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Disclosure Incentives and Bondholder Bargaining Power

Finance Working Paper N° 1133/2026
April 2026

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Abstract

We study how financially distressed firms adjust disclosure when creditor bargaining power increases. Exploiting the 2014 Marblegate Asset Management v. Education Management Corporation ruling, which unexpectedly strengthened public bondholders' ability to hold out in out-of-court restructurings, we find that distressed firms with publicly traded debt significantly reduce voluntary disclosure following the ruling. The decline is concentrated among firms with high blockholder ownership, consistent with informed shareholders curtailing public information to limit bondholders' ability to assess continuation values and coordinate holdout strategies. Disclosure reductions persist among firms with stable capital structures, ruling out financing switching as an alternative explanation. Remaining disclosures become more complex and litigious and are associated with lower likelihoods of positive market reactions. These changes coincide with a deterioration in market information environments and more restrictive covenants in subsequent bond issues. Our findings establish disclosure as a strategic instrument in debt renegotiation, with implications for financial reporting, creditor protection, and restructuring regulation.

Keywords: Bondholders, bargaining power, disclosure, conflicts of interest, renegotiation

JEL Classifications: M41, G33, K22

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Abstract

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1. Introduction

Financial disclosure plays a central role in debt contracting and renegotiation by shaping monitoring, control rights, and the allocation of surplus among claimholders. Prior literature shows that greater transparency can mitigate agency conflicts, reduce information asymmetry, and improve contracting efficiency (e.g., Armstrong et al., 2010; Christensen et al., 2016). Yet when firms approach financial distress and renegotiation becomes likely, disclosure may no longer serve purely informational or efficiency-enhancing objectives. Instead, it can become a strategic tool through which claimholders influence bargaining outcomes, with consequences for both renegotiation and subsequent contracting.

Financial distress intensifies conflicts between shareholders and creditors and raises the stakes of restructuring negotiations. While stronger creditor rights can discipline managerial behavior and mitigate risk-shifting incentives (Jensen and Meckling, 1976; Hart and Moore, 1998), they also alter firms' incentives to manage information. When renegotiation is imminent, public disclosures shape bondholders' beliefs about continuation values, recovery prospects, and the gains from holding out.

Despite the central role of information in renegotiation, empirical evidence is limited on how firms adjust disclosure policies in response to changes in creditor bargaining power. We address this gap by examining how distressed firms modify the quantity, content, and market interpretation of public disclosures when bondholders' negotiating positions strengthen.

Issuers often use exchange offers to renegotiate publicly traded debt. In exchange offers with exit consents, participating bondholders exchange their bonds and vote to amend non-payment terms of the original indenture. Because holdout bondholders are left with reduced-value bonds,

exit consents can pressure creditors to participate in the exchange. Our empirical setting centers on the 2014 *Marblegate Asset Management v. Education Management Corporation* (EMC) ruling, which materially altered the legal treatment of exit consents in out-of-court restructurings.

By constraining firms' ability to use exit consents to coerce participation, the ruling increased public bondholders' ability to hold out and extract concessions, thereby raising expected renegotiation costs for issuers (Roe 1987, 2015; Bernardo and Talley 1996; Bratton and Levitin 2018). Firms seeking to restructure outside bankruptcy consequently faced a less favorable bargaining environment, particularly when attempting to avoid the costs of Chapter 11 (Gilson, John, and Lang, 1990; Franks and Torous, 1994). Importantly, the ruling was unexpected, applied broadly to bonds subject to the Trust Indenture Act, and was not driven by firm-specific behavior. Contemporary commentary and market reactions indicate that the decision was perceived as economically meaningful at the time (Fan, 2025).[1]

We examine firms' responses to this shift in bargaining power through changes in corporate disclosure. Public bondholders rely heavily on publicly available information when evaluating restructuring proposals, as they lack access to private communication channels (Dhaliwal et al., 2011; Peyravan and Wittenberg-Moerman, 2022). We, therefore, focus on voluntary Form 8-K items (Items 7.01 and 8.01), which capture managerial discretion over public information production (He and Plumlee, 2020; Noh et al., 2019). Mandatory items, which are tied to realized events, serve as a comparison outcome to distinguish strategic disclosure adjustments from changes in underlying firm activity.

