Do intangibles matter for corporate policies? Evidence from organization capital and corporate payout choices

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Abstract

We investigate whether a firm's payout choices are related to its level of organization capital. Using a large sample of U.S. firms during 1980-2017, we find robust evidence that both the likelihood and level of cash dividends and share repurchases are significantly higher for firms with high organization capital, even after controlling for other firm specific payout determinants. Our findings hold up to a battery of robustness checks and endogeneity tests. We further explore related channels and find strong evidence that positive relation between organization capital and cash dividends (share repurchases) is largely attributed to agency problem (executive compensation incentives). We do not find strong evidence in favor of signaling argument of corporate payouts. Overall, we document that human based stealth asset of a corporation – organization capital plays a central role in shaping the neoclassical corporate payout policy.

Keywords: Organization capital; Dividend; Stock Repurchase

JEL Classifications: G30; G31; G32; G35

1. Introduction

One of the most heavily explored yet unresolved questions in the history of modern corporate finance is: why and how do corporations pay out to their shareholders? Several neoclassical theories have emerged eventually to resolve the motive behind corporate payouts[1]. Nonetheless, it is widely accepted among academics and practitioners that market reacts positively to dividend and repurchase announcements, and that these decisions convey valuable information to investors. Although various determinants of payout policies have evolved overtime (see, e.g., Farre-Mensa et al., 2014), limited research is done on how a firm's stealth assets shape its payout choices. We fill this void by investigating the effect of a firm's most important intangible asset – organization capital on its payout policies.

Organization capital is a firm specific intangible capital which is embodied in its key talents (Elsfeldt and Papanikolaou, 2013; Boguth et Al., 2018; Leung et al., 2018). It is the agglomeration of unique knowledge, business processes and structural designs, as well as sole corporate culture with essential human inputs (Lev et al., 2009; Elsfeldt and Papanikolaou, 2014). Organization capital is a durable factor of production which, unlike other factors of production, is not mimicable by other firms but is transferable from one firm to another. Examples of Organization capital include Apple's creative corporate culture, innovation, and product development systems, Walmart's vendor-managed inventory (VMI), supply chain and electronic data exchange system, and Coca-Cola's people-based enterprise culture and knowledge sharing systems.

There are two essential features of organization capital – it is a firm specific production factor, and it is provided by the key talents of a firm such as top management

[1] Widely accepted theories of dividend payouts and stock repurchases are, among others, agency models (see, e.g., Jensen and Meckling, 1976; Jensen, 1986; La Porta et al., 2000), signaling models (see, e.g., Bhattacharya, 1979; Miller and Rock, 1985; Grinstein and Michaely, 2005), and tax clientele models (see, e.g., Michaely and Vila, 1996; Rantapuska, 2008).

teams (TMTs), developers, architects, engineers, sales force etc. Prior studies find that corporate payouts are positively associated with executive compensation, executive entrenchment levels, corporate governance practices, and negatively associated with weaker shareholder rights (See, e.g., Hu and Kumar, 2004; Hwang et al., 2013; Geiler and Renneboog, 2016). Several other studies also find that firms with intangibles such as R&D investments tend to pay more dividends for strategic incentives and signaling purposes (See, e.g., Yang et al., 2018; Gelb and Siegel, 2000). As key talents of a firm (corporate insiders) and its shareholders (corporate outsiders) compete for the cash flows generated from organization capital, shareholders view organization capital to be risky (Elsfeldt and Papanikolaou, 2013). Thus, it is important to examine how they extract rents from such firms with key talents and organization capital. One avenue for rent extraction by outside shareholders can be through corporate payouts. Accordingly, in this paper, we ask the following important research questions: Do firms with high (low) organization capital payout more (less) cash dividends and repurchase more (less) shares? If yes, what are the underlying mechanisms for that?

While primitive literature on corporate finance suggests that dividend policy should be considered as independent of firms' investment decisions (Miller and Modigliani, 1961), latter studies find linkage between the two in the presence of market frictions (see, e.g., Holt, 2003; Ramalingegowda et al., 2013). These studies set forth more emphasis on firms' physical assets and less on intangibles. However, in the last three decades, intangible capital especially the one embodied in a firm's key employees has become a vital and durable factor of production (Elsfeldt and Papanikolaou, 2013). This paper adds to the current literature by studying the association between corporate payout policies and organization capital.

At the outset, there could be two potential arguments of why organization capital is related and perhaps positively related to corporate payout policy (complement hypothesis). First,

organization capital apparently generates agency conflict between shareholders and firms' key talents. According to Elsfeldt and Papanikolaou (2013), although shareholders mainly bear the cost of organization capital, key talents including managers expropriate the cash flow accruing from such asset. Moreover, managers have incentive to over-invest in organization capital to increase their out-side option. As classic agency theories suggest that dividends can be used as a disciplinary mechanism because it reduces corporate cash holdings, which in turn limit managerial consumption of perks and overinvestment in privately beneficial projects (see, e.g., Jensen, 1986; Farre-Mensa et al., 2014), firms with high organization capital are expected to distribute more dividends in an attempt to discipline the managers. This argument is in line with the two agency models proposed by La Porta et al. (2000)[2].

Second, organization capital is considered a durable factor of production and a key driver of corporate value, growth and operating performance (see, e.g., Gu and Lev, 2001; Lev et al., 2009). Elsfeldt and Papanikolaou (2013) find that firms with high organization capital generate higher average returns than otherwise firms with less organization capital. Similarly, Lev et al. (2009) show that organization capital is associated with future operating and stock return performance. Consequently, managers of firms with high organization capital have incentive to reveal this information to the markets and offer 'signal of quality'. Farre-Mensa et al. (2014) point out that firms with superior performance amend dividends to signal future prospects, and therefore, it is reasonable to believe that firms with high organization capital have incentive to signal about better future prospects by paying more dividends[3].

Furthermore, we argue that firms with high organization capital tend to repurchase more stocks for two reasons. First, executive compensation contracts have been credited to

[2] Under their first model, dividends are viewed as an outcome of stronger legal protection of shareholders; while under their second model, dividends are viewed as a substitute for legal protection of shareholders.

[3] The key assumption here is that investors have incomplete information about firm prospects, and corporate insiders have incentive to disseminate the information to the markets.

the dramatic rise in share repurchases in recent times (Farre-Mensa et al., 2014). Since organization capital is embodied in firms' key talents, firms must offer incentive compensation to keep these talents within firms. If the compensation depends on firms' earning per share (EPS), then managers have motivation to repurchase shares to reduce number of outstanding stocks and to increase per share value and bonus compensation. Moreover, more option compensation contracts may result in a diluted EPS (if exercised) which eventually motivate managers to buy back shares. Second, as market reacts positively to the announcement of share repurchases (Grullon and Michaely, 2002), the signaling arguments described above are also applicable to share repurchases. In particular, given that announcement of repurchases signals about better future prospects, high organization capital firms are more likely to repurchase to signal their future prospect than low organization capital firms.

Yet, another strand of literature suggests that firms with high organization capital are associated with low level of payouts (substitute hypothesis). This counteracting relationship is premised on the financing constraints theory and the life-cycle theory of dividends. While dividend payouts may mitigate agency problems or provide positive signal, it may also expose high organization capital firms to costly external financing (see, e.g., Rozeff, 1982; Chae et al., 2009). This is because, intangibles like organization capital are not widely accepted as collateral, and therefore, investment in such capital diminishes a firm's debt capacity and raises its cost of debt financing. Moreover, as shareholders perceive firms with high organization capital to be exposed to additional risks, they require higher risk premia from such firms (see, e.g., Eisfeldt and Papanikolaou, 2013; Leung et al., 2018). Thus, firms with high organization capital may find it costly to raise funds externally and are tempted to hold more cash and pay out little.

In addition, life-cycle theory of dividends shows that both propensity and level of payouts are generally higher (lower) during later (earlier) stage of firm life-cycle (see, e.g., Grullon et al., 2002; DeAngelo et al., 2006). As mature firms are able to generate excess cash and unable to find enough profitable investment opportunities, payouts to shareholders are optimal for them unless they are in financial distress. On the other hand, life-cycle theory of firms find that firm life-cycle is driven by its level of organization capital, and that firms are likely to agglomerate organization capital in their earlier stage of life-cycle to help them increase their growth opportunities and achieve sustainable advantage over key competitors (see, e.g., Spence, 1979; Atkeson and Kehoe, 2005; Hasan and Cheung, 2018). Thus, life-cycle theory of payout coupled with life-cycle theory of firms suggest somewhat negative relationship between organization capital and corporate payouts.

Using annual data on dividends and repurchases, and firm-specific estimate of organization capital for a large sample of U.S. firms during 1980–2017, we find that firms' payout choices are positively and significantly related to firm-level organization capital supporting the complement hypothesis. In particular, both the likelihood and level of dividend payments and share repurchases are higher for firms with high organization capital, even after controlling for other firm-specific payout determinants and other forms of intangibles. For instance, when we regress cash dividends (DIV/TA) over organization capital (OC/TA), we find both statistically and economically significant coefficients of OC/TA in all our model specifications. In addition to full-sample analysis, our regression results remain consistent for sub-sample tests (dividend only firms, repurchase only firms, and firms with both dividends and repurchases). This finding suggests that high organization capital firms have incentives to payout more cash dividends either to reduce agency cost or to signal about firms' better prospect or both. The positive relation between organization capital

and stock repurchases also lend support to the compensation incentive and/or signaling arguments of stock repurchases.

Our findings hold up to a battery of robustness tests. We augment our analysis by using alternative measures of dividends, repurchases, and organization capital, and find that our baseline results are largely consistent. We also find that our documented results are not driven by high-tech firms only. To address the potential endogeneity concerns, we verify that our results are not an artifact of omitted variable bias in determining organization capital. We also verify that our results persist in an instrumental variable approach to two-stage least squares estimation.

Finally, we examine the potential explanation for the positive relation between organization capital and cash dividends as well as stock repurchases. We find that firms with high organization capital pay more cash dividends in the presence of agency problem. Following Aggarwal et al. (2012), we construct a composite measure of agency problem (AGENCY) using sum of decile value of four different proxies of agency problem used in prior literature – shareholder base, free cash flow, acquisition, and growth in capital expenditure. We interact OC/TA with AGENCY in the baseline regressions, and find positive and significant coefficient of OC/TA*AGENCY for the full-sample and sub-sample of firms that only pay cash dividends (i.e., DIV>0 & REP=0). Similarly, we construct a composite measure of signaling (SIGNAL) using four different proxies of information asymmetry used in prior literature– bid-ask spread, discretionary accruals, R&D expenses, and institutional shareholding, and find weak evidence in support of the signaling model. Furthermore, we find that firms with higher organization capital repurchase more shares when executives' are offered with high level of equity and option based compensation, which supports the executive compensation-based argument of stock repurchases. Similar to cash dividends, we find weak evidence in support of signaling-based explanation of stock repurchases.

Our contributions to the existing literature are multifold. First, the existing literature on payout policies are largely divided in identifying the motive behind corporate payouts. While existing studies find mixed empirical evidence on the secular changes in corporate payout policies (Farre-Mensa et al., 2014), we extend this stream of literature by examining the effect of a firm's human based stealth asset, organization capital, on payout choices. This gives us more insight on how agency and/or signaling complement firms' payout choices. Moreover, unlike many other prior studies, we examine both cash dividends and share repurchases in an attempt to find such motive.

Second, we attempt to resolve the ongoing debate about the motivation behind corporations' payout choices using a different channel – organization capital. Ours is the first study that looks into the effect of organization capital on the behavior of corporate payouts. Introducing this new strand of literature in the context of corporate policies is striking as intangible assets especially the one embodied in a firm's key talents are considered the hallmark of contemporary business enterprises.

Finally, our study sheds some light on the emerging literature on organization capital. Recent studies show that organization capital plays an important role on corporate outcomes including productivity and efficiency (Peters and Taylor, 2017 and Elsfeldt and Papanikolaou, 2013), sustainable competitive advantages (Lev and Radhakrishnan, 2005 and Lev et al., 2009), product innovation (Carmona-Lavado et al., 2010), mergers and acquisitions (Li et al., 2018), as well as firm life cycle (Hasan and Cheung, 2018). We contribute to this growing literature by linking organization capital with corporate payout choices. Overall, we show that key talents of a firm play a central role in shaping corporate payout policies.

The remainder of the paper is organized as follows: We discuss relevant literature and develop our hypotheses in Section 2. We present a description of the data, variables construction, and methodology in Section 3. Section 4 discusses the empirical results. Section 5 discusses potential explanations and channels; and finally, Section 6 concludes the paper.

2. Theoretical Background and Testable Hypotheses

2.1. Corporate Payouts

The theoretical literature on the motives behind corporate payouts is considerably divided. While Miller and Modigliani (1961), in their seminal paper, claim that firm value is independent of the payout policy in a perfect capital market setting, some years later, classic models of agency and signaling theories were developed. According to agency theories, managers have incentives to retain cash flows to pursue their own interests (e.g., empire building), instead of returning free cash flows to investors (see, e.g., Jensen and Meckling, 1976; Easterbrook, 1984; Jensen, 1986). Dividends and repurchases may reduce the extent to which managers can funnel resources away from shareholders, acting as 'disciplinary device' to mitigate the conflict of interests between management and shareholders (Farre-Mensa et al., 2014). On the other hand, signaling models show that firms pay more dividends to signal about better future prospects of firms (see, e.g., Bhattacharya, 1979; Miller and Rock, 1985; John and Williams, 1985).

A key assumption of these theories is that information is asymmetric in the markets. As a result, market appreciates payout announcements which is postulated in several studies such as, Healy and Palepu (1988), Michaely et al. (1995), Grullon et al. (2002), and Grullon

and Michaely (2004), among others[4]. Several studies also investigate this phenomenon beyond the US markets[5]. Moreover, in their survey paper, Brav et al. (2005) interviewed several corporate CFOs and most of them indicated that the level of dividends and repurchases were determined by the managers which is consistent with the asymmetric information models. Nonetheless, both agency and signaling complement a firm's dividend payments.

Meanwhile, the stylized fact about the dramatic rise in repurchases in the past few decades inspired researchers in search for alternative explanations for corporate payouts. One such explanation is executive compensation contracts. If managerial compensation depends on firms' earning per share (EPS) or if more option compensation is offered to corporate managers, they have incentive to eventually buy back shares (Cheng et al., 2015). Signaling is another explanation for share repurchase. As share repurchase signals market about superior future prospects, managers have incentive to repurchase shares. Both the compensation and signaling arguments complement a firm's share repurchases.

Alternatively, dividend and share repurchase can substitute cash holdings. According to financing constraints theory, payouts by financially constrained firms may increase their external financing costs (Rozeff, 1982; Chae et al., 2009). Therefore, financially constrained firms tend to hold more cash in times of uneasy and costly external financing. Moreover, life-cycle theory of dividends suggests that corporate payout varies with stages of firm life-cycle. Payouts are generally higher (lower) during later (earlier) stage of firm life-cycle (Fama and French, 2001; Grullon et al., 2002; DeAngelo et al., 2006). For instance, young firms usually have greater investment opportunities and limited opportunity to generate cash internally.

[4] These studies collectively find that the average market reaction of the increase (decrease) of or the initiation (omission) of both dividend and share repurchase is positive (negative).
[5] See, e.g., Al-Yahyaee et al. (2011); Alzahrani and Lasfer (2012); Andriosopoulos and Lasfer (2015).

