Annual Report Readability, Financial Flexibility, and Payout Policy

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ABSTRACT

This study examines the relation between annual report readability and corporate payouts. Using the *BOG Index* as the primary measure of readability, we find that firms with more easily readable annual reports have higher payout levels. Cross-sectional analyses show that the effect of readability on payouts is stronger for firms with financial constraints, greater investment opportunities, and higher needs for external financing. Our results are robust to potential endogeneity concerns and alternative proxies for annual report readability and corporate payouts. These results suggest that greater readability of mandated disclosures enables firms to have higher payouts by improving financial flexibility.

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1. Introduction

Annual reports (Form 10-Ks) are the primary channel through which corporate insiders disseminate information to various stakeholders. Since most financial market participants do not have access to non-public information about a firm, they rely on the information contained in such reports to make their decisions. Prior research provides evidence that some managers may obfuscate the contents of their annual disclosures to camouflage their self-serving behavior.[1] Specifically, managers may deliberately reduce financial reporting quality so that outsiders find it difficult to detect their self-interest motive to underpay dividends and overinvest available free cash flow (Koo, Ramalingegowda, and Yu, 2017). Considering that managers have the discretion in making their firm's annual reports more readable, the SEC's plain English rule of October 1998 stresses that all consumers of firm disclosures, especially the least sophisticated investors, should be able to benefit from clear writing and ease of readability. Firms that provide easily readable financial disclosures receive improved credit ratings and have access to lower-cost debt (Bonsall and Miller, 2017; Ertugrul, Lei, Qui, and Wan, 2017). However, it is an empirical question about whether managers transfer such benefits to their shareholders through their internal financial policies. Our research considers that managers act in the interest of shareholders by disclosing information through easily readable annual reports to benefit from financing at more favorable terms. We posit that such financing availability improves the internal resource allocation that ultimately results in increased payouts to shareholders.

[1] Firms that do not provide easily readable annual disclosures are found to have less persistent earnings (Li, 2008), engage in higher earnings management (Lo, Ramos, and Rogo, 2017), have greater analyst coverage dispersion (Lehavy, Li, and Merkley, 2011), and experience higher stock price crash risk (Kim, Wang, and Zhang, 2019).

In the face of financial constraints, firms may generate funds internally by reducing dividend payout to potentially fill precautionary needs, continue business operations without disruption, and finance profitable projects without forgoing them. By making the mandated disclosures more readable, firms obtain favorable credit ratings resulting in more financial flexibility (Bonsall and Miller, 2017). More easily readable disclosures are shown to reduce informational risk to creditors, and the resulting lower cost of debt is ultimately passed on to shareholders (Ertugrul, Lei, Qui, and Wan, 2017). The increased flexibility induced by more readable mandated reports reduces the need for retaining internal funds by cutting back on dividend payout. Hence, *ceteris paribus*, firms will be serving their shareholders better by increasing payouts and transferring the benefits of improved financial flexibility to their shareholders. The above arguments imply that firms face a wedge between the costs of internal and external funds.[2] It is important to note that the financial flexibility argument doesn't necessarily suggest that greater readability *requires* higher payouts. Instead, the theory supports better readability improving financial flexibility through greater access to external finances, which is expected to increase payouts.

While the above reasoning may appear obvious, there are at least three reasons for the argument to fail. First, firms are often forced to choose between dividend payments and investment when faced with capital restrictions (Brav, Graham, Harvey, and Michael, 2005; Daniel, Denis, and Naveen, 2008). Bonsall and Miller (2017) show that these financially constrained firms may obtain better credit ratings and access to external finance by making their corporate disclosures more transparent. Whether the availability of external funds translates to a higher payout is questionable. Khieu and Pyles (2016) show that when firms receive an upgrade in their rating, they

[2] This idea is similar in the spirit of Kaplan and Zingales (1997), who define financial constraint as a wedge between internal and external costs of capital.

prefer to use the external funds to increase their investment but not the payout due to dividends' sticky nature. Hence, even if corporate narratives are easily readable, they do not impact the payout policy. Second, firms with profitable investment opportunities have been found to reduce underinvestment by improving their reporting quality and attracting more external funds (Biddle, Hilary, and Verdi, 2009). In this context, even if we do not consider the sticky nature of dividends, shareholders are better served if managers use the additional funds to reduce underinvestment rather than payout dividends. Third, sometimes, even when managers take every effort to be transparent, the economic environment and business complexity may fail to alleviate the uncertainty associated with future earnings (Bloomfield, 2008). This failure leaves the perception of external capital providers unchanged, resulting in no financial flexibility and, consequently, payouts.[3] Hence, whether the improved financial flexibility due to easily readable annual reports translates to higher corporate payouts is an empirical question that we address in this paper.

Our dataset contains 76,668 firm-year observations, spread over a period from 1994 to 2017, and across the range of Fama-French 12-industry classification. We use the *BOG Index* (*BOG*), developed in Bonsall IV et al. (2017), as our primary proxy for readability and provide robustness checks using other readability measures.[4] After controlling for firm characteristics (size, leverage, cash flow, tangibility, lagged dividends), profitability (return on assets and Tobin's q), and shareholder base, we show that better readability is associated with an increase in both cash dividend payout and total corporate payout (dividends plus share repurchases).

[3] For example, even after filing a quarterly report, managers of Nice Ltd persevered to explain the economic reality of their business during a conference call on May 14, 2020. Due to the disruption caused by the COVID-19 pandemic, the managers could not provide an update to earlier guidance regarding the firm's future earnings. Despite an active Q&A session, security analysts left the call with many unanswered questions and remained unclear about the future holds.

[4] *BOG Index* captures the plain English attributes mentioned explicitly in the SEC guidelines. Prior literature has used the Fog Index (Gunning, 1952), file size (Loughran and McDonald, 2014a), and LM PE Index (Loughran and McDonald, 2014b) as measures of readability.

Our empirical tests show that improved financial flexibility is indeed the mechanism through which annual reports' readability affects corporate payouts. Because readability has been shown to improve a firm's access to lower cost of debt, we expect the positive relation between readability and payouts to be more pronounced among firms that have a greater need for access to external capital, i.e., firms that are strapped for funds due to financial constraints and those that have profitable investment opportunities.

Financially constrained firms have a low credit rating as reflected in their bond ratings (Opler, Pinkowitz, Stulz, and Williamson, 1999), experience costly access to external funds (Blanco, Brennan, and Marsh, 2005), and a have higher propensity to save as a precautionary measure (Keynes, 1936; Almeida, Campello, and Weisbach, 2004). Consequently, we expect the financially constrained firms to benefit from the lower cost of external capital that results from greater readability of 10-K reports. We classify financially constrained firms by their credit rating (Louis and Urcan, 2015) and a proxy for the cost of financial distress.[5] Our findings indicate that the more readable annual reports published by financially constrained firms are associated with a more pronounced increase in payout than firms that are not financially constrained.

Next, we examine the impact of readability among firms that differ in their investment opportunity set. The ability to obtain financing is more crucial for firms with profitable investment opportunities that lead to higher growth. If such firms' annual reports suffer from lack of readability, they are likely to incur a higher borrowing cost and consequently must reduce their payout to pick up the shortfall. Such firms will be able to restore their payout by taking advantage of lower-cost loans that result from making their mandatory disclosures more readable. Firms with relatively limited investment opportunities are unlikely to need as much external financing and,

[5] Our results (unreported) remain unchanged if we use WW and SA index.

consequently, the readability of annual reports may not matter as much. We show that more readable yearly statements made available by firms having greater investment opportunities are associated with a more pronounced positive relation with their payouts. The positive relationship is also stronger for firms that need external financing.

It is conceivable that some unobservable variables could be correlated with readability and corporate payout.[6] We conduct a series of tests to mitigate potential endogeneity concerns. First, we attempt to provide some evidence of causality by exploiting an exogenous shock (e.g., the Plain Writing Act (PWA) of October 2010) to the readability. This act's passage is the first attempt at the federal level to make government disclosures easier to read by the public. We conjecture that the PWA had an incremental and disproportionate effect on the readability of annual reports filed with SEC. Using a difference-in-difference regression specification, we find that increase in readability tied to the PWA shock is accompanied by an increase in corporate payouts. Second, falsification tests and instrumental variable analyses suggest that omitted variable bias is not severe in our analyses. Third, changes in the financial statement readability are also positively associated with the changes in the payout. Finally, using the propensity score matching (PSM) approach, we ensure that the results are robust to endogeneity concerns related to the functional form of model misspecifications (FFM). Additionally, we subject our results to robustness tests, including the impact of business complexity on readability, alternative measures of readability, and relative dividend premium influence. Taken together, these results consistently support our baseline findings that more readable annual reports are associated with higher corporate payouts.

[6] For example, Marissa Mayer, appointed as Yahoo CEO in July 2012, started her first earnings conference call with a discussion of "the vision and direction for Yahoo moving forward…Our goals are simple: execute faster, return value to our shareholders, attract the best talent, and make Yahoo the absolute best place to work." This statement highlights that omitted variables such as managerial style is potentially correlated with clarity in disclosure to stakeholders and returning value (directly as payout policy and indirectly as higher firm valuation).

Alternate explanations may explain our findings. For example, in this paper, we view the complexity of financial statements as a distinct form of an attribute of a firm's financial statement- a linguistic complexity that can be interpreted as how hard it is to read and process the supplied information by an outsider. However, one can argue that this readability measure could be correlated with other financial reporting attributes (e.g., accounting quality, accounting comparability, earnings persistence, earnings management, accounting conservatism, etc.). Existing literature provides empirical evidence on the impact of these variables on corporate payouts (e.g., Kim et al., 2017; Koo et al., 2017; Ramalingegowda et al., 2013; Louis and Urcan, 2015; among others). Moreover, these accounting variables could be the reasons why a firm's financial statement is less readable. Arguably, it is not clear whether our main results have captured these accounting variables' effects on payouts. We attempt to rule out these possibilities by estimating the baseline model while controlling for these accounting variables and their interactions with our proxy for readability, i.e., *BOG Index*. Finding an insignificant coefficient on these interaction variables and a significant coefficient on *BOG Index* will ensure that the relation between readability and payouts is less likely to be influenced by these accounting variables. As expected, we find that our main results remain statistically significant, implying that the relation between the readability of financial statements and payout is not due to any underlying influence of the above accounting attributes.

