years ending on the fiscal year end date, and (2) *NR* includes no-reputation firms that pay decreased dividends per share from a previous year over the recent five years. I create a dummy variable, *RPT5*, which equals one for all firms in *RPT* and zero for all firms in *NR*. In other words, if a firm maintains previous dividend payments or increases dividends for the latest five years in year t, $RPT5 = 1$ for year $t + 1$. In their study using U.S. stock data, Kang et al. (2019) define firms that pay non-decreasing dividends for at least three years as reputation-established firms, and Kang (1997) documents that it usually takes around three years for a firm to establish a reputation. Since Korean companies make annual dividend payouts, they provide fewer dividend payments during the same period when compared to U.S. firms, which generally pay regular quarterly cash dividends, I observe the reputation-building behavior of firms for five years. As a robustness test, I use other reputation-building periods—three years following Kang et al. (2019) or seven years— with no change in the main results. This is discussed in more detail later.

As variables associated with dividends, I use dividends per share (*Div*) and dividend yield (*DY*). The dividend per share is measured by *Log*(*Div*), which is the natural logarithm of the cash dividend per common share plus one, and dividend yield is measured by *Log*(*DY*), which is the natural logarithm of the *Div* scaled by the closing stock price at the end of the fiscal year plus one. In addition, ΔDY is the yearly change in dividend yield for an individual firm, which is defined as the difference in the dividend yield (in logarithm) between the current and previous years.

Based on the literature, I use several sets of variables to control for firm-specific determinants of dividend payout policy. For example, Fama and French (2001), Grullon et al. (2002), and Denis and Osobov (2008) find that the propensity to pay dividends is higher among larger firms, more profitable firms, firms with fewer investment opportunities, and firms with less leverage. It is possible for these characteristics to be associated with reputation building through dividend policy. I first consider two proxies for firm maturity: firm size and age. Many studies argue that larger and older firms face less information asymmetry (Frank and Goyal, 2003; Lemmon and Zender, 2010; Leary and Michaely, 2011). Firm size, *Log*(*MV*), is measured using the natural logarithm of the firm's market capitalization at fiscal year-end, and firm age, *Log*(*Age*), is measured as the natural logarithm of the number of years

the firm has been listed on the Korea Stock Exchange (i.e., KOSPI or KOSDAQ) plus one. Firm profitability is captured by *ROA* and *Cashflow*. *ROA* is the operating income before depreciation scaled by the book value of total assets, and *Cashflow* are cash flows from operations scaled by total assets. The past one-year return, r_{1Y}, measures a firm's performance in the stock market over the last one year. *Cashflow* is also used as a proxy for the agency costs of free cash flow, as in Jensen (1986). To capture investment opportunities, the sales growth rate, *GS*, and market-to-book ratio, *MB* (Fama and French, 2001; Grullon et al., 2002; Grullon and Michaely, 2007; Adam and Goyal, 2008; Denis and Osobov, 2008; Leary and Michaely, 2011). *GS* is calculated using the annual average of the latest three-year sales growth rate, and *MB* is the market capitalization divided by the book value of equity at fiscal year-end. Leverage, *LVRG*, is measured by total liabilities over total assets. As proxies for volatility, I include the volatility of both earnings and stock returns as measures of risk and information asymmetry (Brennan and Subrahmanyam, 1996; O'Hara, 2003; Leary and Michaely (2011). σ_{r1Y} measures the volatility of stock returns, estimated by the annual standard deviation of weekly stock returns, and following Chay and Suh (2009), σ_{ROA} measures earnings volatility or cash uncertainty, estimated by the standard deviation of *ROA* over the prior five years. I further include measures of corporate governance. La Porta et al. (2000), Brav et al. (2005), Michaely and Roberts (2006), and Leary and Michaely (2011) show that corporate governance is related to dividend policies, which capture exposure to agency problems. Officer (2006) also documents that predicted dividend payers with weak governance are more likely to pay dividends than dividend payers with strong governance. La Porta et al (2000) predict that firms use dividend policy as a substitute for weak governance. Thus, the proportion of stock held by the largest shareholder, *LargeSh*, and the proportion of stock held by minority shareholders, *MinorSh*, are included as proxies for governance. The ownership of the largest shareholder reported by DataGuide covers the largest shareholder and related parties' holdings, which is a more comprehensive measure of ownership concentration. Additionally, firms that want to signal to foreign investors through dividend payouts may seek to establish a dividend reputation. For example, Sul and Kim (2006) show that higher foreign ownership is related to higher dividend yields; therefore, foreign holdings, *ForeignSh*, are included. Sul and Kim (2006) find that firms with foreign holdings of more than 5% have a significant impact on the increase in dividend payouts; hence, I add a dummy variable, *FMsh*, which equals one if foreign holdings are more than 5% and zero otherwise. Last, the market return, r_{mt}, is a value-weighted average of index

returns on the KOSPI and KOSDAQ markets, and the risk-free rate, r_{ft}, is measured using the CD91 rate. Table 1 defines all variables used in this study.

All variables, except returns, are winsorized at the 1st and 99th percentiles to reduce the influence of outliers. Consequently, the final sample consists of 2,137 firms and 24,343 firm-year observations. Table 2 presents the descriptive statistics of the variables for the sample firms in the full sample period. The average dividend per share is 295 won, and the median is 60 won. The average dividend yield is 1.654%, and the median is 1%.

3. Determinants of Reputation Building

3.1 Characteristics of reputation-established firms

I compare two groups, reputation-established firms (*RPT*) that continue to pay non-decreasing dividends per share for at least five years, and no-reputation firms (*NR*) that decrease or cut dividends more than once in the prior five years. Table 3 shows the separate statistics for *RPT* and *NR* firms and the results of a t-test of the differences in their variable means. The number of reputation established firms is much larger than no-reputation firms. *RPT* contains 2,910 firm-years, while *NR* contains 21,433 firm-years, about seven times more. *Div* and *DY* for *RPT* firms are significantly larger than those of *NR* firms. According to previous studies such as Fama and French (2001), Denis and Osobov (2008), and He (2012), firms with a consecutively stable dividend stream may pay relatively higher dividends based on their length of maturity and profitability. Further, as Table 3 shows, prices of *RPT* firms are higher than those of *NR* firms; thus, the relatively high *DY* of *RPT* firms is due not to low prices, but absolutely higher dividend payouts.

According to *Log*(*MV*) and *Log*(*Age*) in Table 3, *RPT* firms are significantly larger and older; thus, they are more mature. This indicates that relatively mature firms probably pay stable non-decreasing dividend streams. As *ROA* and *Cashflow* are significantly higher for *RPT* firms, reputation-established firms are associated with higher profitability and larger cash flows from firm operations. However, stock market performance, r_{1Y}, differs with operational performance. *RPT* firms have lower stock returns over the past one year than *NR* firms, but the difference between the two groups is

not significant. The results regarding investment opportunities are mixed; the *GS* of *RPT* firms is significantly lower than that of *NR* firms, but the difference in *MB* between the two groups is insignificant. The results from *LVRG* show that reputation-established firms have relatively low debt. The results of the firms' risk measures, σ_{r1Y} and σ_{ROA}, show that firms with reputations have less stock market and operational risk, and these are consistent with prior studies. That is, firms that are more exposed to risk have difficulty maintaining their previous dividend level. *RPT* firms are larger, older, and less risky, which indicate that these firms are associated with less asymmetric information, based on Brennan and Subrahmanyam (1996), O'Hara (2003), and Leary and Michaely (2011). Finally, results from *LargeSh*, *MinorSh*, and *ForeignSh* reveal that firms with concentrated ownership and firms with relatively high foreign ownership do not decrease dividend payouts over the previous five years. This implies that building a dividend reputation is not related to principal-agent conflicts, as explained by La Porta et al. (2000) and Brav et al. (2005).