Thus it is optimal for them to retain cash for growth. As firms mature, they become profitable and are able to generate enough cash internally, and are inclined to pay dividends and/or buy back shares[6]. Prior studies also find support of the above arguments (see, e.g., DeAngelo et al., 2006; Coulton and Ruddock, 2011).

2.2. Organization Capital

Organization capital can be defined as a firm specific intangible capital which is embodied in its key talents (Elsfeldt and Papanikolaou, 2013; Boguth et Al., 2018; Leung et al., 2018). The significance of this durable asset has long been recognized in management and economics literature, yet not heavily explored in finance. Although the core of organization capital is key talents, it has been variously defined in the literature. For example, Caroli and Van Reenen (2001) find that a skill-based organizational change is associated with greater productivity increases within the firm. According to Lev (2001), unlike other form of intangibles, organization capital is unique structural designs and business processes that gives a firm sustainable competitive edge. Webster and Jensen (2006) attribute organization capital as the architecture and systems within firms for better communication and monitoring. Lev et al. (2009) define this as an agglomeration of unique business processes and systems, and corporate culture that distinguishes a firm from its competitors in efficient production. Peters and Taylor (2017) underscore the prominence of human capital, innovation, branding, customer relation, and distribution channel, among others, in an increasingly becoming service and technology driven modern business world.

Organization capital is a durable factor of production which, unlike other factors of production, is not easily mimicable by other firms but is transferable from one firm to

[6] However, young firms may engage in reputation-building behavior and distribute dividends (but not necessarily repurchase shares) to signal their growth opportunities (Flavin and O'Connor, 2017). Similarly, old firms avoid payouts if they are in financial distress.

another. There are two essential features of organization capital – it is a firm specific production factor, and it is provided by the key talents of a firm such as top management teams (TMTs), developers, architects, engineers, sales force etc. Walmart's vendor managed inventory (VMI) can be thought of an example of organization capital, where the product suppliers are automaticity informed when an item is checked out who eventually manage the inventory in Walmart stores. Walmart received 'Retailer of the Decade' award in late 1980s for this innovative talent in managing its supply chain.

Existing studies examine the relations between organization capital and corporate performance and policies. For example, Lev and Radhakrishnan (2005) and Lev et al. (2009) find positive relation between organization capital and future operating performance and firm value. Elsfeldt and Papanikolaou (2013), Elsfeldt and Papanikolaou (2014), and Leung et al. (2018) show that shareholders in firms with high organization capital demand higher risk premia than in firms with more physical capital. Li et al. (2018) show that acquirer firms with high organization capital ends up with superior deal performance than otherwise acquirers with low organization capital.

2.3. Hypotheses

This study empirically tests two competing hypotheses – the complement hypothesis and the substitute hypothesis. Our testable hypotheses stem from the tenet that organization capital may complement or substitute a firm's payout decision. Under the complement hypothesis, we predict a positive relation between organization capital and corporate payout policy. There are two potential explanations for such relation. First, organization capital creates agency conflict between shareholders and firms' key talents as key talents expropriate cash flows accruing from such asset and they have incentives to over-invest in organization capital to increase their out-side option (Elsfeldt and Papanikolaou, 2013). Therefore, firms with

high organization capital are expected to distribute more cash dividends in an attempt to discipline the managers. Second, managers of firms with high organization capital have incentive to offer 'signal of quality' to the markets by paying more dividends as organization capital is considered a durable factor of production and a key driver of corporate value, growth and operating performance.

Similarly, under the complement hypothesis, we propose two arguments for a positive relation between organization capital and share repurchases. First, firms with more organization capital offer incentive-based compensation to retain the key talents within firm (Lev et al., 2009; Lustig et al., 2011). We argue that such incentive-based compensation may prompt managers to repurchase stocks to reduce outstanding stocks in an attempt to increase earnings per share and value. In addition, stock-based compensation, a popular compensation scheme, may also motivate key talents of high organization capital firms to repurchase shares to avoid the dilution of EPS and to enhance the value of their own stock options. Ferri and Li (2020) state that both the dividend-protection channel (incentive to avoid dividends and replace with repurchases) and the dilution channel (incentive to repurchases to offset the dilutive effect from option exercise) predict that managers with more option compensation will favor repurchases over cash payouts[7]. Second, studies suggest that information asymmetries between inside managers and outside shareholders prompt firms to repurchase stocks to convey information about future prospect and that the stock market generally respond positively to repurchase announcements (Bhattacharya, 1979; John and Williams, 1985; Liang, 2012). Given the intangible nature of organization capital and its exposure to

[7] One may argue that stock option programs could potentially influence corporate payout policy through agency channel. In this connection, Weisbenner (2000) find that a firm's option program is a strong predictor of subsequent share repurchases, but that this relationship is not driven by the agency hypothesis. Additionally he shows that, 'the agency hypothesis predicts a negative correlation between management options and dividends, but does not necessarily predict a positive correlation between management options and share repurchases (the firm may reduce dividends and retain more earnings instead)'. Thus, in the context of our study, we contend that share repurchase is mostly driven by incentive-based compensation and not by agency conflicts.

information asymmetry, firms with high organization capital are more likely to use stock repurchase programs to signal their better future prospect than low organization capital firms. We, thus, have the following hypotheses:

Hypothesis 1. Organization capital is positively associated with cash dividend payouts (agency or signaling arguments)

Hypothesis 2. Organization capital is positively associated with share repurchases (compensation incentive or signaling arguments)

Alternatively, the substitute hypothesis predicts a negative relation between organization capital and corporate payout choices. One explanation of such relation lies in financing constraints theory. Since organization capital is intangible in nature, it cannot be widely used as collateral in debt financing. Therefore, debt financing may be difficult and costly for high organization capital firms (Rozeff, 1982; Chae et al., 2009). In addition, shareholders also require higher risk premia as organization capital induces additional risks. Accordingly, firms with high organization capital may find it costly to raise funds externally and are tempted to hold more cash and pay out little either in the form of cash dividend or stock repurchase. Additionally, life-cycle theory of dividends shows that corporate payouts are generally higher (lower) during later (earlier) stage of firm life-cycle (see, e.g., Grullon et al., 2002; DeAngelo et al., 2006). On the other hand, life-cycle theory of firms find that firms are likely to agglomerate organization capital in their earlier stage of life-cycle to help them achieve sustainable advantage over their key competitors (Atkeson and Kehoe, 2005; Hasan and Cheung, 2018). Thus, life-cycle theory of payouts coupled with life-cycle theory of firms suggest somewhat negative association between organization capital and corporate payouts. We, thus, build the following alternative hypotheses:

Hypothesis 1. Organization capital is negatively associated with cash dividend payouts (financing constraints or life-cycle arguments)

Hypothesis 2. Organization capital is negatively associated with share repurchases (financing constraints or life-cycle arguments)

We design our empirical analyses to test these alternative hypotheses, and also to distinguish between alternative explanations.

3. Data, Variables, and Methodology

3.1. Sample

Our initial sample consists of all firm-year observations available in Compustat database for the period 1980-2017 (401,762 firm-years)[8]. We exclude 102,479 and 15,884 firm-year observations pertaining to financial (SIC codes 6000–6999) and utilities (SIC codes 4400–4999) firms, respectively. We also exclude firm-year observations with missing dependent, independent and control variables (125,919 firm-years). The above sampling criteria yields an unbalanced panel data that consists of 157,480 firm-year observations. There are 17,099 unique firms in the sample with an average number of years being nine and half years. To reduce the influence of outliers, all continuous variables are winsorized at the 1% level on both sides. Note that the number of firm-years observations in the regression models vary depending on the model-specific data requirements. We report the sample selection procedure in Panel A, Table 1.

[8] Our study covers a large sample period so that it accounts for both disappearance and reappearance of dividends (Farre-Mensa et al., 2014).

Panel B, Table 1 presents the distribution of our sample across the Fama-French twelve industry groups. We observe that business equipment industry (i.e., computers, software, and electronic equipment) exhibits the largest share of our sample (21.15%), while chemicals, and allied products represent the smallest share (2.93%).

[Please insert Table 1 about here]

3.2. Measuring Organization Capital

We use organization capital measure of Peters and Taylor (2017) that estimates organization capital as the accumulation of a *fraction* of past selling, general and administrative expenses (SG&A) using the perpetual inventory method as follows:

$$OC_{i,t} = (1 - \delta_0)OC_{i,t-1} + \left(SG\&A_{i,t} \times \theta_0\right) \qquad (1)$$

where $OC_{i,t}$ denotes firm-specific stock of organization capital at time t, δ_0 denotes the depreciation rate of organization capital, $SG\&A_{i,t}$ represents the firms' SG&A expenses at time t, and θ_0 represents the fraction of SG&A expense which is invested into organization capital. The rationale behind using SG&A expense in the estimation of organization capital is that "a large part of SG&A consists of expenses related to labor and IT (white collar wages, training, consulting, and IT expenses), consistent with the idea that any accrued value will be somewhat firm specific and must be shared with key talent … SG&A contains the part of labor expenses that cannot be directly attributed to a particular unit of output. Hence, any spending on the part of the firm to increase its organization capital will be included in SG&A expenses" (Eisfeldt and Papanikolaou, 2013, pp. 1380-1381). Lev et al. (2009) also contend that SG&A expenses include costs related to developing information systems, employee training, R&D, consultant fees and brand promotion, which aid in building organization capital. Finally, Peters and Taylor (2017) also argue that employee training to strengthen

human capital, and advertising to build brand capital, are general or administrative expenses contained within SG&A.

We estimate initial stock of organization capital as follows:

$$OC_{i,t_0} = \frac{(SG\&A_{i,t_0} \times \theta_0)}{g+\delta_0} \qquad (2)$$

Where g represents the growth in the flow of organization capital, estimated as the average growth of firm-level SG&A expenditure. Following prior literature (Peters and Taylor, 2017 and Eisfeldt and Papanikolaou, 2013), we use 30% of SG&A in estimating the stock of organization capital. In addition, we use a depreciation rate of 20% (Peters and Taylor (2017)[9]. Our final measure of organization capital is scaled by book value of total assets (OC/TA).

In the sensitivity analysis, following recent studies (Hasan and Cheung, 2018; Li et al., 2018), we also use organization capital measure of Eisfeldt and Papanikolaou (2013). This measure of organization capital is similar to Peters and Taylor's (2017) method, in that it also incorporates perpetual inventory method. However, Eisfeldt and Papanikolaou (2013) use deflated value of SG&A expenses, rather than a fraction of past SG&A expenses. In particular, the estimation method is as follows:

$$OC_{i,t} = (1 - \delta_{OC})OC_{i,t-1} + \frac{SG\&A_{i,t}}{cp_t} \qquad (3)$$

where cpi_t represents the consumer price index and other variables are explained earlier. Estimation of initial stock of organization capital also involves use of deflated value of SG&A expenses (see Equation 2). For robustness check, we also scale organization capital by total capital (OC/TC) instead of total assets.

[9] Peters and Taylor (2017) document that use of different percentages of SG&A expense and different depreciation rates provide qualitatively similar results.

3.3. Measuring Dividend and Repurchases

To estimate the relationship between organization capital and cash dividends, we use two measures of dividends as dependent variable. For logistic regression, we use *DIV_D*: a binary variable that takes a value of 1 if the firm pays cash dividends in year *t*, and 0 otherwise. For other regression models, we use dividends scaled by total assets (*DIV/TA*) as the dependent variable. In the sensitivity analysis, we also use the ratio of dividends to market value of equity (*DIV/MVE*) and dividends to earnings before interest and taxes (*DIV/EBIT*)[10].

Following prior studies (see, e.g., Stephens and Weisbach, 1998; Fenn and Liang, 2001; Grullon and Michaely, 2002; Cuny et al., 2009; Desai and Jin, 2011), we define stock repurchases as common and preferred stock repurchases adjusted for any decreases in preferred stock.

REP = Purchase of common and preferred stock + min (0, change in preferred stock value) (4)

For logistic regression, we use *REP_D* as dependent variable, a binary variable that takes a value of 1 if the firm repurchase stocks in year *t* and 0 otherwise. For other regression models, we use repurchase scaled by total assets (*REP/TA*). In the sensitivity analysis, we also scale stock repurchase by market value of equity (*REP/MVE*) and earnings before interest and taxes (*REP*/*EBIT*). Finally we show the robustness of the results using stock repurchase as the increase in treasury stocks using annual Compustat data (TSTKC). We replace a decrease in treasury stock by 0 (Banyi et al., 2008).

3.4. Control Variables

[10] Since payout ratios are not meaningful when the denominator (e.g., EBIT) is negative, for OLS and firm-fixed effect regression models, we exclude observations with negative denominator. We also use left-censored Tobit regression to address this issue.

We use a set of control variables that prior studies suggest to affect corporate payouts (e.g., Grullon and Michaely, 2002; Von Eije and Megginson, 2008; Bodnaruk and Ostberg, 2013; Hoberg et al., 2014).[11] Large firms are less financially constraints, which enhance their ability to pay dividends or sustain stock repurchase (Cuny et al., 2009). Therefore, we control for firm size (*SIZE*) in the regressions. Firms tend to pay dividends when investment opportunities are limited, while they tend to repurchase stock when stocks are undervalued (Andriosopoulos and Lasfer, 2015). To control for investment opportunities and equity valuation effects, we use market-to-book ratio (*MTB*), R&D ratio (*R&D*), and capital expenditure to assets ratio (*CAPEX*). Studies show that leverage typically limit firms' payouts (e.g., Dittmar, 2000; DeAngelo et al., 2006), implying the need to control for the leverage ratio (*LEV*). We include firm age (*AGE_LN*) to control for firms' maturity that prior studies suggest to affect payouts (DeAngelo et al., 2006). We include profitability (*ROA*) and stock returns (*RET*) to control for firm performance that affects dividend payments or stock repurchases. Since firms with excess cash tend to pay more dividends and repurchase more stocks to reduce agency costs, we control for corporate cash holdings (*CASH*). Prior studies suggest that firms with volatile returns (*RET_SD*) tend to replace dividends with stock repurchases (Jagannathan et al., 2000). Asset tangibility (*TANG*) may either increase payouts by easing access to external financing or decrease payouts by limiting availability of cash flows (Koo et al., 2017). Given that firms in the competitive industries are less likely to make payouts through dividends and repurchases (Hoberg et al., 2014), we control for industry concentration (*IND_CON*). Following Alzahrani and Lasfer (2012), we include buyback (dividend) in the dividend (buyback) regression. Finally, we control for fiscal year effect and industry/firm effect. Description of all variables are presented in Appendix A.

[11] Interestingly, extant studies use a similar set of variables to explain dividends and stock repurchases (see Von Eije and Megginson, 2008; Skinner, 2008).

3.5. Methodology

We estimate the relation between organization capital and corporate payouts using logit, ordinary least squares (OLS), Tobit, and firm-fixed effect (FFE) regression models. In particular, to test the relation between organization capital and the likelihood of paying cash dividends and stock repurchases we use the following logit regressions with firm-level-clustered standard errors:

$$Prob\ (DIV\_D\ = 1)\ = \alpha_0 + \beta_1 OC + \varphi' Controls\ + \varepsilon \qquad (5.1)$$

$$Prob\ (REP\_D\ = 1)\ = \alpha_0 + \beta_1 OC + \varphi' Controls\ + \varepsilon \qquad (5.2)$$

where the dependent variables (i.e., *DIV_D* and *REP_D*) are defined in section 3.3. Our main variable of interest is organization capital (*OC*) as discussed in Section 3.2, and regression model controls for firm characteristics, industry and year dummies (see Section 3.4).