Our study contributes to a growing literature on the causes and consequences of a firm's financial statement's textual properties. First, prior studies linked 10-K readability to less persistent earnings (Li, 2008), higher earnings management (Lo, Ramos, and Rogo, 2017), greater analyst coverage dispersion (Lehavy, Li, and Merkley, 2011), the worse credit rating (Bonsall and Miller, 2017), higher stock price crash (Kim, Wang, and Zhang, 2019) and higher cost of debt (Ertugrul,

Lei, Qui, and Wan, 2017). We add to this literature by showing that readability influences financial flexibility and has an economic impact on an important corporate decision – payout policies.

Second, we contribute to a growing body of literature on financial flexibility as a determinant of corporate payout policy. Financial flexibility can be defined as a firm's ability to access and restructure financing at the lowest cost (Gamba and Triantis, 2008). Hence, firms with financial flexibility can avoid underinvestment and financial distress in a bad state of the world. Consistent with these views, empirical studies show that corporate payouts are positively associated with conglomerates (Jordan et al., 2018), shareholder base (Bodnaruk and Östberg, 2013), credit supply (Bliss et al., 2015; Abreu and Gulamhussen, 2013), and financial flexibility (Kumar and Vergara-Alert, 2018; Rapp et al., 2014; Booth et al., 2019) and are negatively associated with cashflow uncertainty (Chay and Suh, 2009). Given that greater readability of financial statements reduces a firm's information risk and, thereby, external finance cost, readability can provide a firm with financial flexibility. We show empirically that better readability, through financial flexibility, is associated with higher payouts.

Finally, our study emphasizes that attempts to improve the readability of nonquantitative information in a financial statement are linked to firm value maximization. Since both academics and professionals consider corporate payouts an essential factor in a firm's valuation model, we argue that managers can also maximize shareholder value by writing easy-to-read financial statements. Moreover, given that managers have the discretion in making their firm's annual reports more readable, the SEC's plain English rule of October 1998 stresses that all consumers of firm disclosures, especially the least sophisticated investors, should be able to benefit from clear writing and ease of readability. Our findings are crucial to understanding whether the SEC’s plain English mandate of October 1998 has value relevance.

The paper is organized as follows. Section 2 discusses the existing literature and empirical prediction. Data and samples are presented in Section 3. We discuss the main findings in Section 4. Section 5 presents robustness and additional analyses. Finally, Section 6 concludes the paper.

2. Related literature and hypotheses development

2.1. Readability, information asymmetry, and costly external financing

As corporate insiders, managers of a firm enjoy an information advantage over investors regarding the firm's risk and return prospects. Managers try to convey their superior firm-specific information to outside investors through the 10-K reports, which are considered one of the most credible and widely used mediums. Despite that, the key numbers in financial statements disclosed before the filing dates, the remaining information (e.g., Management Discussion and Analyses (MD&A)) is of great value to investors (e.g., Jegadeesh and Wu, 2013; Loughran and McDonald, 2011; Brown and Tucker, 2011; Feldman et al., 2010; You and Zhang, 2009; Griffin, 2003; among others). Managers seem to routinely disclose important supplementary information in MD&A, which can also be used by outside investors to assess how the current performance of a firm could shape future performance. In addition, accounting rules and practices sometimes limit the disclosure of key financial factors in the financial statements. For instance, accounting rules may not allow capitalization of expenditures related to investment in research and development or expenditure on human capital development. Given the importance of such investments as the drivers of success, managers have the opportunity to convey this vital inside information in the MD&A section of 10-K report (e.g., Campbell et al., 2014; Merkley, 2014; Kravet and Muslu, 2013). However, the usefulness of a 10-K report for outside investors depends largely on how easy it is to read or whether the information processing costs are low.

Prior studies demonstrate a link between less readable financial statements, *aka* complex financial statement, and information processing costs for investors (Li, 2008; You and Zhang, 2009; Lehavy et al., 2011; Lee, 2012; Lawrence, 2013; Loughran and McDonald, 2014; Dyer et al., 2017; Miller, 2010; Bushee et al., 2018). Specifically, the less readable financial statement requires investors to spend more time understanding and forming a meaningful interpretation of the filings. Poor readability could also emanate from various sources such as managerial inability to communicate valuable inside information, the complexity of business operations, financial reporting requirements, or managerial discretion (Dyer et al., 2017; Lo et al., 2017; Li, 2008). Whatever might be the reason, a hard-to-read 10-K report can hinder the process of conveying valuable inside information to investors. Therefore, firms with less readable financial statements are associated with having greater information asymmetry.

A growing body of literature has addressed different aspects of financial statements readability. For example, complex financial statements are associated with less accurate and dispersed analyst forecasts (Bozanic and Thevenot, 2015), with higher stock price crash risk (Kim et al., 2019), less favorable ratings, greater bond rating agency disagreement, and higher cost of debt (Bonsall and Miller, 2017), and with managerial information hoarding and increased cost of external financing (Ertugrul et al., 2017). Hence, poor readability of financial statements can lead to market friction and a wedge between internal and external finance costs of financing.

2.2. Transaction costs of financing and corporate payouts

In Modigliani and Miller (MM)'s perfect capital markets, the dividend policy should have no impact on a firm's value. This dividend irrelevance theory argues that shareholders are indifferent between receiving dividends or investing the retained earnings in new business opportunities with the same risk level. One of the key assumptions here is that the firm's managers and shareholders

have no information asymmetries among them. However, in the presence of capital market imperfections (e.g., information frictions), shareholders become no longer indifferent, affecting their demand for dividends. *Ceteris paribus*, rational shareholders would expect the managers to minimize the transaction costs associated with raising external funds. In this context, shareholders prefer managers to retain earnings as precautionary savings to meet future liquidity shortfalls in a bad state of the world for which internal funds are inadequate to finance investment opportunities. In contrast, shareholders may demand higher dividends to minimize the agency costs of external equity. Thus, on the one hand, an increase in dividend payout relative to earnings lowers agency costs; on the other hand, it raises the transaction costs of external financing. Hence, the sum of these two opposing factors determines a firm's payout ratio (Rozeff, 1982). In this paper, we mainly focus our attention on the transaction cost of external finance by arguing that less readable financial statements as a form of market imperfection may increase external financing transaction costs through information asymmetry.

Costly access to external finance could be treated as an increment to the transaction cost curve. One way to moderate this upward slopping transaction cost curve is to seek financial flexibility through reducing payouts. To better understand the dynamics of the transaction cost curve on corporate payouts, we can use the optimal payout illustration of Rozeff (1982) and set a hypothetical example using two firms, A and B. Suppose both firms have identical funds for reinvestment (before payouts) but generate different level of cash flows over three years (i.e., suppose firm A generates a steady cashflow of $5 each year, but firm B generates variable cashflows of $1, $7, and $6). Holding other factors constant, firm B may have to borrow in year one and incur financing costs to mitigate such cashflow shortfall. Given costly external financing, regardless of firm A's optimal dividend payout, firm B will more likely pay out a lower fraction of

earnings in an attempt to minimize not only the transaction cost but also its dependency on external financing. Consistent with this view, prior studies provide empirical evidence that corporate payouts are positively associated with conglomerates (Jordan et al., 2018), shareholder base (Bodnaruk and Östberg, 2013), credit supply (Bliss et al., 2015; Abreu and Gulamhussen, 2013), and financial flexibility (Kumar and Vergara-Alert, 2018; Rapp et al., 2014; Booth et al., 2019) and are negatively associated with cashflow uncertainty (Chay and Suh, 2009).

2.3. Testable hypothesis

In a world without market imperfections, shareholders would be indifferent in choosing between retaining earnings and receiving dividends as there is no transaction cost of external financing. As a result, the importance of financial statement readability is irrelevant. However, in the presence of information frictions, the readability of financial statements can reduce the costs of those frictions. Therefore, our testable hypothesis comes from the notion that there is a negative relationship between financial statement readability and the cost of external financing. If linguistic complexity is associated with higher information asymmetry (Bushee et al., 2018), stock price crash risk (Kim et al., 2019), and higher cost of external financing (Bonsall and Miller, 2017; Ertugrul et al., 2017), firms with less readable annual report may have to bypass or delay positive NPV projects or incur higher financing cost in raising money from the external sources when internal funds are insufficient. The above argument suggests that readability is negatively related to the wedge between the cost of internal and external funds. In other words, greater readability of annual reports enhances a firm's ability to access financing to fund investment opportunities (i.e., financial flexibility) and reduces financial constraints. Therefore, *ceteris paribus*, firms with greater readability of annual reports, are expected to rely less on internal funds and payout more to their shareholders. We state our hypothesis below:

Hypothesis: Firms with more easily readable annual reports have higher payouts than their counterparts with less readable reports.

3. Data and research design

3.1. Sample selection

We begin our data collection by obtaining dividend payouts and other non-missing financial variables used in this study from Compustat for the period 1994 through 2017. This process yields a total of 120,295 firm-year observations. After merging these observations with the *BOG Index* (*BOG*), we have a total of 87,473 firm-year observations. After dropping the observations from utilities (SIC 4900 – 4999) and financial firms (SIC 6000 – 6999), our final sample contains 76,668 firm-year observations for 10,580 unique firms.

