Journal of Banking and Finance 135 (2022) 106395

Contents lists available at ScienceDirect

Journal of Banking and Finance

journal homepage: www.elsevier.com/locate/jbf

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

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ARTICLE INFO

Article history:
Received 10 March 2019
Accepted 21 December 2021
Available online 24 December 2021

JEL Classifications:
G30
G31
G32
G35

Keywords:
Organization capital
Dividend
Stock repurchase
Agency problems

ABSTRACT

Organization capital represents the stock of knowledge, capabilities, culture, and business processes, and systems that integrate human skills with physical capital to enhance organizational efficiency. We investigate whether and how a firm's payout choices are related to its level of organization capital. Using a large sample of U.S. firms during the period 1980–2017, we find that both the likelihood and the levels of cash dividend distribution and share repurchases are significantly higher for firms with more organization capital. Our findings hold up to a battery of robustness checks and endogeneity tests. We further explore related channels and find strong evidence that the positive association between organization capital and dividend payments (share repurchases) is largely attributable to agency problems (executive compensation incentives). We find weak evidence for the signaling argument for corporate payouts. Overall, we document that organization capital plays a central role in shaping corporate payout choices.

1. Introduction

The recent literature recognizes intangible capital as an important source of firms' productivity, efficiency, and value (Peters and Taylor, 2017; Belo et al., 2021; Francis et al., 2021). A large share of intangible capital is supplied by organization capital (Corrado et al., 2009), which encompasses firms' stock of knowledge, capabilities, culture, business processes and systems that facilitate the matching of human skills and physical capital (Eisfeldt and Papanikolaou, 2013).[1] The literature suggests that organization capital has a considerable impact on corporate investment and financing policies, innovation and tax strategies (e.g.,Li et al., 2018; Falato et al., 2021; Hasan et al., 2021). However, little is known about whether organization capital influences corporate payout choices. In this study, we fill this gap in the literature. We argue that a clear understanding of the relationship between organization capital and corporate payouts is important for both corporate managers (for strategic resource allocation) and investors (for stock selection and portfolio rebalancing).

Corporate payout policies have puzzled researchers for many years. Miller and Modigliani (1961) claim that firm value is independent of payout policy in a perfect capital market setting. However, later studies suggest that payout policy has obvious implications for firm value, other corporate policies, and the real economy, and that dividend decisions are made simultaneously with investment decisions (Jensen et al., 1992; Farre-Mensa et al., 2014). Many firm-level factors that affect corporate payouts are identified in the literature, such as firm size, maturity, profitability, financial flexibility, and corporate governance (e.g., DeAngelo et al., 2006; Chae et al., 2009; Bonaimé et al., 2014; Farre-Mensa et al., 2014; Chen et al., 2017). We extend the literature by investigating whether and how organization capital affects corporate payout choices.

Theoretically, the relationship between organization capital and payout choices is ambiguous. Therefore, we develop two competing hypotheses. Building on the agency and signaling theories of corporate payouts, we predict a positive association between organization capital and cash dividends. The agency theory of corporate

☆ We are grateful to Geert Bekaert (the Editor), Associate Editor and two anonymous referees for their excellent suggestions. We thank Adrian Cheung, Assaf Eisdorfer, So-Yeon Lim, Shofiqur Rahman, seminar participants at Marshall University and IESEG School of Management, and participants at the FMA (2020) and EFMA (2021) Annual Meetings for helpful comments and suggestions. The usual disclaimer applies.

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[1] 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.

https://doi.org/10.1016/j.jbankfin.2021.106395
0378-4266/

payouts suggests that entrenched managers may misuse slack resources (e.g., free cash flow) for empire building or as perquisites instead of returning them to investors (Jensen and Meckling, 1976; Easterbrook, 1984; Jensen, 1986). Dividends may serve as a disciplinary device and reduce managers' ability to funnel resources away from shareholders (La Porta et al., 2000; Farre-Mensa et al., 2014).[2] Research suggests that organization capital may escalate agency problems, because both key talents and shareholders have claims on the cash flow accruing from it (Eisfeldt and Papanikolaou, 2013). Furthermore, key talents at firms with more organization capital have incentives to overinvest in organization capital and other projects to further improve their outside options or to maximize their private benefits (Eisfeldt and Papanikolaou, 2014; Venieris et al., 2015). Therefore, building on the outcome model of La Porta et al. (2000), we expect firms with more organization capital to distribute more cash dividends to discipline their managers.

Moreover, signaling theory suggests that managers have incentives to distribute more cash dividends to signal their firms' improved performance and prospects to outsiders (Bhattacharya, 1979, 1980; John and Williams, 1985; Grinstein and Michaely, 2005). This is particularly important when managers have information about their firms that the market does not have and an incentive to reveal this information to the market.[3] Studies postulate that although organization capital is a source of competitive advantage and a key driver of corporate value, growth, and innovation, it is largely tacit and idiosyncratic and is neither tracked by firms nor recorded in financial systems (Lev et al., 2009). Therefore, the signaling theory of dividends suggest that firms with more organization capital are likely to pay more cash dividends to reveal their superior prospects and to reduce the information asymmetry associated with organization capital.

We rely on executive incentive compensation and signaling-based arguments to hypothesize a positive association between organization capital and stock repurchases. Research suggests that executives' incentive compensation contracts represent a major source of incentives for stock repurchases (Brav et al., 2005). In particular, when executive compensation is tied to earnings per share (EPS) performance, managers are incentivized to manage reported EPS by repurchasing shares to reduce the number of outstanding stocks (Young and Yang, 2011; Cheng et al., 2015). In addition, both the dividend-protection channel (the incentive to avoid paying dividends and replace them with repurchases) and the dilution channel (the incentive to repurchase to offset the dilutive effect of options exercise) suggest that managers with more options-based compensation favor repurchases over cash payouts (Ferri and Li, 2020). Studies show that firms with more organization capital offer more incentive-based compensation to retain key talents (Lev et al., 2009; Lustig et al., 2011). We argue that such incentive-based and non-cash compensation prompts managers at firms with more organization capital to repurchase stocks in an attempt to increase EPS and firm value.

Furthermore, information asymmetry between inside managers and outside shareholders prompts firms to repurchase stocks to convey information about future prospects, and the stock market generally responds positively to repurchase announcements (Bhattacharya, 1979, 1980; John and Williams, 1985; Liang, 2012). Given the intangible nature of organization capital, its role in firm productivity and efficiency, and its exposure to information asymmetry, firms with more organization capital are likely to use stock repurchase programs to signal improved prospects.

Nonetheless, we have reasons to predict a negative association between organization capital and corporate payouts. Although dividend payouts mitigate agency problems and convey positive signals, they may also expose firms with more organization capital to costly external financing (Rozeff, 1982; Chae et al., 2009). As organization capital is an off-balance sheet item and is potentially movable across firms along with key talents, it is not widely accepted as collateral. Therefore, organization capital shrinks a firm's debt capacity and increases its corporate cash holdings (Falato et al., 2021). As a result, firms with more organization capital may distribute less as payouts to avoid costly external financing. Given the competing arguments, the association between organization capital and payout policies is an empirical question of interest.

To test the hypotheses, we use a large sample of U.S. firms during the period 1980–2017. We estimate the annual stock of organization capital for each firm by accumulating a fraction of past selling, general, and administrative (SG&A) expenditures using the perpetual inventory method (Eisfeldt and Papanikolaou, 2013; Peters and Taylor, 2017). Using four regression frameworks—logit, ordinary least squares (OLS), tobit, and firm-fixed effect (FFE)—we find that both the likelihood and the levels of dividend payments and share repurchases are higher for firms with more organization capital. The marginal effect estimated from the logit regression indicates that a one-unit increase in organization capital produces a 4.60% (4.5%) increase in the probability of cash dividend payouts (stock repurchases) for an average firm. Moreover, OLS regression results suggest that a one standard deviation increase in organization capital increases cash dividend payouts (stock repurchases) by 26.11% (23.5%) for an average firm relative to the mean. In addition to full-sample analysis, we conduct sub-sample tests (dividend-only firms, repurchase-only firms, and firms with both dividends and repurchases) and find that our findings remain consistent. The findings are also robust across several sensitivity tests, including alternative measures of dividends, repurchases, and organization capital.