These results are consistent with the literature regarding dividend smoothing in Korea. Jeong (2013) finds that larger firms, lower growth firms, less risky firms, and firms with more concentrated ownership tend to smooth dividends more, which implies that neither information asymmetry-based models nor agency cost-based models are supported for dividend payout policies in Korea.

The correlation coefficients among the study variables are presented in Table 4. Overall, the correlations between the reputation dummy variable, *RPT5*, and other variables are not high; most absolute values are less than 0.2. Among them, *Log*(*DY*), *Log*(*MV*), and *Log*(*Age*) are the most positively correlated with the reputation dummy, consistent with the findings in Table 3. That is, firm maturity has a greater impact on non-decreasing and dividend payout decisions than firm profitability. σ_{r1Y} has also a relatively high, negative correlation with the reputation dummy.

3.2 Logit regressions

Next, I use a set of regressions to examine the relationship between reputation dummies and other relevant variables identified as factors that may impact firm dividend payouts. Because the dependent variables are binomial variables—the reputation dummies, *RPT3*, *RPT5*, or *RPT7*—I use

logit regressions. The explanatory variables are the dividend yield in the previous year, $Log(DY)_{t-1}$, $Log(MV)_t$, $Log(Age)_t$, ROA_t, $CashFlow_t$, $r_{1Y,t}$, GS_t, MB_t, $LVRG_t$, $\sigma_{r1Y,t}$, and $\sigma_{ROA,t}$. I use either $LargeSh_t$ or $MinorSh_t$ to measure ownership concentration because the correlation coefficient between *LargeSh* and *MinorSh* is very high (-0.694). Also, I add either *ForeignSh* or *FMsh* for the foreign ownership variable, which are the proportion of stock held by foreign investors and the dummy equal to one for firms with foreign holdings of more than 5% and zero otherwise, respectively. Dividend yields in the previous year are used to solve the potential endogeneity problem. The logit regressions include year dummies and industry dummies based on major sections of the KSIC (Korean Standard Industrial Classification), and *t*-statistics are based on robust standard errors clustered by firm. The results are reported in Panel A of Table 5.

The reputation dummy, *RPT5*, is positively related to dividend yield, firm size, age, and profitability. Following Zhang (2006) and Lu et al. (2010), this result supports the idea that mature firms with less information asymmetry have already established dividend reputations. The coefficients of *ROA* and *CashFlow* reveal that profitability from operations rather than cash flows affects reputation building. However, the coefficient of r_{1Y} shows that stock market performance has a marginally negative relationship with reputation building. The impact of past stock returns on reputation building through dividend payouts is likely to be relatively weak, noting the insignificance of the difference in r_{1Y} between the *RPT* and *NR* groups in Table 3. Contrary to stock performance, stock return volatility, σ_{r1Y}, has a significantly negative association with reputation building. Taking the significantly negative coefficient of earnings volatility, σ_{ROA}, and the leverage ratio, *LVRG*, into account as well, less risky firms with less information asymmetry and firms with low debt are likely to pay non-decreasing dividends. Interestingly, results from the investment-related variables are mixed. *GS* has a negative coefficient that is significant at the 10% level, while the coefficient of *MB* is significantly positive with a t-statistic of about 5. Consistent with Lee and Kong (1994), Kim, Kim, and Kim (2010), and Flavin and O'Connor (2017), Korean firms with greater growth opportunities tend to seek to build dividend reputations, in contrast to the findings for firms in more developed markets; however, Korean firms have grown relatively slowly. Since they have larger investment opportunities in spite of their lower past growth, they may signal this information to potential investors in emerging markets with country-level institutional barriers to investment. For corporate

governance, the significantly positive coefficient of *LargeSh* and significantly negative coefficient of *MinorSh* indicate firms with concentrated ownership tend to maintain or increase dividend payouts to establish a reputation, which suggests Korean firms' actions are not consistent with the agency theory-based explanation for dividend policies (La Porta et al., 2000; Brav et al., 2005) or dividend smoothing (Leary and Michaely, 2011). According to these prior studies, firms with relatively low largest holdings and high minority holdings, suggesting the existence of agency conflicts, are likely to pay large dividends and smooth dividends more, but this study's results do not support this view. Finally, the coefficient estimates of *ForeignSh* and *FMsh* in the logit regressions imply that foreign holdings have no significant association with corporate dividend reputations but the presence of foreign holdings of more than 5% are significantly related to building reputations through dividend streams. This evidence suggests that foreign investors do not prefer decreases in dividends, and further, may use their voting power to demand non-decreasing dividend series.

I also perform logit regressions of the reputation dummies with other reputation-building periods, *RPT3* or *RPT7*, using the same explanatory and control variables. Overall, the results are robust across different reputation-building periods, that is, firms with higher dividend yields, larger firms, older firms, more profitable firms, less leveraged firms, firms with less volatile returns, and firms with more concentrated ownership build dividend reputations. The marked differences across the reputation-building periods are the following: (1) the longer the reputation-building period, the lower the coefficients and significance of *GS*; (2) *MB* has a significantly positive relationship with the reputation dummies for three and five reputation-building years but does not have significant relationship in the seven-year period; and (3) the longer the reputation-building period, the lower the coefficient and significance of *ROA*, and the higher the coefficient and significance of *FMsh*. In other words, firms that do not reduce regular dividends for at least three years tend to have grown at a relatively rapid pace and have greater growth opportunities, measured by both sales growth and the market-to-book ratio; however, when the reputation period is longer than five years, reputation-building firms have relatively lower past sales growth and higher market-to-book ratios. Flavin and O'Connor (2017) argue that firms with larger growth opportunities (higher market-to-book ratios) in Korea tend to pay larger dividends to build a reputation, in contrast to the findings for firms in more developed regimes. Supporting their findings, this study's results imply that firms with greater growth

opportunities are likely to build dividend reputations, regardless of their past growth. However, for longer reputation-building periods, such as seven years, growth has no significant association with dividend reputation building behavior. Hence, firms may manage to signal their investment information by paying non-decreasing dividends over relatively shorter periods, such as three or five years. Moreover, the increases in the coefficients and significance of *FMsh* for the longer reputation-building period imply that foreign investors as majority shareholders may impact corporate dividend policies to ensure companies do not reduce dividend payments.

3.3 Cross-sectional regressions

I examine cross-sectional differences in the determinants of reputation-building behavior using Fama and MacBeth's (1973) cross-sectional regressions to account for time-specific economy-wide shocks. Each year, I regress reputation dummies on lagged *Log*(*DY*) and other relevant variables used in the prior logit regressions. The regression coefficients are then averaged over time; standard errors and *t*-statistics are computed and reported in Table 6.