3.2. Using *BOG* as a measure of 10-K readability

To overcome problems related to unreadable prospectus filings, the SEC adopted the 1998 Plain English Mandate, SEC Rule 421(d). The SEC also provided a companion handbook entitled "A Plain English Handbook: How to create clear SEC disclosure documents" that provides clear guidance on plain English writing. In the handbook, the SEC lists several distinct problems commonly encountered in regulatory filings: (1) passive voice, (2) weak or hidden verbs, (3) superfluous words, (4) legal and financial jargon, (5) numerous defined terms, (6) abstract words, (7) unnecessary details, (8) lengthy sentences, and (9) unreadable design and layout. Many studies in accounting and finance have employed the Fog Index developed in Gunning (1952) to measure financial reporting complexity or readability. The Fog Index captures two essential attributes of readability: (a) syllables per word and (b) words per sentence. The index indicates the number of

years of formal education a reader of average intelligence would need to read the text once and understand. A higher Fog index indicates less readability.

In the context of regulatory filings, some multisyllabic words such as "Company," "Depreciation," or "Liability" are well understood by the investor community. Loughran and McDonald (2014) argue that the definition of word complexity in the Fog index results in measurement error and wrongly classifies readable documents as less readable. Loughran and McDonald (2014, p. 1644) advocate the use of file size of the 10-K as an easily calculated proxy for document readability. While both of these measures are quantity-based, the SEC notes that sometimes longer sentences may be required for better clarity. Furthermore, quantity-based measures inadvertently include separate exhibits that are unrelated to the annual 10-K filing requirements. Also, documents containing HTML, XML, PDF, and picture format file attachments can lead to further clutter that erroneously renders reports as poorly readable.

The *BOG Index*, introduced by Bonsall IV et al. (2017), captures almost all the SEC's clear communication guidelines with investors. The *BOG Index* is derived from a commercial software program, StyleWriter, which captures attributes mentioned explicitly in the SEC Plain English Handbook. In particular, the *BOG Index* overcomes the shortcomings related to the recognition of complex words by determining word familiarity based on a proprietary list of over 200,000 words. Thus, the *BOG Index* provides a much more comprehensive set of factors and is calculated using a pre-programmed algorithm and eliminates bias due to discretion.

3.3. Empirical model

To test our hypothesis, we use the following baseline Tobit Regression model:[7]

[7] As our dependent variable (*PAYOUT*) has a significant number of observations with the value of zero and the remaining observations contain only positive values, indicating a "left-censored at zero" situation, we use a Tobit model instead of an ordinary least squares (OLS) method (Wooldridge, 2002).

$$PAYOUT_{it} = \beta_0 + \beta_1 BOG_{it} + \sum_{j=2}^{17} \beta_j \, CONTROLS + Ind_i + Y_t + \varepsilon_{it} \qquad (1)$$

where *PAYOUT* is the cash payout (*DIV*) or total payout (*TP*). *BOG* is the *BOG Index* from Bonsall IV et al. (2017) capturing annual report readability. Higher values of *BOG* indicate low readability. *CONTROLS* are 16 firm-specific control variables that prior literature establish as the key determinates of corporate payout decisions – *ROA*, *TOBINQ*, *INVEST*, *SIZE*, *AGE*, *sdROA*, *DEBT*, *CFO*, *TANG*, *RETE*, *TETA*, *CASH*, *SHARES*, *EQIS*, *DEBTIS*, and lagged *PAYOUT* (Fama and French, 2002; DeAngelo et al., 2006; Becker et al., 2011; John et al., 2011; Fenn and Liang, 2001; Koo et al., 2017). The definitions and explanations of all variables are provided in Appendix A. Ind_i and Y_t refer to the Fama-French 12 industry fixed effects and year fixed effects, respectively. Firms with low payout could be operating in industries requiring complex wording (e.g., nature of business activity includes wide-spread use of jargon) in annual reports. To mitigate this possibility, we control for industry fixed effects and avoid falsely claiming that reduced payout results from lower readability. In the above equation, our coefficient of interest is β_1, which is expected to be negative based on our hypothesis.

We expect a positive sign on *SIZE*, *TANG*, *AGE*, because larger firms, firms with more assets in place, and older firms have more stable earnings, easier access to external finance, and pay more dividends (DeAngelo, DeAngelo, and Stulz, 2006; John et al., 2011). Firms with more *DEBT* have a greater financial risk and tend to pay lower dividends (Fama and French, 2002). We expect a positive sign between payout and cash flow from operations, *CFO* (Fenn and Liang, 2001). Prior literature shows mixed evidence on the impact of lagged payout on the payout of the current period (Lintner, 1956; Brav, Graham, Harvey, and Michaely, 2005; Kim, Lee, Lie, 2017). We include *SHARES* as a control because external financing is costly for firms with a smaller

shareholder base and, consequently, these firms reduce corporate payouts (Bodnaruk and Ostberg, 2013). However, greater capital market access for equity funds can also mean higher dividends. Therefore, we do not have a prediction for the sign on *SHARES*. Following DeAngelo et al. (2006), we include the ratio of retained earnings to common equity (*RETE*) and common equity to total assets (*TETA*) to capture the life cycle of a firm and the composition of equity financing. We expect a positive relation between *RETE* and *PAYOUT*, and similar to DeAngelo et al. (2006), we do not have an expectation on the sign on *TETA*. Because more profitable firms are likely to pay out more, we expect a positive relation between payout and return on assets (*ROA*) and a negative relation between payout and volatility of *ROA*, measured using the standard deviation of *ROA* (*sdROA*). Firms with more growth opportunities would tend to hold more cash and reduce their payout (Fama and French, 2002; DeAngelo et al., 2006). We measure investment opportunities with *TOBINQ* and *INVEST* and expect a negative coefficient on these two variables. Following prior research, we use *EQIS* and *DEBTIS* to control for firms' capital market incentives (Cohen and Zarowin, 2010; Zang, 2011).

[Table 1 about here]

3.4. Summary statistics

Panel A of Table 1 reports the descriptive statistics for cash dividends (*DIV*), total payout (*TP*), readability, and control variables in Eq. (1). The mean (median) values of both *DIV* and *TP* are 0.630 (0.000) and 2.401 (0.000), respectively. Note that both *DIV* and *TP* are scaled by total assets. A higher (lower) value of the *BOG Index* denotes poor (better) readability. For easy interpretation, we multiply the *BOG index* with minus one to measure *READABILITY*, indicating better 10-k readability as values increase. The mean and median values of *READABILITY* are -82.787 and

-83.000, respectively.[8] The mean (median) firm in our sample has *TOBINQ* of 5.527 (1.595), *SIZE* of 5.024 (5.071), *AGE* of 2.675 (2.639), and *DEBT* of 0.418 (0.205). These descriptive statistics of the control variables are similar to those in prior research (e.g., Koo et al., 2017). Panel B of Table 1 reports the Pearson correlations for the baseline variables in our study. The statistically significant and positive correlation between the *READABILITY* and payout variables (*DIV* and *TP*) provides initial support to our main hypothesis that firms with more readable annual reports have a higher payout. The statistically significant correlation between payouts (*DIV* and *TP*) and the control variables is consistent with the expected sign and confirms the need to use these controls in the regressions. Panel C of Table 1 reports the univariate statistics for the key variables in our study. High (low) readability is defined as the value of the *READABILITY* above (below) the sample mean. The mean *DIV* for high (low) readability is 0.791 (0.461). The difference in means is statistically significant at the 1% level, providing initial support to our main hypothesis that firms with less readable annual reports pay out less. The differences in means between high and low readability subsample for other baseline variables are also statistically significant.

4. Main results

4.1. Effect of annual report readability on payouts

We examine both cash dividend (*DIV*) and total payout (*TP*) as dependent variables.[9] We define *DIV* as firm *i*'s dividend yield over time *t*, measured as the common dividend payout (*DVC*), scaled

[8] To put this in perspective, Bonsall IV et al. (2017) find that the *BOG Index* for Wells Fargo, Kroger, and PepsiCo are 2, 14, and 19, respectively. In comparison, the *BOG Index* for Phillips, International FC Stone, and United Technologies are 89, 93, and 81, respectively. Based on the *BOG Index*, the latter three firms' annual reports are relatively less readable.

[9] While dividend payments are more frequent (usually, quarterly), share repurchases are less frequent and are motivated for other reasons (Dittmar, 2000; Jagannathan and Stephens, 2003). Additionally, shareholders pay more taxes on dividend income than on capital gains from tendering shares through a share repurchase. Regardless of these differences between these two different types of payouts, we examine the relation between readability and cash payout as well as total payout (dividends plus share repurchases).

by total assets. *TP* is defined as firm *i*'s dividend plus share repurchase at time *t* scaled by total assets. This paper's primary variable of interest is *READABILITY*, the negative of the *BOG Index* (*BOG*), which refers to the readability of a firm's annual report (Bonsall IV et al., 2017).[10] A higher value of *READABILITY* implies relatively easier readability of 10-K reports. If better readability induces firms to increase their payout, we expect the coefficient on *READABILITY* in Eq. (1) to be greater than zero ($\beta_1>0$). Because our dependent variable, *DIV* or *TP*, is left-censored at 0, we estimate Eq. (1) using a Tobit regression model and present the results in Table 2.[11] We also control for year and industry fixed effects, and the reported *p*-values are based on standard errors corrected for heteroskedasticity and clustered at the firm level.

[Table 2 about here]

When the dependent variable is cash payout (*DIV*), the coefficient on *READABILITY* in column (1) of Table 2 is positive and statistically significant (0.049, $p = 0.000$). In column (2) of Table 2, when the dependent variable is Total payout (*TP*), the coefficient on *READABILITY* is also positive and statistically significant (0.081, $p = 0.000$). Consistent with our prediction, these findings suggest that firms with more easily readable annual reports have higher corporate payouts (both dividend and total payouts). The coefficients on control variables for both cash dividend and total payout models are consistent with previous studies. Specifically, we find that dividends and total payout are negatively related to proxies for growth opportunities, leverage, the volatility of *ROA*, *SHARES*, *DEBTIS*, and *EQIS* and positively related to *ROA*, *SIZE*, *AGE*, *CFO*, *TANG*, and lagged dividends. Our findings are also economically meaningful. For example, the coefficient on

[10] We thank Brian Miller for making the *BOG Index* data available on his website at Kelly School of Business, Indiana University.