We next undertake several identification strategies to mitigate endogeneity concerns arising from omitted variable bias and reverse causality issues. For instance, we include additional controls in the regression model and use the omitted variable bias test proposed by Oster (2019). We then use two-stage least squares (2SLS), change regression analysis, and entropy-balancing estimates. The findings of these analyses confirm that our results are not an artifact of omitted variable bias and are unlikely to be spurious or bi-directional.

Finally, we examine potential explanations for the positive association between organization capital and each of the two payout outcomes of interest, namely cash dividends and stock repurchase. We find that firms with more organization capital pay more cash dividends in the presence of agency problems, which supports our agency-based argument. We find weak evidence in support of the dividend signaling model. Furthermore, we find that firms with more organization capital repurchase more shares when executives are offered high levels of equity and option-based compensation, supporting the incentive compensation-based argument for stock repurchases. Similar to cash dividend payouts, we find weak evidence in support of the signaling-based explanation for stock repurchases.

Our study makes two important contributions to the literature. First, it contributes to the broad literature on corporate payouts by assessing the effects of a firm's organization capital on its payout choices. We investigate this relationship holistically, using corporate payout theories based on agency, signaling, executive incentive compensation, and financing constraints (Bhattacharya, 1979;

[2] La Porta et al. (2000) outline two agency models of dividends: the outcome model and the substitution model. The outcome model suggests that shareholders' pressure to disgorge cash prompts corporate insiders to pay dividends.

[3] Key assumptions here are that information is asymmetrical in markets and that markets appreciate payout announcements (e.g., Michaely et al., 1995; Grullon et al., 2002; Grullon and Michaely, 2004). These studies collectively find that the average market reaction to an increase (decrease) in or the initiation (omission) of both dividend payments and share repurchases is positive (negative).

La Porta et al., 2000; Brav et al., 2005; Chae et al., 2009; Farre-Mensa et al., 2014). We find support for the agency-based argument for cash dividends and the incentive compensation-based argument for stock repurchases. Second, we contribute to the emerging literature on organization capital. Although studies document the importance of organization capital in improving productivity, efficiency, and operational and stock performance (Lev et al., 2009; Eisfeldt and Papanikolaou, 2013;Li et al., 2018; Hasan et al., 2021), we provide robust evidence of the effects of organization capital on firms' cash dividend and stock repurchase choices. We thus extend understanding of the influence of organization capital on corporate outcomes. Given that dividend decisions are made simultaneously with corporate investment decisions (Farre-Mensa et al., 2014), a better understanding of the relationship between organization capital and payout choices is important both for corporate insiders and for outside stakeholders.

The remainder of the paper is organized as follows. Section 2 presents the data and research method. Section 3 discusses the empirical results. Section 4 discusses potential explanations and channels for payouts. Finally, Section 5 concludes the paper.

2. Data, variables, and methodology

2.1. Sample

Our initial sample consists of all firm-year observations available in the Compustat database for the period 1980–2017 (401,762 firm-years). We cover a large sample period to account for both the disappearance and the reappearance of dividends (Farre-Mensa et al., 2014). Because financial and utility firms are subject to substantially different accounting practices and regulations, we exclude 102,479 and 15,884 firm-year observations pertaining to financial (standard industrial classification (SIC) codes 6000–6999) and utility (SIC codes 4400–4999) firms, respectively. We also exclude firm-year observations with missing data for the dependent, independent, or control variables (125,919 firm-years). These sampling criteria yield unbalanced panel data that consist of 157,480 firm-year observations. To reduce the influence of outliers, all continuous variables are winsorized at the 1% level on both sides. The number of firm-year observations in the regression models varies depending on the model-specific data requirements. We report the sample selection procedure in Panel A of Table 1.

Panel B of Table 1 presents the distribution of our sample across the 12 Fama–French (1997) industry groups. We observe that the business equipment industry (i.e., computers, software, and electronic equipment) makes up the largest share of our sample (21.15%), and chemicals and allied products make up the smallest share (2.93%).

Table 1
Sample selection and distribution of 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	4815	3.06
Manufacturing	22,154	14.07
Oil, gas and coal extraction and products	10,071	6.39
Chemicals and allied products	4608	2.93
Business equipment	33,313	21.15
Telephone and television transmission	5899	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

2.2. Measuring organization capital

We follow Peters and Taylor (2017) and estimate a firm's stock of organization capital by accumulating a fraction of past SG&A expenditures using the perpetual inventory method:

$$OC_{i,t} = (1 - \delta_0)OC_{i,t-1} + (SG\&A_{i,t} \times \theta_0) \quad (1.1)$$

where $OC_{i,t}$ denotes the 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 expenses that are invested in organization capital. We use a *fraction* of SG&A expenses in the estimation of organization capital because "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, all of 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 and are thus contained within SG&A.

We estimate the initial stock of organization capital as follows:

$$OC_{i,t_0} = \frac{\left(SG\&A_{i,t_0} \times \theta_0\right)}{g + \delta_0} \quad (1.2)$$

where g represents the growth in the flow of organization capital, estimated as the average growth of firm-level SG&A expenditure. Following the literature (Eisfeldt and Papanikolaou, 2013; Peters and Taylor, 2017), we use 30% of SG&A to estimate the stock of organization capital. In addition, we use a depreciation rate of 20% (Peters and Taylor, 2017). We scale the stock of organization capital by the book value of total assets (OC/TA). In the sensitivity analysis, we use five alternative measures of organization capital (see Section 3.5.2)

2.3. Measuring dividend payments and repurchases

We use two measures of dividends as dependent variables. For logistic regression, we use *DIV_D*, which is 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*).[4]

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

$$REP = Purchase of common and preferred stock + min(0, change in preferred stock value) \quad (2)$$

As the dependent variable for the logistic regression we use *REP_D*, which is a binary variable that takes a value of 1 if the firm repurchases stocks in year *t* and 0 otherwise. For the other regression models, we use repurchases scaled by total assets (*REP/TA*). In the sensitivity analysis, we also scale stock repurchases by market value of equity (*REP/MVE*) and earnings before interest and taxes (*REP/EBIT*). Finally, we demonstrate the robustness of the results using an alternative stock repurchase measure (see Section 3.5.1).

2.4. Control variables

We use a set of control variables previously found to affect corporate payouts (e.g., Grullon and Michaely, 2002; Von Eije and Megginson, 2008; Bodnaruk and Ostberg, 2013; Hoberg et al., 2014; Hossain et al., 2021). Larger firms are less financially constrained, which enhances their ability to pay dividends or sustain stock repurchases (Cuny et al., 2009). Therefore, we control for the natural log of market value of equity (*SIZE*). Firms tend to pay dividends when investment opportunities are limited, and they tend to repurchase stocks when stocks are undervalued (Andriosopoulos and Lasfer, 2015). To control for investment opportunities and equity valuation effects, we use the market-to-book ratio (*MTB*), R&D to assets ratio (*R&D*), and capital expenditure to assets ratio (*CAPEX*). Studies show that leverage typically limits firms' payouts (e.g., 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, which studies have suggested affects payouts (DeAngelo et al., 2006). We include profitability (*ROA*) and stock returns (*RET*) to control for the effects of firm performance on dividend payments or stock repurchases. As firms with excess cash tend to pay more dividends and repurchase more stocks to reduce agency costs, we control for corporate cash holdings (*CASH*). Research suggests 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 the availability of cash flows (Koo et al., 2017). Given that firms in more 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 effects and industry/firm effects. Descriptions of all of the variables are presented in Appendix A.

2.5. Methodology

We estimate the relationship between organization capital and corporate payouts using logit, OLS, tobit, and FFE regression models. In particular, to test the relationship 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:

$$Prob\ (DIV\_D = 1) = \alpha_0 + \beta_1 OC + \varphi' Controls + \varepsilon \quad (3.1)$$

$$Prob\ (REP\_D = 1) = \alpha_0 + \beta_1 OC + \varphi' Controls + \varepsilon \quad (3.2)$$

where the dependent variables (*DIV_D* and *REP_D*) are as defined in Section 2.3. Our main variable of interest is organization capital (*OC*), as discussed in Section 2.2, and our regression model controls for firm characteristics, industry, and year dummies (see Section 2.4).

