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Words and numbers: A disagreement story from post-earnings announcement return and volume patterns

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ABSTRACT

We examine whether disclosure readability affects investor disagreement following earnings announcements. Analyzing annual announcements by U.S.-listed firms between 2007 and 2018, we find that firms with lower disclosure readability experience higher unexplained trade volume and abnormal volatility after the announcement, consistent with low readability generating investor disagreement. We also show that financial analysts help alleviate the disagreement induced by low readability. Moreover, we document that low readability is unassociated with post-announcement returns, indicating that readability-driven disagreement spurs unexplained trade volume and volatility without affecting the aggregate market valuation. Overall, the results suggest that low disclosure readability increases stock-market investor disagreement.

1. Introduction

The equity market comprises many investors that often hold conflicting opinions about a firm's value. Such diverse valuations may diverge or jumble if investors do not possess the same information or if they interpret it differently. Because of its repercussion on the stock market, investor disagreement "is one of the most important issues in finance" (Carlin et al., 2014, p.226) and a crucial matter for accounting researchers and regulators (Bamber et al., 2010).

The finance literature has found that disagreement can spur abnormal trade and price volatility (Carlin et al., 2014), as investors with different beliefs about a company's fundamentals trade in different directions, slowing down the pricing of new information. Disagreement can also be perceived as a risk factor increasing a firm's cost of capital (Doukas et al., 2006; Garfinkel and Sokobin, 2006; Varian, 1985). Moreover, disagreement can impair market efficiency, causing overpricing (Miller, 1977; Diether et al., 2002; Sadka and Scherbina, 2007) and negatively affecting the corporate control market (Chatterjee and Eyigungor, 2012).

Accounting information could potentially alleviate the issues arising from disagreement. As Bamber et al. (2010) note, the key goal of accounting is to "level the playing field by reducing the informational disparity among investors" (p. 433). Hence, accounting information should allow investors to make informed decisions through public reports and disclosures. Yet, whether accounting information, especially around earnings announcements, mitigates investor disagreement is a complex issue.

The empirical literature provides mixed evidence about accounting information's general effect on investor disagreement around earnings announcements. For instance, Brown and Han (1992) show analyst forecast dispersion declines after earnings

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announcements, while Berkman et al. (2009) show investor disagreement rises before and decreases after the announcement. Other studies, however, suggest that financial disclosures around earnings announcements can generate disagreement. Kandel and Pearson (1995) suggest that diverging investors' interpretations explain abnormal trade volume reactions that are not accompanied by significant changes in price. Bamber et al. (1997) show that earnings announcements generate disagreement by jumbling different investors' expectations or widening their range. Barron et al. (2002) show that earnings announcements reduce analyst information commonality.

To better understand the accounting information effect on investor disagreement, recent literature has examined its specific drivers around earnings announcements. In particular, this research has investigated regulatory changes (Ahmed and Schneible, 2007), firm characteristics (Ahmed et al., 2009; Barron et al., 2018), or earnings attributes that affect accounting *numbers*' predictability and persistence (D'Augusta et al., 2016; Abdel-Meguid et al., 2019; Barth et al., 2020; Chen et al., 2022). However, among these drivers, no prior study has examined the *words* that accompany accounting numbers around information events. Indeed, whether textual disclosures play a role in mitigating investor disagreement around earnings announcements remains an open question, which is especially relevant in light of the increasing interest that accounting and finance research has recently dedicated to the analysis of narrative disclosures (Amel-Zadeh and Faasse, 2016; Loughran and McDonald, 2016; Brown et al., 2021; Dang et al., 2022; Paul and Sharma, 2022). We aim to fill this void.

Theoretical literature suggests that two channels cause investor disagreement: information asymmetry (Bamber and Cheon, 1995; Kim and Verrecchia, 1997) and uncertainty (Karpoff, 1986). We argue that disclosure readability can drive investor disagreement through either channel. First, the information asymmetry channel suggests that if investors rely on different information sets when formulating their opinions about future cash flows, such opinions will likely diverge, causing disagreement. When reacting to earnings announcements, investors combine the publicly-released information with their own pre-announcement information, whether from public disclosures or private sources. Low textual disclosure readability may allow only skilled investors to truly understand the firm situation and derive correct baseline estimates of future cash flows. By contrast, unskilled investors will either not get the information or get it wrong. This will cause disagreement between asymmetrically-informed investors. In addition, unreadable disclosures could become irrelevant (i.e., incapable of affecting decisions), leading investors to disregard public disclosures and seek private information instead. Each investor will likely search for it differently based on skills, age, expertise, or behavioral traits. This will not necessarily cause some investors to possess a superior information set, just a different one sufficient to cause disagreement.