[1] The EMC ruling was later reversed on appeal. The reversal followed a period of legal uncertainty during which distressed issuers faced binding renegotiation constraints. Firms could not assume a prompt or certain resolution, and delaying renegotiation was often infeasible given near-term liquidity needs, maturities, and covenant pressures.

Using a difference-in-differences design, we find that distressed firms with publicly traded debt significantly reduce public disclosure following the EMC ruling, with the effect concentrated in discretionary 8-K filings. The magnitude of the decrease is from 14.5% to 16.1% of the average discretionary 8-K level. This pattern is consistent with firms strategically limiting public information when bondholders' ability to evaluate and resist restructuring proposals increases. As expected, mandatory filings do not exhibit a robust change once we control for time and industry fixed effects, consistent with the shock operating through managerial disclosure choices rather than event realization (Heinle et al., 2023).

The decline in disclosure is concentrated among firms with high blockholder ownership. This pattern is consistent with blockholders' payoff incentives: as residual claimants in workouts, they have stronger incentives to preserve bargaining flexibility and limit information that can improve creditors' negotiating position. Because blockholders have superior access to private information and greater influence over managerial decisions (Collin-Dufresne and Fos, 2015; Shleifer and Vishny, 1986), they have stronger incentives to preserve informational advantages when bondholder bargaining power increases.

Consistent with these patterns reflecting strategic information management rather than mechanical reporting changes, the content of remaining disclosures also shifts following the ruling. We find that voluntary 8-K filings are more complex and harder to process, and more litigious in tone. Consistent with these textual shifts, firms are also less likely to experience positive abnormal returns around 8-K filings after the ruling, suggesting that the remaining disclosures are interpreted as less favorable and/or less informative.

A natural alternative explanation is that firms respond to the ruling by altering their capital structure, rather than adjusting disclosure directly. For example, firms could substitute toward bank

debt, which relies more heavily on private monitoring and less on public disclosure (Vashishtha, 2014; Lo, 2014), or toward equity financing, which could increase public disclosure demands (Kim et al., 2018). We explicitly test these possibilities and find no evidence that financing switching explains our results. The reduction in voluntary disclosure persists among firms that do not alter their capital structure mix and is not driven by changes in bank debt or equity issuance.

Consistent with disclosure reductions having real informational consequences, our evidence indicates that treated firms with high blockholder ownership experience a deterioration in their information environment, as reflected in wider bid–ask spreads (Corwin and Schultz, 2012). These results suggest that disclosure suppression has real consequences for market information asymmetry rather than merely reflecting changes in disclosure needs.

We further examine how strategic disclosure choices interact with ex-ante debt contracting. The increase in renegotiation costs induced by the ruling implies that creditors place greater weight on initial contract terms when information asymmetry is high. Consistent with theories of optimal covenant design (Garleanu and Zwiebel, 2009), we find that lower disclosure following the EMC ruling is associated with more restrictive covenants in newly issued bonds, linking firms' disclosure strategies during distress to subsequent financing terms.

Our findings advance the literature on accounting information in financial contracting by demonstrating that disclosure responds not only to monitoring needs but also to strategic bargaining considerations when creditor rights change. While prior research emphasizes the role of disclosure in reducing information asymmetry and improving contract efficiency (Armstrong et al., 2010; Christensen et al., 2016), our evidence shows that disclosure can instead be strategically curtailed when shifts in bargaining power alter the distribution of surplus among claimholders.

More broadly, our results identify information production as a central strategic instrument in shareholder–creditor conflicts during financial distress. While prior work shows that bargaining frictions affect firms' investment, financing, and payout policies (Myers, 1977; Smith and Warner, 1979), we demonstrate that firms also actively manage public information to influence renegotiation outcomes. Vashishtha (2014) shows that voluntary disclosure decreases following bank loan covenant violations because of a delegation of monitoring to banks by shareholders. We document a different mechanism of disclosure policies when bondholder renegotiation process changes. By linking disclosure choices to bargaining incentives, information environments, and subsequent contract design, our analysis integrates financial reporting into dynamic models of debt renegotiation. These findings have implications for debates over creditor protection and restructuring regulation, highlighting that stronger creditor rights can have unintended informational consequences.