[11] In untabulated tests, we also employ the OLS specification and the Fama-MacBeth procedure, which assigns equal weight to each firm-year observation regardless of the number of observations in a given year. Our main findings remain unchanged.

READABILITY in column (1) implies that a one-unit increase in *READABILITY* translates to an increase of 4.9 basis points in cash dividends for an average US firm. This increase in dividends is equal to approximately a 7.8% increase from our sample's mean dividend yield (i.e., 4.9/63). The second regression in column (2) shows that a unit increase *READABILITY* translates to an increase of 8.1 basis points in total payout for an average US firm or approximately 12.9% increase from the mean dividend yield (i.e., 8.1/63) of our sample. Overall, these results align with our prediction that firms with more readable financial statements have higher payouts.

4.2. Readability and financial flexibility

We provide evidence on the financial flexibility channel that renders a positive association between readability and payouts. The intuition behind this relation is simply that linguistic complexity is positively related to the wedge between the cost of internal and external funds, making firms with more readable annual reports, *ceteris paribus*, rely less on internal funds than on costly external financing and paying out more to their shareholders. To gain further insight, we examine how this positive relation differs across firms with varying levels of financial constraints, investment opportunities, and the need for external financing.

4.2.1. Financial constraints

Building on the finding in Ertugrul, Lei, Qui, and Wan (2017), our baseline regression results indicate that firms respond to the lower borrowing cost associated with better readability of mandated reports by increasing their payout ratios. If the documented relation between readability and payouts is driven by costly external finance, we should observe a stronger effect when the firm is financially constrained. In other words, improved financial statement readability may attenuate a firm’s financial constraints (i.e., more readability would lessen a firm’s financial constraints). Hence, the role of better readability in increasing payouts may be more important for financially

constrained firms. Financial constraints arise from frictions such as information asymmetries that make external funds more costly than internal funds, sometimes prohibitively. In a recent paper, Buehlmaier and Whited (2018) use textual analysis to construct measures that detect financial constraints related to specific sources of funds. They find debt appears to be the most important for financial constraints risk. We use the investment-grade bond rating and expected financial distress cost (*ECOST*) as measures of financial constraints.

[Table 3 about here]

A firm's outstanding bond rating is an indicator of how creditors perceive financial risk. As in Louis and Urcan (2015), we categorize firms as investment-grade if the S&P long-term issuer credit rating is BBB+ or above. We define financially constrained firms to have speculative bond ratings (NON-IG, with a rating below BBB+). Additionally, we create a dummy variable *ECOST* with the value of one (zero) if a firm's expected financial distress cost is in the top (bottom) decile of yearly distribution. We provide a detailed calculation of a firm's expected cost of financial distress in the Appendix. We re-estimate Eq. (1) by including *READABILITY* × *CON*, where *CON* is a financial constraint indicating either *NON-IG* or *ECOST*. We expect the interaction term to have a positive sign. The results are reported in Table 3. In columns (1) and (3), the coefficients on *READABILITY* × *NON-IG* for *DIV* (0.040, p = 0.000) and for *TP* (0.051, p = 0.000) are both positive and statistically significant. Besides, in columns (2) and (4), the coefficients on *READABILITY* × *ECOST* for *DIV* (0.037, p = 0.049) and for *TP* (0.126, p = 0.000) are also both positive and statistically significant. Furthermore, the positive coefficients on *READABILITY* across the table indicate that better readability continues to exert an independent effect on both cash dividend and total payout. These findings collectively suggest that a firm's financial constraints partly drive the higher payout associated with better readability.

4.2.2. Investment opportunities and need for external financing

We examine the impact of readability among firms that differ in their investment opportunity set. The ability to obtain financing is more crucial for firms with profitable investment opportunities that lead to higher growth. Such firms will benefit from lower-cost loans by making their mandatory disclosures more readable. If such firms' annual reports suffer from lack of readability, they are likely to incur a higher borrowing cost and consequently must reduce their payout to pick up the shortfall. Firms with relatively limited investment opportunities are unlikely to need as much external financing, and consequently, the readability of annual reports may not matter as much. Hence, we predict the positive relation between *READABILITY* and payout to be stronger for firms with high investment opportunities. We use *TOBINQ* as a proxy for a firm's investment opportunities.

[Table 4 about here]

We re-estimate Eq. (1) by including *READABILITY* ×*INVOP*, where *INVOP* is a dummy variable with the value of one (zero) if a firm's *TOBINQ* is in the top (bottom) decile of yearly *TOBINQ* distribution.[12] In columns (1) and (3) of Table 4, the coefficients on *READABILITY* × *INVOP* for *DIV* (0.056, p = 0.016) and *TP* (0.104, p = 0.003) are both positive and statistically significant. These results indicate that firms with greater investment opportunities are associated with a more pronounced increase in their payouts by easily readable annual reports. Similarly, firms that need external financing may find that improving their financial statements' readability may alleviate the need to retain more internal funds than necessary for liquidity purposes, thereby resulting in increased dividends. Thus, we expect the main findings to be stronger for firms with higher needs for external financing. We implement this test by creating a variable named *NEF* (need for external

[12] The calculation of *INVOP* has *TOBINQ* in it. To mitigate potential multicollinearity problems, we, therefore, drop *TOBINQ* from Eq. (1) when estimating the interaction effect (*BOG* × *INVOP*).

financing), which is a dummy variable with the value of one if a firm's total asset growth is higher than the sustainable growth rate (*ROE*/(1-*ROE*)) during a year, otherwise set to zero (Bodnaruk and Östberg, 2013). We re-estimate Eq. (1) by including *READABILITY* × *NEF* as an interaction variable and reported the results in Table 4. In column (2) and (4), the coefficients on *READABILITY* × *NEF* for *DIV* (0.017, $p = 0.000$) and *TP* (0.052, $p = 0.000$) are both positive and statistically significant. These results suggest that the main findings between readability and payouts are stronger for firms with higher external financing needs. Overall, these findings support the notion that the increase in corporate payouts associated with more readable financial statements varies across firms with varying levels of investment opportunities and the need for external financing.

5. Endogeneity tests, Robustness checks, and Additional analyses

5.1. Endogeneity tests

Our estimation could suffer from correlated omitted variables and possible endogeneity problems. This section attempts to address these issues by conducting several tests: a quasi-natural experiment, falsification tests, instrumental variable analysis, controlling for firm-fixed effects using OLS regression, change regression analysis, and propensity score matching.

5.1.1. The Plain Writing Act (PWA) of 2010 – Quasi-natural experiment

We provide some evidence of the causal relation between readability and payouts by exploiting the Plain Writing Act (PWA) of October 2010 as a positive exogenous shock to the readability of 10-K disclosures. PWA's main purpose was to make the documents produced by government or government entities more readable for the general public (Public Law 111–274, 111th Congress, October 13, 2010). This law's passage is the first attempt that plain English is mandated at the

federal level in the US. As in Hwang and Kim (2017), we argue and show that the PWA had an incremental and positive effect on the financial statement readability filed with the SEC. PWA's important feature is that the primary motive of passing this law is to improve the readability and transparency of government disclosures but not that of 10-K files submitted to the SEC. Any change in the readability of a financial statement associated with PWA can be considered purely exogenous and clean shock to readability.

We employ a difference-in-difference regression specification by creating the treatment group (e.g., firms with low readability before the signing of PWA) and control group (e.g., firms with high readability before the signing of PWA). This experiment's intuition is that if PWA had a positive shock to readability, it is the treatment group who will be affected the most due to their low readability. However, the control group would show less change in their readability tied to PWA because their readability is already high. Thus, based on our central hypothesis that readability is positively related to payouts, firms in the treatment group are expected to exhibit a disproportionate increase in payouts compared to those in the control group.

A firm belongs to the treatment (control) group if it's readability in the pre-PWA period (2008 and 2009) is in the bottom (top) quartile of the distribution. Using the propensity score matching technique, we match each treatment group observation during the pre-PWA period with a control group observation, which has similar characteristics to the treatment group observation.[13] After matching, we compare the annual report readability of the treatment and control group during two years before (2008 and 2009) and after (2011 and 2012) of the introduction of the Plain Writing Act of 2010.

[13] We consider the same control variables from our baseline model (Eq. 1) as firm characteristics to match treatment and control group observations.

Specifically, we conduct our analyses in two steps. First, we assess our experiment's validity by testing whether firms in the treatment group with low readability were affected by the passage of PWA. Second, we examine whether the improvement of annual report readability of the treatment group during post-PWA affects corporate payouts. The results are reported in Table 5.

[Table 5 about here]

Column (1) presents regression estimates with *BOG index* as the dependent variable. A positive and statistically significant coefficient on *the Treat group* in column (1) suggests that the *Treat group* has lower annual report readability during the pre-PWA period. A negative and statistically significant coefficient on *Treat group* × *Post-PWA* indicates that *Treat group* experiences lower *BOG index* (hence, higher annual report readability) during the post-PWA period. This test validates the use of PWA 2010 as an exogenous shock to annual report readability. In column (2), a negative and statistically significant coefficient on *the Treat group* shows that firms with low annual report readability (*Treat group*) pay low cash dividends during the pre-PWA period. More importantly, a positive and statistically significant coefficient on *Treat group* × *Post-PWA* supports our prediction that the improvement of annual report readability of the treatment group during the post-PWA period enhances cash payouts. However, the results reported in column (3) suggest that the PWA passage has no discernible impact on total payouts. One reason could be that total payout includes repurchase, which is flexible (i.e., depends on managerial discretions) and less likely to be affected by exogenous shocks.