The second channel is uncertainty about interpreting the earnings news (Karpoff, 1986). This can happen if investors have to assess the error and bias in earnings (Dontoh and Ronen, 1993; Kandel and Pearson, 1995; Abdel-Meguid et al., 2019). In particular, investors could judge low readability as a sign that managers attempt to obfuscate the situation to conceal adverse outcomes (Li, 2008; Lo et al., 2017) or that managers struggle to understand a particularly turbulent business environment. This will lead investors to suspect that the earnings signal is affected by bias or error. Because of differences in skills, informedness, or other individual traits, different investors will likely disagree about the error's magnitude, leading to diverging opinions about the firm's valuation.

To test whether disclosure readability affects investor disagreement, we analyze trading patterns in the weeks following 20,251 annual earnings announcements by listed companies from 2007 through 2018. Consistent with prior literature (Garfinkel, 2009; Chen et al., 2022), we study two empirical manifestations of investor disagreement: (i) Unexplained trade volume that is not due to new information — i.e., trade unrelated to stock returns; (ii) Abnormal return volatility.

Following prior research (e.g., Callen et al., 2013), we look at the MD&A to gauge the readability of a company's textual disclosures. Relative to other disclosure venues, the MD&A is ideal for our study because its forward-looking nature directly speaks to investors' primary need to predict the timing, amount, and uncertainty of future cash flows (Barker et al., 2020). Compared to the numbers reported in the income statement, which are inherently backward-looking due to GAAPs, the MD&A leaves managers relatively unconstrained in discussing future threats and opportunities. In this way, the MD&A"helps [investors] in interpreting financial statement numbers, and therefore aids in predicting cash flows" (Callen et al., 2013, p. 270).

We find that the MD&A readability is significantly associated with investor disagreement following earnings announcements. Specifically, firms with *lower* MD&A readability experience *higher* unexplained trade volume and abnormal volatility in the post-announcement weeks. This evidence points to low disclosure readability being one of the drivers of disagreement. Interestingly, cross-sectional analyses reveal that financial analysts can alleviate the low readability-induced disagreement.

Moreover, in ancillary tests, we find that low readability is unassociated with cumulative post-announcement abnormal returns, in line with investor disagreement models predicting that disagreement spurs unexplained trade and volatility but little price change (Bamber and Cheon, 1995; Kandel and Pearson, 1995). This finding further corroborates that low-disclosure readability increases stock-market investor disagreement with no aggregate market valuation effect. Finally, to alleviate endogeneity concerns, we implement several robustness tests and find that the results are similar to the main findings.

Our paper makes several contributions. First, we add to the research on disclosure readability's financial market effects, documenting readability's role in shaping investor disagreement following the public release of earnings information. Specifically, our results suggest disagreement as one possible link between textual disclosures' quality and stock market efficiency. Additionally, our study heeds Bamber et al. (2010)'s call to provide new insights to understand unexplained trade volume following earnings announcements. Moreover, our results show that firm-specific textual disclosure characteristics can help understand investor disagreement patterns following earnings announcements, thus casting new light on prior literature's diverging findings in this respect.

Our paper also contributes to recent research exploring some aspects of disclosure readability and disagreement-induced abnormal volume and volatility. For instance, Smales and Apergis (2017) show that more complex language in Federal Open Market

Committee statements increases the trading volume and return volatility in the stock, bond, and currency markets, consistent with "increased opportunity for investors to interpret this information in different ways" (p. 172). Similarly, Callen et al. (2013) and Lee (2012) show that low readability hinders market efficiency delaying new information pricing. Moreover, Lehavy et al. (2011) show that "less readable 10-Ks are associated with greater dispersion, lower accuracy, and greater overall uncertainty in analyst earnings forecasts" (p. 1087). Rahman and Oliver (2022) show that less readable 10-Ks increase insider trading profitability, consistent with better-informed traders exploiting information asymmetries. Analyzing the debt market, Bonsall and Miller (2017) find that low readability leads to rating disagreement.