For the OLS, tobit, and FFE regression models, we estimate the following equations:

$$DIV = \alpha_0 + \beta_1 OC + \theta' Controls + \varepsilon \quad (4.1)$$

$$REP = \alpha_0 + \beta_1 OC + \theta' Controls + \varepsilon \quad (4.2)$$

where *DIV* is cash dividends scaled by total assets (*DIV/TA*), *REP* is stock repurchases scaled by total assets (*REP/TA*), and the other variables are as defined above. For the tobit model we use left-censored regression:

$$where\ DIV = \begin{cases} DIV; & if DIV > 0 \\ 0 & ; otherwise \end{cases} \quad (4.3)$$

$$and\ REP = \begin{cases} REP; & if REP > 0 \\ 0 & ; otherwise \end{cases} \quad (4.4)$$

3. Empirical results

3.1. Descriptive statistics

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

Table 2 also shows that the firms in our sample have an average organization capital of 33% of total assets (*OC/TA*), with a corresponding median value of 21.9%. Summary statistics for the control variables are largely consistent with prior studies (Lev et al., 2009; Jacob and Jacob, 2013; Hasan and Cheung, 2018). For instance, the firms in our sample are on average moderately large (*SIZE* = 4.909), not highly leveraged (*LEV* = 0.241), and somewhat profitable (*ROA* = 0.035); they hold considerable amounts of cash (*CASH* = 0.180) and invest in both research and development (*R&D* = 0.051) and capital expenditure (*CAPEX* = 0.069).

We report the correlations between the variables used in the main analysis in Internet Appendix 1. We find that *OC/TA* is positively correlated with stock repurchases (*REP/TA*) (coefficient = 0.02; significant at $p < 0.01$) and total payout (*TP/TA*) (coefficient = 0.01, $p < 0.01$). The correlations between payouts and

[4] Since payout ratios are not meaningful when the denominator (e.g., *EBIT*) is negative, we exclude observations with negative denominators from the OLS and FFE regression models. We also use left-censored tobit regression to address this issue.

Table 2
Descriptive statistics. This table presents summary statistics for the variables used in this study. The sample period is from 1980 to 2017. Descriptions 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
TP/TA	0.025	0.054	0.000	0.001	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
OC/TA_EPW	0.132	0.267	−0.034	0.089	0.244
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
	0.128	0.089	0.057	0.102	0.175
HOSTILE_INDEX					
|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

the controls are also in line with the study of Alzahrani and Lasfer (2012). Finally, the greatest correlation is that between *TANG* and *CAPX* (coefficient = 0.57), implying that multicollinearity is not a concern for our analysis.

3.2. Univariate analysis

Panel A of 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-samples of firms that pay (*DIV* = 1) and that do not pay (*DIV* = 0) cash dividends. We find that dividend payers are significantly larger (*SIZE*), more profitable (*ROA* and *RETURN*), and more mature (*AGE_LN*) than non-dividend payers. In addition, firms that pay dividends have significantly fewer growth opportunities (*MTB* and *R&D*) and significantly lower financial leverage (*LEV*), cash holdings (*CASH*), and variability of stock returns (*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 the sub-samples of firms that repurchase stocks (*REP* = 1) and those that do not (*REP* = 0) [Columns (4) to (6)], and for the sub-samples of firms that pay cash dividends and buy back shares (*TP* = 1) and those that do neither (*TP* = 0) [Columns (7) to (9)].

Panel B of Table 3 exhibits the univariate mean differences in payouts between the sub-samples of firms with high (*OC* > median) and low (*OC* < median) organization capital.[5] We observe that cash dividends (*DIV/TA*), stock repurchases (*REP/TA*), and total payouts (*TP/TA*) are significantly higher for firms with more organization capital compared with their low organization capital counterparts. We obtain qualitatively similar results when we restrict our analysis to sub-samples of firms that only pay cash dividends, only repurchase shares, and both pay dividends and repurchase shares.

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

Table 3
Univariate analysis. This table reports univariate test results for the difference in firm characteristics and payouts. Panel A presents a mean difference test in the firm characteristics between firms with and without different forms of payouts, and Panel B presents a 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. Descriptions of the variables are presented in Appendix A.

Panel A: Univariate tests of difference in firm characteristics

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	DIV =1	DIV =0	Diff.	REP =1	REP =0	Diff.	TP=1	TP=0	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***

3.3. Organization capital and corporate payouts: baseline results

We present regression results for the relationship between organization capital and payout policy in Table 4. We control for year and industry (or firm) fixed effects along with firm-level characteristics in all models. Robust standard errors (reported in parentheses) are clustered at the firm level. Column (1) of Panel A presents our logistic regression results for the relationship between organization capital and the likelihood of paying cash dividends. We find that the coefficient of *OC/TA* is 0.386 (statistically significant at the 1% level), suggesting that firms with more organization capital are more likely to pay cash dividends. 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.

For Columns (2) to (4) of Panel A, we use three regression models: OLS (Column 2), tobit (Column 3), and FFE (Column 4). The regression results show a positive and significant (at $p < 0.01$) relationship between organization capital and cash dividend payments (*DIV/TA*). For example, the OLS regressions indicate that the coefficient of *OC/TA* is 0.005 ($p < 0.01$), and the corresponding coefficients for the tobit and FFE regression models are 0.011 ($p < 0.01$) and 0.003 ($p < 0.01$), respectively. With respect to economic significance, the OLS regression results in Column (2) suggest 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.[6] Similarly, the tobit regression results in Column (3) indicate a predicted increase in the 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 show the results for the relationship between organization capital and share repurchases. The logistic regression results in Column (5) reveal that the coefficient of *OC/TA* is positive and significant (coefficient = 0.232; $p < 0.01$), implying that firms with more organization capital are more likely to repurchase shares. The estimated marginal effect indicates that a one-unit increase in *OC/TA* leads to a 4.5% increase in the propensity for share repurchases for an average firm. The results in Columns (6) to (8) show that the relationship between organization capital and level of share repurchases is positive and significant ($p < 0.01$), and this relationship remains robust irrespective

[6] Calculated as [(0.005×0.47)/0.009], where 0.005 is the estimated coefficient, 0.47 is the standard deviation of *OC/TA*, and 0.009 is the mean *DIV/TA*.

Table 4
Baseline regression results. This table reports the results of regressions of the likelihood and level of payouts on organization capital and control variables. Panel A presents the results for the full sample analysis using logit, OLS, tobit, and firm fixed effect regressions. In the regressions, we include buyback (dividends) in the dividend (buyback) regression. Panel B presents the regression results of the relation between organization capital and payout policy for three sub-samples: cash dividend payers only [Columns (1) to (2)], buyback firms only [Columns (3) to (4)], and cash dividends and buybacks firms [Columns (5) to (6)]. Robust 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. Descriptions 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*** **	
	[0.07]	**[0.00]**	**[0.00]**	**[0.00]**	**[0.03]**	**[0.00]**	**[0.00]**	**0.005*** ** **[0.00]**
SIZE	0.418***	0.002***	0.005***	0.001***	0.126***	0.002***	0.006***	
	[0.01]	[0.00]	[0.00]	[0.00]	[0.01]	[0.00]	[0.00]	0.002*** [0.00]
MTB	−0.191***	0.000***	0.001**	0.000***	−0.060***	0.001***	0.001**	
	[0.02]	[0.00]	[0.00]	[0.00]	[0.01]	[0.00]	[0.00]	0.000*** [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	
	[0.75]	[0.00]	[0.01]	[0.00]	[0.14]	[0.00]	[0.01]	0.010*** [0.00]
ROA	3.471***	0.006***	0.090***	0.004***	0.831***	0.012***	0.041***	
	[0.19]	[0.00]	[0.01]	[0.00]	[0.07]	[0.00]	[0.00]	0.008*** [0.00]
CASH	−0.366***	0.002***	0.008***	0.005***	0.175***	0.008***	0.018***	
	[0.14]	[0.00]	[0.00]	[0.00]	[0.07]	[0.00]	[0.00]	0.008*** [0.00]
CAPEX	−2.964***	−0.016***	−0.073***	−0.001	0.152	0.000	0.000	
	[0.24]	[0.00]	[0.01]	[0.00]	[0.15]	[0.00]	[0.01]	−0.007*** [0.00]
AGE_LN	0.501***	0.001***	0.005***	0.000	0.248***	0.001***	0.007***	
	[0.02]	[0.00]	[0.00]	[0.00]	[0.01]	[0.00]	[0.00]	−0.001*** [0.00]
RETURN	−0.196***	−0.001***	−0.005***	−0.001***	−0.088***	−0.002***	−0.006***	
	[0.02]	[0.00]	[0.00]	[0.00]	[0.01]	[0.00]	[0.00]	−0.002*** [0.00]
SD_RET	−47.020***	−0.086***	−0.809***	−0.024***	−11.823***	−0.049***	−0.437***	
	[1.54]	[0.00]	[0.03]	[0.00]	[0.58]	[0.01]	[0.02]	−0.058*** [0.01]
TANG	1.603***	0.010***	0.028***	0.001	−0.512***	−0.006***	−0.020***	
	[0.13]	[0.00]	[0.00]	[0.00]	[0.08]	[0.00]	[0.00]	0.004*** [0.00]
IND_CON	0.277	−0.001	0.002	−0.002	0.097	0.004	0.003	0.005