The dependent variables are *RPT5* in Panel A, *RPT3* in Panel B, and *RPT7* in Panel C. The evidence confirms the logit regression results: firms with higher dividend yields, larger firms, older firms, more profitable firms, less leveraged firms, firms with less volatile returns, firms with more concentrated ownership, and firms held by more foreign investors tend to establish dividend reputations. Consistent with Table 5, the longer the reputation-building period, the lower the coefficients and significance of *GS* and *MB*. That is, in shorter terms, firms with greater investment opportunities and past growth are likely to use dividend payouts to convey their information to outside investors, while in longer terms, firms with higher investment opportunities but lower past growth are likely to pay non-decreasing dividends to establish a reputation. Cross-sectionally, the foreign ownership effect is larger than in the logit regressions. Both *ForeignSh* and *FMsh* have larger coefficients and greater significance in the Fama-MacBeth regressions.

3.4 Reputation-established firms and portfolios formed on size and market-to-book ratio

Since the previous results indicate that firms with greater growth opportunities as captured by market-to-book equity unexpectedly tend to pay non-decreasing dividends, as do larger firms, as expected, I investigate which firms seek to build dividend reputations based on size and the market-to-book ratio. Each year, I sort the full sample of firms by size, *Log*(*MV*), and (independently) by market-to-book equity, *MB*. I construct 25 portfolios from the intersections of the size and *MB* quintiles and count the number of firms for which the reputation dummy, *RPT5* or *RPT3*, equals one for each of 25 portfolios. Table 7 shows the number and proportion of reputation-established firms. For firms in the smaller size quintiles, the lowest market-to-book quintiles have the greatest number of reputation-established firms. However, for firms in larger size quintiles, the higher market-to-book quintiles have the most reputation-established firms. For instance, among firms in the smallest quintile, the lowest market-to-book quintiles have 118 firms with reputations over at least five years; the percentage in both the smallest and lowest market-to-book quintiles is 7.5%, which is the highest. In contrast, among the portfolios in the largest size quintile, the highest market-to-book quintile has the largest stocks, 312, and the second highest market-to-book quintile has the largest percentage of firms with reputations, 24.7%. These patterns are similar for firms whose *RPT* reputation dummy equals one. The evidence implies that among small firms, firms with higher market-to-book ratios may not be able to pay non-decreasing dividends because they have large investment opportunities and should retain their earnings due to lack of capital. However, among big firms, firms with higher market-to-book ratios are likely to pay stable and non-decreasing dividends because they also have large investment opportunities and can convey their information to external capital providers through dividend payout policies.

4. Relationship Between Dividend Yields and Future Stock Returns Based on Dividend Reputation

There are conflicting opinions in finance regarding the relationship between dividend yields and stock returns. Litzenberger and Ramaswamy (1979), Blume (1980), Keim (1985), Fama and French

(1988), Hodrick (1992), McQueen et al. (1997), Naranjo et al. (1998), Lewellen (2004), Campbell and Yogo (2006), and Visscher and Filbeck (2003) show that dividend yields have a strong positive relationship with expected market returns. However, Miller and Scholes (1982), Goetzmann and Jorion (1993), Filbeck and Visscher (1997), Wolf (2000), Lanne (2002), and Welch and Goyal (2008) argue that there is no significant relationship between expected returns and dividend yields. Moreover, literature using Korean corporate data, such as Kim and Kim (2004), Chung and Kim (2010), Kim and Seo (2011), and Choi (2016), do not find evidence that dividend yields can forecast returns. This obscure association may be caused by the emerging market nature of the Korean financial and corporate environment, which investors perceive as a relatively risky and growing market where firms pay lower dividends than developed markets. Therefore, I expect dividend reputations impact this association, because even in this environment, reputations can provide potential investors with a prediction of the firm's future dividend payout policies or cash flows, thus affecting investor reactions.

4.1 Regressions for dividend reputation and no-reputation groups

In Section 2, all firms are divided into two groups based on their regular dividend streams; *RPT* includes reputation-established firms over at least three or five years, and *NR* includes no reputation firms over three or five years. To reveal the difference in the relationship between yields and returns for *RPT* and *NR* firms, I run firm-year fixed effects panel regressions for each group of one-year future excess returns on the variable for dividend yields, *Log*(*DY*). Excess returns are stock returns minus the risk-free rate measured by the CD91 rate. As control variables that influence stock returns, I include ΔDY, *Log*(*MV*), *ROA*, *GS*, *MB*, *LVRG*, and r_m. *t*-statistics are based on robust standard errors clustered by firm, and the results are reported in Table 7.

In Panel A, the reputation-building period is five years; that is, *RPT* includes reputation-established firms for at least five years. Columns (1) and (3) do not include ΔDY as a control variable; only *Log*(*DY*) is used as a dividend-related variable. As shown in column (1), for reputation-established firms (*RPT*), the dividend yield has a positive relationship with one-year future excess returns, whereas for no-reputation firms (*NR*) in column (3), the yield has no significant relationship with future excess returns. To determine whether the positive relationship for *RPT* is caused simply by

an increase in dividend payments, I add ΔDY to the panel regressions in columns (2) and (4). Likewise, the coefficient of *Log*(*DY*) is significantly positive for *RPT* but insignificant for *NR*. Associations between the change in dividend yield and future returns depend on the group. For reputation-established firms, the degree of increase in dividend yield does not affect future returns, but for no-reputation firms, it has a positive relationship. The results shown in Panel B, where the reputation-building period is three years, are consistent with those in Panel A. In other words, dividend yield positively affects future returns but changes in yield do not significantly affect returns for the group of reputation-established firms, while yield has no significant relationship with future returns but changes in yield positively affects returns for the group of no-reputation firms.

Consequently, dividend yield and changes in dividend yield have different impacts on stock returns depending on whether firms build a dividend reputation. Further, the evidence in this study differs from that of Kang et al. (2019), who use U.S. stocks. They find that all firms in their sample have a positive relationship between yields and returns, but the positive relationship is weaker for reputation-established firms than other firms. They interpret this finding as indicating firms with dividend reputations tend to have less risk compared to firms without dividend reputations, and thus produce relatively lower returns. However, in Korea, the positive relationship between yields and returns only for reputation-established firms may be induced by the higher growth potential of mature firms, considering the positive coefficient estimates of size, age, and the market-to-book equity ratio in Tables 5 and 6, consistent with Flavin and O'Connor (2017) argument. Additionally, changes in dividend yield do not affect future returns for reputation-established firms but positively affect future returns for no-reputation firms. This implies that investors are sensitive to yield fluctuations for firms without reputations, but yield fluctuations of firms with reputations are not important to investors; higher yields matter. Investors can expect to enjoy continuous high yields based on a non-decreasing dividend payout reputation.

The values of within R^2 for reputation-established firms in Panels A and B are more than twice as high as the within R^2 for no-reputation firms. This evidence indicates that the effect of dividend yields for *RPT* as the determinant of stock returns is higher than for *NR*. In equivalent panel regressions (not reported) with only *Log*(*DY*) as the explanatory variable and a reputation period of five years, within R^2 is 11.05% for *RPT* and 0.35% for *NR*, a large difference.