For OLS, Tobit and firm-fixed effect regression models, we estimate the following equations:

$$DIV\ = \alpha_0 + \beta_1 OC + \theta' Controls\ + \varepsilon \qquad (6.1)$$

$$REP\ = \alpha_0 + \beta_1 OC + \theta' Controls\ + \varepsilon \qquad (6.2)$$

where *DIV* is cash dividends scaled by total assets (*DIV/TA*), *REP* is stock repurchase scaled by total assets (*REP/TA*), and other variables are defined earlier. Note that for Tobit model, we use left-censored regression:

$$where\ DIV\ = \begin{cases} DIV; & if DIV > 0 \\ 0 & ; otherwise \end{cases} \qquad (6.3)$$

$$and\ REP\ = \begin{cases} REP; & if REP > 0 \\ 0 & ; otherwise \end{cases} \qquad (6.4)$$

4. Empirical Results

4.1. Descriptive Statistics and correlation

Table 2 (Panel A) presents summary statistics for the variables used in our study. Consistent with prior studies, firms in our sample exhibit slight preference for share repurchases over cash dividends (See, e.g., Farre Mensa et al., 2014). For example, proportion of firms that tend to pay cash dividend (repurchase shares) is 33.8% (34.8%). Moreover, the average cash dividend payout (share repurchase) for the sample firms are 0.9% (1.4%) of total assets. However, the median value of both dividend and share repurchases is zero, indicating that corporate payouts are largely skewed to a small number of firms.

Panel A also shows that firms in our sample have average organization capital of 33% of total assets (OC/TA) and the corresponding median value is 21.9%. Alternative specification of dividends (i.e., DIV/MVE and DIV/EBIT), share repurchases (i.e., REP/MVE and REP/EBIT), and organization capital (i.e., OC/TC and OC/TA_EP) also yields similar mean and median values. Summary statistics of control variables used in our study are consistent with prior studies (see, e.g., Lev et al., 2009; Jacob and Jacob, 2013; Hasan and Cheung, 2018). For instance, the average firms in our sample are moderately large (SIZE = 4.909), less levered (LEV = 0.241), somewhat profitable (ROA = 0.035), holds more cash (CASH = 0.180), and invest fund for both research and development (R&D = 0.051) and capital expenditure (CAPEX = 0.069).

Panel B of Table 2 reports correlation between the variables used in main analysis. We find that OC/TA is correlated positively with stock repurchase (REP/TA) (correlation coefficient = 0.02; significant at $p<0.01$) and total payout (TP/TA) (correlation coefficient = 0.01, $p<0.01$). Correlations between payouts and controls are also in line with expectations. Finally, correlation between controls are at moderate level, implying that multicollinearity is not a concern for our analysis.

[Please insert Table 2 about here]

4.2. Univariate analysis

Panel A in Table 3 presents the characteristics of the firms in our sample by payout policy. In Columns (1) to (3), we show univariate mean differences between sub-sample of firms that pay (DIV =1) and don't pay (DIV =0) cash dividends. We find that dividend payers are significantly larger (SIZE), profitable (ROA and RETURN), and mature (AGE_LN) than non-dividend payers. In addition, firms that pay dividends have significantly lower growth opportunities (MTB and R&D), financial leverage (LEV), cash holdings (CASH) and variability of stock return (SD_RET). These differences between dividend payers and non-payers are consistent with prior studies (e.g., Fama and French, 2001; Grullon and Michaely. 2002; DeAngelo et al., 2006). We observe that the above firm-level differences hold for sub-sample of firms that repurchase (REP =1) and don't repurchase (REP =0) stocks (Columns 4 – 6), and also for sub-sample of firms that both pay cash dividends and buyback share (TP = 1) and don't pay cash dividends and don't buyback share (TP =0) (Columns 7 - 9).

Panel B of Table 3 exhibits the univariate mean differences of payouts between sub-sample of firms with high (OC>median) and low (OC<Median) organization capital[12]. We observe that amount of cash dividends (DIV/TA), stock repurchase (REP/TA) and total payout (TP/TA) are significantly higher for firms with high organization capital compared to their low organization capital counterpart. We obtain qualitatively similar results when we restrict our analysis to sub-sample of firms that pay cash dividend only, repurchase share only, and both pay dividend and repurchase shares.

[12] In unreported tests, we also use tercile and quintile breakpoints instead of median to classify firms into high OC and low OC and find qualitatively similar results.

[Please insert Table 3 about here]

4.2. Organization Capital and Corporate Payouts: Baseline Results

We present the results of the relation between firm-level organization capital and payout policy in Table 4. Column (1) of Panel A presents logistic regression results for the relation between organization capital and likelihood of paying cash dividends. Our dependent variable is DIV_D, an indicator variable that equals one if a firm pays cash dividend in any given year and zero otherwise. Our main explanatory variable is organization capital scaled by total assets (OC/TA). We control for year and industry fixed effects along with firm-level characteristics in all our models. Standard errors (reported in parentheses) are clustered at the firm level.[13]

Result reported in Column (1) of Panel A shows that firms with high organization capital are more likely to pay cash dividends. In particular, the coefficient of OC/TA is 0.386 (statistically significant at the 1% level). The marginal effect estimated from the regression suggests that a one unit increase in OC/TA produces a 4.60% increase in the probability of cash dividend payouts for an average firm.

Columns (2) to (4) of Panel A test the relation between organization capital and cash dividend levels. As mentioned before, we employ three regression models – OLS (Column 2), Tobit (Column 3) and firm fixed effect (Column 4). We use cash dividends scaled by total assets as dependent variable (DIV/TA). Regression results show a positive and significant (at $p<0.01$) relation between organization capital and cash dividend payments. For example, OLS regressions show that the coefficient of OC/TA is 0.005 ($p<0.01$) and the corresponding coefficients for Tobit and firm fixed effect regression models are 0.011 ($p<0.01$) and 0.003

[13] Note that our results throughout the paper remains robust even if we cluster standard errors at both firm and year level.

(p<0.01), respectively. The economic significance of the relation between organization capital and cash payout policy is also substantial. For instance, OLS regression results in Column (2) show that a one standard deviation increase in OC/TA (= 0.47) increases the level of cash dividends by 26.11% for an average firm relative to the mean. Similarly, Tobit regression results in Column (3) indicate a predicted increase in cash dividend ratio of 57.44% relative to the mean. Thus, the findings in our regression models are not only statistically significant, but also economically meaningful.

Columns (5) to (8) of Panel A exhibit the relation between organization capital and share repurchases. In Column (5), logistic regression shows that coefficient of organization capital is positive and significant (coefficient = 0.232; p<0.01), implying that firms with high organization capital are more likely to repurchase shares. The marginal effect estimated from the regression shows that a one unit increase in OC/TA leads to a 4.5% increase in the propensity of share repurchases for an average firm. Results in Columns (6) to (8) show that the relation between organization capital and levels of share repurchase is positive and significant (p<0.01) and this relation remains robust irrespective of the use of OLS, Tobit and firm fixed effect regression specifications.

Our documented positive relation between organization capital and share repurchases is also economically meaningful. For instance, OLS regression results in Column (6) suggests that a one standard deviation increase in OC/TA increases the level of share repurchases by 23.5% (DIV/TA) relative to the mean. This economic significance remains qualitatively similar with alternative regression specifications[14].

Coefficients of the major control variables are consistent with prior studies. For example, large, mature, and profitable firms with more tangible assets are more likely to pay

[14] When we repeat the analysis for total payouts ((dividends + repurchase)/total assets), we continue to find that coefficient of OC/TA is positive and significant (p<0.01) (untabulated).

cash dividends. On the other hand, levered, volatile and R&D and capital-intensive firms are less likely to pay cash dividends. The results also indicate that cash dividends and share repurchases are not substitutes to each other as the coefficients of repurchases (dividends) are positive in the dividend (repurchases) regressions, in line with some prior studies (Allen et al., 2000; Lee and Rui, 2007). Overall, Panel A of Table 3 provides support to our hypothesis that both the likelihood and level of cash dividends and stock repurchases are higher for firms with higher level of organization capital.

In Panel B of Table 4, we re-estimate the relation between organization capital and payout policy for three sub-samples: cash dividend payers only (Columns (1) – (2)), buyback firms only (Columns (3) – (4)) and firms with both cash dividends and buybacks (Columns (5) – (6)). In all regressions, we scale respective payouts by total assets. Given that the fundamental motives for different payout methods may be distinct, particularly within the signaling context, this sub-sample analysis could alleviate some drawbacks associated with the estimation. In Panel B, we find that organization capital is positively and significantly ($p<0.01$) related to cash dividends (DIV/TA), stock repurchases (REP/TA) and total payouts (TP/TA) and this relation remains robust irrespective of the use of OLS and firm fixed effect regression specifications.[15] These results indicate that for sub-sample of firms that pay dividends and buyback shares only, the amount of dividends and buyback are higher for firms with higher organization capital. Likewise, for sub-sample of firms that pay dividends as well as buyback shares, the magnitude of total payout is higher for firms with high-level of organization capital.

[15] Note that for sub-sample analysis we do not use Tobit regression specification. This is because use of positive payout ratio as the dependent variable yields same result for both OLS and Tobit regressions.

Overall, the results shown in Table 4 support our complement hypothesis and confirm that both the likelihood and level of cash dividends and share repurchases are higher for firms with higher level of organization capital.

[Please insert Table 4 about here]

4.3. Endogeneity

Our analysis so far suggests that firms with high organization capital are more likely to pay dividends and repurchase stocks. Moreover, these firms tend to pay more dividends and repurchase more stocks. However, there may be a concern that our results are biased due to endogeneity problem arising from omitted variable bias and reverse causality problem. In this section, we undertake several approaches to address this concern.

4.3.1. Omitted Variable Bias

Although we control for a set of firm-level characteristics that prior studies suggest to affect payouts, one may argue that our analyses omit some additional controls that are related to both payout and other included variables. For example, one may contend that organization capital measure only captures managerial ability rather than an agglomeration of business practices, processes, culture and designs. Moreover, since we construct organization capital based on SG&A expenditure, it is imperative to control SG&A in the regression model. There may be further concern that our estimation is biased as it omits intangible assets reported in firms' balance sheet. Therefore, in Columns (1) to (4) of Panel A and B (Table 5) we control for managerial ability score (MA_SCORE) of Demerjian et al. (2013), intangibles scaled by total assets (INTAN/TA) and SG&A scaled by total assets (SGA/TA). We find the relation between organization capital and both cash dividends as well as stock repurchases remains robust (significant at $p<0.01$) even after controlling for the above variables and the results are not sensitive to the use of logit, OLS, Tobit and FFE regression models.

Jiang et al. (2017) show that stock liquidity is positively associated with corporate payouts. Studies also show that firms' financing constraints, corporate governance, and financial reporting quality affect corporate payouts (e.g., Adjaoud and Ben-Amar, 2010; Bodnaruk and Östberg, 2013; Koo et al., 2017). Therefore, we include stock illiquidity (ILLIQ) measure of Amihud (2002), financing constraints (FC) measure of Whited and Wu (2006), corporate governance measures (HOSTILE_INDEX) of Cain et al. (2017) and performance matched discretionary accrual measures of Kothari et al. (2005) (|DAC|) as additional controls in Columns (5) to (8) of Table 5 (both in Panel A and B). Again, we continue to find robust evidence that organization capital is positively related (significant at $p<0.01$) to both cash dividends and stock repurchases. Furthermore, when we include all additional controls together in Columns (9) to (12), we find that our results remain qualitatively similar. Finally, we find that our results relating to organization capital and payout policy remain qualitatively similar, in terms of sign, significance and magnitude of coefficients, when we include the above additional controls for sub-sample analysis in Panel C of Table 5 and, thus, provide support for the robustness of our estimates.

Overall, results reported in Table 5 provide evidence that the relation between organization capital and both the likelihood as well as the level of cash dividends and stock repurchases remains positive and significant, indicating that results in our main analysis are not driven by omitted correlated variables.

[Please insert Table 5 about here]

4.3.2. Two-stage Least Squares (2SLS) Estimation

Despite we provide robust evidence that firms with high organization capital are positively related to high levels of cash dividends and stock repurchases, it is possible that firms with high levels of corporate payouts may also invest more in organization capital (i.e., a reverse

causality problem). To address this concern, we utilize a two-stage least squares (2SLS) regression model.

Following prior studies (Li et al., 2018), we employ the industry-level growth uncertainty (*IND_GRW_UNC*) as an instrument. Carlin et al. (2012) contend that firms in rapidly changing industries invest less in organization capital, because of their high technology obsolescence risk. Therefore, we expect industry-level growth shock to be negatively correlated with the firm-level organization capital (the relevance condition) but such industry-level growth shock has nothing to do with firm-level payouts (the exclusion restriction). To measure industry-level growth uncertainty, we first estimate firm-level standard deviations of quarterly asset growth rates over the eight quarters and then, we take the industry-median of those firm-level standard deviations (Li et al., 2018).

The first stage regression results in Column (1) and (4) of Table 6 show that our selected instrument (i.e., IND_GRW_UNC) has a significantly negative association (coefficient = - 0.322; $p < 0.01$ in Column (1) and coefficient = - 0.303; $p < 0.01$ in Column (4)) with organization capital (OC/TA). As far as the weak instrument issue is concerned, we find no evidence of a weak instrument because the F-statistic of the coefficient of the instrument "IND_GRW_UNC" from the first stage regression is far greater than 10.

Columns (2) to (3) of Table 6 report the second-stage regression results for the relation between our predicted measure of OC/TA and cash dividends. Consistent with our main results, we find that the relation between predicted organization capital and cash dividends remains positive and statistically significant ($p<0.01$). Similarly, second-stage regression results in Columns (5) to (6) show a significantly ($p<0.01$) positive relation between our predicted measure of OC/TA and share repurchases. Overall, findings from the second-stage regression results confirm that the positive relation between organization

capital, and cash dividends as well as share repurchases is not driven by the endogeneity problem.

[Please insert Table 6 about here]

4.4. Sensitivity Analysis

4.4.1. Alternative Specification of Payouts

In this sub-section, we test the sensitivity of our base findings to alternative specification of corporate payouts. Here we scale dividends by market value of equity (DIV/MVE) and by earnings before interest and taxes (DIV/EBIT). Similarly, we scale stock repurchase by market value of equity (REP/MVE) and by earnings before interest and taxes (REP/EBIT). Panel A of Table 7 shows that coefficients of organization capital remain positive and significant for the alternative scaling of dividend and repurchase irrespective of whether we use OLS, Tobit or FFE regression models. We also find that our inference from the analysis remains same when we scale payout by sale or when we use the above alternative measures for sub-sample tests in Panel B of Table 4 (untabulated). Finally, to test robustness of the results, we define stock repurchase as the increase in treasury stocks using annual Compustat data (TSTKC). We replace a decrease in treasury stock by 0 (Banyi et al., 2008). We find that results using this alternative measure of stock repurchase corroborate our main analysis (untabulated).

4.4.2. Alternative Specification of Organization Capital

Recall that, in main analysis we use organization capital measure of Peters and Taylor (2017). Now, we test the sensitivity of our results using organization capital measure of Eisfeldt and Papanikolaou (2013) (OC/TA_EP). Panel B summarizes test results for both cash dividends and share repurchase. We find that coefficient of OC/TA_EP is positive and significant (mostly at $p<0.01$) across all the models, corroborating findings from main

analyses. In addition, we find that inference from our analysis remains qualitatively similar when we scale organization capital measures by total capital (OC/TC) (results untabulated). Finally, we find consistent evidence when we use the above alternative measure as well as alternative scaling of organization capital for sub-sample tests in Panel B of Table 3 (untabulated).