5.1.2. Falsification tests

There may be unobservable factors that are associated with both readability and payouts, introducing omitted variable bias. To gauge the severity of this omitted variable problem, we

follow Altonji et al. (2005) 's approach and use the degree of selection on observables as a guide to the degree of selection on the unobservable.

As a first step, we include the main determinants of financial statement readability as additional controls in our baseline regression.[14] If unobservable factors explain the main findings, their effects on payouts would have to be significantly larger, and the coefficient on *READABILITY* should change. However, as reported in columns (1) and (4) of Table 6, READABILITY's coefficients remain significantly positive for both *DIV* and *TP*, respectively. More importantly, the magnitude of the coefficients on *READABILITY* does not change in column (1) and almost similar in column (4) compared to the coefficients reported in baseline regressions in columns (1) and (2) of Table 2.

[Table 6 about here]

Next, following Christensen et al. (2016) and Ljungqvist et al. (2017), we implement a falsification test using a two-stage process. In the first stage, we regress payouts on the determinants of financial statement readability and obtain the predicted value. In the second stage, we regress the predicted value of payouts on *READABILITY* and other control variables used in our baseline regression (Eq. (1)). The idea here is that, if our main findings are spurious or subject to omitted variable biases, we would observe coefficients on *READABILITY* that are almost similar to those reported in the base regression table (Table 2). However, as columns (2) and (5) of Table 6 show, the coefficients on *READABILITY* are very small and statistically insignificant. Overall, these findings suggest that our results are less likely to be driven by the omitted variables or reverse causality.

[14] We use the most common determinants of readability suggested by Li (2008) such as incorporation state (*DLW*), operating complexity (*NBSEG* and *NGSEG*), financial complexity (*NITEM*), special item (*SI*), unusual corporate events (*MADUM* and *SEODUM*). Any other leftover determinants may have already been used as control variables in the main regression model. All of these variables are also defined in the Appendix.

5.1.3. Instrumental variable analysis (2SLS estimation)

Next, we address potential endogeneity concerns further. Specifically, we implement an instrumental variable analysis wherein we predict 10-K readability using two instrumental variables in the first stage and regress payouts on predicted readability in the second stage. We use the two instruments suggested by the literature (Ertugrul et al., 2017) such as (a) the average readability within an industry during a given year and (b) the average readability of firms located in the same area in a given year (i.e., firms that have similar first three digits of a 5-digit zip code). As reported in columns (3) and (6) of Table 6, the coefficients on *READABILITY* for the second stage 2SLS (IV) for both *DIV* and *TP* remain positive and statistically significant. Moreover, statistically significant first stage F-statistics (*p = 0.000)* and statistically insignificant Hansen J statistic ($p = 0.5216$) for both models in columns (3) and (6) suggest that the instruments are not weakly identified, and they jointly satisfy the exclusion restrictions.

5.1.4. Firm-fixed effects and change regression

As mentioned in footnote 6, it is conceivable that some unobservable firm-level variable is correlated with both readability and corporate payout. Since Tobit is a nonlinear function and the likelihood estimator for firm fixed effects could be biased and inconsistent (Honoré, 1992), we control for firm-fixed effects in Eq. (1) in OLS regression specification and attempt to mitigate the likely effect of firm-specific characteristics that are relatively time-invariant. We report the results in columns (1) and (3) in Table 7. The coefficient on *READABILITY* is positive for both *DIV* (0.011) and *TP* (0.035) and significant at the 1% level (p =0.000). These findings imply that the positive association between *READABILITY* and payouts is less likely to be affected by time-invariant firm-level omitted variables.

[Table 7 about here]

We also conduct a change regression as an additional test by using the change in all variables used in Eq. (1). The results are reported in columns (2) and (4) of Table 7. The coefficients on Δ*READABILITY* for Δ*DIV* (0.005, $p = 0.001$) and for Δ*TP* (0.023, $p = 0.001$) are both positive and statistically significant, indicating that the change in readability is positively related to the change in dividend payout. Overall, these results further our understanding of the causality between annual reports' readability and corporate payouts.

5.1.5. Propensity score matching (PSM)

As a final test, we address endogeneity related to functional form misspecification (FFM). Specifically, to rule out the possibility that systematic differences between the firms with high and low readability indeed drive the relationship between *READABILITY* and payouts, we use the propensity score matching (PSM) technique. The report the regression results in Panel B of Table 7.

In columns (1) and (2), we show the regression estimates of PSM's second-stage regression results. Specifically, in an untabulated first-stage model, we run a logit regression to capture a firm's propensity to be included in the high readability group (*Low BOG* = 1), controlling for all baseline variables from Eq. (1). Next, we apply one-to-one nearest neighbor matching for each firm with high and low readability without replacement and run the second-stage Tobit model in column (1) with cash payout (*DIV*) and in column (2) with total payout (*TP*) as the dependent variables. A positive and highly statistically significant coefficient on *High READABILITY* in both columns (1) and (2) is consistent with our baseline findings that high annual report readability increases corporate payouts.

5.2. Robustness check: Alternative measures of readability

This section tests whether the positive *READABILITY-PAYOUT* relationship is robust to other measures used in the extant literature. Accordingly, we use Fog, Flesch, and Kincaid index (Li, 2008) in column (1) through column (3) and the number of words, 10-K file size, percentage of uncertain words, and percentage of weak modal words (Loughran and McDonald, 2011; 2014) in column (4) through column (7) in Table 8. The definitions of these variables are in Appendix A. Collectively, the statistically significant coefficients on these variables suggest that our finding of a positive relationship between annual report readability and the corporate payout is robust to the alternative specification of annual report readability.[15]

[Table 8 about here]

In an unreported table, we also estimate baseline regression with an alternative measure of cash payout (*DIV2*) and total payout (*TP2*). The positive coefficient on *READABILITY* indicates that the *READABILITY–PAYOUT* positive relationship is not sensitive to the use of alternative proxies to measure corporate payouts.

5.3. Additional analysis

5.3.1 *Influence of other accounting attributes*

Arguably, the readability of financial statements can be the consequence of a firm's purposeful accounting practices or reflect other financial statements' attributes. We take steps to ensure that our main findings do not merely capture the relation between payouts and such accounting variables as earning management, earnings persistence, accounting quality, accounting comparability, and accounting conservatism. Specifically, existing literature provides empirical

[15] Unlike other measures, the higher values of FLESCH indicates higher readability.

evidence on the impact of these variables on corporate payouts (e.g., Kim et al., 2017; Koo et al., 2017; Ramalingegowda et al., 2013; Louis and Urcan, 2013; among others). If these accounting variables cause financial statements to be less readable, they cast doubt on whether our tests have, instead, captured the effects of these accounting variables on payouts. We attempt to rule out these possibilities by estimating the baseline model while controlling for these accounting variables and their interactions with *READABILITY*. Finding an insignificant coefficient on these interaction variables and a significant coefficient on *READABILITY* will ensure that the relation between readability and payouts is less likely to reflect these accounting variables.

[Table 9 about here]

Prior studies suggest that firms are reluctant to cut dividends and follow a dividend payout policy that is sustainable in the long-term (Lintner, 1956). This policy is feasible if it is set based on an expected persistent level of earnings (Kormendi and Zarowin, 1996; Skinner, 2008). In the event of transitory or non-persistent earnings falling short of the dividend threshold, firms can potentially resort to earnings management to maintain their expected payout level (Daniel, Denis, and Naveen, 2008). However, if managers do not want the scrutiny of outside investors when they experience a setback in their earnings persistence or if they engage in earnings management, they tend to obfuscate the information contained in the annual reports by making it more complicated i.e., less readable (Li, 2008; Lo, Ramos, and Rogo, 2017). Thus, a concern is that the relation between the readability of financial statement and payouts merely reflects the previously documented relation between readability and earnings persistence or earnings management. We moderate this concern by showing that the main results hold even after controlling for earnings persistence and earnings management.

Specifically, with the spirit of Banerjee et al. (2018), we estimate our baseline regression with an interaction between earnings management and readability (*READABILITY* × *EM*). We measure earnings management as the three-year moving sum of the residuals from the accruals model estimated using the modified Jones model (Dechow, Sloan, and Sweeney, 1995; Hutton et al., 2009). The results are reported in columns (1) and (3) of Table 9 (Panel A). The coefficients on *READABILITY* remain positive and statistically significant. However, the coefficients on the *READABILITY* × *EM* are statistically insignificant.

Next, we augment our baseline regression with an interaction between earnings persistence and readability (*READABILITY* × *EP*) as an additional variable. We measure earnings persistence (*EP*) as an indicator variable with the value of one if *ΔROA* at year *t* and *ΔROA* at year *t+1* have the same sign; otherwise, EP is set to zero (Kim et al., 2019). The results are reported in columns (2) and (4) of Table 9 (Panel A). The positive and statistically significant coefficients on *READABILITY* and insignificant coefficients on the *READABILITY* × *EP* suggest that the effect of *READABILITY* on payout policy is independent of the influence of earnings persistence.

Similarly, we control for the firm's financial reporting quality (Koo et al., 2017), financial statement comparability (Devos et al., 2018), accounting conservatism as interaction terms in Eq. (1), and the results are reported in Panel B of Table 9. These accounting variables are defined in the Appendix. We find that our primary variable of interest, *READABILITY*, remains positive and significant at the 1% level in all the regressions, but the coefficients on the interactions are all statistically insignificant across the tables. Hence, the findings support the notion that financial statements' readability has explanatory power as a determinant of payouts beyond these factors. These results collectively suggest that the impact of readability on payouts does not depend significantly on, or merely capture, a relation between readability and other accounting attributes.