No-reputation firms in *NR* have a positive association between *ROA* and future returns while *RPT* firms do not show a significant relationship. Since reputation-established firms may already have a reputation for their payout policies that allows investors to expect continuous earnings and payouts, profitability is not the determinant of future returns for them. However, for firms without reputations, profitability affects investor reactions as suggested by the results from the change in yields, ΔDY. Also, *NR* firms do not have a significant relationship between *MB* and future returns whereas *RPT* firms do not have a negative relationship, which implies that value firms with reputations tend to produce higher returns.

I examine cross-sectional differences in the relationship between returns and yields for the two groups using Fama-MacBeth cross-sectional regressions and the same variables in Table7. The results are reported in Table 8, and the previous findings are robust to cross-sectional regressions.

4.2 Relationship between dividend reputation, yield, and future returns

To identify the relationship between corporate dividend reputations, dividend yield, and stock returns, I estimate panel regressions using the full sample. I run firm-year fixed effects panel regressions of one-year future excess returns on reputation dummies, *RPT5* or *RPT3*, the dividend yield variable, *Log*(*DY*), and their interaction term. I include ΔDY, *Log*(*MV*), *ROA*, *MB*, and r_m as control variables. According to the evidence in Tables 7 and 8 and in Flavin and O'Connor (2017), I add interaction terms between the reputation dummies and relevant variables such as size, change in yield, market-to-book ratio, the largest shareholder ownership, and foreign ownership, because they are primary factors in reputation building. In particular, as Flavin and O'Connor (2017) document that mature firms with greater growth opportunities (higher market-to-book ratios) in Korea tend to pay larger dividends to build a reputation, I also add the interaction term between the reputation dummies, size, and the market-to-book ratio. Panels A and B in Table 9 present the regression results with *RPT5* and *RPT3* as reputation dummies; *t*-statistics are based on robust standard errors clustered by firm.

When I include only $RPT \times Log(DY)$, $RPT \times \Delta DY$, and $RPT \times Log(MV)$ as interaction terms in columns (1) and (4), the coefficient of *RPT* is significantly negative, but when other interaction terms are included in columns (2), (3), (5), and (6), it is no longer significant. Importantly, after including an extensive set of control variables, the interaction terms between the reputation dummy and dividend yield have a significantly positive association with future returns whereas yields have no relationship with returns, consistent with the results in Tables 7 and 8. However, their significance declines as the reputation building periods shorten from five years to three years. The significantly negative coefficients of $RPT \times \Delta DY$ also confirm the results in Tables 7 and 8. That is, future returns of firms without reputations are likely to increase with changes in dividend yields.

In columns (1) and (4), larger firms with reputations are likely to produce higher future returns, as shown by $RPT \times Log(MV)$, although the coefficients of $Log(MV)$ indicate the well-known negative relationship between firm size and returns. Noting firms with reputations tend to be mature, investors positively value mature firms that also build dividend reputations. However, when the interaction term between the reputation dummies, size, and the market-to-book ratio, $RPT \times Log(MV) \times MB$, is included in the regressions, the coefficients of $RPT \times Log(MV)$ become insignificant in columns (2), (3), (5), and (6). That is, the relatively higher future returns of mature firms with dividend reputations are caused by some other determinant.

The interaction term, $RPT \times Log(MV) \times MB$, positively affects future returns, which implies that when larger firms with higher growth potential have dividend reputations, future returns are higher. According to the previous section, firms building dividend reputations are likely to be larger and have greater growth opportunities. Moreover, the coefficient estimates reveal that markets also positively react to mature firms with greater growth opportunities that pay non-decreasing dividends as signals.

For ownership, the prior results indicate that firms with more concentrated ownership tend to build dividend reputations. However, the coefficient estimates of $RPT \times LargeSh$ and *LargeSh* in Table 9 show that when firms with less concentrated ownership have dividend reputations, their future returns tend to be higher, while firms with less concentrated ownership without reputations are likely to have relatively low future returns. In other words, investors may react negatively to these companies in Korean markets, although firms with more concentrated ownership are likely to pay non-decreasing dividend streams and investors expect higher returns for firms with higher largest shareholders. Firms with more concentrated ownership have lower agency costs and need not solve

the agency problem by paying non-decreasing dividend streams regardless of their earnings. Consequently, investors may regard these continuous non-decreasing dividend payouts as expropriation of minority shareholders' wealth in the Korean environment of poor corporate governance and weak protections for minority shareholders. Additionally, Tables 5 and 6 show that firms with foreign holdings of more than 5% tend to build dividend reputations, but the evidence in Table 9 demonstrates that there is no effect of the interaction between foreign holdings and dividend reputation on stock returns.

5. Conclusion

This study uses Korean stock market data to investigate the determinants of dividend-reputation-building for firms and shows that the association between dividend yields and stock returns depends on dividend reputations. The evidence indicates that firms paying higher dividends, larger firms, older firms, more profitable firms, less leveraged firms, and firms with less volatile returns are more likely to establish a dividend reputation by not reducing regular cash dividends over at least three, five, or seven years. These results are consistent with the literature indicating that mature firms tend to increase dividend payments (Fama and French, 2001; Grullon et al., 2002). Interestingly, the results for growth opportunities measured by sales growth and the market-to-book ratio are mixed. Firms that do not reduce regular dividends over at least three years tend to have higher sales growth and market-to-book ratios, but when I expand the reputation-building period to more than five years, reputation-building firms have relatively lower sales growth and higher market-to-book ratios. The evidence indicates that firms with greater growth opportunities are likely to build dividend reputations, regardless of their past growth. However, firms that pay continuous non-decreasing dividend streams over a longer horizon experience a slowdown in sales growth. For corporate governance, firms with more concentrated ownership establish dividend reputations. This result does not support agency theory for corporate dividend policies (Jensen, 1986) or dividend smoothing (Leary and Michaely, 2011). Also, firms with foreign holdings of more than 5% tend to pay non-decreasing dividend streams.

I explore whether the relationship between dividend yields and future stock returns depends on a firm's dividend reputation. The sample is divided into two groups based on whether the firm

establishes a dividend reputation, and the relationship is investigated using panel regressions and Fama-MacBeth cross-sectional regressions. After including control variables, the evidence indicates that reputation-established firms have a significantly positive relationship between dividend yields and future returns, whereas no-reputation firms show no significant relationship. Similarly, the results from the panel regressions and Fama-MacBeth cross-sectional regressions of the one-year future stock returns on the dividend reputation dummy variable, dividend yield, and interaction terms between reputation dummies and some relevant variables, including dividend yields, provide evidence consistent with the prior regressions for each group separately. Although the yield coefficients are not significant, those of the interaction term between the reputation dummy and yield are significantly positive. This indicates that, among firms with higher yields, only reputation-established firms are expected to produce higher future returns. In particular, when larger firms with higher market-to-book ratios and firms with less concentrated ownership have dividend reputations, future returns are higher. That is, investors positively react when mature firms with higher growth potential and firms with higher agency conflicts build dividend reputations.