However, other papers suggest that low readability's association with trade volume could be negative, not positive. For instance, Miller (2010) argues that "faced with more complex filings, some investors will elect not to process the report because doing so is too costly. Consequently, these investors will not initiate trades" (p. 2111). Similarly, Boubaker et al. (2019) suggest that low readability reduces investors' willingness to trade, decreasing stock liquidity. Relatedly, Brochet et al. (2016) find that conference calls "with a greater use of non-plain English and more erroneous expressions show lower intra-day price movement and trading volume" (p. 1023). Our study contributes to the literature mentioned above, none of which, to the best of our knowledge, has directly examined whether disclosure readability is associated with stock-market investor disagreement following earnings announcements.

2. Empirical design

2.1. Regression models

We use two investor disagreement proxies as dependent variables: Standardized Unexplained Volume (SUV) and Abnormal stock return Volatility (AVOL) over the post-announcement window (+2, +25), where 0 is the announcement day. We construct AVOL as the difference between the abnormal daily returns volatility over the post-announcement window (+2, +25) and the pre-announcement window (−30, −5). We construct SUV per Garfinkel (2009) and run the following regression over the window (−30; −5):

$$V_{i,t} = \alpha + \beta_1 \cdot |RET|^{+}_{i,t} + \beta_2 \cdot |RET|^{-}_{i,t} + \varepsilon_{i,t}, \tag{1}$$

where $V_{i,t}$ and $|RET|_{i,t}$ are trade volume and the absolute value of stock returns for firm i on day t. The plus (+) and minus (−) superscripts indicate positive or negative returns. We then use the parameter estimates $\hat{\beta}_1$ and $\hat{\beta}_2$ from Eq. (1) to calculate the expected daily volume over the post-announcement window (+2, +25). Standardized unexplained volume (SUV) is the difference between actual and expected volume, divided by the standard deviation of the residuals from the regression. As discussed in Garfinkel (2009), SUV captures the trade volume that is not explained by contemporaneous returns. Therefore, it reflects the trade originating from investor disagreement rather than new information. Our SUV proxy is the average daily SUV over the window (+2, +25).[1]

The key independent variable is the readability of the prior year's MD&A, calculated using the decile rank of the Flesch–Kincaid readability proxy (LowREADABILITY) (Flesch, 1948; Kincaid et al., 1975).[2] *Higher* values of LowREADABILITY indicate an MD&A that is *less* readable and *harder* to understand. Therefore, we expect LowREADABILITY to be positively associated with SUV and AVOL if low MD&A readability increases investor disagreement. Our regression models are the following:

$$\text{SUV}_{i,t} = \alpha + \beta_1 \cdot \text{LowREADABILITY}_{i,t} + \boldsymbol{\gamma} \cdot \mathbf{Controls}_{i,t} + \delta^{IND} + \delta^{Year} + \varepsilon_{i,t}, \tag{2}$$

$$\text{AVOL}_{i,t} = \alpha + \beta_1 \cdot \text{LowREADABILITY}_{i,t} + \boldsymbol{\gamma} \cdot \mathbf{Controls}_{i,t} + \delta^{IND} + \delta^{Year} + \varepsilon_{i,t}, \tag{3}$$

where δ^{IND} and δ^{Year} represent industry and year fixed effects. The vector $\mathbf{Controls}_{i,t}$ includes the logarithm of market capitalization and stock price (LMCAP and LPRICE), the market-to-book ratio (MB) and leverage (LEV), analyst following (FOLLOW) and forecast dispersion (DISPERSION), the average share turnover (TO), the absolute cumulative abnormal return (CAR) over the announcement window (−1, +1), and a dummy identifying positive CAR (PosCAR). We also control for four market metrics measured over the window (−30, −5): (i) daily abnormal returns volatility (SDRET), (ii) the company's stock turnover (PriorTO), (iii) the average bid/ask spread (SPREAD) and (iv) the cumulative abnormal return (PriorRET).

2.2. Data and sample

The sample comprises annual earnings announcements by firms listed on the NYSE, AMEX, or NASDAQ from 2007 to 2018. We use the Wharton Research Data Services (WRDS) website to retrieve stock market and financial statement data from CRSP and Compustat Fundamentals Annual and Analysts' forecast data from the I/B/E/S database. We require observations to have a total market capitalization (stock price) higher than USD 20 million (USD 2) and sufficient data for the models' variables. To mitigate the influence of extreme information events, which can exhibit anomalous trade patterns, we exclude from the sample observations in the top and bottom percentiles of CAR, SUV, and AVOL. We also exclude financial firms per Fama and French (1997). Tables 1 and A.1 report descriptive statistics and variable definition.