[Please insert Table 7 about here]

4.5.3. Other Sensitivity Analysis

In addition to the above analysis, we conduct a few other sensitivity analyses to check the robustness of our results. First, following Fama and Macbeth (1973), we estimate cross-sectional regressions to estimate the relation between organization capital and payout. Consistent with our previous findings, we observe positive relation between organization capital and both measures of corporate payouts (DIV/TA and REP/TA). The coefficients of all regression models are positive and significant at the 1% level (untabulated). Second, Panel B of Table 1 shows that 21.5% of our sample belongs to business equipment (i.e., computers, software, and electronic equipment) industry. To mitigate the concern that our documented positive relation between organization capital and payouts is driven by the firms in business equipment industry, we re-estimate the baseline regressions after excluding business equipment industry. Our untabulated results remain qualitatively similar in terms of sign, significance and magnitude, corroborating the evidence from our main analysis. In addition, we divide the sample in high tech and non-high-tech firms based on the classifications of Barton and Waymire (2004)[16]. We then separately run the regressions for both sub-samples. Untabulated results show that the coefficient of organization capital remains positive and

[16] Barton and Waymire (2004) define high technology firms as those belonging to the following 3-digit SIC codes: aircraft (372), automotive (371), communications (481, 482, 489), electronics (363, 366, 369), film and entertainment (781, 783, 791), industrial machinery (351-356), office equipment (357), photography (381, 383, 384, 387) and electrical utilities (491, 493).

statistically significant ($p < 0.01$) for both high-tech and non-high-tech sub-sample and for both cash dividends and stock repurchases.

5. Potential Explanations and Channel Analysis

5.1. Organization Capital and Cash Dividends

5.1.1. Agency problem as a channel to explain the positive relation between organization capital and cash payouts

While developing the hypothesis, we argue that dividends can be used as a mechanism to mitigate agency problems between corporate insiders (including key talents) and outside shareholders. Prior studies suggest that firms with high agency problem pay more dividends to discipline the managers (Easterbrook, 1984; Jensen, 1986). Given that firms with higher organization capital are exposed to more agency problem (Elsfeldt and Papanikolaou, 2013), we expect such firms to disgorge more cash in the form of dividends. Accordingly, we expect the positive relation between organization capital and dividends to be stronger in the presence of higher level of agency problem. This agency-based argument is motivated by La Porta et al., (2000), who propose two agency views of dividends. The first view states that dividends are an outcome of legal protection of minority shareholders. The greater the rights of minority shareholders (such as the presence of good corporate governance), the more cash they appropriate from the company. Moreover, this relationship is stronger (weaker) for firms with low (high) growth prospects. According to the alternative view, dividends can be used as substitute for legal protection of minority shareholders. Firms with low investor protection tend to build reputation in the capital markets by paying dividends. While our agency-based arguments are in line with their mechanism, we differ from their study in that, first, unlike

theirs, we do not establish the link from an international context, and second, unlike ours, they do not investigate share repurchases in their paper.

Prior studies suggest a few proxies for firm-level agency problem. Drawing on these researches, first we employ the shareholder base (SHR_BASE) to measure the extent to which a firm is exposed to agency costs. Studies show that a large shareholder base indicates a dispersed ownership and more agency problems, and that firms with a large shareholder base pays out more as dividends (Rozeff, 1982; Bodnaruk and Östberg, 2013). Second, we use free cash flow (FCF) as managers are naturally motivated to waste cash for self-serving purposes when internal funds exceeding investment opportunities (Jensen, 1986). DeAngelo et al. (2009) also suggest that agency costs associated with free-cash-flow plays a major role in explaining payout policy. Next, we use acquisition (ACQ) since the agency conflicts between shareholders and managers motivate entrenched managers to undertake inefficient and excessive investments to build empire by growing the firm beyond the optimal size (Jensen, 1986). Other prior studies also use acquisition to proxy for agency problem (Hope and Thomas, 2008; Giroud and Mueller 2010). Finally, drawing on the literature that suggests that excessive spending in capital expenditure is a sign of managerial empire building, we use growth in capital expenditure (ΔCAPEX) as a measure for agency problem (Hope and Thomas, 2008; Giroud and Mueller 2010).

Given that the above proxies measure agency problems with noise and our focus is on the overall agency problem, in the spirit of Aggarwal et al. (2012), we create a composite measure of agency problem (AGENCY) based on the sum of decile value of the above four proxies. AGENCY ranges from 4 to 40, and a higher (lower) value of AGENCY indicates more (less) agency problem[17]. To test the agency argument of cash dividends, we include this

[17] This composite measure not only reduces the potential skewed distributions of individual proxies, but also offers a more reliable measure for our channel analysis.

variable in the base-line regression and interact this with organization capital (OC/TA * AGENCY). Regression results in Columns (1) to (3) in Table 8 (Panel A) show that coefficient of the interactive variable is positive and significant at conventional level. We continue to find positive and significant coefficients for most of the interactive variables when individual agency variables are interacted with OC/TA in Columns (4) to (15). Inference from our analysis also remains consistent and qualitatively similar when we employ firm-fixed effect regression model (untabulated). Finally, when we repeat the analysis for sub-sample of firms that only pay cash dividends (i.e., DIV>0 & REP =0), we continue to find consistent evidence (results un-tabulated). Overall, consistent with the agency and corporate control literature, this finding indicates that high organization capital firms tend to pay more cash dividends in an attempt to minimize agency problem.

5.1.2. Signaling motive as a channel to explain the positive relation between organization capital and cash payouts

Signaling motive, another potential channel, postulates that firms with high organization capital may distribute more cash dividends to signal their future prospects to the outsiders. Given that dividends is a costly signaling mechanism, only firms with solid credentials may use 'signal of quality' to convey their future prospect. Studies show that signaling motive of dividends is more effective in the presence of information asymmetry between corporate insiders and outside shareholders (Bhattacharya, 1979). Thus, in the context of our study, if signaling-based explanation of dividends holds, one would expect the positive relation between organization capital and dividends to be stronger in the presence of information asymmetry.

We draw on prior research to identify four different proxies to capture information asymmetry. We use bid-ask spread (SPREAD) because prior studies indicate this as a suitable

market-based measure to proxy for the degree of information asymmetry (e.g., Brennan and Subrahmanyam, 1996; Armstrong et al., 2011). We also use discretionary accrual (|DAC|) because this accounting-based measure captures information gaps between managers and outsiders (Lee and Masulis, 2009; Armstrong et al., 2011). Motivated by prior studies that suggest that R&D intensive firms maintain greater information asymmetry to benefit from product development and market movement (Barth and Kasznik, 1999; Aboody and Lev, 2000), we use R&D expenses (R&D) to proxy for information asymmetry. Finally, we use institutional shareholding (INST) because studies suggest that institutional investors reduce information asymmetry between management and outside shareholders and firms use dividends to attract institutional investors because institutions bring value to the firm through monitoring and information production (Allen et al., 2000; Amihud and Li, 2006). These measures of information asymmetry are widely used in the context of dividends signaling model (e.g., Howe and Lin, 1992; Barth and Kasznik, 1999; Aggarwal et al., 2012; Billett and Yu, 2016).

Given that the above proxies capture information asymmetry with noise, following Aggarwal et al. (2012), we create a composite measure of information asymmetry (SIGNAL) based on the sum of decile value of the above four proxies. A higher (lower) value of SIGNAL indicates more (less) information asymmetry, which may motivate firms to distribute more cash as dividends to convey signal about firms' future prospect. Table 8 (Panel B) presents results for signaling-based explanation of dividends by high organization capital firms. We include proxy for information asymmetry in the base-line regression and interact this with organization capital (OC/TA * SIGNAL). A positive and significant coefficient of the interaction term will provide support to our signaling-based explanation[18].

[18] Since signaling theory suggests that dividend changes convey managers' information about future prospect, we use change in dividends rather than level of dividends as dependent variable.

Regression results in Columns (1) to (3) in Table 8 (Panel B) show that coefficient of the interactive variable is positive and significant ($p<0.01$), implying that high organization capital firms distributes more cash in the presence of information asymmetry – lending support to our signaling-based explanation. However, in Columns (4) to (15), we find that positive and significant coefficient of the interaction remains robust for SPREAD and R&D, but not for |DAC| and INST measures of information asymmetry. When we repeat the analysis for sub-sample of firms that only pay cash dividends (i.e., DIV>0 & REP =0), we find that interactive coefficients are significant in only 4 out of 15 regression models (results untabulated). Overall, finding in Panel B of Table 8 provide weak evidence about the signaling-based explanation of dividends.

[Please insert Table 8 about here]

5.2. Potential Explanation: Organization Capital and Stock Repurchases

5.2.1. Incentive Compensation as a Channel to Explain the Relation between Organization Capital and Share Repurchases

As organization capital is embodied in a firm's key talent, the firm tends to design executive compensation contracts in order to retain these talents within firm (Eisfeldt and Papanikolaou, 2013). Lev et al. (2009) show that managers of firms with high organization capital are exposed to the stock price movements because of their current and potential equity holding. Based on this prior evidence, we argue that pay-for-performance contracts and option contracts motivate corporate managers to buy back shares. With this endeavor, we

argue managerial compensation as a potential channel to explain the positive relation between organization capital and share repurchases[19].

In Table 9 (Panel A), we present results of our baseline regression models using both equity intensity and option intensity as a moderating factor. Following Humphery-Jenner et al. (2016), we define equity intensity (EQU_INT) and option intensity (OPTN_INT) as the proportion of total annual executive compensation that arises from option grants and stocks and the proportion of total annual executive compensation that arises from option grants, respectively. In Columns (1) to (4), consistent with base-line regressions, organization capital exhibits a positive association with the likelihood and levels of share repurchases. More interestingly, the interaction variable (OC/TA*EQU_INT) generates positive and significant ($p<0.05$ or better) coefficients in all regression models. We find similar evidence when option intensity (OPTN_INT) is used as the moderating factor in Columns (5) to (8)[20]. Finally, when we repeat the analysis for sub-sample of firms that only repurchase stocks (i.e., REP>0 & DIV=0), we continue to find that interactive coefficients are positive and significant ($p<0.05$ or better) (results un-tabulated). Overall, finding from this analysis show robust evidence that managerial incentive-based compensation prompt high organization capital firms to buy back stocks, lending support to our incentive compensation-based explanation.

5.2.2. Signaling motive as a channel to explain the relation between organization capital and share repurchases

In our hypothesis development, we argue that high organization capital firms may have incentives to repurchase shares in order to signal their better future prospect to the outsiders.

[19] Although we hypothesize that the positive association between organization capital and share repurchases is stronger for firms with higher executive compensation and option compensation, we examine here only the latter segment. This is because executive compensation is not only an incentive mechanism, but also a measure of managerial ability which eventually is reflective in organization capital.

[20] Inference from our analysis remains qualitatively similar when we control for agency problem (proxies used in section 5.1.1.), implying that relation between stock repurchase and incentive-based compensation is not driven by agency conflicts.

This signaling is more important and effective when there is considerable information asymmetry. Thus, signaling-based explanation of stock repurchase indicates that the positive relationship between organization capital and stock repurchase would be magnified for firms with more information asymmetry.

Panel B of Table 9 empirically tests the above explanations. We use the same signaling proxies as used for signaling of cash dividends (see section 5.1.2).[21] In Column (1), we find that coefficient of the interaction term (OC/TA*SIGNAL) is positive and significant ($p<0.05$). However, when we use individual proxies for information asymmetry in Columns (2) to (5), we find that coefficient of the interaction term is mostly insignificant Furthermore, using change in stock repurchase (ΔREP/TA) as dependent variable, when we repeat the analysis for sub-sample of firms that only repurchase stocks (i.e., REP>0 & DIV =0), we continue to find that interactive coefficients are mostly insignificant (coefficients are positive and significant for only 3 out of 15 regressions) (results untabulated). Thus, finding from Panel B of Table 9 provides weak evidence in support of signaling-based explanation of stock repurchases.

[Please insert Table 9 about here]

6. Conclusions

In this paper, we examine whether organization capital affects corporations' payout choices. We develop two competing hypotheses in relating organization capital with corporate payouts. Based on agency and signaling (compensation incentive and signaling) theory of

[21] Since it is likely that only first announcement acts as a signaling device rather than the repeated announcements, in the regression we use a first repurchase announcement indicator (REP) to test the signaling argument of stock repurchase. We collect share-repurchase announcement data from Thomson Reuters SDC Platinum database. Nonetheless, inference from our analysis remains qualitatively similar when we use changes in stock repurchase value in place of first repurchase announcement indicator.

dividends (complement hypothesis), we predict that firms with high organization capital are likely to pay more dividends and repurchase more stocks. In contrast, financing constraint theory and life cycle theory of payouts and firms (substitute hypothesis) suggest a negative relation between organization capital and cash dividends as well as stock repurchases.

Using a large sample of U.S. firms during 1980-2017, we find that firms with high (low) levels of organization capital are more (less) likely to pay cash dividends and pay more cash dividends. We also find a positive association between organization capital and the likelihood and levels of share repurchases. Our findings are robust to the use of alternative measures of cash dividends, share repurchases, and organization capital, and after controlling for the endogeneity concerns. We also show that our results remain robust irrespective of the use of logit, OLS, Tobit and firm-fixed effect regression estimates. We also examine alternative channels that explain the positive association between the two. We show that the positive association between organization capital and cash dividends is mainly driven by the agency-based explanation of dividends. Furthermore, we show that the positive association between organization capital and share repurchases is driven by compensation-based argument for stock repurchases.

Overall, our paper contributes to the payout literature by documenting the extent to which payout decisions is influenced by tacit assets such as organization capital. We also shed some light on the relatively new literature on organization capital and how it shapes major corporate policies in the 21st century.

Appendix A
Description of Variables

Variable	Description
Dependent Variables	
DIV_D	An indicator variable that equals one for a firm if it pays dividends (*DVC*>0), and 0 otherwise.
DIV/TA	Dividend payments measured as the ratio of cash dividends (*DVC*) to total assets (*AT*).
DIV/MVE	Dividend payments measured as the ratio of cash dividends (*DVC*) to market value of equity (*MVE = PRCC_F*CSHO*).
REP_D	An indicator variable that equals one for a firm if it repurchases stocks, and 0 otherwise. We define stock repurchases as common and preferred stock repurchases adjusted for any decreases in preferred stock (Cuny et al., 2009; Desai and Jin, 2011).
REP/TA	Share repurchases measured as the amount of stock repurchases scaled by total assets (*AT*).
REP/MVE	Share repurchases measured as the amount of stock repurchases scaled by market value of equity (*MVE*).
Independent Variables	
OC/TA	Organization capital measured as the stock of organization capital (See section 3.2 for details) scaled by lagged total assets (AT).
OC/TC	Organization capital measured as the stock of organization capital scaled by lagged total capital (TC).
Control Variables	
SIZE	Natural log of market value of equity (*PRCC_F*CSHO*).
MTB	Market-to-book ratio, calculated as the market value of assets ((*PRCC_F*CSHO*) + (*DLTT+DLC*)) divided by the book value of assets (*AT*).
LEV	Leverage measured as the ratio of the sum of short term and long-term debt (*DLC+DLTT*) over total assets (*AT*).
R&D	Research and development expenses, measured as R&D (*XRD*) over total assets (*AT*). We replace missing R&D with zero.
ROA	Return on assets, measured as operating income before depreciation (*OIBDP*) scaled by total assets (*AT*).
CASH	Cash and marketable securities (CHE) scaled by total assets (*AT*).
CAPEX	Capital expenditure (*CAPX*) scaled by total assets (*AT*).
AGE_LN	Firm age, measured as the number of years since the firm was first covered by the Center for Research in Securities Prices (CRSP). We measure AGE as the natural log of (1+ age of the firm).
RETURN	Yearly stock return.
SD_RET	Standard deviation of daily stock returns over the year.
TANG	Asset tangibility measured as the net property, plant and equipment (*PPENT*) scaled by total assets (*AT*).
IND_CON	Industry concentration measured as the sum of the squared market share of each firm in the same industry (2-digit SIC codes) during a year. Market share is defined as the total sales of the firm in a given year divided by the total sales of the industry in the year.