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Table 1. Variable Definitions

Variable	Definition
Dummy variables for dividend reputation	
RPT3	One if a firm continues to pay non-decreasing dividends for at least three years, and zero otherwise
RPT5	One if a firm continues to pay non-decreasing dividends for at least five years, and zero otherwise
RPT7	One if a firm continues to pay non-decreasing dividends for at least seven years, and zero otherwise
Variables for firm dividend payments	
Log(*Div*)	Natural log of Korea won value per common share of distributions resulting from cash dividends at the end of the fiscal year plus one
Log(*DY*)	Natural log of cash dividends per common share divided by the closing stock price at the end of the fiscal year plus one
ΔDY	The natural log of the dividend yield in a given year minus the natural log of the dividend yield in the previous year
Variables for firm characteristics	
Prc	Closing stock price at the end of the fiscal year
Log(*MV*)	Natural log of the number of common shares outstanding multiplied by the closing stock price at the end of the fiscal year
Log(*Age*)	Natural log of one plus the time (in years) from the firm's first listing date in KOSPI or KOSDAQ markets plus one
ROA	Operating income before depreciation divided by the book value of total assets
Cashflow	Cash flows from operating divided by the total assets
r_{1Y}	Past one-year stock returns
GS	Three-year average of one-year growth in sales
MB	Market value of common equity divided by the book value of common equity
LVRG	Liabilities divided by the total assets
σ_{r1Y}	Standard deviation of weekly stock returns over the one-year period
σ_{ROA}	Standard deviation of *ROAs* over the prior five years
LargeSh	Proportion of the stock held by the largest shareholder and the related parties
MinorSh	Proportion of the stock held by the minority shareholders
ForeignSh	Proportion of the stock held by the foreign investors
FMsh	One if the foreign holding is more than 5%, and zero otherwise
Variables related to markets	
r_{mt}	Value-weighted average of index returns of the KOSPI and KOSDAQ
r_{ft}	Proxy of the risk-free rate, the CD91 rate

Table 2. Summary statistics

This table reports the summary statistics for the variables in this paper. *Div* is Korea won value per common share of distributions resulting from cash dividends, *DY* is Korea won dividends per common share divided by the closing stock price. Other variables are defined in Table 1. The sample period is from 1998 to 2019.

	N	Mean	STD	Q1	Median	Q3
Div	24,343	295	848	0	60	270
DY	24,343	0.017	0.022	0	1.000	0.025
Prc	24,343	22,612	81,337	2,935	6,250	15,700
ΔDY	22,999	-0.014	0.512	-0.131	0	0.095
Log(*MV*)	24,343	25.232	1.559	24.189	25.008	26.005
Log(*Age*)	24,343	2.420	0.812	1.792	2.485	3.045
ROA	24,343	0.045	0.087	0.013	0.044	0.085
Cashflow	24,343	0.044	0.105	-0.002	0.045	0.096
r_{1Y}	24,257	0.268	1.402	-0.211	0.042	0.417
GS	24,343	0.102	0.236	-0.013	0.068	0.168
MB	24,343	1.517	10.653	0.569	0.938	1.597
LVRG	24,343	0.436	0.232	0.259	0.426	0.587
σ_{r1Y}	24,269	0.034	0.014	0.024	0.032	0.043
σ_{ROA}	24,343	0.070	0.149	0.019	0.036	0.071
LargeSh	24,099	0.388	0.175	0.256	0.380	0.506
MinorSh	23,776	0.439	0.184	0.301	0.428	0.564
ForeignSh	24,293	0.073	0.124	0.002	0.017	0.085

Table 3. Differences between Firms with and without Dividend Reputation

This table reports the differences in the variables between firms with and without dividend reputations. *RPT* includes firms that continue to pay non-decreasing dividends per share for at least five years, and *NR* includes firms that decrease or cut dividends more than once in the prior five years. The variables are defined in Table 1. The last column reports the *t*-test results between the means of *RPT* and *NR*. The *t*-statistics are reported in parentheses, and ***, **, and * denote statistical significance at the 1, 5, and 10% levels, respectively. The sample period is from 1998 to 2019.

	RPT			*NR*			
	N (1)	Mean (2)	STD (3)	N (4)	Mean (5)	STD (6)	Difference ((2)-(5))
Div	2,910	812	1,373	21,433	225	720	587***
		(31.89)			(45.69)		(22.64)
DY	2,910	0.024	0.018	21,433	0.016	0.023	0.008***
		(70.15)			(100.80)		(22.35)
Prc	2,910	71,444	188,449	21,433	15,982	48,229	55,461***
		(20.45)			(48.51)		(15.81)
Log(*MV*)	2,910	26.153	1.657	21,433	25.107	1.503	1.046***
		(851.38)			(2446.35)		(32.30)
Log(*Age*)	2,910	2.845	0.549	21,433	2.362	0.824	0.483***
		(279.48)			(419.59)		(41.48)
ROA	2,910	0.078	0.057	21,433	0.041	0.090	0.037***
		(73.14)			(66.26)		(30.17)
Cashflow	2,910	0.073	0.071	21,433	0.040	0.108	0.032***
		(54.79)			(54.51)		(21.28)
r_{1Y}	2,910	0.230	0.564	21,347	0.273	1.480	-0.042
		(22.03)			(26.92)		(-1.53)
GS	2,910	0.082	0.134	21,433	0.105	0.246	-0.022***
		(33.32)			(62.20)		(-7.42)
MB	2,910	1.300	1.246	21,433	1.547	11.344	-0.247
		(56.29)			(19.96)		(-1.17)
LVRG	2,910	0.358	0.186	21,433	0.447	0.235	-0.089***
		(103.78)			(278.32)		(-23.42)
σ_{r1Y}	2,910	0.025	0.010	21,359	0.035	0.014	-0.010***
		(140.84)			(359.91)		(-48.94)
σ_{ROA}	2,910	0.026	0.040	21,433	0.076	0.157	-0.049***
		(35.45)			(70.52)		(-37.78)
LargeSh	2,910	0.444	0.158	21,189	0.407	0.171	0.037***
		(151.97)			(346.1)		(11.85)
MinorSh	2,849	0.356	0.140	20,927	0.419	0.173	-0.062***
		(136.06)			(349.78)		(-21.44)
ForeignSh	2,910	0.131	0.148	21,383	0.065	0.119	0.066***
		(47.80)			(79.95)		(23.16)

Table 4. Correlation Coefficients

This table reports correlation coefficients for the variables. The variables are defined in Table 1. The sample period is from 1998 to 2019.

	RPT5	*Log*(*DY*)	ΔDY	*Log*(*MV*)	*Log*(*Age*)	*ROA*	*Cashflow*	r_{1Y}	*GS*	*MB*	*LVRG*	σ_{r1Y}	σ_{ROA}	*LargeSh*	*MinorSh*	*ForeignSh*
RPT5	1.000															
Log(*DY*)	0.202	1.000														
ΔDY	0.008	0.358	1.000													
Log(*MV*)	0.218	-0.002	-0.009	1.000												
Log(*Age*)	0.193	0.001	0.011	0.248	1.000											
ROA	0.137	0.339	0.117	0.165	-0.113	1.000										
Cashflow	0.100	0.234	0.087	0.124	-0.068	0.563	1.000									
r_{1Y}	-0.010	-0.031	-0.076	0.072	-0.029	0.078	0.047	1.000								
GS	-0.031	0.047	0.052	0.072	-0.153	0.272	0.106	0.055	1.000							
MB	-0.008	-0.054	-0.005	0.029	-0.016	-0.074	-0.041	0.049	0.002	1.000						
LVRG	-0.125	-0.161	-0.014	-0.043	0.131	-0.225	-0.188	-0.001	0.029	0.030	1.000					
σ_{r1Y}	-0.228	-0.266	-0.013	-0.330	-0.196	-0.170	-0.171	0.189	0.047	0.038	0.240	1.000				
σ_{ROA}	-0.107	-0.220	0.001	-0.107	-0.039	-0.257	-0.216	-0.016	0.012	0.054	0.099	0.233	1.000			
LargeSh	0.072	0.223	0.017	-0.035	-0.027	0.116	0.101	-0.012	-0.028	-0.040	-0.103	-0.183	-0.144	1.000		
MinorSh	-0.118	-0.280	-0.012	0.009	0.008	-0.167	-0.132	0.003	0.027	0.043	0.088	0.256	0.126	-0.694	1.000	
ForeignSh	0.173	0.123	0.002	0.506	0.116	0.167	0.144	0.004	0.029	0.004	-0.063	-0.210	-0.079	-0.070	-0.081	1.000