[1] For more details about SUV's construction, see Garfinkel (2009, page 1326, Equations (4), (5), and (6)).

[2] The results are qualitatively similar using the FOG index (Gunning, 1969).

3. Results and discussion

3.1. Main tests

In Table 2, we begin by testing whether low readability increases post-announcement investor disagreement. Consistent with our expectation, we find that LowREADABILITY is significantly positive in column 1 (2), suggesting SUV (AVOL) increases by 0.7 (0.5) percent as LowREADABILITY grows by one decile.

These results are consistent with the theoretical models by Bamber and Cheon (1995) and Kim and Verrecchia (1997), suggesting that the lack of disclosure readability incentivizes investors to acquire differential private information sets. The resulting information asymmetry leads to diverging opinions and disagreement when investors use their private information in conjunction with public announcements to trade on the earnings information. The results are also consistent with the lack of readability raising investor uncertainty about the error in such earnings information, which creates the scope for disagreement among investors to emerge (Karpoff, 1986; Dontoh and Ronen, 1993; Kandel and Pearson, 1995; Abdel-Meguid et al., 2019). In turn, investor disagreement translates into higher unexplained trading and return volatility as diverging opinions lead optimists and pessimists to trade with one another, thus pulling the price in opposite directions in line with Garfinkel (2009) and Chen et al. (2022).

Next, we perform two additional analyses. First, we explore analysts' information role in alleviating the low readability-induced disagreement. We hypothesize that low-disclosure readability raises disagreement because investors are more uncertain about information interpretation and are incentivized to seek private information. However, financial analysts are sophisticated information users who are better than average investors at understanding and interpreting textual disclosures despite the lack of readability. Hence, analyst reports can mitigate investor uncertainty and information asymmetry, thus weakening the two theoretical channels that connect readability to disagreement. If this is the case, then we expect the results in Table 2 to stem primarily from observations with low analyst following. To test this, we split the sample based on whether analyst coverage is higher than the sample average (i.e., 10 analysts) and find that this is the case. Columns 1 and 2 of Table 3 show that LowREADABILITY is significantly positive *only* when analyst coverage is low, but insignificant otherwise.

Second, we look at the cumulative abnormal returns over the window (+2, +25) (AfterCAR). Investor disagreement models predict that earnings announcements can cause diverse belief revisions between different individual investors but a small aggregate market revision. Therefore, disagreement can induce unexplained trade and abnormal volatility without affecting prices (Bamber and Cheon, 1995). If Table 2's results reflect low readability spurring only disagreement, we expect LowREADABILITY to be unassociated with AfterCAR. As individual investors' opinions diverge or jumble, bullish and bearish investors trade with one another and move the stock price, sometimes up and sometimes down, without a statistically significant aggregate market effect. Table 4 shows that this is the case since LowREADABILITY is insignificant across all specifications.

3.2. Robustness tests

Prior research highlights that endogeneity may be a significant concern when investigating a firm's disclosure readability. In particular, the firm's business complexity could be an omitted variable influencing the main results (Rjiba et al., 2021). The event-study design that we employ mitigates this concern: business complexity would likely affect disagreement in the estimation windows already and would be therefore controlled for, at least in part, by the inclusion of pre-announcement control variables such as PriorRET, PriorTO, SPREAD, and SDRET. Moreover, our models already include control variables typically associated with business complexity, such as LEV, MB, LPRICE, FOLLOW, DISPERSION, o LMCAP (Rjiba et al., 2021). Nevertheless, in this section we perform two additional tests to further dispel this concern.

First, we follow Rjiba et al. (2021) and repeat the analysis controlling for many additional firm-specific factors associated with business complexity. These are the firm's capital intensity, capital expenditure, research and development intensity, debt and equity issuance, the cash flow volatility over the prior five years, two dummy variables identifying if the firm reported goodwill impairments and/or restructuring charges during the current fiscal year, acquisitions during the year, and the logarithms of the number of business segments and geographic segments. Table 5 shows that, despite the significant drop in sample size due to the lack of data for many of these additional controls, the coefficients of LowREADABILITY remain similar to those reported in Table 2. Indeed, they are stronger in significance and magnitude, thus rejecting concerns that the influence of business complexity drives our main results.