Other Variables

DIV/SALE	Dividend payments measured as the ratio of cash dividends (*DVC*) to total Sales (*SALE*).
DIV/NI	Dividend payments measured as the ratio of cash dividends (*DVC*) to net income (*NI*).
REP/SALE	Share repurchases measured as the ratio of share repurchases to total Sales (*SALE*).
REP/NI	Share repurchases measured as the ratio of share repurchases to net income (*NI*).
MA_SCORE	Managerial ability measure following Demerjian et al. (2012).
INTAN/TA	Intangibles (*INTAN*) scaled by total assets (*AT*).
SGA/TA	Selling, general, and administrative expenses (*SG&A*) scaled by total assets (*AT*).
ILLIQ	Stock illiquidity measure of Amihud (2002).
FC	Financing constraints measured following Whited and Wu (2006).
TAKEOVER_INDEX	Corporate governance measures following Cain et al. (2017).
/DAC/	Performance matched discretionary accruals following Kothari et al. (2005).
IND_GRW_UNC	Industry-level growth uncertainty measure following Li et al. (2018).
INST	Percentage of common shares held by institutional investors.
EQU_INT	Proportion of annual CEO compensation that comes from option grants (option_awards_blk_value / option_awards_fv) and stocks (stock_awards_fv) scaled by total annual compensation (tdcl)
OPTN_INT	Proportion of annual CEO compensation that comes from option grants (option_awards_blk_value / option_awards_fv) scaled by total annual compensation (tdcl)

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Table 1

Sample selection and distribution of the sample.

Panel A: Sample selection

Description	Total number of observations
Data available in Compustat annual file from 1980 to 2017	401,762
Less:	
Financial firms	(102,479)
Utility firms	(15,884)
Firms with missing values for the variables used in the regression model	(125,919)
Final sample	157,480
Final number of unique firms	17,099

Panel B: Industry distribution

Industry	Freq.	%
Consumer nondurables	11,360	7.21
Consumer durables	4,815	3.06
Manufacturing	22,154	14.07
Oil, gas and coal extraction and products	10,071	6.39
Chemicals and allied products	4,608	2.93
Business equipment	33,313	21.15
Telephone and television transmission	5,899	3.75
Wholesale, retail and some services	19,677	12.49
Healthcare, medical equipment and drugs	18,049	11.46
Other	27,534	17.48
Total	157,480	100

Table 2: Descriptive statistics

Panel A: Summary statistics

This Panel presents summary statistics for the variables used in this study. The sample period ranges from 1980 to 2017. Description of the variables are presented in Appendix A.

	Mean	Std. Dev	p25	Median	p75
Dependent variables					
DIV_D	0.338	0.473	0.000	0.000	1.000
DIV/TA	0.009	0.021	0.000	0.000	0.010
REP_D	0.348	0.476	0.000	0.000	1.000
REP/TA	0.014	0.040	0.000	0.000	0.004
Main Independent variable					
OC/TA	0.330	0.466	0.089	0.219	0.423
Control variables					
SIZE	4.909	2.391	3.147	4.778	6.568
MTB	1.818	2.661	0.780	1.146	1.921
LEV	0.241	0.257	0.039	0.198	0.362
R&D	0.051	0.133	0.000	0.000	0.048
ROA	0.035	0.365	0.020	0.107	0.169
CASH	0.180	0.216	0.027	0.090	0.251
CAPEX	0.069	0.080	0.021	0.044	0.086
AGE_LN	2.216	0.993	1.491	2.292	2.952
RETURN	0.126	0.657	-0.276	0.025	0.359
SD_RET	0.039	0.025	0.022	0.033	0.049
TANG	0.295	0.238	0.102	0.230	0.431
IND_CON	0.081	0.081	0.038	0.056	0.086
Variables used in sensitivity analysis					
DIV/MVE	0.010	0.021	0.000	0.000	0.012
DIV/EBIT	0.089	0.218	0.000	0.000	0.093
REP/MVE	0.014	0.039	0.000	0.000	0.005
REP/EBIT	0.130	0.406	0.000	0.000	0.024
ΔDIV/TA	0.039	0.957	0.000	0.000	0.000
REP	0.028	0.164	0.000	0.000	0.000
OC/TA_EP	2.089	3.724	0.620	1.278	2.321
MA_SCORE	0.000	0.118	-0.068	-0.015	0.040
INTAN/TA	0.109	0.167	0.000	0.025	0.152
SGA/TA	0.416	0.573	0.143	0.292	0.509
ILLIQ	1.935	4.576	0.007	0.103	1.189
FC	-0.141	0.330	-0.289	-0.205	-0.104
HOSTILE_INDEX	0.128	0.089	0.057	0.102	0.175
|DAC|	0.080	0.097	0.021	0.049	0.099
SHR_BASE	1.128	1.095	0.331	0.780	1.569
FCF	-0.026	0.392	-0.014	0.057	0.101
ACQ	0.020	0.058	0.000	0.000	0.004
ΔCAPEX	-0.004	0.063	-0.017	-0.001	0.013
SPREAD	0.030	0.039	0.003	0.016	0.040
INST	0.371	0.304	0.094	0.305	0.611
EQU_INT	0.394	0.249	0.197	0.410	0.586
OPTN_INT	0.262	0.246	0.000	0.213	0.423

Panel B: Correlations matrix

This Panel reports Pearson correlation coefficients of selected variables used in the regression models. * Denotes a two-tailed p-value of less than 0.01. Description of the variables are presented in Appendix A.

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
(1) DIV/TA	1.00															
(2) REP/TA	0.08*	1.00														
(3) TP/TA	0.54*	0.85*	1.00													
(4) OC/TA	-0.02*	0.02*	0.01*	1.00												
(5) SIZE	0.27*	0.18*	0.24*	-0.27*	1.00											
(6) MTB	-0.00	0.06*	0.06*	0.12*	0.10*	1.00										
(7) LEV	-0.05*	-0.05*	-0.06*	0.08*	-0.06*	-0.01*	1.00									
(8) R&D	-0.11*	-0.00	-0.04*	0.13*	-0.08*	0.34*	-0.06*	1.00								
(9) ROA	0.17*	0.07*	0.13*	-0.35*	0.25*	-0.36*	-0.13*	-0.63*	1.00							
(10) CASH	-0.08*	0.05*	0.03*	-0.03*	-0.02*	0.30*	-0.34*	0.41*	-0.27*	1.00						
(11) CAPX	-0.00	-0.04*	-0.03*	-0.10*	-0.00	0.03*	0.09*	-0.09*	0.02*	-0.17*	1.00					
(12) AGE_LN	0.17*	0.06*	0.10*	0.10*	0.27*	-0.18*	0.03*	-0.11*	0.16*	-0.24*	-0.14*	1.00				
(13) RETURN	0.02*	-0.01*	0.00	-0.02*	0.14*	0.16*	-0.06*	-0.05*	0.14*	0.02*	-0.03*	0.06*	1.00			
(14) SD_RET	-0.27*	-0.10*	-0.18*	0.21*	-0.49*	0.10*	0.08*	0.22*	-0.37*	0.15*	-0.04*	-0.26*	-0.10*	1.00		
(15) TANG	0.10*	-0.07*	-0.02*	-0.17*	0.06*	-0.12*	0.25*	-0.22*	0.12*	-0.41*	0.57*	0.06*	-0.02*	-0.09*	1.00	
(16) IND_CON	0.00	-0.03*	-0.03*	0.02*	-0.13*	-0.06*	0.06*	-0.15*	0.05*	-0.14*	0.04*	-0.02*	-0.00	-0.02*	0.08*	1.00

Table 3: Univariate analysis

Panel A reports mean difference test for the firm characteristics between firms with and without different forms of payouts. Panel B presents mean difference test in payouts between high and low organization capital firms. * and ** denote a two-tailed p-value of less than 0.01 and 0.05, respectively. Description of the variables are presented in Appendix A.

Panel A: Univariate tests of difference in firm characteristics

	(1) DIV =1	(2) DIV =0	(3) Diff.	(4) REP =1	(5) REP =0	(6) Diff.	(7) TP=1	(8) TP=0	(9) Diff.
SIZE	6.269	4.213	2.056***	5.767	4.452	1.315***	6.735	4.553	2.182***
MTB	1.387	2.038	-0.651***	1.579	1.945	-0.366***	1.445	1.890	-0.445***
LEV	0.234	0.245	-0.011***	0.223	0.251	-0.028***	0.228	0.244	-0.016***
R&D	0.016	0.068	-0.091***	0.034	0.059	-0.025***	0.017	0.057	-0.040***
ROA	0.153	-0.025	0.178***	0.107	-0.003	0.110***	0.160	0.011	0.149***
CASH	0.111	0.215	-0.104***	0.164	0.189	-0.025***	0.111	0.193	-0.082***
CAPEX	0.070	0.069	0.001**	0.063	0.072	-0.009***	0.063	0.070	-0.007***
AGE_LN	2.729	1.954	0.775***	2.514	2.057	0.457***	2.926	2.078	0.848***
RETURN	0.166	0.105	0.061***	0.131	0.123	0.008**	0.150	0.121	0.029***
SD_RET	0.024	0.047	-0.023***	0.032	0.043	-0.011***	0.023	0.043	-0.020***
TANG	0.350	0.266	0.084***	0.285	0.299	-0.014***	0.325	0.289	0.036***
IND_CON	0.083	0.081	0.002***	0.078	0.083	-0.005***	0.080	0.082	-0.002***

Panel B: Univariate tests of difference in payouts

	High OC (OC> median)	**Low OC (OC<Median)**	**Diff.**
For full sample:			
DIV/TA	0.009	0.008	0.001**
REP/TA	0.016	0.012	0.004***
TP/TA	0.026	0.022	0.004***
For sub-sample:			
DIV/TA (dividend payers only)	0.027	0.025	0.002***
REP/TA (buyback firms only)	0.047	0.041	0.006***
TP/TA (both dividend payers and buyback firms)	0.071	0.055	0.016***

Table 4

Baseline regression results.

This table reports regressions results of the likelihood and level of payouts on firm-level organization capital and control variables. Panel A presents results for the full sample analysis using a logit, OLS, Tobit and firm fixed effect regressions). In the regressions, we include buyback (dividends) in the dividend (buyback) regression. Panel B presents regression results of the relation between organization capital and payout policy for three sub-samples: cash dividend payers only (Columns (1) – (2)), buyback firms only (Columns (3) – (4)) and cash dividends and buybacks firms (Columns (5) – (6)). In Panel B, we do not include Tobit regression because for sub-sample analysis OLS and Tobit yield same results. Standard errors (clustered at the firm level) are included below the coefficient estimates in parentheses. Statistical significance at the 1%, 5%, and 10% levels is indicated by ***, **, and *, respectively. Description of the variables are presented in Appendix A.

Panel A: Organization capital and payouts (full-sample analysis)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Logit	OLS	Tobit	FFE	Logit	OLS	Tobit	FFE
Dep. Var. =	DIV_D	DIV/TA	DIV/TA	DIV/TA	REP_D	REP/TA	REP/TA	REP/TA
OC/TA	**0.386*** **	**0.005*** **	**0.011*** **	**0.003*** **	**0.232*** **	**0.007*** **	**0.017*** **	**0.005*** **
	[0.07]	**[0.00]**	**[0.00]**	**[0.00]**	**[0.03]**	**[0.00]**	**[0.00]**	**[0.00]**
SIZE	0.418***	0.002***	0.005***	0.001***	0.126***	0.002***	0.006***	0.002***
	[0.01]	[0.00]	[0.00]	[0.00]	[0.01]	[0.00]	[0.00]	[0.00]
MTB	-0.191***	0.000***	0.001**	0.000***	-0.060***	0.001***	0.001**	0.000***
	[0.02]	[0.00]	[0.00]	[0.00]	[0.01]	[0.00]	[0.00]	[0.00]
LEV	-1.148***	-0.005***	-0.018***	-0.003***	-0.305***	0.001	-0.006***	0.001
	[0.11]	[0.00]	[0.00]	[0.00]	[0.05]	[0.00]	[0.00]	[0.00]
R&D	-8.775***	-0.002**	-0.135***	0.006***	-0.262*	0.007***	0.007	0.010***
	[0.75]	[0.00]	[0.01]	[0.00]	[0.14]	[0.00]	[0.01]	[0.00]
ROA	3.471***	0.006***	0.090***	0.004***	0.831***	0.012***	0.041***	0.008***
	[0.19]	[0.00]	[0.01]	[0.00]	[0.07]	[0.00]	[0.00]	[0.00]
CASH	-0.366***	0.002***	0.008***	0.005***	0.175***	0.008***	0.018***	0.008***
	[0.14]	[0.00]	[0.00]	[0.00]	[0.07]	[0.00]	[0.00]	[0.00]
CAPEX	-2.964***	-0.016***	-0.073***	-0.001	0.152	0.000	0.000	-0.007***
	[0.24]	[0.00]	[0.01]	[0.00]	[0.15]	[0.00]	[0.01]	[0.00]
AGE_LN	0.501***	0.001***	0.005***	0.000	0.248***	0.001***	0.007***	-0.001***
	[0.02]	[0.00]	[0.00]	[0.00]	[0.01]	[0.00]	[0.00]	[0.00]
RETURN	-0.196***	-0.001***	-0.005***	-0.001***	-0.088***	-0.002***	-0.006***	-0.002***

	[0.02]	[0.00]	[0.00]	[0.00]	[0.01]	[0.00]	[0.00]	[0.00]
SD_RET	-47.020***	-0.086***	-0.809***	-0.024***	-11.823***	-0.049***	-0.437***	-0.058***
	[1.54]	[0.00]	[0.03]	[0.00]	[0.58]	[0.01]	[0.02]	[0.01]
TANG	1.603***	0.010***	0.028***	0.001	-0.512***	-0.006***	-0.020***	0.004***
	[0.13]	[0.00]	[0.00]	[0.00]	[0.08]	[0.00]	[0.00]	[0.00]
IND_CON	0.277	-0.001	0.002	-0.002	0.097	0.004	0.003	0.005
	[0.36]	[0.00]	[0.01]	[0.00]	[0.22]	[0.00]	[0.01]	[0.00]
REP_D	0.162***							
	[0.03]							
REP/TA		0.014***	-0.024***	0.014***				
		[0.00]	[0.01]	[0.00]				
DIV/D					0.264***			
					[0.03]			
DIV/TA						0.055***	0.067***	0.089***
						[0.01]	[0.02]	[0.01]
Constant	0.062	0.005**	-0.011*	0.006***	-2.221***	-0.009***	-0.104***	-0.008***
	[0.36]	[0.00]	[0.01]	[0.00]	[0.25]	[0.00]	[0.01]	[0.00]
Year effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry effects	Yes	Yes	Yes	No	Yes	Yes	Yes	No
Firm effects	No	No	No	Yes	No	No	No	Yes
Observations	157,480	157,206	157,206	157,206	157,472	157,206	157,206	157,206
Adj. R^2/Pseudo R^2	0.42	0.17	-0.97	0.53	0.11	0.07	-1.30	0.20