Table 5. Determinants of Reputation Building: Logit Regressions

This table reports the results from logit regressions of dividend reputation dummies, *RPT3*, *RPT5*, and *RPT7*. The variables are defined in Table 1. The dependent variables are *RPT5* in Panel A, *RPT3* in Panel B, and *RPT7* in Panel C. *t*-statistics are based on standard errors adjusted for firm-clustering effect, and are in parentheses. ***, **, and * denote statistical significance at the 1, 5, and 10% levels. The sample period is from 1998 to 2019.

	Panel A: *RPT5*				Panel B: *RPT3*		Panel C: *RPT7*	
Log(*DY*)	0.841***	0.834***	0.841***	0.835***	1.150***	1.151***	0.691***	0.695***
	(9.58)	(9.50)	(9.59)	(9.52)	(19.02)	(18.95)	(5.40)	(5.42)
Log(*MV*)	0.272***	0.247***	0.281***	0.254***	0.238***	0.241***	0.251***	0.262***
	(6.54)	(6.64)	(6.78)	(6.83)	(8.49)	(8.57)	(5.14)	(5.38)
Log(*Age*)	0.665***	0.661***	0.657***	0.652***	0.460***	0.454***	0.849***	0.835***
	(9.90)	(9.86)	(9.85)	(9.78)	(9.28)	(9.19)	(9.49)	(9.36)
ROA	7.949***	7.871***	7.958***	7.850***	8.688***	8.558***	6.552***	6.465***
	(7.83)	(7.61)	(7.89)	(7.60)	(11.83)	(11.71)	(4.96)	(4.95)
Cashflow	0.250	0.232	0.273	0.254	0.309	0.355	0.457	0.543
	(0.56)	(0.52)	(0.61)	(0.56)	(0.96)	(1.10)	(0.73)	(0.85)
r_{1Y}	-0.068*	-0.066*	-0.080**	-0.075*	-0.101***	-0.107***	-0.108*	-0.136**
	(-1.75)	(-1.69)	(-2.02)	(-1.92)	(-3.56)	(-3.77)	(-1.85)	(-2.28)
GS	-0.411*	-0.418*	-0.443*	-0.444*	0.310***	0.300**	-0.506	-0.515
	(-1.83)	(-1.85)	(-1.94)	(-1.94)	(2.32)	(2.23)	(-1.63)	(-1.64)
MB	0.009***	0.009***	0.009***	0.009***	0.008***	0.008***	0.007	0.006
	(5.00)	(5.52)	(5.11)	(5.45)	(5.51)	(5.68)	(1.05)	(0.64)
LVRG	-0.971***	-0.949***	-0.917***	-0.893***	-0.862***	-0.824***	-1.117***	-1.050***
	(-3.68)	(-3.62)	(-3.48)	(-3.40)	(-4.63)	(-4.45)	(-3.11)	(-2.91)
σ_{r1Y}	-20.332***	-19.435***	-17.410***	-16.643***	-13.720***	-11.868***	-26.140***	-21.970***
	(-4.46)	(-4.27)	(-3.88)	(-3.70)	(-4.57)	(-3.90)	(-3.83)	(-3.27)
σ_{ROA}	-18.093***	-18.072***	-17.429***	-17.393***	-11.505***	-11.262***	-13.514***	-12.576***
	(-5.34)	(-5.31)	(-5.20)	(-5.18)	(-5.61)	(-5.55)	(-3.03)	(-2.91)
LargeSh	0.445	0.503*			0.543***		0.726*	
	(1.50)	(1.70)			(2.61)		(1.80)	
MinorSh			-0.841***	-0.838***		-0.681***		-1.223***
			(-2.70)	(-2.68)		(-3.14)		(-2.84)
ForeignSh	0.182		0.059					
	(0.43)		(0.14)					
FMsh		0.200**		0.172*	0.095	0.064	0.295**	0.250*
		(2.06)		(1.80)	(1.32)	(0.90)	(2.22)	(1.90)
Constant	-10.446***	-9.896***	-10.194***	-9.564***	-9.414***	-8.962***	-11.376***	-10.953***
	(-9.51)	(-9.35)	(-9.58)	(-9.38)	(-11.84)	(-11.63)	(-8.10)	(-8.10)
Observations	22,689	22,689	22,346	22,346	22,801	22,458	22,622	22,280
Year dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Clusters (firms)	2,046	2,046	2,044	2,044	2,054	2,052	2,040	2,038
R^2	0.256	0.257	0.256	0.257	0.265	0.265	0.252	0.251

Table 6. Determinants of Reputation Building: Fama-MacBeth Cross-sectional Regressions

This table reports the results from Fama and MacBeth (1973) cross-sectional regressions of the dividend reputation dummies, *RPT3*, *RPT5*, and *RPT7*. The variables are defined in Table 1. In Panel A, the dependent variable is *RPT5*, in Panel B, the dependent variable is *RPT3*, and in Panel C, the dependent variable is *RPT7*. *t*-statistics are in parentheses. ***, **, and * denote statistical significance at the 1, 5, and 10% levels, respectively. The sample period is from 1998 to 2019.