5.3.2 *Effect of readability on cash holdings*

Our previous findings support that the view that firms with less readable financial statements have higher information risk, thereby, higher cost of external financing. To mitigate this market friction, these firms tend to reduce corporate payout and retain a higher fraction of their earnings inside. One can argue that these firms should also exhibit an improved internal liquidity position- an internal cash reserve could be one of them. Particularly, if firms with high readability increase payouts due to less reliance on internal funds or having better access to external financing, we should find a lower cash holding for firms with high readable annual reports. We test this prediction in Table 9. Supporting our conjecture, the negative and statistically significant coefficient on *READABILITY* (-0.002, p = 0.000) in column (1) suggests that cash holdings decrease with an increase in readability.

[Table 10 about here]

5.3.3 *Market preference for dividend*

Baker and Wurgler (2004) suggest a catering theory of dividend, indicating that lower dividends can be explained through a market's (less) preference for dividends model. Specifically, most firms have a high likelihood of paying dividends if firms' shares are traded at a premium (Baker and Wrugler, 2004; Caliskan and Doukas, 2015). Therefore, the positive relationship between *READABILITY* and payouts could merely capture a situation of a market's preference for capital gain over dividends for the firms with low readability. Following Caliskan and Doukas (2015), we address this concern by controlling for relative dividend premium (*RDP*) in our regression. The results are reported in columns (2) and (3) in Table 10. The significantly positive coefficient on *READABILITY* and the insignificant coefficients on *RDP* in both columns (2) and (3) for the cash

payout and total payout rule out the alternative explanation that dividends' market preference drives the positive *READABILITY-PAYOUT* relationship.

6. Conclusion

Annual reports provide essential information to many market participants, including analysts, creditors, shareholders, institutional and retail investors. To level the playing field so that even the least sophisticated investor can understand such reports, the SEC passed a plain English rule in October 1998 requiring firms to make their annual reports more readable. Our testable hypothesis comes from the notion that there is a negative relationship between financial statement readability and the cost of external financing. If linguistic complexity (e.g., intentional managerial obfuscation) is associated with a higher cost of external financing, firms with less readable annual reports may have to bypass or delay positive NPV projects or incur higher financing costs in raising money from the external sources when internal funds are insufficient. This reasoning suggests that readability is negatively related to the wedge between the cost of internal and external funds. Therefore, we hypothesize that *ceteris paribus*, firms with higher readability, are expected to rely less on internal funds and pay out more to their shareholders.

We find that better readable annual reports are associated with a higher corporate payout. Using the *BOG Index* as a proxy for financial statement readability, we find that one unit increase in *READABILITY* results in an approximately 7.8% increase from our sample's mean dividend yield. The increase in payout is more pronounced among financially constrained firms and firms having profitable investment opportunities. Our research highlights that the understanding and interpretation of mandatory reports can influence a firm’s internal financial policy.

Appendix A: Definitions of variables

Variable name	Description
A. Payouts	
DIV	Dividend on common shares (DVC) divided by total assets (AT), multiplied by 100. *Source:* Compustat.
DIV2	Dividend on common shares (DVC) divided by market value of equity (CSHO×PRCC_F), multiplied by 100. *Source:* Compustat.
TP	Total payout (DVC + PRSTKC) divided by total assets (AT), multiplied by 100. *Source:* Compustat.
TP2	Total payout (DVC + PRSTKC) divided by market value of equity (CSHO×PRCC_F), multiplied by 100. *Source:* Compustat.
B. Annual Report Readability	
READABILITY	We measure *READABILITY* as -1×BOG. The *BOG Index* (*BOG*) is a readability measure, which is designed using Editor Software's StyleWriter and indicates the plain English problems in a 10-K filing such as the use of jargon, passive voice, long and complex sentence, and clichés (Bonsall IV et al., 2017). *Source:* https://kelley.iu.edu/bpm/activities/bogindex.html
Low BOG	A dummy variable with the value of one if *BOG* is lower than the average value of *BOG* in a year, otherwise the variable is set to zero. *Low BOG* indicates higher readability.
FOG	Fog index (*FOG*) (Gunning, 1952) captures readability by considering words per sentence and percent of complex words with three or more syllables (Li, 2008). Higher values suggest lower readability. *Source:* http://webuser.bus.umich.edu/feng/
FLESCH	Flesch reading ease index (*FLESCH*) is a readability measure, which evaluates texts based on 100 points. It is measured using the formula: 206.835 – (1.015 × words per sentence) – (84.6 × syllables per word) (Li, 2008). The higher value of *FLESCH* suggests higher readability. *Source:* http://webuser.bus.umich.edu/feng/
KINCAID	Kincaid index is a readability measure, which is measured using the formula: (11.8 × syllables per word) + (0.39 × words per sentence) – 15.59 and suggests the text readability equivalent to a school student at a U.S. grade level (Li, 2008). Higher values indicate lower readability. *Source:* http://webuser.bus.umich.edu/feng/
NWORD	Natural logarithm of the number of words in the 10-K filing in EDGAR (Loughran and McDonald, 2014). Higher values imply lower readability. *Source:* https://sraf.nd.edu/textual-analysis/resources/#LM_10X_Summaries
FILESIZE	Natural logarithm of 10-K file size reported in EDGAR (Loughran and McDonald, 2014). Higher values indicate lower readability. *Source:* https://sraf.nd.edu/textual-analysis/resources/#LM_10X_Summaries
UNCERT	Percentage of uncertainty indicating words in the total number of words in a 10-K filing in EDGAR (Loughran and McDonald, 2011). *Source:* https://sraf.nd.edu/textual-analysis/resources/#LM_10X_Summaries
WMODAL	Percentage of weak modals in the total number of words in a 10-K filing in EDGAR (Loughran and McDonald, 2011). *Source:* https://sraf.nd.edu/textual-analysis/resources/#LM_10X_Summaries

C. Baseline control variables	
ROA	The sum of earnings before extraordinary items (IB), interest expenses (XINT), and deferred tax from income statement (TXDI), scaled by total assets (AT). *Source:* Compustat.
TOBINQ	The ratio of the sum of market value of equity (CSHO × PRCC_F) and total assets (AT) minus book value of common equity (CEQ) to total assets (AT). *Source:* Compustat.
INVEST	The ratio of the sum of R&D expenditure (XRD), capital expenditure (CAPX), and acquisition expenditure (AQC) minus sale of PP&E (SPPE) to total assets (AT). *Source:* Compustat.
SIZE	The natural logarithm of total assets (AT). *Source:* Compustat.
AGE	Firm age calculated as the number of years (plus one) since the firm is listed in CRSP. *Source:* CRSP.
sdROA	Standard deviation of *ROA* during years t - 4 to t. *Source:* Compustat.
DEBT	The sum of long-term debt (DLTT) and debt in current liabilities (DLC), scaled by total assets (AT). *Source:* Compustat.
CFO	A ratio of cash flow from operations (OANCF) to total assets (AT). *Source:* Compustat.
TANG	A ratio of net PP&E (PPENT) to total assets (AT). *Source:* Compustat.
RETE	Retained earnings (RE), scaled by common equity (CEQ). *Source:* Compustat.
TETA	Common equity (CEQ), scaled by total assets (AT). *Source:* Compustat.
CASH	A ratio of cash and short-term investments (CHE) to total assets (AT). *Source:* Compustat.
SHARES	Natural logarithm of number of outstanding common shares (CSHO). *Source:* Compustat.
EQIS	A dummy variable with the value of one if a firm issues common or preferred stock (SSTK > 0) during the year, and otherwise zero. *Source:* Compustat.
DEBTIS	A dummy variable with the value of one if a firm issues long-term debt (DLTIS > 0) during the year, and otherwise zero. *Source:* Compustat.
D. Other variables	
Non-IG	A dummy variable with the value of one if a firm's security is considered as non-investment grade, otherwise the variable is set to zero. We define a firm as non-investment grade if the firm's S&P long-term issuer credit rating is below *BBB+*. *Source:* Compustat.
ECOST	A dummy variable with the value of one (zero) if a firm's expected costs of financial distress is in the top (bottom) decile of yearly distribution. Expected costs of financial distress is calculated as the standard deviation of the ratio of the first difference of a firm's earnings before depreciation, interest, and taxes to average total assets, multiplied by the asset intangibility measured by the ratio of the sum of R&D and advertising expenses to total assets (Graham et al., 1998). *Source:* Compustat.
INVOP	A dummy variable with the value of one (zero) if a firm's *TOBINQ* is in the top (bottom) decile of yearly *TOBINQ* distribution. *Source:* Compustat.
Need for external financing (NEF)	A dummy variable with the value of one if a firm's total asset growth is higher than the sustainable growth rate (ROE/(1-ROE)) during a year, otherwise set to zero, where *ROE* indicates return on equity. *Source:* Compustat.
DLW	A dummy variable with the value of one if a firm's state of incorporation is Delaware during year *t*, otherwise set to zero. *Source:* Compustat.
NBSEG	Natural logarithm of the sum of one and the number of business segments during year *t*. *Source:* Compustat.
NGSEG	Natural logarithm of the sum of one and the number of geographic segments during year *t*. *Source:* Compustat.
NITEM	Total number of non-missing items in Compustat during year *t*. *Source:* Compustat.
SI	A ratio of special items (SPI) to total assets (AT). *Source:* Compustat.