(*continued on next page*)

Table 4 (*continued*)

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

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	[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***

(*continued on next page*)

Table 4 (*continued*)

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

	(1)	(2)	(3)	(4)	(5)	(6)
	[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

of the use of OLS, tobit, or FFE regressions.[7] Our documented results are also economically meaningful. For instance, the OLS regression results in Column (6) suggest that a one standard deviation increase in *OC/TA* increases the level of share repurchases (*REP/TA*) by 23.5% relative to the mean. This economic significance remains qualitatively similar with the use of alternative regression models. Furthermore, when we repeat the analysis for total payouts [(*DIV* + *REP*) / *TA*], we again find a positive and significant ($p < 0.01$) coefficient of *OC/TA* (Internet Appendix 2).

The coefficients of the major control variables are consistent with prior studies (e.g., Bodnaruk and Östberg, 2013). For example, large, mature, and profitable firms are more likely to pay cash dividends, and leveraged, volatile, and R&D- and capital-intensive firms are less likely to pay cash dividends.[8] The results also indicate that cash dividends and share repurchases are not substitutes for each other, as the coefficients of repurchases (dividends) are positive in the dividend (repurchase) regressions, in line with some prior studies (Allen et al., 2000; Lee and Rui, 2007). Overall, Panel A of Table 4 provides support for our hypothesis that both the likelihood and the levels of cash dividend payouts and stock repurchases are higher for firms with higher levels of organization capital.

In Panel B of Table 4, we re-estimate the relationship between organization capital and payout policy for three sub-samples: cash dividend payers only [Columns (1) and (2)], buyback firms only [Columns (3) and (4)], and firms with both cash dividends and buybacks [Columns (5) and (6)]. Given that the fundamental motives for using different payout methods may vary, this sub-sample analysis may alleviate potential drawbacks associated with the estimation. We find that organization capital is positively and significantly ($p < 0.01$) related to cash dividend payments (*DIV/TA*), stock repurchases (*REP/TA*), and total payouts (*TP/TA*). These relationships remain robust irrespective of the use of OLS or FEE regression specifications.

Overall, the results presented in Table 4 support our hypotheses and confirm that both the likelihood and the levels of cash dividend payments and share repurchases are higher for firms with higher levels of organization capital.

3.4. Endogeneity

In this section, we undertake several approaches to address endogeneity concerns arising from omitted variable bias and reverse causality problems.

3.4.1. Additional controls

Although we control for a set of firm-level characteristics that studies suggest 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 the organization capital measure captures only managerial ability rather than an agglomeration of business practices, processes, culture, and designs. Moreover, as we construct organization capital

[7] From a tax perspective, firms have incentives to substitute share repurchases for dividends because capital gains are taxed at lower rates than ordinary income (Grullon and Michaely, 2002). To address this concern, in untabulated analysis, we control for these tax differences and obtain qualitatively similar results.

[8] Although we generally expect a positive correlation between prior stock returns and dividends, a negative correlation between them is not uncommon in the literature. For instance, Rubin and Smith (2009), Bodnaruk and Östberg (2013), and Eisdorfer et al. (2015) find a negative correlation between dividend payouts and past stock returns, which is consistent with our findings. None of these studies explain this puzzling relationship, but we argue that positive past stock returns may encourage managers to increase investments that may reduce firms' capacity to pay dividends. Especially in a low market interest rate regime, firms appear to accept projects that are otherwise not profitable, resulting in less cash available for dividends.

based on SG&A expenditures, it is imperative to control SG&A in the regression model. There may be further concern that our estimation is biased by the omission of intangible assets reported on firms' balance sheets. Therefore, in Columns (1) to (4) of Panels A and B (Table 5), we control for the managerial ability score (*MA_SCORE*) of Demerjian et al. (2012), intangibles scaled by total assets (*INTAN/TA*), and SG&A scaled by total assets (*SGA/TA*). We find the relationships between organization capital and both cash dividend payments and stock repurchases remain robust (significant at $p < 0.01$) after controlling for the above variables.

Studies show that firms' liquidity, financing constraints, corporate governance, and financial reporting quality affect corporate payouts (e.g., Adjaoud and Ben-Amar, 2010; Bodnaruk and Östberg, 2013; Jiang et al., 2017; Koo et al., 2017). Therefore, we include the stock illiquidity (*ILLIQ*) measure of Amihud (2002), financing constraints (*FC*) measure of Whited and Wu (2006),[9] corporate governance measures (*HOSTILE_INDEX*) of Cain et al. (2017), and discretionary accrual measures (|*DAC*|) of Kothari et al. (2005) as additional controls in Columns (5) to (8) of Table 5 (in both Panels A and B). Again, we find robust evidence that organization capital is positively related (significant at $p < 0.01$) to both cash dividend payments and stock repurchases. Furthermore, when we include all of the additional controls together in Columns (9) to (12), we find that our results remain qualitatively similar. Finally, the results relating to organization capital and payout policy remain qualitatively similar when we include the above additional controls for three sub-samples (Panel B of Table 4): cash dividend payers only, buyback firms only, and firms with both cash dividends and buyback analysis (these results are tabulated in Internet Appendix 3).

Overall, the results reported in Table 5 provide evidence that the relationship between organization capital and both the likelihood and the levels of cash dividend payments and stock repurchases remains positive and significant after including additional controls, indicating that the results of our main analysis are not driven by omitted correlated variables.

3.4.2. Omitted variable bias test using Oster (2019)

To further alleviate concern about endogeneity arising from omitted-variable-bias, we follow recent studies (Gao and Huang, 2020; Irani et al., 2021) in using the estimation technique of Oster (2019). This technique exploits the stability of coefficients from regressions with and without controls combined with *R*-squared values to create a new identifiable set. If the identifiable set does not contain a zero, the null hypothesis that omitted variable bias drives the result can be rejected. We present the results and detailed specifications in Internet Appendix 4. We find that our estimated bounded sets for *OC/TA* do not include zero, implying that omitted variable bias is unlikely to influence our findings.

3.4.3. Two-stage least squares (2SLS) estimation

One may contend that our study suffers from a reverse causality problem, because firms with higher levels of corporate payouts may also invest more in organization capital. To address this concern, we utilize a 2SLS regression model.

Motivated by prior studies (Carlin et al., 2012; Francis et al., 2021), we use industry-level growth uncertainty as an instrument. To measure industry-level growth uncertainty (IND_GRU), we first estimate firm-level standard deviations of quarterly asset growth rates over the previous eight quarters, and then we take the industry median of those firm-level standard deviations. 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 organization capital (the relevance condition). Although industry-level growth shock is unlikely to have any relation with firm-level payouts (the exclusion restriction), one could argue that industry-level shocks may affect firms' investment in organization capital, which in turn could affect payout policies. To mitigate this concern, in the spirit of Francis et al. (2021), we remove the effect of industry-level payouts from the industry-level growth uncertainty variable. Specifically, for each industry-year we first calculate cash dividends scaled by total assets (IND_DIV/TA) and stock repurchase scaled by total assets (IND_REP/TA). We then estimate the following regression for each industry (two-digit SIC):

$$IND\_GRU_{j,t} = \alpha + IND\_DIV/TA_{j,t} + IND\_REP/TA_{j,t} + \varepsilon_{j,t} \quad (5)$$

where j denotes industry and t denotes time. The residual from the above regression (*IND_GRW_UNC*) captures the industry-level shock unexplained by industry payouts. We use this variable as the instrument for organization capital.