	Panel A: *RPT5*				Panel B: *RPT3*		Panel C: *RPT7*	
Log(*DY*)	0.076***	0.075***	0.075***	0.074***	0.170***	0.171***	0.034***	0.033***
	(6.83)	(6.89)	(6.88)	(6.94)	(11.39)	(11.65)	(4.64)	(4.63)
Log(*MV*)	0.019***	0.019***	0.020***	0.019***	0.026***	0.027***	0.013***	0.012***
	(5.24)	(6.01)	(5.48)	(6.29)	(6.65)	(6.97)	(5.24)	(5.31)
Log(*Age*)	0.057***	0.056***	0.056***	0.056***	0.062***	0.063***	0.040***	0.040***
	(12.10)	(11.86)	(12.53)	(12.37)	(12.31)	(12.42)	(8.95)	(9.17)
ROA	0.249***	0.249***	0.245***	0.244***	0.529***	0.515***	0.121***	0.113***
	(6.06)	(6.21)	(5.96)	(6.08)	(8.93)	(8.87)	(4.59)	(4.34)
Cashflow	0.025	0.026	0.021	0.021	0.038	0.039	0.027*	0.025
	(1.46)	(1.52)	(1.15)	(1.19)	(1.48)	(1.41)	(1.75)	(1.56)
r_{1Y}	-0.003	-0.003	-0.004	-0.004	-0.002	-0.003	-0.004	-0.005
	(-0.60)	(-0.61)	(-0.80)	(-0.76)	(-0.32)	(-0.49)	(-1.22)	(-1.46)
GS	-0.025***	-0.027***	-0.026***	-0.028***	0.025*	0.026*	-0.019***	-0.019***
	(-2.96)	(-3.21)	(-3.10)	(-3.32)	(1.68)	(1.76)	(-2.84)	(-2.90)
MB	0.002***	0.002***	0.003***	0.003***	0.004***	0.004***	0.001***	0.001***
	(3.05)	(3.08)	(3.40)	(3.41)	(2.52)	(2.83)	(2.93)	(3.24)
LVRG	-0.102***	-0.102***	-0.100***	-0.099***	-0.127***	-0.125***	-0.072***	-0.070***
	(-10.04)	(-10.05)	(-10.83)	(-10.78)	(-9.30)	(-9.30)	(-6.92)	(-6.84)
σ_{r1Y}	-1.794***	-1.731***	-1.675***	-1.616***	-2.016***	-1.888***	-1.213***	-1.145***
	(-6.25)	(-5.98)	(-5.68)	(-5.41)	(-4.94)	(-4.74)	(-4.48)	(-4.11)
σ_{ROA}	-0.035*	-0.033	-0.039**	-0.038*	-0.064**	-0.073***	-0.006	-0.012
	(-1.78)	(-1.63)	(-1.99)	(-1.91)	(-2.24)	(-2.56)	(-0.46)	(-0.93)
LargeSh	0.024***	0.027***			0.060***		0.020***	
	(2.89)	(3.06)			(5.12)		(2.58)	
MinorSh			-0.051***	-0.054***		-0.073***		-0.043***
			(-6.06)	(-6.64)		(-5.28)		(-5.90)
ForeignSh	0.128***		0.115***					
	(4.56)		(4.00)					
FMsh		0.038***		0.037***	0.039***	0.035***	0.026***	0.024***
		(6.70)		(6.45)	(5.99)	(5.01)	(7.56)	(7.43)
Constant	-0.488***	-0.479***	-0.474***	-0.456***	-0.642***	-0.603***	-0.332***	-0.303***
	(-4.84)	(-5.40)	(-4.93)	(-5.50)	(-5.84)	(-5.84)	(-4.94)	(-4.91)
Observations	22,689	22,689	22,346	22,346	22,801	22,458	22,622	22,280
Adjusted R^2	0.115	0.113	0.115	0.114	0.196	0.197	0.070	0.070

Table 7. Number of reputation-established firms for 25 portfolios formed on size and market-to-book ratio

This table reports the number of firms that do not decrease in regular dividends per share over at least five or three years. Size is market capitalization. The sample period is from 1998 to 2019.

	Market-to-book equity quintiles										
Size quintiles	Low	2	3	4	High	Total	Low	2	3	4	High
	Number of firms of *RPT5*=1						Proportion of firms of *RPT5*=1				
Small	118	85	40	10	3	256	0.075	0.064	0.041	0.017	0.008
2	125	117	92	41	6	381	0.112	0.107	0.082	0.043	0.010
3	131	132	116	94	33	506	0.141	0.147	0.119	0.082	0.035
4	131	157	169	134	108	699	0.168	0.191	0.187	0.133	0.080
Big	99	160	211	286	312	1,068	0.221	0.218	0.236	0.247	0.191
Total	604	651	628	565	462	2,910					
	Number of firms of *RPT3*=1						Proportion of firms of *RPT3*=1				
Small	245	203	128	37	5	618	0.155	0.153	0.131	0.061	0.013
2	269	262	199	113	18	861	0.240	0.239	0.177	0.117	0.031
3	250	244	238	212	72	1,016	0.269	0.273	0.245	0.185	0.077
4	237	273	295	261	221	1,287	0.303	0.332	0.326	0.259	0.163
Big	160	271	348	469	535	1,783	0.357	0.369	0.390	0.406	0.327
Total	1,161	1,253	1,208	1,092	851	5,565					
	Number of firms in the full sample										
Small	1,581	1,324	980	603	372	4,860					
2	1,119	1,096	1,122	963	572	4,872					
3	931	895	972	1,143	931	4,872					
4	781	823	904	1,008	1,357	4,873					
Big	448	735	893	1,156	1,634	4,866					
Total	4,860	4,873	4,871	4,873	4,866	24,343					

Table 8. Relation between Stock Returns and Dividend Yields for Reputation and No Reputation Groups: Panel Regressions

This table reports the results from panel regressions of one-year future excess returns on dividend yields for reputation-established and no-reputation firms. In Panel A, regressions are estimated for *RPT*, which includes reputation-established firms for at least five years and *NR*, which includes no-reputation firms over five years. In Panel B, *RPT* includes reputation-established firms for at least three years and *NR* includes no-reputation firms over three years. The variables are defined in Table 1. *t*-statistics are based on standard errors adjusted for firm-clustering effect, and are in parentheses. ***, **, and * denote statistical significance at the 1, 5, and 10% levels, respectively. The sample period is from 1998 to 2019.

	Panel A. Reputation-building period: five years				Panel B. Reputation-building period: three years			
	RPT		*NR*		*RPT*		*NR*	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Log(*DY*)	0.128**	0.106*	0.008	-0.008	0.112**	0.120***	0.004	-0.024
	(1.99)	(1.66)	(0.26)	(-0.25)	(2.25)	(2.40)	(0.13)	(-0.61)
ΔDY		0.043		0.060***		-0.021		0.070***
		(0.94)		(2.65)		(-0.56)		(2.69)
Log(*MV*)	-0.207***	-0.213***	-0.317***	-0.304***	-0.165***	-0.163***	-0.339***	-0.325***
	(-5.35)	(-5.40)	(-10.76)	(-9.95)	(-5.69)	(-5.59)	(-10.02)	(-9.17)
ROA	-0.462	-0.447	0.598***	0.412***	-0.246	-0.253	0.629***	0.431***
	(-1.34)	(-1.30)	(3.32)	(3.29)	(-1.13)	(-1.16)	(3.30)	(3.31)
GS	0.123	0.123	-0.062	-0.058	0.081	0.073	-0.063	-0.058
	(0.86)	(0.86)	(-1.06)	(-0.98)	(1.39)	(1.15)	(-1.01)	(-0.92)
MB	-0.058***	-0.057***	-0.0004	-0.0004	-0.062***	-0.063***	-0.0003	-0.0004
	(-2.54)	(-2.52)	(-0.70)	(-0.82)	(-3.67)	(-3.72)	(-0.58)	(-0.71)
LVRG	0.058	0.070	-0.180	-0.355***	0.117	0.121	-0.215*	-0.411***
	(0.27)	(0.32)	(-1.49)	(-3.09)	(0.88)	(0.91)	(-1.69)	(-3.44)
r_{mt}	0.580***	0.574***	0.859***	0.757***	0.688***	0.692***	0.867***	0.756***
	(12.38)	(12.16)	(13.10)	(11.70)	(17.02)	(16.43)	(12.21)	(10.67)
Constant	5.449***	5.623***	8.130***	7.907***	4.298***	4.241***	8.660***	8.451***
	(5.03)	(5.09)	(11.23)	(10.43)	(5.39)	(5.28)	(10.48)	(9.64)
Observations	2,614	2,614	20,003	18,712	5,133	5,123	17,484	16,203
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Clusters (firms)	614	614	2,066	1,990	1,032	1,031	2,062	1,982
Within R^2	0.295	0.295	0.110	0.099	0.279	0.279	0.108	0.095