2. Institutional Background and Setting

This section provides institutional background on out-of-court restructurings of publicly traded bonds and explains how the EMC ruling altered bondholder bargaining power.

2.1 Out-of-Court Restructuring of Publicly Traded Bonds

Firms experiencing financial distress often seek to restructure their debt obligations to avoid filing for bankruptcy. Chapter 11 proceedings involve substantial direct and indirect costs, including legal expenses, operational disruptions, and loss of firm value (Gilson, John, and Lang, 1990; Gilson, 1991; Franks and Torous, 1994). Prior work also emphasizes that legal rules governing reorganization shape bargaining dynamics, creditor coordination, and the relative

attractiveness of workouts versus bankruptcy (e.g., Gertner and Scharfstein, 1991). Therefore, distressed firms generally prefer to restructure debt outside of bankruptcy whenever possible.

For publicly traded bonds, out-of-court restructuring typically occurs through exchange offers, in which firms invite bondholders to exchange existing bonds for new securities with modified terms, such as reduced principal, extended maturities, or changes in priority. Successful exchange offers allow firms to reduce their debt burden while continuing operations outside of bankruptcy.

A central challenge in out-of-court bond restructurings is bondholder coordination. Public bonds are widely held, and individual bondholders could have incentives to hold out rather than participate in an exchange offer. If enough bondholders refuse to tender, the exchange offer fails and the firm may be forced into bankruptcy, even when a restructuring would preserve value. Therefore, managing this coordination problem is critical to firms' ability to renegotiate public debt outside court.

2.2 Exit Consents and Bondholder Bargaining Power

To address bondholder coordination and holdout problems, firms commonly rely on exit consents. In an exchange offer, participating bondholders agree not only to exchange their bonds but also to vote to amend certain non-payment terms of the original bond indenture. These amendments typically make the remaining bonds less attractive. For example, they can remove covenants or other protections, which reduces the payoff to holding out.

Exit consents weaken bondholders' bargaining position by increasing the cost of non-participation. When exit consents are effective, dispersed bondholders face strong incentives to tender their bonds, even if the exchange offer is unfavorable, because holding out leaves them with inferior claims. Consequently, exit consents substantially increase issuers' leverage in out-of-court

restructurings and lower the likelihood that individual bondholders can extract concessions by refusing to participate.

The ability to use exit consents is shaped by the Trust Indenture Act of 1939 (TIA), which governs publicly traded bonds in the United States. Section 316(b) of the TIA prohibits changes to payment-related terms, such as principal and interest, without unanimous bondholder consent outside bankruptcy. Historically, courts and practitioners interpreted this provision as permitting exit consents that altered non-payment terms, allowing firms to restructure effectively despite the unanimity requirement for payment terms. Under this interpretation, exit consents played a central role in facilitating out-of-court restructurings by mitigating holdout behavior and limiting bondholders' ability to block exchange offers.

2.3 *Marblegate Asset Management et al. v. Education Management Corporation Ruling*

In December 2014, the Southern District of New York issued a ruling in *Marblegate Asset Management v. Education Management Corporation* that materially altered the legal treatment of exit consents in out-of-court bond restructurings. The court held that certain transactions violated Section 316(b) of the TIA even when payment terms were not formally amended if the practical effect of the restructuring impaired bondholders' right to receive payment. This interpretation constrained issuers' ability to rely on exit consents to pressure bondholders into exchange offers.

The ruling reduced issuers' leverage in renegotiations by limiting their ability to penalize non-participating bondholders. As a result, bondholders' ability to hold out and extract concessions increased, raising the expected cost of restructuring public bonds outside bankruptcy. Contemporary commentary and market reactions indicate that the ruling was perceived as both

unexpected and economically meaningful, particularly for financially distressed firms with publicly traded debt (Fan, 2025).[2]

Importantly, distressed firms could not easily delay or wait out a potential reversal of the ruling. Firms approaching financial distress face near-term liquidity needs, debt maturities, covenant pressures, and refinancing constraints that require timely renegotiation decisions. Out-of-court restructurings are often incremental and forward-looking, involving repeated interactions with bondholders rather than a single, discrete event. In this setting, even temporary or uncertain legal constraints can materially affect bargaining dynamics by weakening issuers' ability to credibly threaten exit-consent-based coercion. More broadly, prior work emphasizes that when renegotiation is anticipated, asymmetric information between firms and creditors shapes both contracting outcomes and renegotiation dynamics (Roberts, 2014).