MADUM	A dummy variable with the value of one if a firm is identified as an acquirer during year *t*, otherwise set to zero. *Source:* SDC Platinum.
SEODUM	A dummy variable with the value of one if a firm has seasoned equity offering during year *t*, otherwise set to zero. *Source:* SDC Platinum.
ACCTQUAL	Measures financial reporting quality, calculated as the negative of the standard deviations of the residuals during a five-year window using McNichols (2002) modified Dechow and Dichev (2002) model, estimated for each industry-year (Koo et al., 2017). *Source:* Compustat.
ACCTCOMP	Measures financial statement comparability, which includes the mean of a firm's four highest financial comparability scores in year *t* (De Franco et al., 2011). *Source:* https://mitmgmtfaculty.mit.edu/rverdi/
EP	Measures earnings persistence, calculated as a dummy variable with the value of one if *ΔROA* at year *t* and *ΔROA* at year *t+1* have the same sign, otherwise the variable is set to zero. *Source:* Compustat.
EM	Measures earnings management, calculated as the three-year moving sum of the residuals from the accruals model estimated using the modified Jones model (Dechow, Sloan, and Sweeney, 1995). *Source:* Compustat.
ACCTCONS	Measures conditional conservatism, calculated following Khan and Watts (2009). Firms with higher value of *ACCTCONS* are considered as more conservative. *Source:* Compustat, CRSP.
RDP	*RDP* is the relative dividend premium calculated as the difference between the average market-to-book ratio of the dividend-paying firms and the market-to-book ratio of a firm. *Source:* Compustat.

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TABLE 1

Summary statistics, correlation, and univariate analysis

Panel A: Descriptive statistics

Variable	N	Mean	Std. Dev.	P25	Median	P75
DIV	76,668	0.630	1.765	0.000	0.000	0.000
TP	68,095	2.401	5.305	0.000	0.000	2.248
READABILITY	76,668	-82.787	7.704	-88.000	-83.000	-78.000
ROA	76,668	-0.455	2.235	-0.136	0.036	0.085
TOBINQ	76,668	5.527	21.252	1.134	1.595	2.681
INVEST	76,668	0.153	0.218	0.036	0.087	0.183
SIZE	76,668	5.024	2.584	3.182	5.071	6.868
AGE	76,668	2.675	0.757	2.079	2.639	3.258
sdROA	76,668	0.764	3.547	0.027	0.066	0.196
DEBT	76,668	0.418	1.088	0.032	0.205	0.395
CFO	76,668	-0.161	0.918	-0.055	0.058	0.120
TANG	76,668	0.252	0.234	0.069	0.174	0.367
RETE	76,668	-0.183	13.610	-0.766	0.319	0.863
TETA	76,668	-0.141	3.409	0.244	0.462	0.665
CASH	76,668	0.200	0.238	0.028	0.100	0.283
SHARES	76,668	3.316	1.394	2.366	3.266	4.153
EQIS	76,668	0.754	0.431	1.000	1.000	1.000
DEBTIS	76,668	0.502	0.500	0.000	1.000	1.000

Panel B: Correlation analysis

		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
(1)	*DIV*	1.000																	
(2)	*TP*	**0.557**	1.000																
(3)	*READABILITY*	**0.080**	**0.010**	1.000															
(4)	*ROA*	**0.085**	**0.084**	**-0.051**	1.000														
(5)	*TOBINQ*	**-0.052**	**-0.048**	**0.065**	**-0.748**	1.000													
(6)	*INVEST*	**-0.102**	**-0.071**	**-0.186**	**-0.323**	**0.218**	1.000												
(7)	*SIZE*	**0.280**	**0.313**	**-0.220**	**0.278**	**-0.173**	**-0.093**	1.000											
(8)	*AGE*	**0.268**	**0.183**	0.004	**0.181**	**-0.151**	**-0.183**	**0.336**	1.000										
(9)	*sdROA*	**-0.069**	**-0.067**	**0.063**	**-0.676**	**0.633**	**0.190**	**-0.243**	**-0.150**	1.000									
(10)	*DEBT*	**-0.068**	**-0.077**	**0.063**	**-0.597**	**0.594**	**0.195**	**-0.252**	**-0.090**	**0.489**	1.000								
(11)	*CFO*	**0.112**	**0.115**	**-0.020**	**0.831**	**-0.710**	**-0.420**	**0.319**	**0.205**	**-0.603**	**-0.614**	1.000							
(12)	*TANG*	**0.035**	**-0.028**	**0.217**	**0.056**	**-0.067**	**-0.010**	**0.069**	**0.070**	**-0.062**	**0.014**	**0.099**	1.000						
(13)	*RETE*	**0.022**	**0.018**	**0.044**	**-0.149**	**0.131**	**0.019**	-0.005	**0.022**	**0.125**	**0.149**	**-0.141**	**0.018**	1.000					
(14)	*TETA*	**0.064**	**0.070**	**-0.069**	**0.749**	**-0.751**	**-0.216**	**0.272**	**0.099**	**-0.618**	**-0.845**	**0.715**	**0.039**	**-0.171**	1.000				
(15)	*CASH*	**-0.050**	**0.006**	**-0.254**	**-0.140**	**0.158**	**0.245**	**-0.082**	**-0.196**	**0.133**	**-0.018**	**-0.205**	**-0.383**	**-0.068**	**-0.055**	1.000			
(16)	*SHARES*	**0.149**	**0.174**	**-0.233**	**-0.056**	**0.076**	**0.051**	**0.631**	**0.151**	**0.062**	**0.068**	**-0.038**	**0.030**	**0.032**	**-0.071**	-0.005	1.000		
(17)	*EQIS*	0.002	**0.102**	**-0.153**	**0.060**	**-0.068**	**0.123**	**0.317**	**-0.028**	**-0.066**	**-0.137**	**0.044**	**-0.077**	**-0.027**	**0.129**	**0.092**	**0.176**	1.000	
(18)	*DEBTIS*	**0.008**	-0.006	**0.022**	**0.093**	**-0.099**	**-0.037**	**0.188**	**0.111**	**-0.087**	**0.044**	**0.098**	**0.240**	**0.033**	**0.041**	**-0.364**	**0.125**	**0.007**	1.000

Panel C: Univariate analysis

	High *READABILITY*		Low *READABILITY*		High – Low	
Variable	N	Mean	N	Mean	Diff. in means	*p*-value
DIV	39,246	0.791	37,422	0.461	0.330***	0.000
TP	36,131	2.536	31,964	2.247	0.292***	0.000
ROA	39,246	-0.590	37,422	-0.314	-0.277***	0.000
TOBINQ	39,246	7.071	37,422	3.908	3.163***	0.000
INVEST	39,246	0.122	37,422	0.185	-0.063***	0.000
SIZE	39,246	4.665	37,422	5.400	-0.735***	0.000
AGE	39,246	2.705	37,422	2.642	0.063***	0.000
sdROA	39,246	1.016	37,422	0.499	0.516***	0.000
DEBT	39,246	0.488	37,422	0.344	0.143***	0.000
CFO	39,246	-0.195	37,422	-0.126	-0.069***	0.000
TANG	39,246	0.292	37,422	0.209	0.083***	0.000
RETE	39,246	0.319	37,422	-0.708	1.027***	0.000
TETA	39,246	-0.383	37,422	0.112	-0.495***	0.000
CASH	39,246	0.159	37,422	0.243	-0.084***	0.000
SHARES	39,246	3.147	37,422	3.493	-0.346***	0.000
EQIS	39,246	0.701	37,422	0.809	-0.108***	0.000
DEBTIS	39,246	0.507	37,422	0.498	0.009***	0.005

Notes: This table presents the descriptive statistics for the variables used in baseline regression. All continuous variables are winsorized at the 1st and 99th percentile. Appendix A provides variable definitions.

TABLE 2

Annual report readability and payouts – Baseline

	Dependent variable			
	(1)		(2)	
	Cash payout (*DIV*)		Total payout (*TP*)	
	Coeff.	*p*-Value	Coeff.	*p*-Value
READABILITY	0.049***	0.000	0.081***	0.000
ROA	-0.143	0.132	-0.343***	0.000
TOBINQ	-0.015	0.267	-0.018**	0.021
INVEST	-3.389***	0.000	-2.738***	0.000
SIZE	0.769***	0.000	1.636***	0.000
AGE	1.058***	0.000	1.122***	0.000
sdROA	-0.122*	0.065	-0.001	0.980
DEBT	-0.680***	0.000	-0.520***	0.004
CFO	1.803**	0.011	1.840***	0.000
TANG	0.536***	0.001	-0.638***	0.007
RETE	0.008**	0.031	0.012***	0.008
TETA	-0.128	0.112	-0.179***	0.005
CASH	-0.384*	0.060	1.348***	0.000
SHARES	-0.610***	0.000	-1.174***	0.000
EQIS	-0.179***	0.002	0.293***	0.003
DEBTIS	-0.061	0.195	-0.374***	0.000
Lag(PAYOUT)	0.892***	0.000	0.559***	0.000
Constant	-2.804***	0.000	-3.454***	0.000
Year FE	Yes		Yes	
Industry FE	Yes		Yes	
Pseudo-R^2	0.284		0.111	
Observations	76,668		68,095	

Notes: This table shows the results for the Tobit regression estimates of Cash payout (*DIV*) and Total payout (*TP*) on the annual readability (-1×*BOG*). All variables are defined in Appendix A. The *p*-values are calculated based on robust standard errors clustered at the firm level. *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively.

TABLE 3

Cross-sectional analysis: Financial constraints

	Dependent variable			
	Cash payout (DIV)		Total payout (TP)	
	(1)	(2)	(3)	(4)
READABILITY	0.014**	0.037***	0.033***	0.039***
	(0.025)	(0.000)	(0.009)	(0.001)
READABILITY×NON-IG	0.040***		0.051***	
	(0.000)		(0.000)	
NON-IG	2.956***		3.484***	
	(0.000)		(0.001)	
READABILITY×ECOST		0.037**		0.126***
		(0.049)		(0.000)
ECOST		2.006		7.798***
		(0.185)		(0.001)
Control variables	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
Pseudo-R^2	0.281	0.286	0.110	0.107
Observations	73,457	26,322	65,117	23,349

Notes: This table shows the effect of financial constraints and investment opportunities on the relation between annual report readability (-1×*BOG*) and corporate payouts. Firm's financial constraints are represented as non-investment grade (*Non-IG*) and expected cost of financial distress (*ECOST*). All the regression models include an unreported intercept. The *p*-values are calculated based on robust standard errors clustered at the firm level. *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively. All variables are defined in Appendix A.