The first-stage regression results in Columns (1) and (4) of Table 6 show that, consistent with our expectation, the coefficient of our selected instrument (i.e., *IND_GRW_UNC*) is significantly negative ($p < 0.01$). We also find no evidence of a weak instrument, with the *F*-statistic of the coefficient of the instrument (*IND_GRW_UNC*) from the first-stage regression far greater than 10. The second-stage regression results show that the relationship between predicted *OC/TA* and cash dividend payments remains positive and statistically significant ($p < 0.01$) [Columns (2) and (3)]. Similarly, Columns (5) and (6) show a significantly ($p < 0.01$) positive relationship between our predicted measure of *OC/TA* and share repurchases. Overall, the 2SLS regression results confirm that the positive relationships between organization capital and both cash dividend payments and share repurchases are not driven by the endogeneity problem.

3.4.4. Change regression analysis

To further mitigate any endogeneity concerns, we follow past research (Li et al., 2017; Hasan et al., 2021) in conducting a change analysis. This regression technique is arguably more powerful to explain the incremental effects of organization capital on corporate payouts because it reduces potential noise in the regression model by filtering out unobserved effects that are fixed over time. The results reported in Internet Appendix 5 show that the coefficient of $\Delta OC/TA$ remains positive and significant for both cash dividends ($\Delta DIV/TA$) and stock repurchases ($\Delta REP/TA$), providing additional support for the finding that organization capital has a positive impact on corporate payouts.

3.4.5. Entropy-balancing estimates

Following recent literature (Hainmueller, 2012; Hasan et al., 2021), we use an entropy-balancing method to address the endogeneity concern. We split the sample into treatment (high *OC*) and control (low *OC*) groups based on the median *OC/TA* and re-weight the observations to achieve covariates balances in the first three moments to ensure that the treated and control groups are similar in terms of mean, standard deviation, and skewness. This method mitigates the possibility that design choices could affect our results. This entropy-balancing method not only improves the balance between the treatment and control group but also retains the original sample size and improves estimation efficiency.

Internet Appendix 6 (Panel A) shows that the entropy-balanced weight adjustment improves the covariate balance used in our

[9] Farre-Mensa and Ljungqvist (2016) show that popular measures of financial constraints are unable to identify firms that are plausibly financially constrained. Nonetheless, the inferences from our analysis remain qualitatively similar when we use text-based measures of financing constraints (Hoberg and Maksimovic, 2015).

Table 5
Omitted variable bias and alternative explanations.This table presents the results of incorporating additional controls in 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. Descriptions 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

(*continued on next page*)

Table 5 (*continued*)

Panel B: Organization capital and share repurchases

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Dep. Var. =	Logit REP_D	OLS REP/TA	Tobit REP/TA	FFE REP/TA	Logit REP_D	OLS REP/TA	Tobit REP/TA	FFE REP/TA	Logit REP_D	OLS REP/TA	Tobit REP/TA	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

multivariate analysis. In Panel B, we re-estimate the regressions using the entropy-balanced sample and find that *OC/TA* is positively and significantly related to both cash dividends and stock repurchases (p <0.01).

3.5. Sensitivity analysis

3.5.1. Alternative specification of payouts

In this sub-section, we test the sensitivity of our main findings to alternative specifications of corporate payouts. We scale dividends as well as stock repurchases by market value of equity (*DIV/MVE* and *REP/MVE*) and by earnings before interest and taxes (*DIV/EBIT* and *REP/EBIT*). Panel A of Table 7 shows that the coefficients of *OC/TA* remain positive and significant for the alternative scaling of dividends and repurchases irrespective of whether we use OLS, tobit, or FFE regression models. We also find that the inferences from our analysis remain the same when we scale payouts by sales and when we use the above alternative measures in subsample tests reported in Panel B of Table 4 (untabulated). Finally, we define stock repurchases as an increase in treasury stocks, using annual Compustat data (*TSTKC*). We replace a decrease in treasury stocks with 0 (Banyi et al., 2008). The results using this alternative measure of stock repurchases corroborate those of our main analysis (untabulated).

3.5.2. Alternative specifications of organization capital

We test the sensitivity of our documented results using five alternative measures of organization capital. First, we use the organization capital measure (*OC/TA_EP*) of Eisfeldt and Papanikolaou (2013). This measure of organization capital is similar to that of Peters and Taylor (2017), except that Eisfeldt and Papanikolaou (2013) use deflated values of SG&A expenses rather than a fraction of past SG&A expenses. The estimation method is as follows:

$$OC_{i,t} = (1 - \delta_{OC})OC_{i,t-1} + \frac{SG\&A_{i,t}}{cpi_t} \quad (6)$$

where cpi_t represents the consumer price index and other variables are as explained above. The estimation of the initial stock of organization capital also involves the use of deflated values of SG&A expenses (see Eq. (1.2)). Panel B of Table 7 shows that the coefficients of *OC/TA_EP* are positive and significant (mostly at $p < 0.01$) for both cash dividends and share repurchases across all regression models, corroborating the findings of the main analysis. In addition, we find that the inferences from our analysis remain qualitatively similar when we scale the organization capital measures by total capital (*OC/TC*) (untabulated).

Second, we use the organization capital measure of Enache and Srivastava (2018). Using cross-sectional regressions, this measure estimates part of the net SG&A expenses (total SG&A – advertising expenses – R&D expenses) that are not accompanied by sales revenue, which the authors label as the investment portion of SG&A (a new measure of *OC*). In Internet Appendix 7, we explain this estimation technique and report the related results. We find that the inferences from our analyses remain very similar when this measure of organization capital (*OC/TA_ES*) is used in the estimation. Third, the findings from our analysis also remain mostly robust when organizational capital is proxied by the managerial compensation over industry (*SIC2*) mean (*OC/TA_ABN_COMP*) (see Internet Appendix 8).

Fourth, accounting practices governing the composition of SG&A expenses, the fraction of SG&A expenses devoted to accumulating organization capital and its depreciation rate may all differ across industries. To address these concerns, we use the organization capital measure of Ewens et al. (2020), which uses industry-level parameter estimates (fraction of SG&A and depreciation rates)

Table 6
Instrumental variable estimation results. This table presents our 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. Descriptions of the variables are presented in Appendix A.