Legal uncertainty itself can increase renegotiation frictions. By constraining coercive restructuring tactics, the EMC ruling increased bondholders' willingness to hold out and raised expected renegotiation costs for distressed issuers, making immediate strategic adjustments more likely than delay. In economic terms, the ruling increased public bondholders' bargaining power during a critical period for firms seeking to restructure debt outside bankruptcy, providing a natural setting to examine how disclosure responds when renegotiation incentives and constraints change.

The ruling was later reversed on appeal in January 2017, but only after a period of substantial legal uncertainty during which distressed firms faced binding liquidity, maturity, and covenant pressures that made waiting infeasible. Accordingly, the initial ruling plausibly affected firms'

[2] See J. Scott Victor, 2015, The Examiners: Practical Impairment Leads to Chapter 11, Wall Street Journal. "The recent cases in New York make it impossible to conduct an out-of-court restructuring without the consent of 100% of the affected noteholders. The only other way to override the holdout noteholder is to have the issuer file for Chapter 11 bankruptcy."

bargaining environments and disclosure incentives during the period we study, independent of its ultimate legal resolution. Consistent with this interpretation, we find no evidence that firms adjusted disclosure or capital structure in anticipation of the ruling.

3. Hypothesis Development

The changes in bondholder bargaining power described in Section 2 altered firms' incentives to produce public information at precisely the stage when renegotiation with public bondholders becomes salient. By constraining the use of exit consents, the EMC ruling increased public bondholders' ability to hold out in out-of-court restructurings and raised expected renegotiation costs for issuers. In this section, we develop testable predictions regarding how distressed firms adjust their disclosure practices in response to increased public bondholder bargaining power.

3.1 Disclosure Responses to Increased Bondholder Bargaining Power

Public disclosure plays a central role in debt renegotiation by shaping creditors' assessments of firm value, continuation prospects, and recovery rates. When bondholders rely primarily on public information, greater disclosure can improve their ability to evaluate whether to participate in or hold out from a restructuring. As discussed in Section 2, the EMC ruling strengthened bondholders' bargaining position by limiting issuers' ability to coerce participation through exit consents. Standard contracting views suggest that stronger creditor rights increase the demand for transparency (e.g., Tan, 2013). However, when renegotiation is imminent and claims are contested, disclosure can also redistribute surplus by altering the relative information advantages among claimholders. By reducing public disclosure, firms may limit bondholders'

ability to assess continuation values and coordinate holdout strategies, thus softening the effective exercise of enhanced bargaining power.

These competing forces make the net effect of increased bondholder bargaining power on disclosure theoretically ambiguous. In bargaining models with dispersed creditors and asymmetric information, public information can facilitate creditor coordination and increase expected holdout payoffs (Gertner and Scharfstein, 1991). When issuers lose coercive tools such as exit consents, reducing disclosure becomes a substitute mechanism for weakening creditor bargaining power. We, therefore, test whether distressed firms alter their disclosure practices following the EMC ruling without imposing a priori directionality.

Because voluntary disclosures reflect managers' discretionary reporting choices, prior research finds that firms primarily adjust voluntary disclosures in response to policy and financing shocks (e.g., Lo, 2014; Vashishtha, 2014; Nagar et al., 2019; He and Plumlee, 2020; Stewart, 2022). Accordingly, we expect firms to change their voluntary disclosures after the increase in bargaining power. In contrast, we do not expect mandatory disclosures—which are largely triggered by underlying real activities—to change to the same extent. We therefore use mandatory disclosure as a comparison outcome to demonstrate that the change in voluntary disclosure is not solely driven by a broad shift in the overall disclosure environment.

H1: Financially distressed firms alter their disclosure practices following an increase in public bondholder bargaining power.

3.2 Ownership Structure and Information Advantage

The incentives to adjust disclosure in response to changes in bargaining power are unlikely to be uniform across firms. In particular, ownership structure can shape firms' disclosure responses through differences in access to private information and influence over managerial decisions.