Second, we perform a Granger causality test similar to Dyck et al. (2019) and Rjiba et al. (2021) (not tabulated for brevity). Regressing SUV and AVOL on their lagged values and on the prior year's disclosure readability, we find results similar to those reported in Table 2. However, regressing current readability on its prior year's value and on lagged disagreement, we find the latter coefficient to be largely insignificant and even negative. Hence, in our setting, we do not find any evidence of endogenous reverse causality driving the positive coefficient of LowREADABILITY in Table 2.

4. Conclusion

While previous literature has studied the role (i) of accounting information in general (e.g., Brown and Han, 1992; Berkman et al., 2009) and (ii) of specific drivers in particular (e.g., D'Augusta et al., 2016; Barth et al., 2020; Chen et al., 2022) in investor disagreement, we examine the words that accompany accounting numbers around earnings announcements. Specifically, we investigate the effect of disclosure readability. We find that, following earnings announcements, firms with lower MD&A readability experience

Table 1
Descriptive statistics. The definitions are reported in Table A.1.

	Obs.	Mean	Std. Dev.	25th	Median	75th
Dependent variables						
SUV	20,251	0.6449	1.1335	−0.1311	0.3688	1.1034
AVOL	20,251	−0.0003	0.0082	−0.0041	−0.0003	0.0035
AfterCAR	20,251	0.0073	0.0996	−0.0466	0.0051	0.0578
Independent variables						
LowREADABILITY	20,251	17.6176	1.8363	16.5399	17.3787	18.3052
LMCAP	20,251	21.1420	1.6533	19.9488	21.0352	22.1924
LPRICE	20,251	3.1384	0.9952	2.4681	3.2280	3.8588
MB	20,251	4.0575	5.6637	1.5333	2.4334	4.1545
LEV	20,251	0.4995	0.2159	0.3350	0.5104	0.6619
FOLLOW	20,251	9.7337	7.1779	4.0000	8.0000	13.0000
DISPERSION	20,251	0.0038	0.0080	0.0005	0.0012	0.0032
TO	20,251	0.0196	0.0185	0.0079	0.0141	0.0245
CAR	20,251	0.0044	0.0795	−0.0410	0.0035	0.0503
PosCAR	20,251	0.5214	0.4996	0.0000	1.0000	1.0000
SDRET	20,251	0.0201	0.0115	0.0118	0.0171	0.0252
PriorTO	20,251	0.0095	0.0076	0.0046	0.0073	0.0119
SPREAD	20,251	0.0017	0.0026	0.0004	0.0008	0.0018
PriorRET	20,251	0.0032	0.1034	−0.0528	0.0020	0.0585

Note. All continuous variables are winsorized at 1% and 99%.

Table 2
Results of the OLS baseline regression models for Eqs. (2) and (3) are given in Columns (1) and (2), respectively.

	(1) *SUV*	(2) *AVOL*
LowREADABILITY	0.007***	0.005**
	(2.71)	(2.12)
Constant	Yes	Yes
Controls	Yes	Yes
Industry fixed effects	Yes	Yes
Year fixed effects	Yes	Yes
Observations	20,251	20,251
R2	0.183	0.315

All variables are defined in Appendix. *, **, and *** define statistical significance at the 10%, 5%, and 1% level respectively. *t*-statistics are reported in parentheses and based on standard errors that are clustered by firm.

higher unexplained trade volume and abnormal volatility, consistent with low-disclosure readability increasing disagreement. In additional analyses, we document analysts' role in helping investors cope with low readability and alleviating their disagreement.

We acknowledge the following limitations, which future research could address. First, as noted by Lara et al. (2016), in finance and accounting research, endogeneity concerns can never be completely ruled out. Despite the robustness tests discussed in Section 3.2, endogeneity issues may persist. Second, future research could further explore the relationship between disclosure readability and investor disagreement by employing more advanced and refined textual analysis techniques (Bochkay et al., 2022). Third, future research could also focus on textual features different from their readability (e.g., tone, topic emphasis, etc.).

Our results are important for policymakers and academics alike. Over the last two decades, the SEC has been committed to helping companies communicate with investors with effective and understandable language. Our findings stress the importance of providing investors with a clear picture of a company's situation and prospects. At the same time, our results cast new light on prior literature's diverging findings on textual disclosures' effect on investor disagreement. Although our focus is on the MD&A readability, it is reasonable to believe that the effect we document may also arise in other disclosure venues (e.g., press releases, conference calls' transcripts, etc.). We leave the investigation of such new domains to future research.