	(1) 1st Stage	(2) 2nd Stage	(3) 2nd Stage	(4) 1st Stage	(5) 2nd Stage	(6) 2nd Stage
		OLS	Tobit		OLS	Tobit
Dep. Var. =	OC/TA	DIV/TA	DIV/TA	OC/TA	REP/TA	REP/TA
OC/TA		**0.043*** **	**0.104*** **		**0.046*** **	**0.171*** **
		[0.01]	**[0.01]**		**[0.01]**	**[0.02]**
SIZE	−0.048***	0.004***	0.009***	−0.050***	0.004***	0.014***
	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]
MTB	0.016***	−0.000	−0.001***	0.016***	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	−0.000	−0.010***
	[0.02]	[0.00]	[0.00]	[0.02]	[0.00]	[0.00]
R&D	−0.335***	0.011***	−0.100***	−0.326***	0.020***	0.060***
	[0.05]	[0.00]	[0.01]	[0.05]	[0.01]	[0.01]
ROA	−0.474***	0.024***	0.133***	−0.476***	0.030***	0.114***
	[0.03]	[0.00]	[0.01]	[0.03]	[0.01]	[0.01]
CASH	−0.246***	0.012***	0.032***	−0.244***	0.018***	0.057***
	[0.02]	[0.00]	[0.00]	[0.02]	[0.00]	[0.01]
CAPEX	0.093***	−0.020***	−0.080***	0.123***	−0.004*	−0.017***
	[0.03]	[0.00]	[0.00]	[0.03]	[0.00]	[0.01]
AGE_LN	0.098***	−0.003***	−0.004***	0.095***	−0.003***	−0.008***
	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]
RETURN	0.022***	−0.002***	−0.007***	0.023***	−0.003***	−0.010***
	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]
SD_RET	0.945***	−0.120***	−0.890***	1.067***	−0.088***	−0.592***
	[0.14]	[0.01]	[0.02]	[0.14]	[0.01]	[0.03]
TANG	−0.253***	0.019***	0.050***	−0.274***	0.004	0.022***
	[0.02]	[0.00]	[0.00]	[0.02]	[0.00]	[0.01]
IND_CON	−0.082**	0.003	0.010***	−0.079*	0.007	0.016**
	[0.05]	[0.00]	[0.00]	[0.05]	[0.00]	[0.01]
REP/TA	0.662***	−0.012**	−0.085***			
	[0.04]	[0.01]	[0.01]			
DIV/TA				1.900***	−0.019	−0.229***
				[0.15]	[0.02]	[0.04]
IND_GRW_UNC	**−0.329*** **			**−0.312*** **		
	[0.04]			**[0.04]**		
Constant	0.258***	−0.005	−0.035***	0.273***	−0.018***	−0.142***
	[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	0.33	−0.32	–	0.33	−0.07	–
Underidentification test (Kleibergen-Paap rk LM statistic)	66.81			61.06		
P-value	0.00			0.00		
Weak identification test 1st-stage F stat	68.07			62.02		

of organization capital (*OC/TA_EPW*). Panel C of Table 7 shows that the coefficient of *OC/TA_EPW* remains positive and significant ($p < 0.01$) for both cash dividend payments and stock repurchases. Fifth, our inference remains robust if the industry-median adjusted ratio of organization capital to total assets is used as a measure of organization capital (Li et al., 2018) (see Internet Appendix 9). Finally, our documented evidence remains robust when we use the above alternative measures of organization capital in sub-sample tests, as shown in Panel B of Table 4 (untabulated).

3.5.3. Exploring non-linearity

Our analysis suggests an overall positive relationship between organization capital and corporate payouts. However, one may contend that this positive relationship persists only up to a certain level of organization capital, becoming negative as the stock of organization capital increases further. For example, it is possible that a shift toward organization capital after a certain level shrinks firms' debt capacity and leads them to hold more cash (Falato et al., 2021), thus limiting their ability to distribute funds among shareholders. Therefore, the overall positive effect of organization capital on corporate payouts may be dampened as the level of organization capital increases, resulting in a non-linear relationship.

To test this potential non-linearity, we follow prior studies (e.g., Wang et al., 2010; Shen and Zhang, 2020) in using a quadratic specification. Specifically, we include both *OC/TA* and its squared term (OC/TA^2) in Eq. (4) and re-estimate the regressions. The re-

Table 7
Alternative specification of payouts and organization capital. This table reports the regression results for the relation between organization capital and corporate payouts using alternative measures of payouts (Panel A), an alternative specification of organization capital (Eisfeldt and Papanikolaou, 2013) (Panel B), and the organization capital measure of Ewens et al. (2020) (Panel C). Robust 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. Descriptions of the variables are presented in Appendix A.

Panel A: Alternative measures of payouts

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Dep. Var. =	OLS DIV/MVE	Tobit DIV/MVE	FFE DIV/MVE	OLS DIV/EBIT	Tobit DIV/EBIT	FFE DIV/EBIT	OLS REP/MVE	Tobit REP/MVE	FFE REP/MVE	OLS REP/EBIT	Tobit REP/EBIT	FFE REP/EBIT
OC/TA	**0.002*** [0.00]**	**0.008*** [0.00]**	**0.001* [0.00]**	**0.022*** [0.00]**	**0.063*** [0.01]**	**0.003* [0.00]**	**0.003*** [0.00]**	**0.012*** [0.00]**	**0.001* [0.00]**	**0.037*** [0.00]**	**0.102*** [0.02]**	**0.023*** [0.00]**
Constant	0.019*** [0.00]	0.011* [0.01]	0.024*** [0.00]	0.096** [0.05]	−0.008 [0.08]	0.068*** [0.01]	0.005** [0.00]	−0.083*** [0.01]	0.013*** [0.00]	−0.017 [0.02]	−1.028*** [0.09]	0.016 [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 (Eisfeldt and Papanikolaou, 2013)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dep. Var. =	Logit DIV_D	OLS DIV/TA	Tobit DIV/TA	FFE DIV/TA	Logit REP_D	OLS REP/TA	Tobit REP/TA	FFE REP/TA
OC/TA_EP	**0.013* [0.01]**	**0.001*** [0.00]**	**0.001*** [0.00]**	**0.0004*** [0.00]**	**0.017*** [0.00]**	**0.001*** [0.00]**	**0.001*** [0.00]**	**0.001*** [0.00]**
Constant	0.404 [0.37]	0.006** [0.00]	−0.007 [0.01]	0.005*** [0.00]	−2.094*** [0.24]	−0.011*** [0.00]	−0.101*** [0.01]	−0.009*** [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

Panel C: Alternative measures of organization capital (Ewens et al., 2020)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dep. Var. =	Logit DIV_D	OLS DIV/TA	Tobit DIV/TA	FFE DIV/TA	Logit REP_D	OLS REP/TA	Tobit REP/TA	FFE REP/TA
OC/TA_EPW	**0.312*** [0.09]**	**0.005*** [0.00]**	**0.011*** [0.00]**	**0.005*** [0.00]**	**0.267*** [0.04]**	**0.009*** [0.00]**	**0.020*** [0.00]**	**0.009*** [0.00]**
Constant	−0.053 [0.36]	0.001 [0.00]	−0.015*** [0.01]	0.002*** [0.00]	−2.399*** [0.25]	−0.011*** [0.00]	−0.117*** [0.01]	−0.017*** [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	156,167	155,893	155,893	155,893	156,159	155,893	155,893	155,893
Adj. R^2/Pseudo R^2	0.42	0.17	−0.95	0.53	0.11	0.07	−1.26	0.2

sults in Panel A of Internet Appendix 10 show that the coefficient of *OC/TA* is positive and significant ($p < 0.01$) for all of the regressions but the coefficient of OC/TA^2 is largely insignificant. This finding suggests that relationship between organization capital and payouts is linear.

We further use a piecewise linear specification (i.e., a spline) to examine non-linearity. This specification allows the slope coefficient to vary with different levels of organization capital. Following Wang et al. (2010), we choose the spline cut-off points based on the quintiles of the *OC/TA*. The spline regression results in Panel B of Internet Appendix 10 show that the *OC/TA* is negatively related to cash dividends when the level of *OC/TA* is relatively low (Spline 1), but the coefficients are positive and significant for a higher level of *OC/TA* (Splines 2–5). We also find that the relationship between *OC/TA* and stock repurchases is positive and significant for all levels of *OC/TA* (i.e., Splines 1–5). Overall, we document a linear relationship between organization capital and corporate payouts.

3.5.4. Other sensitivity analyses

We conduct a few other sensitivity analyses to check the robustness of our results. First, following Fama and Macbeth (1973), we use cross-sectional regressions to estimate the relationship between organization capital and payouts. Consistent with the above findings, we observe a positive and significant ($p < 0.01$) relationship between organization capital and both measures of corporate payouts (*DIV/TA* and *REP/TA*) (untabulated). Second, Panel B of Table 1 shows that 21.5% of the firms in our sample belong to the business equipment industry. To mitigate concern about the disproportionate representation of particular industries, we re-estimate the baseline regressions for each of the 12 Fama–French industry groups. The results in Internet Appendix 11 show that the positive relationship between organization capital and payouts holds for all industry sectors. We also rerun the baseline regression after excluding the business equipment industry and obtain qualitatively similar results (untabulated). In addition, we divide the sample into high-tech and nonhigh-tech firms based on the classifications of Barton and Waymire (2004). We then separately run the regressions for both sub-samples. The untabulated results show that the coefficient of organization capital remains positive and statistically significant ($p < 0.01$) for both the high-tech and nonhigh-tech sub-samples and for both cash dividend payments and stock repurchases. Third, we check whether including the 2007–2009 global financial crisis (GFC) period affects the documented positive relationship between organization capital and

payouts in our sample. We re-estimate the baseline regressions after excluding the GFC period (2007–2009). The results in Internet Appendix 12 reveal that the coefficient of *OC/TA* remains positive and statistically significant ($p < 0.01$) for both cash dividend payments and share repurchases. We further re-estimate the regressions for only the GFC sub-sample and obtain qualitatively similar results (untabulated). Fourth, we find that the positive relationship between organization capital and payouts remains robust under quantile regression (0.25, 0.50, 0.75, and 0.95) (untabulated).