Institutional blockholders often possess informational advantages over dispersed investors due to closer monitoring, direct access to management, and the scale of their stake, which justifies investment in private information production (Shleifer and Vishny, 1986; Collin-Dufresne and Fos, 2015). Consistent with this, prior research shows that firms with greater blockholder ownership produce less voluntary disclosure and have worse information environments, as blockholders use their private informational advantage to influence managerial disclosure decisions (Ge et al., 2021). However, we argue that this transparency-reducing effect can strengthen when financial distress makes renegotiation imminent and the distribution of surplus among claimholders becomes the primary concern.

In distress, blockholders' payoff as residual claimants depends critically on the terms of any debt restructuring. Prior research shows that shareholders tend to experience higher recovery rates and greater deviations from absolute priority in out-of-court workouts than in bankruptcy (Franks and Torous, 1994), giving equity blockholders strong incentives to facilitate exchange offers on favorable terms. When bondholders' bargaining power increases as the EMC ruling did by limiting issuers' ability to use exit consents, public disclosures become a tool that creditors can use to assess continuation values, coordinate holdout strategies, and extract greater concessions.

In this setting, blockholders' informational advantage and influence over managerial decisions create both the means and the incentive to curtail public information production, limiting dispersed bondholders' ability to exercise their enhanced bargaining position. Accordingly,

disclosure responses to the EMC ruling should be more pronounced among firms with higher blockholder ownership.

H2: The change in disclosure following an increase in public bondholder bargaining power is more pronounced for firms with higher blockholder ownership.

3.3 Financing Switching as an Alternative Explanation

In response to increased renegotiation frictions, firms could adjust along dimensions other than disclosure. One possibility is financing switching. Firms facing higher expected costs of out-of-court restructuring might substitute toward bank debt, which relies more heavily on private monitoring and less on public disclosure, or toward equity financing, which could increase disclosure demands (Vashishtha, 2014; Lo, 2014; Kim et al., 2018). Under this alternative, observed disclosure changes would be a consequence of capital structure decisions rather than a direct strategic response to changes in bondholder bargaining power.

If financing switching drives the disclosure results, then post-ruling disclosure changes should be concentrated among firms that meaningfully alter their financing mix — those that increase bank borrowing or issue new equity. Conversely, if disclosure reductions persist even among firms with stable capital structures, this is inconsistent with financing switching as the primary explanation and supports the interpretation that disclosure is an independent strategic response to the shift in bargaining power. We examine both equity issuance and bank debt as potential switching channels and use the cross-sectional pattern of results — rather than their overall magnitude — to distinguish these explanations.

4. Data and Summary Statistics

4.1 Data

This section describes the sample construction and data sources used to test the hypotheses developed in Section 3. Our empirical design focuses on financially distressed firms for which out-of-court renegotiation of public debt is salient and exploits cross-sectional variation in exposure to the EMC ruling based on the presence of publicly traded bonds.

We begin with all U.S. publicly traded firms covered by Compustat and CRSP between 2010 and 2018. We restrict the sample to financially distressed firms, defined as those with a Merton distance-to-default–based probability of default exceeding 5 percent as of December 2014 based on Bharath and Shumway's (2008) SAS code. This restriction ensures that renegotiation incentives are economically meaningful around the EMC ruling and aligns the empirical setting with the institutional background described in Section 2. Firms are classified as treated if they have at least one publicly traded bond outstanding prior to the EMC ruling. Information on bond issuance and characteristics is obtained from the Mergent Fixed Income Securities Database, which allows us to identify bonds subject to the Trust Indenture Act and thus exposed to the ruling.

Firm-level accounting data are obtained from Compustat, and stock return and trading data are from CRSP. We use quarterly data throughout the analysis to capture timely adjustments in disclosure and information environments as firms approach or engage in debt renegotiation, while mitigating noise from high-frequency disclosure clustering.

Corporate disclosure is measured using Form 8-K filings collected from the SEC Analytics Suite. Following prior literature, we classify 8-K items into voluntary (Items 7.01 and 8.01) and mandatory disclosures (all other item numbers) based on whether the filing reflects managerial discretion or is triggered by a realized corporate event or regulatory requirement. This distinction is central to our empirical design because voluntary disclosures capture managerial choices over information production, so we use them as our primary outcome. Mandatory disclosures, in

contrast, largely reflect underlying firm activity, so we use them as a comparison outcome to address the concern that our results are driven by a broad change in the disclosure environment.