Panel B: Organization capital and payouts (sub-sample analysis)

	(1)	(2)	(3)	(4)	(5)	(6)
	Only cash dividends (i.e., DIV>0 & REP =0)		Only repurchase (i.e., REP>0 & DIV = 0)		Both cash dividends and repurchase (i.e., DIV>0 & REP>0)	
	OLS	FFE	OLS	FFE	OLS	FFE
Dep. Var. =	DIV/TA	DIV/TA	REP/TA	REP/TA	TP/TA	TP/TA
OC/TA	**0.009*** **	**0.021*** **	**0.019*** **	**0.023*** **	**0.029*** **	**0.063*** **
	[0.00]	**[0.00]**	**[0.00]**	**[0.00]**	**[0.00]**	**[0.01]**
SIZE	-0.001***	0.000	0.004***	0.002**	-0.001**	-0.003**
	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]
MTB	0.006***	0.003***	0.005***	0.004***	0.015***	0.011***
	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]
LEV	-0.014***	-0.017***	0.003	0.008*	0.033***	0.063***
	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.01]
R&D	0.009	0.053***	0.027***	0.036***	0.157***	0.123**
	[0.01]	[0.02]	[0.01]	[0.01]	[0.03]	[0.05]
ROA	0.043***	0.024**	0.020***	0.028***	0.215***	0.240***
	[0.02]	[0.01]	[0.00]	[0.00]	[0.01]	[0.01]
CASH	0.038***	0.019***	0.031***	0.023***	0.067***	0.028***
	[0.00]	[0.00]	[0.00]	[0.00]	[0.01]	[0.01]
CAPEX	-0.046***	-0.006	-0.001	-0.004	-0.129***	-0.089***
	[0.01]	[0.00]	[0.01]	[0.01]	[0.01]	[0.01]
AGE_LN	-0.004***	-0.003***	-0.007***	-0.015***	-0.002***	-0.005***
	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]
RETURN	-0.005***	-0.002***	-0.006***	-0.004***	-0.012***	-0.009***
	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]
SD_RET	-0.223***	-0.150***	-0.012	-0.114***	-0.196***	-0.407***
	[0.03]	[0.02]	[0.03]	[0.03]	[0.07]	[0.07]
TANG	0.014***	0.000	-0.007**	0.016**	0.007	0.015**
	[0.00]	[0.00]	[0.00]	[0.01]	[0.00]	[0.01]
IND_CON	-0.014**	-0.004	0.009	-0.009	-0.010	0.003
	[0.01]	[0.01]	[0.01]	[0.01]	[0.01]	[0.01]
Constant	0.025***	0.026***	0.032**	0.014**	-0.017***	-0.011
	[0.01]	[0.00]	[0.01]	[0.01]	[0.01]	[0.01]
Year effects	Yes	Yes	Yes	Yes	Yes	Yes
Industry effects	Yes	No	Yes	No	Yes	No
Firm effects	No	Yes	No	Yes	No	Yes
Observations	27,547	27,547	28,926	28,926	25,718	25,718
Adj. R-squared	0.26	0.72	0.11	0.32	0.31	0.50

Table 5: Omitted variable bias and alternative explanations

This table presents results from incorporating additional controls with our baseline model. Robust standard errors (clustered at the firm level) are included in parentheses. Statistical significance at the 1%, 5%, and 10% levels is indicated by ***, **, and *, respectively. Description of the variables are presented in Appendix A.

Panel A: Organization capital and cash dividends

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	Logit	OLS	Tobit	FFE	Logit	OLS	Tobit	FFE	Logit	OLS	Tobit	FFE
Dep. Var. =	DIV_D	DIV/TA	DIV/TA	DIV/TA	DIV_D	DIV/TA	DIV/TA	DIV/TA	DIV_D	DIV/TA	DIV/TA	DIV/TA
OC/TA	**0.419*** **	**0.005*** **	**0.014*** **	**0.003*** **	**0.348*** **	**0.005*** **	**0.011*** **	**0.003*** **	**0.362*** **	**0.005*** **	**0.014*** **	**0.003*** **
	[0.08]	**[0.00]**	**[0.00]**	**[0.00]**	**[0.08]**	**[0.00]**	**[0.00]**	**[0.00]**	**[0.09]**	**[0.00]**	**[0.00]**	**[0.00]**
MA_SCORE	-0.010	0.008***	-0.000	0.005***					-0.280	0.006***	-0.004	0.004***
	[0.19]	[0.00]	[0.00]	[0.00]					[0.24]	[0.00]	[0.00]	[0.00]
INTAN/TA	-1.261***	-0.006***	-0.023***	-0.010***					-1.015***	-0.005***	-0.022***	-0.011***
	[0.18]	[0.00]	[0.00]	[0.00]					[0.21]	[0.00]	[0.00]	[0.00]
SGA/TA	-0.065	-0.001***	-0.006***	-0.001**					0.044	-0.001***	-0.007***	-0.001**
	[0.08]	[0.00]	[0.00]	[0.00]					[0.10]	[0.00]	[0.00]	[0.00]
ILLIQ					0.006***	0.000***	0.000***	0.000***	0.006***	0.000***	0.000***	0.000***
					[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]
FC					-0.100***	-0.000	-0.001	0.000	-0.100**	0.000	-0.001	0.000
					[0.04]	[0.00]	[0.00]	[0.00]	[0.04]	[0.00]	[0.00]	[0.00]
HOSTILE_INDEX					2.006***	0.019***	0.034***	0.014***	1.875***	0.018***	0.031***	0.014***
					[0.42]	[0.00]	[0.01]	[0.00]	[0.46]	[0.00]	[0.01]	[0.00]
|DAC|					-0.643***	0.001	-0.005	0.001*	-0.743***	0.002*	-0.001	0.002*
					[0.17]	[0.00]	[0.00]	[0.00]	[0.19]	[0.00]	[0.00]	[0.00]
Constant	-0.010	0.006*	-0.010	0.006***	0.543	0.006**	-0.008	0.006***	0.515	0.008**	-0.006	0.007***
	[0.36]	[0.00]	[0.01]	[0.00]	[0.46]	[0.00]	[0.01]	[0.00]	[0.48]	[0.00]	[0.01]	[0.00]
Other controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry effects	Yes	Yes	Yes	No	Yes	Yes	Yes	No	Yes	Yes	Yes	No
Firm effects	No	No	No	Yes	No	No	No	Yes	No	No	No	Yes
Observations	118,419	118,213	118,213	118,213	108,986	108,893	108,893	108,893	87,509	87,428	87,428	87,428
Adj. R^2/Pseudo R^2	0.40	0.18	-0.89	0.54	0.43	0.17	-1.08	0.52	0.41	0.17	-0.99	0.52

Panel B: Organization capital and share repurchases

VARIABLES	(1) Logit REP_D	(2) OLS REP/TA	(3) Tobit REP/TA	(4) FFE REP/TA	(5) Logit REP_D	(7) OLS REP/TA	(8) Tobit REP/TA	(6) FFE REP/TA	(9) Logit REP_D	(10) OLS REP/TA	(11) Tobit REP/TA	(12) FFE REP/TA
OC/TA	**0.305*** **	**0.008*** **	**0.019*** **	**0.006*** **	**0.223*** **	**0.007*** **	**0.017*** **	**0.006*** **	**0.275*** **	**0.008*** **	**0.018*** **	**0.006*** **
	[0.03]	**[0.00]**	**[0.00]**	**[0.00]**	**[0.03]**	**[0.00]**	**[0.00]**	**[0.00]**	**[0.04]**	**[0.00]**	**[0.00]**	**[0.00]**
MA_SCORE	0.183*	0.011***	0.013***	0.007***					0.451***	0.013***	0.016***	0.003
	[0.11]	[0.00]	[0.00]	[0.00]					[0.13]	[0.00]	[0.01]	[0.00]
INTAN/TA	0.611***	0.005***	0.019***	-0.015***					0.330***	0.002	0.009**	-0.018***
	[0.10]	[0.00]	[0.00]	[0.00]					[0.11]	[0.00]	[0.00]	[0.00]
SGA/TA	-0.108***	-0.001	-0.003***	-0.002***					-0.145***	-0.001**	-0.005**	-0.002**
	[0.03]	[0.00]	[0.00]	[0.00]					[0.05]	[0.00]	[0.00]	[0.00]
ILLIQ					0.004***	0.000***	0.000***	0.000***	0.005***	0.000***	0.000***	0.000***
					[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]
FC					-0.025	0.000	-0.000	0.000	-0.006	0.001	0.000	0.000
					[0.02]	[0.00]	[0.00]	[0.00]	[0.03]	[0.00]	[0.00]	[0.00]
HOSTILE_INDEX					-0.017	0.005	0.011	0.017***	-0.240	0.003	0.004	0.018***
					[0.24]	[0.00]	[0.01]	[0.01]	[0.26]	[0.00]	[0.01]	[0.01]
|DAC|					-1.017***	-0.001	-0.029***	-0.003**	-0.934***	-0.001	-0.024***	-0.002
					[0.10]	[0.00]	[0.00]	[0.00]	[0.12]	[0.00]	[0.01]	[0.00]
Constant	-2.317***	-0.013***	-0.107***	-0.007***	-2.619***	-0.012***	-0.114***	-0.008***	-2.614***	-0.014***	-0.114***	-0.006***
	[0.27]	[0.00]	[0.01]	[0.00]	[0.28]	[0.00]	[0.01]	[0.00]	[0.31]	[0.00]	[0.01]	[0.00]
Other controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry effects	Yes	Yes	Yes	No	Yes	Yes	Yes	No	Yes	Yes	Yes	No
Firm effects	No	No	No	Yes	No	No	No	Yes	No	No	No	Yes
Observations	118,421	118,213	118,213	118,213	108,986	108,893	108,893	108,893	87,509	87,428	87,428	87,428
Adj. R-squared	0.11	0.08	-0.88	0.22	0.12	0.07	-1.04	0.20	0.12	0.08	-0.84	0.21

Panel C: Sub-sample analysis

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Only cash dividends			Only repurchase			Both dividends and repurchase		
Dep. Var. =	DIV/TA	DIV/TA	DIV/TA	REP/TA	REP/TA	REP/TA	TP/TA	TP/TA	TP/TA
OC/TA	**0.013*** **	**0.010*** **	**0.019*** **	**0.019*** **	**0.019*** **	**0.019*** **	**0.056*** **	**0.032*** **	**0.064*** **
	[0.00]	**[0.00]**	**[0.00]**	**[0.00]**	**[0.00]**	**[0.00]**	**[0.01]**	**[0.00]**	**[0.01]**
MA_SCORE	0.005		0.007	0.016***		0.009	-0.003		-0.004
	[0.00]		[0.00]	[0.01]		[0.01]	[0.01]		[0.01]
INTAN/TA	-0.005		-0.008*	0.003		0.003	-0.018***		-0.024***
	[0.00]		[0.00]	[0.00]		[0.00]	[0.01]		[0.01]
SGA/TA	-0.005**		-0.015***	0.002		0.003	-0.042***		-0.050**
	[0.00]		[0.00]	[0.00]		[0.00]	[0.01]		[0.02]
ILLIQ		0.000	0.000		0.000	0.000		0.000	0.000
		[0.00]	[0.00]		[0.00]	[0.00]		[0.00]	[0.00]
FC		0.001	0.001		0.002	0.001		0.001	0.000
		[0.00]	[0.00]		[0.00]	[0.00]		[0.00]	[0.00]
HOSTILE_INDEX		0.024***	0.021***		0.034***	0.033***		0.031***	0.029***
		[0.01]	[0.01]		[0.01]	[0.01]		[0.01]	[0.01]
|DAC|		0.020***	0.029***		0.027***	0.022***		0.052***	0.072***
		[0.00]	[0.01]		[0.01]	[0.01]		[0.01]	[0.01]
Constant	0.023***	0.018**	0.019*	0.034**	0.057***	0.048**	-0.016**	-0.023***	-0.022**
	[0.01]	[0.01]	[0.01]	[0.01]	[0.02]	[0.02]	[0.01]	[0.01]	[0.01]
Other controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	20,592	16,839	13,792	23,310	21,954	18,255	20,454	18,147	15,135
Adj. R-squared	0.29	0.28	0.31	0.12	0.11	0.12	0.32	0.29	0.30

Table 6: Instrumental variable estimation results

This table presents two-stage least square regressions. We use industry-level growth uncertainty (IND_GRW_UNC) as the instrument. Robust standard errors (clustered at the firm level) are in parentheses. Statistical significance at the 1%, 5%, and 10% levels is indicated by ***, **, and *, respectively. Description of all variables are presented in Appendix A.

	(1)	(2)	(3)	(4)	(5)	(6)
	1st Stage	2nd Stage	2nd Stage	1st Stage	2nd Stage	2nd Stage
		OLS	Tobit		OLS	Tobit
Dep. Var. =	OC/TA	DIV/TA	DIV/TA	OC/TA	REP/TA	REP/TA
OC/TA		**0.051*** **	**0.124*** **		**0.061*** **	**0.200*** **
		[0.01]	**[0.01]**		**[0.01]**	**[0.02]**
SIZE	-0.048***	0.004***	0.010***	-0.050***	0.005***	0.016***
	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]
MTB	0.016***	-0.000*	-0.001***	0.015***	-0.000	-0.002***
	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]
LEV	0.014	-0.006***	-0.020***	0.024	-0.001	-0.011***
	[0.02]	[0.00]	[0.00]	[0.02]	[0.00]	[0.00]
R&D	-0.322***	0.014***	-0.092***	-0.323***	0.025***	0.070***
	[0.05]	[0.00]	[0.01]	[0.05]	[0.01]	[0.01]
ROA	-0.474***	0.028***	0.143***	-0.476***	0.037***	0.128***
	[0.03]	[0.00]	[0.01]	[0.03]	[0.01]	[0.01]
CASH	-0.244***	0.014***	0.037***	-0.242***	0.022***	0.065***
	[0.02]	[0.00]	[0.00]	[0.02]	[0.00]	[0.01]
CAPEX	0.094***	-0.020***	-0.082***	0.123***	-0.006**	-0.020***
	[0.03]	[0.00]	[0.00]	[0.03]	[0.00]	[0.01]
AGE_LN	0.098***	-0.003***	-0.006***	0.095***	-0.005***	-0.011***
	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]
RETURN	0.022***	-0.002***	-0.008***	0.023***	-0.004***	-0.010***
	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]
SD_RET	0.958***	-0.127***	-0.908***	1.078***	-0.104***	-0.621***
	[0.14]	[0.01]	[0.02]	[0.14]	[0.02]	[0.03]
TANG	-0.254***	0.021***	0.055***	-0.274***	0.008**	0.030***
	[0.02]	[0.00]	[0.00]	[0.02]	[0.00]	[0.01]
IND_CON	-0.104**	0.003	0.012***	-0.099**	0.008*	0.019***
	[0.05]	[0.00]	[0.00]	[0.05]	[0.00]	[0.01]
REP/TA	0.659***	-0.017**	-0.099***			
	[0.04]	[0.01]	[0.01]			
DIV/TA				1.895***	-0.049*	-0.286***
				[0.15]	[0.03]	[0.04]
IND_GRW_UNC	**-0.322*** **			**-0.303*** **		
	[0.04]			**[0.04]**		
Constant	0.291***	-0.007*	-0.041***	0.273***	-0.022***	-0.150***
	[0.04]	[0.00]	[0.00]	[.04]	[0.00]	[0.01]
Observations	157,043	157,043	157,043	157,043	157,043	157,043
Year effects	Yes	Yes	Yes		Yes	Yes
Industry effects	Yes	Yes	Yes		Yes	Yes
Adj. R-squared	0.32	-0.53	-	0.32	-0.20	-
Underidentification test (Kleibergen-Paap rk LM statistic)	61.743			55.96		
P-value	0.00			0.00		
Weak identification test 1st-stage F stat	63.00			56.91		

Table 7
Alternative specification of payouts and organization capital.