4. Potential explanations and channel analysis

4.1. Organization capital and cash dividend payments

4.1.1. Agency problems as a channel for the positive relationship between organization capital and cash payouts

Studies suggest that firms with high agency problems pay more dividends to discipline their managers (Easterbrook, 1984; Jensen, 1986). Given that firms with higher organization capital are exposed to more agency problems (Elsfeldt and Papanikolaou, 2013), we expect such firms to disgorge more cash in the form of dividends. If this agency-based explanation holds, one would expect the positive relationship between organization capital and dividend payouts to be stronger in the presence of higher levels of agency problems.

Studies suggest a few proxies for firm-level agency problems. Drawing on this body of research, we first use the shareholder base (*SHR_BASE*) to measure the extent to which a firm is exposed to agency costs. Studies find that a larger shareholder base indicates more dispersed ownership and more agency problems and that firms with a larger shareholder base pay out more as dividends (Rozeff, 1982; Bodnaruk and Östberg, 2013). Second, we use free cash flow (*FCF*) because managers are naturally motivated to waste cash for self-serving purposes when internal funds exceed investment opportunities (Jensen, 1986). DeAngelo et al. (2009) also suggest that the agency costs associated with free cash flow play a major role in explaining payout policy. Next, we use acquisition (*ACQ*), because agency conflicts between shareholders and managers motivate entrenched managers to undertake inefficient and excessive investments to build empires by growing their firms beyond the optimal size (Jensen, 1986). Other studies also use acquisition to proxy for agency problems (Hope and Thomas, 2008; Giroud and Mueller, 2010). Finally, drawing on the literature that suggests that excessive capital expenditure is a sign of agency problems, we use growth in capital expenditure ($\Delta CAPEX$) as a measure of agency problems (Hope and Thomas, 2008; Giroud and Mueller, 2010).

Given that the above proxies measure agency problems with noise and our focus is on overall agency problems, in the spirit of Aggarwal et al. (2012) we create a composite measure of agency problems (*AGENCY*) based on the sum of decile values of the above four proxies. A higher (lower) value of *AGENCY* indicates more (less) agency problems. This composite measure not only reduces the potential skewness of the distributions of individual proxies but also offers a more reliable measure for our channel analysis. To test the agency argument for distributing cash dividends, we include this variable in the baseline regression and interact this with organization capital ($OC/TA \times AGENCY$). The regression results in Columns (1) to (3) in Table 8 (Panel A) show that the coefficient of the interactive variable is positive and significant at the 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). The inferences from our analysis also remain consistent and qualitatively similar when we use an FFE regression model (untabulated). Finally, when we repeat the analysis for the sub-sample of firms that only pay cash dividends (i.e., $DIV > 0$ and $REP = 0$), we continue to find consistent evidence (see Internet Appendix 13). Overall, the findings of this analysis support our agency-based argument that firms with more organization capital tend to pay more cash dividends in an attempt to minimize agency problems (La Porta et al., 2000).

4.1.2. The signaling motive as a channel for the positive relationship between organization capital and cash payouts

Based on the signaling motive, we postulate that firms with more organization capital may distribute more cash dividends to signal their prospects to outsiders. Research shows that the signaling motive for distributing dividends is stronger in the presence of information asymmetry between corporate insiders and outside shareholders (Bhattacharya, 1979). Thus, in the context of our study, if the signaling-based explanation for dividend distribution holds, one would expect the positive relationship 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 studies indicate that this is a suitable market-based 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 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 they 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 studies of the dividend-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 values of the above four proxies. A higher (lower) value of *SIGNAL* indicates more (less) information asymmetry. Panel B of Table 8 presents the results for the signaling-based explanation for dividend distributions by firms with more organization capital. We include a proxy for information asymmetry in the baseline regression and interact this with organization capital ($OC/TA \times SIGNAL$). A positive and significant coefficient of the interaction term will provide support for our signaling-based explanation.[10] The regression results in Columns (1) to (3) in Panel B of Table 8 show that the coefficient of the interactive variable is positive and significant ($p < 0.01$), implying that firms with more organization capital distribute more cash in the presence of information asymmetry and thus lending support to our signaling-based explanation. However,

[10] As signaling theory suggests that dividend *changes* convey managers' information about future prospects, we use change in dividends rather than level of dividends as the dependent variable (Al-Yahyaee et al., 2011). We thank an anonymous reviewer for this insightful suggestion.

Table 8
Potential explanations: organization capital and cash dividends. This table reports the results for potential explanations of the positive relationship between organization capital and cash dividends. Panel A summarizes the results for the agency-based explanation and Panel B presents the results for the signaling-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. Descriptions of the 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)
Dep. Var. =	Logit DIV_D	OLS DIV/TA	Tobit DIV/TA	Logit DIV_D	OLS DIV/TA	Tobit DIV/TA	Logit DIV_D	OLS DIV/TA	Tobit DIV/TA	Logit DIV_D	OLS DIV/TA	Tobit DIV/TA	Logit DIV_D	OLS DIV/TA	Tobit 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]**
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
Other controls	Yes	Yes	Yes	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	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

(*continued on next page*)

Table 8 (*continued*)

Panel B: Signaling motives as a channel for cash dividends

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
Dep. Var. =	OLS ΔDIV/TA	Tobit ΔDIV/TA	FFE ΔDIV/TA	OLS ΔDIV/TA	Tobit ΔDIV/TA	FFE ΔDIV/TA	OLS ΔDIV/TA	Tobit ΔDIV/TA	FFE ΔDIV/TA	OLS ΔDIV/TA	Tobit ΔDIV/TA	FFE ΔDIV/TA	OLS ΔDIV/TA	Tobit ΔDIV/TA	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*** **	**0.193*** **	**0.022*** **												
	[0.00]	**[0.05]**	**[0.01]**												
SPREAD				0.658***	6.224***	0.352**									
				[0.09]	[0.64]	[0.14]									
OC/TA* SPREAD				**0.686*** **	**3.119** **	**0.794** **									
				[0.20]	**[1.42]**	**[0.31]**									
|DAC|							0.040	−0.034	0.004						
							[0.03]	[0.12]	[0.03]						
OC/TA* |DAC|							**0.085**	**−0.157**	**0.170**						
							[0.10]	**[0.52]**	**[0.12]**						
R&D										0.000	−5.557***	0.190***			
										[0.02]	[0.41]	[0.03]			
OC/TA* R&D										**0.284*** **	**6.609*** **	**0.267*** **			
										[0.05]	**[0.91]**	**[0.08]**			
INST													0.098***	0.621***	0.068***
													[0.01]	[0.05]	[0.02]
OC/TA* INST													**0.052**	**−0.101**	**0.240*** **
													[0.04]	**[0.14]**	**[0.06]**
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
Other controls	Yes	Yes	Yes	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	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 explanations: organization capital and stock repurchase. This table reports the results for potential explanations of the positive relationship between organization capital and stock repurchases. Panel A presents the results for the incentive compensation-based explanation and Panel B summarizes the results for the signaling-based explanation of stock repurchases. 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. Descriptions of the 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]**
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
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
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 share repurchases

	(1)	(2)	(3)	(4)	(5)
	Logit	Logit	Logit	Logit	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]			
|DAC|			−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]
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
Other controls	Yes	Yes	Yes	Yes	Yes
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

in Columns (4) to (15) we find that the positive and significant coefficient of the interaction remains robust for the *SPREAD* and *R&D* but not for the |*DAC*| and *INST* measures of information asymmetry. When we repeat the analysis for sub-samples of firms that only pay cash dividends (i.e., $DIV > 0$ and $REP = 0$), we find that the interactive coefficients are significant in only 4 of the 15 regression models (see Internet Appendix 14). Overall, the findings in Panel B of Table 8 provide relatively weak evidence for the signaling-based explanation for dividend distribution.