Table 9. Relation between Stock Returns and Dividend Yields for Reputation and No Reputation Groups: Fama-MacBeth Cross-sectional Regressions

This table reports the results from Fama-MacBeth cross-sectional regressions of one-year future excess returns on dividend yields for reputation-established and no-reputation firms. In Panel A, regressions are estimated for *RPT*, which includes reputation-established firms for at least five years and *NR*, which includes no reputation firms over five years. In Panel B, *RPT* includes reputation-established firms for at least three years and *NR* includes no-reputation firms over three years. The variables are defined in Table 1. *t*-statistics are in parentheses. ***, **, and * denote statistical significance at the 1, 5, and 10% levels, respectively. The sample period is from 1998 to 2019.

	Panel A. Reputation-building period: five years				Panel B. Reputation-building period: three years			
	RPT		*NR*		*RPT*		*NR*	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Log(*DY*)	0.113**	0.065***	0.025	0.012	0.045*	0.065**	-0.015	0.011
	(2.13)	(2.75)	(0.84)	(0.36)	(1.66)	(2.18)	(-0.32)	(0.31)
ΔDY		0.026		0.056**		0.004		0.020
		(0.26)		(1.95)		(0.03)		(0.41)
Log(*MV*)	0.038	0.006	-0.072**	-0.061***	-0.172	-0.036	-0.100***	-0.036
	(1.21)	(0.25)	(-2.23)	(-2.52)	(-1.08)	(-1.33)	(-2.43)	(-1.01)
ROA	1.549***	1.110**	0.695	0.642	-0.879	0.024	1.245***	0.184
	(2.51)	(2.28)	(1.48)	(1.57)	(-0.50)	(0.03)	(2.59)	(0.22)
GS	-1.022	-0.181	0.024	-0.021	0.119	0.192	-0.077	-0.047
	(-1.19)	(-0.99)	(0.43)	(-0.49)	(0.45)	(0.66)	(-0.86)	(-1.65)
MB	-0.079***	-0.075*	-0.016***	-0.016***	-0.0002	-0.049*	-0.012***	-0.023*
	(-2.50)	(-1.88)	(-2.55)	(-2.39)	(0.00)	(-1.90)	(-3.03)	(-1.79)
LVRG	0.109	0.101	0.011	0.024	0.407*	0.127	0.033	0.065
	(1.40)	(1.25)	(0.15)	(0.40)	(1.81)	(1.49)	(0.33)	(0.58)
r_{mt}	0.506	0.507	1.165***	1.215***	-3.321	1.014***	0.243	-0.052
	(1.31)	(1.26)	(4.55)	(4.74)	(-0.75)	(4.56)	(0.32)	(-0.05)
Constant	-0.937	-0.083	1.913**	1.642***	3.765	0.930	2.475***	0.866
	(-1.11)	(-0.14)	(2.26)	(2.57)	(1.10)	(1.39)	(2.50)	(0.83)
Observations	2,614	2,614	20,003	18,712	5,133	5,123	17,484	16,203
Adjusted R^2	0.130	0.131	0.078	0.069	0.141	0.151	0.065	0.063

Table 10. Relation between Reputation, Stock Returns and Dividend Yields

This table reports the results from panel regressions of one-year future excess returns on the reputation dummies, *RPT5* or *RPT3*; dividend yields; their interaction terms; and other control variables. The reputation dummy is *RPT5* in Panel A and *RPT3* in Panel B. The variables are defined in Table 1. *t*-statistics are based on standard errors adjusted for firm-clustering effect, and are in parentheses. ***, **, and * denote statistical significance at the 1, 5, and 10% levels, respectively. The sample period is from 1998 to 2019.

	Panel A. Reputation dummy: *RPT5*			Panel B. Reputation dummy: *RPT3*		
	(1)	(2)	(3)	(4)	(5)	(6)
RPT	-0.610*	0.441	0.329	-0.801***	0.057	0.001
	(-1.65)	(1.24)	(0.88)	(-2.35)	(0.20)	(0.01)
RPT×*Log*(*DY*)	0.070*	0.033*	0.036**	0.033*	0.025	0.027
	(1.80)	(1.90)	(2.03)	(1.67)	(1.32)	(1.45)
RPT× ΔDY	-0.134***	-0.113***	-0.112***	-0.093**	-0.074*	-0.073*
	(-2.80)	(-2.67)	(-2.63)	(-2.08)	(-1.88)	(-1.84)
RPT× *Log*(*MV*)	0.024*	-0.011	-0.006	0.033***	0.006	0.009
	(1.73)	(-0.90)	(-0.47)	(2.46)	(0.60)	(0.77)
RPT×*MB*		-0.448***	-0.430***		-0.435***	-0.419***
		(-2.56)	(-2.44)		(-3.13)	(-3.00)
RPT×*Log*(*MV*)×*MB*		0.015***	0.015***		0.014***	0.014***
		(2.53)	(2.41)		(2.89)	(2.76)
RPT×*LargeSh*		-0.153	-0.168		-0.183**	-0.189**
		(-1.46)	(-1.61)		(-2.25)	(-2.31)
RPT×*FMsh*			-0.023			-0.005
			(-0.72)			(-0.20)
Log(*DY*)	0.009	0.041	0.042	0.0001	0.001	0.0001
	(0.23)	(1.22)	(1.26)	(0.01)	(1.02)	(1.01)
ΔDY	0.053**	0.033*	0.032	0.059***	0.037*	0.035*
	(2.29)	(1.72)	(1.63)	(2.31)	(1.77)	(1.67)
Log(*MV*)	-0.278***	-0.225***	-0.220***	-0.285***	-0.226***	-0.222***
	(-8.46)	(-17.36)	(-17.50)	(-8.10)	(-16.47)	(-16.58)
ROA	0.402***	0.318***	0.323***	0.383***	0.321***	0.326***
	(4.13)	(3.77)	(3.83)	(3.95)	(3.80)	(3.85)
MB	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001
	(-1.14)	(-1.17)	(-1.17)	(-1.16)	(-1.14)	(-1.14)
LargeSh		0.632***	0.624***		0.647***	0.639***
		(6.96)	(6.93)		(6.87)	(6.84)
FMsh			-0.048**			-0.049**
			(-2.07)			(-1.96)
r_{mt}	0.743***	0.643***	0.644***	0.744***	0.644***	0.645***
	(12.36)	(27.09)	(27.06)	(12.34)	(27.23)	(27.20)
Constant	7.100***	5.476***	5.378***	7.272***	5.511***	5.414***
	(8.40)	(17.43)	(17.54)	(8.06)	(16.59)	(16.67)
Observations	21,326	21,207	21,207	21,326	21,207	21,207
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Clusters (firms)	1,993	1,991	1,991	1,993	1,991	1,991
Within R^2	0.101	0.163	0.164	0.101	0.164	0.164