This table reports regression results of the relation between organization capital and corporate payouts using alternative measures of payouts (Panel A) and alternative specification of organization capital (Panel B). Standard errors (clustered at the firm level) are included below the coefficient estimates in parentheses. Statistical significance at the 1%, 5%, and 10% levels is indicated by ***, **, and *, respectively. Description of all variables are presented in Appendix A.

Panel A: Alternative measures of payouts

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	OLS	Tobit	FFE	OLS	Tobit	FFE	OLS	Tobit	FFE	OLS	Tobit	FFE
Dep. Var. =	DIV/MVE	DIV/MVE	DIV/MVE	DIV/EBIT	DIV/EBIT	DIV/EBIT	REP/MVE	REP/MVE	REP/MVE	REP/EBIT	REP/EBIT	REP/EBIT
OC/TA	**0.002*** **	**0.008*** **	**0.001***	**0.022*** **	**0.063*** **	**0.003***	**0.003*** **	**0.012*** **	**0.001***	**0.037*** **	**0.102*** **	**0.023*** **
	[0.00]	**[0.00]**	**[0.00]**	**[0.00]**	**[0.01]**	**[0.00]**	**[0.00]**	**[0.00]**	**[0.00]**	**[0.00]**	**[0.02]**	**[0.00]**
Constant	0.019***	0.011*	0.024***	0.096**	-0.008	0.068***	0.005**	-0.083***	0.013***	-0.017	-1.028***	0.016
	[0.00]	[0.01]	[0.00]	[0.05]	[0.08]	[0.01]	[0.00]	[0.01]	[0.00]	[0.02]	[0.09]	[0.01]
Other controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry effects	Yes	Yes	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes	No
Firm effects	No	No	Yes	No	No	Yes	No	No	Yes	No	No	Yes
Observations	157,206	157,206	157,206	154,034	154,034	154,034	157,206	157,206	157,206	148,075	148,075	148,075
Adj. R^2/Pseudo R^2	0.21	-1.04	0.53	0.14	0.36	0.40	0.04	-0.90	0.12	0.06	0.14	0.15

Panel B: Alternative measures of organization capital

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Logit	OLS	Tobit	FFE	Logit	OLS	Tobit	FFE
Dep. Var. =	DIV_D	DIV/TA	DIV/TA	DIV/TA	REP_D	REP/TA	REP/TA	REP/TA
OC/TA_EP	**0.013***	**0.001*****	**0.001*****	**0.0004*****	**0.017*****	**0.001*****	**0.001*****	**0.001*****
	[0.01]	**[0.00]**	**[0.00]**	**[0.00]**	**[0.00]**	**[0.00]**	**[0.00]**	**[0.00]**
Constant	0.404	0.006**	-0.007	0.005***	-2.094***	-0.011***	-0.101***	-0.009***
	[0.37]	[0.00]	[0.01]	[0.00]	[0.24]	[0.00]	[0.01]	[0.00]
Other controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry effects	Yes	Yes	Yes	No	Yes	Yes	Yes	No
Firm effects	No	No	No	Yes	No	No	No	Yes
Observations	133,389	133,176	133,176	133,176	133,389	133,176	133,176	133,176
Adj. R^2/Pseudo R^2	0.41	0.17	-0.83	0.53	0.11	0.07	-0.94	0.21

Alternative scaling of organization capital

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Logit	OLS	Tobit	FFE	Logit	OLS	Tobit	FFE
Dep. Var. =	DIV_D	DIV/TA	DIV/TA	DIV/TA	REP_D	REP/TA	REP/TA	REP/TA
OC/TC	**0.491*****	**0.011*****	**0.016*****	**0.010*****	**0.504*****	**0.017*****	**0.038*****	**0.025*****
	[0.14]	**[0.00]**	**[0.00]**	**[0.00]**	**[0.00]**	**[0.00]**	**[0.00]**	**[0.00]**
Constant	-0.053	0.001	-0.015***	0.002***	-2.399***	-0.011***	-0.117***	-0.017***
	[0.36]	[0.00]	[0.01]	[0.00]	[0.25]	[0.00]	[0.01]	[0.00]
Other controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry effects	Yes	Yes	Yes	No	Yes	Yes	Yes	No
Firm effects	No	No	No	Yes	No	No	No	Yes
Observations	156,487	156,247	156,247	156,247	156,479	156,247	156,247	156,247
Adj. R^2/Pseudo R^2	0.42	0.17	-0.96	0.53	0.12	0.07	-1.28	0.20

Table 8: Potential explanation: organization capital and cash dividends.

This Table reports results for the potential explanation of the positive relation between organization capital and cash dividends. Panel A reports the results for the agency-based explanations and Panel B reports the results for signalling-based explanation of cash dividends. Robust standard errors (clustered at the firm level) are included in parentheses. Statistical significance at the 1%, 5%, and 10% levels is indicated by ***, **, and *, respectively. Description of variables are presented in Appendix A.

Panel A: Agency problem as a channel for cash dividends

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
	Logit	OLS	Tobit	Logit	OLS	Tobit	Logit	OLS	Tobit	Logit	OLS	Tobit	Logit	OLS	Tobit
Dep. Var. =	DIV_D	DIV/TA	DIV/TA	DIV_D	DIV/TA	DIV/TA	DIV_D	DIV/TA	DIV/TA	DIV_D	DIV/TA	DIV/TA	DIV_D	DIV/TA	DIV/TA
OC/TA	0.441***	0.007***	0.013***	0.401***	0.007***	0.013***	-0.068	0.006***	0.003	0.371***	0.006***	0.012***	0.460***	0.007***	0.013***
	[0.08]	[0.00]	[0.00]	[0.09]	[0.00]	[0.00]	[0.09]	[0.00]	[0.00]	[0.09]	[0.00]	[0.00]	[0.08]	[0.00]	[0.00]
AGENCY	-0.207***	-0.001***	-0.006***												
	[0.02]	[0.00]	[0.00]												
OC/TA*AGENCY	**0.157***	**0.003*****	**0.003****												
	[0.09]	**[0.00]**	**[0.00]**												
SHR_BASE				0.126***	0.002***	0.003***									
				[0.03]	[0.00]	[0.00]									
OC/TA*SHR_BASE				**-0.083**	**0.003*****	**0.003****									
				[0.09]	**[0.00]**	**[0.00]**									
FCF							-19.058***	-0.030***	-0.262***						
							[0.55]	[0.00]	[0.02]						
OC/TA*FCF							**3.455*****	**0.003****	**0.056*****						
							[0.46]	**[0.00]**	**[0.01]**						
ACQ										-0.004	-0.001***	-0.002***			
										[0.03]	[0.00]	[0.00]			
OC/TA*ACQ										**0.493*****	**0.004*****	**0.006*****			
										[0.14]	**[0.00]**	**[0.00]**			
ΔCAPEX													1.481***	0.012***	0.045***
													[0.20]	[0.00]	[0.00]
OC/TA*ΔCAPEX													**0.188**	**0.009*****	**0.027****
													[0.50]	**[0.00]**	**[0.01]**
SIZE	0.445***	0.002***	0.005***	0.348***	0.001***	0.003***	0.458***	0.002***	0.004***	0.424***	0.002***	0.005***	0.417***	0.002***	0.005***
	[0.01]	[0.00]	[0.00]	[0.02]	[0.00]	[0.00]	[0.01]	[0.00]	[0.00]	[0.01]	[0.00]	[0.00]	[0.01]	[0.00]	[0.00]
MTB	-0.201***	0.000***	0.000*	-0.155***	0.000***	0.001***	-0.377***	0.000***	-0.001	-0.193***	0.000***	0.001**	-0.183***	0.000***	0.001***
	[0.02]	[0.00]	[0.00]	[0.02]	[0.00]	[0.00]	[0.03]	[0.00]	[0.00]	[0.02]	[0.00]	[0.00]	[0.02]	[0.00]	[0.00]

LEV	-1.124***	-0.004***	-0.017***	-1.129***	-0.004***	-0.016***	-2.099***	-0.005***	-0.031***	-1.124***	-0.004***	-0.017***	-1.125***	-0.004***	-0.017***
	[0.11]	[0.00]	[0.00]	[0.11]	[0.00]	[0.00]	[0.11]	[0.00]	[0.00]	[0.11]	[0.00]	[0.00]	[0.11]	[0.00]	[0.00]
R&D	-8.857***	-0.003***	-0.137***	-8.920***	-0.003***	-0.133***	-7.859***	-0.007***	-0.106***	-8.860***	-0.004***	-0.137***	-8.780***	-0.004***	-0.137***
	[0.75]	[0.00]	[0.01]	[0.80]	[0.00]	[0.01]	[0.73]	[0.00]	[0.01]	[0.75]	[0.00]	[0.01]	[0.76]	[0.00]	[0.01]
ROA	3.823***	0.005***	0.097***	3.536***	0.005***	0.097***	18.067***	0.019***	0.258***	3.432***	0.005***	0.089***	3.508***	0.005***	0.090***
	[0.20]	[0.00]	[0.01]	[0.18]	[0.00]	[0.01]	[0.52]	[0.00]	[0.03]	[0.19]	[0.00]	[0.01]	[0.20]	[0.00]	[0.01]
CASH	-0.522***	0.001	0.003	-0.405***	0.003***	0.010***	-0.943***	-0.001	-0.004**	-0.364***	0.002**	0.008***	-0.334**	0.003***	0.010***
	[0.14]	[0.00]	[0.00]	[0.15]	[0.00]	[0.00]	[0.15]	[0.00]	[0.00]	[0.14]	[0.00]	[0.00]	[0.14]	[0.00]	[0.00]
CAPEX	-2.654***	-0.014***	-0.063***	-2.870***	-0.015***	-0.071***	-2.113***	-0.015***	-0.047***	-3.010***	-0.017***	-0.074***	-3.779***	-0.022***	-0.094***
	[0.24]	[0.00]	[0.00]	[0.26]	[0.00]	[0.01]	[0.24]	[0.00]	[0.00]	[0.24]	[0.00]	[0.01]	[0.31]	[0.00]	[0.01]
AGE_LN	0.522***	0.001***	0.006***	0.539***	0.001***	0.005***	0.523***	0.001***	0.004***	0.494***	0.001***	0.005***	0.499***	0.001***	0.005***
	[0.02]	[0.00]	[0.00]	[0.02]	[0.00]	[0.00]	[0.02]	[0.00]	[0.00]	[0.02]	[0.00]	[0.00]	[0.02]	[0.00]	[0.00]
RETURN	-0.196***	-0.001***	-0.005***	-0.178***	-0.001***	-0.005***	-0.159***	-0.001***	-0.004***	-0.195***	-0.001***	-0.005***	-0.201***	-0.001***	-0.006***
	[0.02]	[0.00]	[0.00]	[0.02]	[0.00]	[0.00]	[0.02]	[0.00]	[0.00]	[0.02]	[0.00]	[0.00]	[0.02]	[0.00]	[0.00]
SD_RET	-47.149***	-0.091***	-0.808***	-49.201***	-0.101***	-0.820***	-48.141***	-0.116***	-0.698***	-46.981***	-0.090***	-0.809***	-46.285***	-0.088***	-0.806***
	[1.54]	[0.01]	[0.03]	[1.67]	[0.01]	[0.03]	[1.55]	[0.01]	[0.04]	[1.54]	[0.01]	[0.03]	[1.58]	[0.01]	[0.03]
TANG	1.481***	0.009***	0.024***	1.621***	0.010***	0.027***	1.747***	0.011***	0.026***	1.604***	0.010***	0.027***	1.753***	0.011***	0.032***
	[0.13]	[0.00]	[0.00]	[0.14]	[0.00]	[0.00]	[0.13]	[0.00]	[0.00]	[0.13]	[0.00]	[0.00]	[0.14]	[0.00]	[0.00]
IND_CON	0.279	-0.001	0.002	0.173	-0.003	-0.001	0.409	-0.001	0.004	0.282	-0.001	0.001	0.261	-0.001	0.001
	[0.36]	[0.00]	[0.01]	[0.37]	[0.00]	[0.01]	[0.38]	[0.00]	[0.00]	[0.36]	[0.00]	[0.01]	[0.37]	[0.00]	[0.01]
REP_D	0.180***			0.200***			0.189***			0.161***			0.161***		
	[0.03]			[0.03]			[0.03]			[0.03]			[0.03]		
REP/TA		0.014***	-0.021***		0.013***	-0.023***		0.016***	-0.017**		0.013***	-0.025***		0.013***	-0.028***
		[0.00]	[0.01]		[0.00]	[0.01]		[0.00]	[0.01]		[0.00]	[0.01]		[0.00]	[0.01]
Constant	-0.061	0.005*	-0.014**	0.473	0.010***	-0.002	-0.061	0.006**	-0.007*	0.197	0.007***	-0.007	0.059	0.006**	-0.008
	[0.36]	[0.00]	[0.01]	[0.40]	[0.00]	[0.01]	[0.36]	[0.00]	[0.00]	[0.36]	[0.00]	[0.01]	[0.36]	[0.00]	[0.01]
Observations	157,480	157,206	157,206	142,906	142,794	142,794	148,790	148,793	148,793	157,480	157,206	157,206	150,920	150,661	150,661
Year effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R2/ Pseudo R2	0.425	0.17	-0.98	0.43	0.18	-0.98	0.47	0.20	-1.21	0.42	0.17	-0.97	0.42	0.17	-0.99