TABLE 4

Cross-sectional analysis: Investment opportunities and need for external financing

	Dependent variable			
	Cash payout (DIV)		Total payout (TP)	
	(1)	(2)	(3)	(4)
READABILITY	0.064***	0.040***	0.039*	0.042***
	(0.000)	(0.000)	(0.082)	(0.000)
READABILITY×INVOP	0.056**		0.104***	
	(0.016)		(0.003)	
INVOP	2.789		3.815	
	(0.137)		(0.189)	
READABILITY×NEF		0.017***		0.052***
		(0.000)		(0.000)
NEF		0.444		1.096
		(0.264)		(0.154)
Control variables	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
Pseudo-R^2	0.294	0.289	0.127	0.119
Observations	15,337	76,666	13,584	68,093

Notes: This table shows the effect of investment opportunities and need for external financing on the relation between annual report readability (-1×*BOG*) and corporate payouts. *INVOP* refers to firm's investment opportunities, which is a dummy variable with the value of one (zero) if a firm's TOBINQ is in the top (bottom) decile of yearly TOBINQ distribution. *NEF* refers to the need for external financing, which is a dummy variable with the value of one if a firm's total asset growth is higher than the sustainable growth rate during a year and zero otherwise. All the regression models include an unreported intercept. The *p*-values are calculated based on robust standard errors clustered at the firm level. *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively. All variables are defined in Appendix A.

TABLE 5

The Plain Writing Act (PWA) of 2010, readability, and payouts – Quasi-natural experiment

	Dependent variable		
	(1)	(2)	(3)
	BOG index	Cash payout (DIV)	Total payout (TP)
Treat group	13.617***	-0.840***	-0.539
	(0.000)	(0.000)	(0.101)
Treat group × *Post-PWA*	-2.326***	0.497**	-0.087
	(0.000)	(0.026)	(0.824)
Post-PWA	1.402***	0.279	-0.468
	(0.000)	(0.137)	(0.205)
Control variables	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes
R^2/Pseudo-R^2	0.787	0.236	0.114
Observations	6,343	6,343	5,497

Notes: This table presents the relation between annual report readability and corporate payouts using the Plain Writing Act (PWA) of 2010 as an exogenous shock to readability. Column (1) shows the regression estimates with *BOG index* as the dependent variable. Columns (2) and (3) report the regression results with cash payout (DIV) and total payout (TP) as the dependent variables. *Treat group* is a dummy variable with the value of one (zero) if a firm's annual report readability in the pre-PWA period (2008 and 2009) is in the bottom (top) quartile of the distribution. *Post-PWA* is a dummy variable with the value of one for the next two years (2011 and 2012) after the introduction of PWA in 2010. All the regression models include unreported intercept and control variables from Eq. (1). The *p*-values are calculated based on robust standard errors clustered at the firm level. *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively. All variables are defined in Appendix A.

TABLE 6

Omitted variable analyses: Controlling for readability determinants, falsification, and 2SLS

	Dependent variable					
	Cash payout (DIV)			Total payout (TP)		
	(1)	(2)	(3)	(4)	(5)	(6)
READABILITY	0.049***	0.001	0.018***	0.080***	0.003	0.049***
	(0.000)	(0.177)	(0.000)	(0.000)	(0.132)	(0.000)
DLW	-0.381***			-0.183*		
	(0.000)			(0.053)		
NBSEG	0.075***			0.027		
	(0.000)			(0.433)		
NGSEG	-0.021			-0.035		
	(0.347)			(0.382)		
NITEM	0.007***			0.012***		
	(0.000)			(0.000)		
SI	0.015			-0.001***		
	(0.108)			(0.000)		
MADUM	0.066			1.850***		
	(0.111)			(0.000)		
SEODUM	-0.774***			-2.499***		
	(0.000)			(0.000)		
Control variables	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Pseudo-R^2	0.286	0.886	0.502	0.115	0.563	0.302
Observations	76,668	63,794	76,668	68,095	55,301	68,095

Notes: This table presents the relation between annual report readability (-1×*BOG*) and corporate payouts controlling for readability determinants (column (1) and (4)), falsification tests (column (2) and (5)), and instrumental variable analysis (column (3) and (6)). The *p*-values are calculated based on robust standard errors clustered at the firm level. All the regression models include an unreported intercept. *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively. All variables are defined in Appendix A.

TABLE 7

Omitted variable analyses: Firm fixed effects, change regression, and PSM

Panel A: Firm fixed effects and change regression

	Dependent variable			
	Cash payout (DIV)		Total payout (TP)	
	(1)	(2)	(3)	(4)
READABILITY	0.011***		0.035***	
	(0.000)		(0.000)	
Δ *READABILITY*		0.005***		0.023***
		(0.001)		(0.001)
Control variables	Yes		Yes	
ΔControl variables		Yes		Yes
Year FE	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes
Pseudo-R^2	0.157	0.142	0.064	0.196
Observations	76,668	63,794	68,095	55,301

Panel B: Propensity score matching (PSM)

	Dependent variable	
	Cash payout (DIV)	Total payout (TP)
	(1)	(2)
High READABILITY	0.523***	0.720***
	(0.000)	(0.000)
Control variables	Yes	Yes
Year FE	Yes	Yes
Industry FE	Yes	Yes
R^2/Pseudo-R^2	0.288	0.109
Observations	74,844	66,377

Notes: This table shows firm-fixed effects and change regression estimates in Panel A and the second stage of the propensity score matching (PSM) regression results in Panel B. In Panel A, columns (2) and (4) include variables in changed form (difference between time *t* and *t-1*). All the regression models include an unreported intercept. The *p*-values are calculated based on robust standard errors clustered at the firm level. *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively. All variables are defined in Appendix A.

TABLE 8

Alternative measures of readability of annual report

Panel A: Cash payout (DIV) is the dependent variable							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	FOG	*FLESCH*	*KINCAID*	*NWORD*	*FILESIZE*	*UNCERT*	*WMODAL*
READABILITY	-0.022***	0.010**	-0.029***	-0.496***	-0.520***	-0.530***	-1.825***
	(0.005)	(0.025)	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)
Control variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Pseudo-R^2	0.290	0.290	0.290	0.267	0.267	0.266	0.267
Observations	42,527	42,527	42,527	56,153	56,153	56,153	56,153
Panel B: Total payout (TP) is the dependent variable							
READABILITY	-0.028*	0.035***	-0.041**	-0.730***	-0.778***	-0.470***	-2.234***
	(0.086)	(0.000)	(0.030)	(0.000)	(0.000)	(0.007)	(0.000)
Control variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Pseudo-R^2	0.090	0.090	0.090	0.104	0.104	0.104	0.104
Observations	37,150	37,150	37,150	49,773	49,773	49,773	49,773

Notes: This table shows the regression estimates of the relation between annual report readability and corporate payouts with alternative measures of readability. All the regression models include an unreported intercept. The *p*-values are calculated based on robust standard errors clustered at the firm level. *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively. All variables are defined in Appendix A.

TABLE 9

Additional Analysis: Does the *READABILITY-PAYOUT* relation merely reflect other accounting attributes?

Panel A: Earnings management and earnings persistence

	Dependent variable			
	Cash payout (DIV)		Total payout (TP)	
	(1)	(2)	(3)	(4)
READABILITY	0.038***	0.047***	0.073***	0.083***
	(0.000)	(0.000)	(0.000)	(0.000)
READABILITY×EM	0.003		0.001	
	(0.128)		(0.635)	
READABILITY×EP		-0.002		-0.009
		(0.632)		(0.286)
Control variables	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
Pseudo-R^2	0.295	0.282	0.112	0.110
Observations	65,897	68,713	58,996	61,044

Panel B: Accounting quality, accounting comparability, and accounting conservatism

	Dependent variable					
	Cash payout (DIV)			Total payout (TP)		
	(1)	(2)	(3)	(4)	(5)	(6)
READABILITY	0.039***	0.037***	0.042***	0.078***	0.072***	0.072***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
READABILITY ×*ACCTQUAL*	-0.012			0.006		
	(0.266)			(0.692)		
READABILITY ×*ACCTCOMP*		0.001			-0.001	
		(0.879)			(0.923)	
READABILITY ×*ACCTCONS*			-0.003			-0.005
			(0.796)			(0.863)
Control variables	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Pseudo-R^2	0.290	0.291	0.272	0.113	0.096	0.093
Observations	55,233	30,536	51,493	49,832	27,065	45,657

Notes: This table presents the relation between annual report readability (-1×*BOG*) and corporate payouts controlling for other accounting attributes. Panel A shows the results for earning management (EM) and earnings persistence (EP). Panel B shows the results for accounting quality (ACCTQUAL), accounting comparability (ACCTCOMP), and accounting conservatism (ACCTCONS). All the regression models include an unreported intercept. The *p*-values are calculated based on robust standard errors clustered at the firm level. *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively. All variables are defined in Appendix A.

TABLE 10

Cash holdings, relative dividend premium, and financial statement readability

	Dependent variable		
	Cash Holdings	Cash payout (DIV)	Total payout (TP)
	(1)	(2)	(3)
READABILITY	-0.002***	0.049***	0.080***
	(0.000)	(0.000)	(0.000)
RDP		0.004	-0.010
		(0.304)	(0.169)
Control variables	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes
R^2/Pseudo-R^2	0.374	0.284	0.111
Observations	76,668	76,668	68,095

Notes: This table shows the regression estimates of the relation between annual report readability (-1×*BOG*) and corporate cash holdings in column (1) and the role of relative dividend premium (*RDP*) in BOG-PAYOUT relation in column (2)-(3). All the regression models include an unreported intercept. The *p*-values are calculated based on robust standard errors clustered at the firm level. *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively. All variables are defined in Appendix A.