4.2. Potential explanations: organization capital and stock repurchases

4.2.1. Incentive compensation as a channel for the relationship between organization capital and share repurchases

As organization capital is embodied in a firm's key talents, firms tend to design executive compensation contracts to retain these talents (Eisfeldt and Papanikolaou, 2013). Based on prior evidence, we argue that incentive compensation motivates managers to re-

purchase stocks to reduce the number of outstanding stocks and to increase per share value and bonus compensation (Young and Yang, 2011). With this endeavor, we argue that managerial incentive compensation is a potential channel for the positive relationship between organization capital and share repurchases.

In Panel A of Table 9, we present the results of our baseline regression models using both equity intensity and option intensity as moderating factors. Following Humphery-Jenner et al. (2016), we define equity intensity (*EQU_INT*) as the proportion of total annual executive compensation that consists of option grants and stocks and define option intensity (*OPTN_INT*) the proportion of total annual executive compensation that arises from option grants. In Columns (1) to (4), consistent with the baseline regressions, organization capital exhibits a positive association with the likelihood and level of share repurchases. More interestingly, the interaction variable (*OC/TA* × *EQU_INT*) generates positive and significant ($p < 0.05$ or better) coefficients in all of the regression models. We find similar evidence when option intensity (*OPTN_INT*) is used as the moderating factor in Columns (5) to (8). Finally, when we repeat the analysis for the sub-sample of firms that only repurchase stocks (i.e., *REP* > 0 and *DIV* = 0), we continue to find that the interactive coefficients are positive and significant ($p < 0.05$ or better) (see Internet Appendix 15). Overall, the findings of this analysis indicate that managerial incentive-based compensation prompts firms with more organization capital to buy back more stocks, lending support for our incentive compensation-based explanation.

4.2.2. The signaling motive as a channel explaining the relationship between organization capital and share repurchases

We argue above that firms with more organization capital may be incentivized to repurchase shares to signal their improved prospects to outsiders. This signaling is more important and effective in the presence of a high level of information asymmetry. Thus, the signaling-based explanation for stock repurchases suggests that the positive relationship between organization capital and stock repurchases is magnified for firms with greater information asymmetry.

Panel B of Table 9 empirically tests the above explanation. We use the same signaling proxies as used for signaling cash dividend payments (see Section 4.1.2.). In Column (1), we find that the 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 the coefficients of the interaction term are mostly insignificant.[11] Thus, the findings from Panel B of Table 9 provide weak support for the signaling-based explanation for stock repurchases.

5. Conclusion

We examine whether and how the organization capital of a firm is associated with its payout choices. Using a large sample of U.S. firms during the period 1980–2017, we find that firms with high levels of organization capital are more likely to pay cash dividends and pay larger 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 dividend payments, share repurchases, and organization capital, and after controlling for endogeneity concerns. We also show that our results remain robust irrespective of the use of logit, OLS, tobit, and FFE regression estimates. We further examine alternative channels that might explain the positive association between organization capital and payouts. We show that the positive association between organization capital and cash dividend payments (share repurchases) is mainly driven by agency problems (executive compensation incentives). Our findings show weak evidence for the signaling argument for corporate payouts.

Overall, our paper contributes to the payout literature by documenting the extent to which payout decisions are influenced by a key tacit asset, organization capital. We also provide insights for the emerging literature on organization capital. Our findings have important implications. For example, intangibles such as organization capital are often overlooked by policy makers and investors due to the nature of accounting disclosure practices and difficulty in valuation. The findings of our study suggest that understanding the relationship between this capital and major corporate policies may assist stakeholders in taking apposite investment and financial decisions and thereby reduce market frictions.

Declaration of Competing Interest

None.

Supplementary materials

Supplementary material associated with this article can be found, in the online version, at doi:10.1016/j.jbankfin.2021.106395.

Appendix A. Descriptions of variables

[11] As it is likely that only the first announcement acts as a signaling device, we use a first repurchase announcement indicator (*REP*) to test the signaling argument for stock repurchases. We collect share-repurchase announcement data from the Thomson Reuters SDC Platinum database. We continue to obtain weak evidence for the signaling-based argument for stock repurchases when we use changes in stock repurchases (Δ*REP/TA*) in place of the first repurchase announcement indicator (see Internet Appendix 16)

Variable	Description
	An indicator variable that equals 1 if a firm pays dividends ($DVC > 0$), and 0 otherwise.
Dependent Variables	
DIV_D	
DIV/TA	Dividend payments, measured as the ratio of cash dividends (*DVC*) to total assets (*AT*).
REP_D	An indicator variable that equals 1 if a firm 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 ratio of stock repurchases to total assets (*AT*).
	Organization capital scaled by lagged total assets (*AT*) (see Section 2.2 for details).
Independent Variables	
OC/TA	
Control Variables	
SIZE	Natural log of market value of equity ($PRCC\_F \times CSHO$).
MTB	Market-to-book ratio, calculated as the market value of assets (($PRCC\_F \times CSHO$) + ($DLTT + DLC$)) divided by the book value of assets (*AT*).
LEV	Financial leverage, measured as the ratio of the sum of short-term and long-term debt ($DLC + DLTT$) to total assets (*AT*).
R&D	Research and development expenses, measured as R&D (*XRD*) over total assets (*AT*). We replace missing R&D with 0.
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 buy and hold stock return.
SD_RET	Standard deviation of daily stock returns over the year. Asset tangibility, measured as the net property, plant, and equipment (*PPENT*)
TANG	scaled by total assets (*AT*). Industry concentration, measured as the sum of the squared market shares of each firm in the same
IND_CON	industry (2-digit SIC codes) during a year. Market share is defined as the total sales of a firm in a given year divided by the total sales of the industry in the year.
Other Variables	
DIV/MVE	Dividend payments, measured as the ratio of cash dividends (*DVC*) to market value of equity ($MVE = PRCC\_F \times CSHO$).
DIV/EBIT	Dividend payments, measured as the ratio of cash dividends (*DVC*) to earnings before interest and taxes (*EBIT*).
REP/MVE	Share repurchases, measured as the ratio of share repurchases to market value of equity (*MVE*).

(*continued on next page*)

Variable	Description
REP/EBIT	Share repurchases, measured as the ratio of share repurchases to earnings before interest and taxes (*EBIT*).
OC/TA_EP	Organization capital measure of Eisfeldt and Papanikolaou (2013).
OC/TA_EPW	Organization capital measure of Ewens et al. (2020) using industry-level parameter estimates (fraction of SG&A and depreciation rates).
OC/TA_ES	Organization capital measure of Enache and Srivastava (2018) using the investment component of SG&A as a proxy for organization capital.
MA_SCORE	Managerial ability score developed by Demerjian et al. (2012) using data envelopment analysis to capture how efficiently managers can convert firm resources into revenues relative to their peers in the same industry. The authors first calculate firm efficiency using an optimization procedure, then regress it on firm characteristics that affect firm efficiency. The residual term derived from this regression is the component reflecting managerial ability.
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 measure of Whited and Wu (2006).
TAKEOVER_INDEX	Corporate governance measures of Cain et al. (2017).
/DAC/	Performance-matched discretionary accruals following Kothari et al. (2005).
IND_GRW_UNC	Industry-level growth uncertainty measure.
INST	Percentage of common shares held by institutional investors.
SHR_BASE	Shareholder base, defined as the natural log of one plus common/ordinary shareholders (*CSHR*).
FCF	Free cash flow, defined as operating income before depreciation (*OIBDP*) minus interest and related expenses (*XINT*) minus income taxes (*TXT*) minus common dividends (*DVC*). We scale free cash flow by total assets (*AT*).
ACQ	Acquisitions (*AQC*) scaled by total assets (*AT*).
ΔCAPEX	Growth in capital expenditure (*CAPX*).
SPREAD	Bid-ask spread.
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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