Panel B: Signaling motives as a channel for cash dividends

Dep. Var. =	(1) OLS ΔDIV/TA	(2) Tobit ΔDIV/TA	(3) FFE ΔDIV/TA	(4) OLS ΔDIV/TA	(5) Tobit ΔDIV/TA	(6) FFE ΔDIV/TA	(7) OLS ΔDIV/TA	(8) Tobit ΔDIV/TA	(9) FFE ΔDIV/TA	(10) OLS ΔDIV/TA	(11) Tobit ΔDIV/TA	(12) FFE ΔDIV/TA	(13) OLS ΔDIV/TA	(14) Tobit ΔDIV/TA	(15) FFE ΔDIV/TA
OC/TA	0.042***	0.195***	0.106***	0.033***	0.254***	0.101***	0.046***	0.167***	0.112***	0.047***	0.429***	0.111***	0.039***	0.172***	0.085***
	[0.01]	[0.05]	[0.01]	[0.01]	[0.06]	[0.02]	[0.01]	[0.05]	[0.01]	[0.01]	[0.06]	[0.01]	[0.01]	[0.05]	[0.02]
SIGNAL	-0.001	0.165***	-0.006												
	[0.00]	[0.02]	[0.01]												
OC/TA* SIGNAL	**0.019*** [0.00]**	**0.193*** [0.05]**	**0.022*** [0.01]**												
SPREAD				0.658***	6.224***	0.352**									
				[0.09]	[0.64]	[0.14]									
OC/TA* SPREAD				**0.686*** [0.20]**	**3.119** [1.42]**	**0.794** [0.31]**									
FRQ							0.040	-0.034	0.004						
							[0.03]	[0.12]	[0.03]						
OC/TA* |DAC|							**0.085 [0.10]**	**-0.157 [0.52]**	**0.170 [0.12]**						
R&D										0.000	-5.557***	0.190***			
										[0.02]	[0.41]	[0.03]			
OC/TA* R&D										**0.284*** [0.05]**	**6.609*** [0.91]**	**0.267*** [0.08]**			
INST													0.098***	0.621***	0.068***
													[0.01]	[0.05]	[0.02]
OC/TA* INST													**0.052 [0.04]**	**-0.101 [0.14]**	**0.240*** [0.06]**
SIZE	0.026***	0.187***	0.060***	0.027***	0.195***	0.063***	0.026***	0.171***	0.061***	0.026***	0.179***	0.061***	0.031***	0.178***	0.069***
	[0.00]	[0.01]	[0.00]	[0.00]	[0.01]	[0.00]	[0.00]	[0.01]	[0.00]	[0.00]	[0.01]	[0.00]	[0.00]	[0.01]	[0.00]
MTB	0.008***	-0.012	-0.000	0.008***	0.007	-0.001	0.007***	-0.013	0.000	0.008***	-0.012	0.000	0.010***	-0.005	0.002
	[0.00]	[0.01]	[0.00]	[0.00]	[0.01]	[0.00]	[0.00]	[0.01]	[0.00]	[0.00]	[0.01]	[0.00]	[0.00]	[0.01]	[0.00]
LEV	-0.078***	-0.578***	-0.080***	-0.072***	-0.632***	-0.076***	-0.079***	-0.638***	-0.081***	-0.077***	-0.616***	-0.081***	-0.075***	-0.545***	-0.112***

	[0.01]	[0.07]	[0.02]	[0.02]	[0.09]	[0.02]	[0.01]	[0.07]	[0.02]	[0.01]	[0.07]	[0.02]	[0.01]	[0.08]	[0.02]
R&D	0.059***	-6.019***	0.210***	0.071***	-5.761***	0.210***	0.069***	-5.096***	0.225***				0.095***	-5.131***	0.330***
	[0.02]	[0.44]	[0.02]	[0.02]	[0.49]	[0.03]	[0.02]	[0.41]	[0.02]				[0.02]	[0.43]	[0.04]
ROA	0.083***	3.700***	0.101***	0.065***	3.785***	0.081***	0.084***	3.894***	0.102***	0.070***	3.751***	0.079***	0.133***	3.834***	0.166***
	[0.01]	[0.20]	[0.01]	[0.01]	[0.27]	[0.02]	[0.01]	[0.19]	[0.01]	[0.01]	[0.20]	[0.01]	[0.01]	[0.23]	[0.03]
CASH	0.051***	0.313***	0.141***	0.039**	0.273**	0.112***	0.047***	0.284***	0.134***	0.061***	0.355***	0.140***	0.056***	0.209**	0.178***
	[0.01]	[0.09]	[0.02]	[0.02]	[0.11]	[0.03]	[0.01]	[0.09]	[0.02]	[0.01]	[0.09]	[0.02]	[0.02]	[0.09]	[0.03]
CAPEX	0.105**	-1.512***	0.128**	0.030	-2.033***	0.059	0.090**	-1.502***	0.115**	0.105**	-1.446***	0.126**	0.142**	-1.498***	0.180**
	[0.04]	[0.17]	[0.05]	[0.05]	[0.24]	[0.07]	[0.04]	[0.18]	[0.05]	[0.04]	[0.17]	[0.05]	[0.06]	[0.20]	[0.07]
AGE_LN	0.001	0.058***	0.003	0.001	0.059***	-0.004	0.002	0.054***	0.005	0.001	0.052***	0.004	0.007*	0.082***	0.010
	[0.00]	[0.01]	[0.01]	[0.00]	[0.01]	[0.01]	[0.00]	[0.01]	[0.01]	[0.00]	[0.01]	[0.01]	[0.00]	[0.01]	[0.01]
RETURN	0.028***	-0.045***	0.024***	0.025***	-0.061***	0.022***	0.026***	-0.050***	0.021***	0.028***	-0.043***	0.025***	0.021***	-0.062***	0.015***
	[0.00]	[0.01]	[0.00]	[0.00]	[0.02]	[0.00]	[0.00]	[0.01]	[0.00]	[0.00]	[0.01]	[0.00]	[0.00]	[0.01]	[0.01]
SD_RET	-0.508***	25.830***	-0.179	-1.134***	33.296***	-0.836***	-0.538***	24.773***	-0.179	-0.491***	24.447***	-0.191	-0.746***	26.441***	-0.255
	[0.11]	[1.08]	[0.14]	[0.15]	[1.45]	[0.20]	[0.11]	[1.09]	[0.15]	[0.11]	[1.04]	[0.14]	[0.15]	[1.23]	[0.21]
TANG	-0.013	0.470***	-0.082***	0.007	0.632***	-0.058	-0.008	0.499***	-0.096***	-0.013	0.441***	-0.077***	-0.024	0.422***	-0.119***
	[0.02]	[0.07]	[0.03]	[0.02]	[0.09]	[0.04]	[0.02]	[0.08]	[0.03]	[0.02]	[0.07]	[0.03]	[0.02]	[0.08]	[0.04]
IND_CON	0.059	0.152	-0.020	0.091	0.089	0.045	0.053	0.157	-0.026	0.059	0.145	-0.021	0.042	0.055	-0.026
	[0.04]	[0.19]	[0.07]	[0.06]	[0.26]	[0.08]	[0.04]	[0.20]	[0.07]	[0.04]	[0.20]	[0.07]	[0.06]	[0.21]	[0.09]
REP	-0.024	-0.106***	-0.019	-0.037**	-0.156***	-0.031	-0.024	-0.103***	-0.019	-0.024	-0.100***	-0.019	-0.024	-0.086***	-0.023
	[0.02]	[0.03]	[0.02]	[0.02]	[0.04]	[0.02]	[0.02]	[0.03]	[0.02]	[0.02]	[0.03]	[0.02]	[0.02]	[0.03]	[0.02]
Constant	0.008	-0.790***	-0.088***	-0.120**	-1.162***	-0.204***	0.007	-0.841***	-0.082***	0.006	-1.168***	-0.076***	0.004	-0.905***	-0.124***
	[0.04]	[0.17]	[0.02]	[0.05]	[0.44]	[0.05]	[0.04]	[0.17]	[0.02]	[0.04]	[0.17]	[0.02]	[0.04]	[0.19]	[0.03]
Observations	151,258	151,258	151,258	116,890	116,890	116,890	145,015	145,015	145,015	151,258	151,258	151,258	110,328	110,328	110,328
Year effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry effects	Yes	Yes	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes	No
Firm effects	No	No	Yes	No	No	Yes	No	No	Yes	No	No	Yes	No	No	Yes
Adj. R^2/ Pseudo R^2	0.01	0.16	-0.02	0.01	0.15	-0.03	0.01	0.17	-0.02	0.01	0.16	-0.02	0.02	0.15	-0.01

Table 9: Potential explanation: organization capital and stock repurchase.

This Table reports results for the potential explanation of the positive relation between organization capital and stock repurchase. Panel A reports the results for the incentive compensation -based explanations and Panel B reports the results for signalling-based explanation of stock repurchase. Robust standard errors (clustered at the firm level) are included in parentheses. Statistical significance at the 1%, 5%, and 10% levels is indicated by ***, **, and *, respectively. Description of variables are presented in Appendix A.

Panel A: Incentive compensation as a channel for share repurchases

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Logit	OLS	Tobit	FFE	Logit	OLS	Tobit	FFE
Dep. Var. =	REP_D	REP/TA	REP/TA	REP/TA	REP_D	REP/TA	REP/TA	REP/TA
OC/TA	0.763***	0.031***	0.043***	0.036***	0.769***	0.030***	0.043***	0.036***
	[0.12]	[0.00]	[0.00]	[0.00]	[0.11]	[0.00]	[0.00]	[0.00]
EQU_INT	0.485***	0.017***	0.023***	0.007***				
	[0.09]	[0.00]	[0.00]	[0.00]				
OC/TA*EQU_INT	**0.843****	**0.050*****	**0.055*****	**0.041*****				
	[0.35]	**[0.01]**	**[0.01]**	**[0.01]**				
OPTN_INT					0.254***	0.014***	0.018***	0.004*
					[0.09]	[0.00]	[0.00]	[0.00]
OC/TA*OPTN_INT					**1.483*****	**0.039*****	**0.059*****	**0.035*****
					[0.37]	**[0.01]**	**[0.01]**	**[0.01]**
SIZE	0.213***	0.004***	0.007***	0.005***	0.233***	0.004***	0.007***	0.005***
	[0.02]	[0.00]	[0.00]	[0.00]	[0.02]	[0.00]	[0.00]	[0.00]
MTB	-0.159***	0.002***	0.001	0.001*	-0.156***	0.002***	0.001	0.001*
	[0.02]	[0.00]	[0.00]	[0.00]	[0.02]	[0.00]	[0.00]	[0.00]
LEV	-0.606***	0.008***	-0.003	0.005	-0.605***	0.008***	-0.003	0.005
	[0.14]	[0.00]	[0.00]	[0.00]	[0.14]	[0.00]	[0.00]	[0.00]
R&D	1.436***	0.093***	0.126***	0.073***	1.523***	0.095***	0.130***	0.073***
	[0.51]	[0.01]	[0.02]	[0.01]	[0.51]	[0.01]	[0.02]	[0.01]
ROA	3.298***	0.105***	0.187***	0.082***	3.231***	0.106***	0.187***	0.082***
	[0.34]	[0.01]	[0.02]	[0.01]	[0.34]	[0.01]	[0.02]	[0.01]
CASH	0.580***	0.024***	0.034***	0.007*	0.606***	0.024***	0.035***	0.007*
	[0.18]	[0.00]	[0.01]	[0.00]	[0.18]	[0.00]	[0.01]	[0.00]
CAPEX	-0.915*	-0.046***	-0.081***	-0.040***	-0.827	-0.045***	-0.078***	-0.039***

	[0.53]	[0.01]	[0.02]	[0.01]	[0.53]	[0.01]	[0.02]	[0.01]
AGE_LN	0.107***	-0.000	0.002*	0.003***	0.103***	-0.000	0.002*	0.003***
	[0.03]	[0.00]	[0.00]	[0.00]	[0.03]	[0.00]	[0.00]	[0.00]
RETURN	-0.212***	-0.008***	-0.014***	-0.007***	-0.224***	-0.008***	-0.014***	-0.007***
	[0.03]	[0.00]	[0.00]	[0.00]	[0.03]	[0.00]	[0.00]	[0.00]
SD_RET	-24.924***	-0.324***	-0.964***	-0.287***	-24.209***	-0.323***	-0.952***	-0.287***
	[2.07]	[0.03]	[0.07]	[0.04]	[2.06]	[0.03]	[0.07]	[0.04]
TANG	-0.238	0.002	-0.000	0.026***	-0.259	0.002	-0.000	0.026***
	[0.20]	[0.00]	[0.01]	[0.01]	[0.20]	[0.00]	[0.01]	[0.01]
IND_CON	0.631	-0.005	0.002	0.009	0.771	0.000	0.009	0.013
	[0.68]	[0.01]	[0.02]	[0.01]	[0.68]	[0.01]	[0.02]	[0.01]
DIV_D	0.314***				0.294***			
	[0.06]				[0.06]			
DIV/TA		0.007	-0.034	0.115***		0.005	-0.040	0.118***
		[0.03]	[0.05]	[0.03]		[0.03]	[0.05]	[0.03]
Constant	-2.712***	-0.021***	-0.095***	-0.039***	-2.937***	-0.026***	-0.103***	-0.040***
	[0.46]	[0.01]	[0.02]	[0.01]	[0.45]	[0.01]	[0.01]	[0.01]
Observations	33,500	33,447	33,447	33,447	33,500	33,447	33,447	33,447
Year effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry effects	Yes	Yes	Yes	No	Yes	Yes	Yes	No
Firm effects	No	No	No	Yes	No	No	No	Yes
Adj. R^2/ Pseudo R^2	0.15	0.21	-0.36	0.34	0.15	0.20	-0.36	0.34

Panel B: Signaling motives as a channel for repurchase

	(1) Logit	(2) Logit	(3) Logit	(4) Logit	(5) Logit
Dep. Var. =	REP	REP	REP	REP	REP
OC/TA	-0.033	0.016	-0.044	0.004	-0.006
	[0.06]	[0.06]	[0.06]	[0.06]	[0.06]
SIGNAL	0.232***				
	[0.03]				
OC/TA* SIGNAL	**0.145****				
	[0.07]				
SPREAD		-6.574***			
		[0.91]			
OC/TA* SPREAD		**3.260***			
		[1.74]			
FRQ			-0.966***		
			[0.21]		
OC/TA* |DAC|			**0.368**		
			[0.80]		
R&D				0.097	
				[0.25]	
OC/TA* R&D				**0.323**	
				[0.65]	
INST					-0.633***
					[0.06]
OC/TA* INST					**0.304**
					[0.19]
SIZE	0.149***	0.038***	0.131***	0.133***	0.090***
	[0.01]	[0.01]	[0.01]	[0.01]	[0.01]
MTB	-0.271***	-0.231***	-0.267***	-0.272***	-0.278***
	[0.02]	[0.02]	[0.02]	[0.02]	[0.02]
LEV	-0.794***	-0.772***	-0.887***	-0.845***	-0.800***
	[0.09]	[0.09]	[0.09]	[0.09]	[0.09]
R&D	-0.481*	-0.259	0.057		-0.078
	[0.28]	[0.26]	[0.25]		[0.27]
ROA	2.677***	2.524***	2.749***	2.749***	2.715***
	[0.18]	[0.19]	[0.19]	[0.18]	[0.17]
CASH	0.879***	0.756***	0.865***	0.881***	1.004***
	[0.09]	[0.10]	[0.09]	[0.09]	[0.10]
CAPEX	0.258	0.029	0.429	0.326	0.064
	[0.26]	[0.29]	[0.28]	[0.25]	[0.28]
AGE LN	-0.263***	-0.345***	-0.284***	-0.277***	-0.339***
	[0.01]	[0.02]	[0.02]	[0.01]	[0.02]
RETURN	-0.402***	-0.408***	-0.408***	-0.396***	-0.419***
	[0.04]	[0.04]	[0.04]	[0.04]	[0.04]
SD RET	-4.191***	-2.361**	-2.195**	-2.886***	-0.808
	[0.93]	[1.17]	[0.93]	[0.90]	[1.01]
TANG	-0.394***	-0.458***	-0.560***	-0.418***	-0.465***
	[0.10]	[0.11]	[0.11]	[0.10]	[0.11]
IND CON	-1.371***	-0.908**	-1.393***	-1.374***	-1.133***
	[0.35]	[0.41]	[0.36]	[0.35]	[0.36]
%ΔDIV/TA	-0.025*	-0.032**	-0.026*	-0.025*	-0.024
	[0.01]	[0.01]	[0.01]	[0.01]	[0.01]
Constant	-3.171***	-2.570***	-3.123***	-3.172***	-3.202***
	[0.39]	[0.41]	[0.39]	[0.39]	[0.32]
Observations	147,745	116,508	141,708	147,745	108,298
Year effects	Yes	Yes	Yes	Yes	Yes
Industry effects	Yes	Yes	Yes	Yes	Yes
Pseudo R^2	0.07	0.07	0.07	0.07	0.07