5. Tables

See Tables 1–5.

Table 3
Results of the OLS regression models for Eqs. (2) and (3) when firms have a low (Columns (1) and (3)) and high (Columns (2) and (4)) analyst coverage, respectively.

	Low analyst coverage		High analyst coverage	
	(1) *SUV*	(2) *AVOL*	(3) *SUV*	(4) *AVOL*
LowREADABILITY	0.008**	0.009***	0.004	−0.000
	(2.42)	(2.62)	(1.08)	(−0.07)
Constant	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes
Observations	13,080	13,080	7171	7171
R2	0.171	0.311	0.224	0.347

All variables are defined in Appendix. *, **, and *** define statistical significance at the 10%, 5%, and 1% level respectively. *t*-statistics are reported in parentheses and based on standard errors that are clustered by firm.

Table 4
Results of the OLS regression model where the dependent variable is the Cumulative Abnormal Returns (AfterCAR) over the window (+2, +25). Columns (1), (2), and (3) consider the full sample, a positive (PosCAR = 1) and negative (PosCAR = 0) Cumulative Abnormal Returns in the three day announcement window, respectively.

	Full Sample (1) *AfterCAR*	PosCAR = 1 (2) *AfterCAR*	PosCAR = 0 (3) *AfterCAR*
LowREADABILITY	−0.001	0.000	−0.003
	(−0.30)	(0.14)	(−0.67)
Constant	Yes	Yes	Yes
Controls	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes
Observations	20,251	10,559	9692
R2	0.022	0.023	0.026

All variables are defined in Appendix. *, **, and *** define statistical significance at the 10%, 5%, and 1% level respectively. *t*-statistics are reported in parentheses and based on standard errors that are clustered by firm.

Table 5
Results of the OLS regression models for Eqs. (2) and (3) are given in Columns (1) and (2), respectively. We include several additional control variables, in particular for business complexity, to address endogeneity concerns.

	(1) *SUV*	(2) *AVOL*
LowREADABILITY	0.012***	0.010***
	(3.32)	(2.88)
Constant	Yes	Yes
Business Complexity Controls	Yes	Yes
Controls	Yes	Yes
Industry fixed effects	Yes	Yes
Year fixed effects	Yes	Yes
Observations	11,707	11,707
R2	0.198	0.318

All variables are defined in Appendix. *, **, and *** define statistical significance at the 10%, 5%, and 1% level respectively. *t*-statistics are reported in parentheses and based on standard errors that are clustered by firm.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data availability

The authors do not have permission to share data.

Appendix. Variable definition

See Table A.1.

Table A.1
Description of every variable used in the paper.

Variable	Description
SUV	Average value of the Standardized Unexplained Volume, calculated as per Garfinkel (2009) over the post-announcement window (+2, +25).
AVOL	Difference between the standard deviation of abnormal daily returns over the post-announcement window (+2, +25) and the standard deviation over the pre-announcement window (−30, −5).
AfterCAR	Cumulative abnormal returns over the window (+2, +25). Abnormal returns are calculated as the difference between the firm stock return and the value-weighted market return.
LowREADABILITY	Inverse measure of the readability of the prior year's MD&A section of the 10-K filings, calculated using the decile rank of the Flesch–Kincaid readability proxy (Kincaid et al., 1975).
LMCAP	Natural logarithm of the firm's market value of equity at fiscal year end.
LPRICE	Natural logarithm of the firm's stock price at the end of the fiscal year.
MB	Market-to-book ratio at the end of the fiscal year.
LEV	Financial leverage, calculated as total liabilities divided by total assets.
FOLLOW	Most recent pre-announcement number of outstanding analyst forecasts.
DISPERSION	Most recent value of the dispersion of analyst earnings forecasts before the announcement, scaled by the stock price four days before the announcement.
TO	Average share turnover over the announcement window (−1, +1).
CAR	Absolute cumulative abnormal stock return over the announcement window (−1, +1).
PosCAR	Dummy variable identifying whether CAR is positive, and zero otherwise.
SDRET	Standard deviation of abnormal daily returns over the window (−30, −5).
PriorTO	Average value of the daily stock turnover over the window (−30, −5).
SPREAD	Average value of the bid/ask spread, scaled by the midpoint, over the window (−30, −5).
PriorRET	Cumulative abnormal return over the window (−30, −5).

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