To measure ownership structure, we obtain institutional ownership data from 13(f) filings data Backus et al. (2021). We construct measures of blockholder ownership based on institutions holding at least five percent of a firm's outstanding shares, as well as continuous measures of institutional ownership concentration. This data allows us to examine whether disclosure responses vary with the presence of informed shareholders who possess superior access to private information and greater influence over managerial decisions.

To address alternative explanations related to financing behavior, we collect data on seasoned equity offerings from Refinitiv and data on bank debt from Capital IQ. With this data, we can examine changes in equity issuance and bank borrowing around the EMC ruling and assess whether disclosure responses are driven by shifts in firms' financing choices rather than strategic information management. To explore how the content within the 8-Ks, we obtain complexity and litigious words used in the 8-K filings from WRDS SEC Analytics Suite.

Following standard practice, we exclude utility, bank, insurance, and real estate firms (Fama and French 48 industries 31, 44, 45, 46). We do this because disclosure requirements, capital structures, and renegotiation processes differ substantially from those of industrial firms. Appendix A contains detailed variable definitions and data construction procedures.

4.2 Summary statistics

Table 1 presents summary statistics for the variables used in our empirical analysis and compares treated firms (financially distressed firms with publicly traded bonds) to control firms (financially distressed firms without publicly traded bonds). The table reports means and

observation numbers for firm fundamentals, disclosure measures, ownership characteristics, financing, and information environment variables.

As expected, treated and control firms differ along several observable dimensions, reflecting selection into public debt markets. Treated firms are larger, more leveraged, and more likely to have institutional blockholders than control firms. These differences underscore the importance of our DiD design, which exploits within-firm changes around the ruling rather than cross-sectional differences in levels.

Summary statistics on ownership structure indicate that institutional ownership is prevalent among treated firms, with a nontrivial fraction exhibiting concentrated blockholder ownership. This feature of the data motivates our analysis of heterogeneity in disclosure responses based on ownership structure. Measures of equity issuance and bank borrowing indicate that, while some firms adjust financing activity during the sample period, these changes are not mechanically correlated with disclosure levels.

Consistent with the focus on strategic disclosure, voluntary 8-K filings constitute a substantial portion of disclosures in the sample. This variation provides meaningful scope for firms to adjust disclosure behavior in response to changes in bargaining incentives. Firms with public bonds issue more voluntary 8-K filings than firms without public bonds. Meanwhile, treated firms have lower bid-ask spread and high-low spread than control firms.

Although treated and control firms differ on several dimensions, these differences do not threaten identification. Treatment status is determined by firms' pre-existing debt structure, and the EMC ruling was unexpected and unrelated to firm-specific disclosure choices. In subsequent analyses, we further address remaining concerns by examining pre-treatment trends, conditioning

on financing activity, and implementing robustness checks that restrict attention to firms with stable capital structures.

[Insert Table 1]

5. Firm disclosure around the EMC ruling

5.1 Changes in Disclosure

In Table 2, we use DiD analyses to examine the causal relation between out-of-court public bond restructuring and firm-provided disclosure based on equation (1):

$$Disclosure_{i,t} = b_0 + b_1 Treat_i \times Post_t + b_2 Treat_i + b_3 Post_t + b_{control} Controls_{i,t\text{-}1} + \epsilon_{i,t} \quad (1)$$

The dependent variables, $Disclosure_{i,t}$, include either the number of voluntary 8-K filings or the number of mandatory 8-Ks for each firm i in period t. $Treat_i$ is a binary variable that equals one if firm i has outstanding public bonds under the TIA from 2013 to 2016. $Post_t$ is a binary variable that takes on a value of one after 2014. Control variables include ROA, firm size, leverage, M/B ratio, and top plaintiff-lawyer views in quarter $t-1$[3]. In Columns (1) – (2), we show the baseline regressions without fixed effects. In Columns (3) – (4), we further control for two-digit SIC code fixed effects and quarter fixed effects. The coefficient of $Treat_i \times Post_t$ (b_1) measures the marginal effect of the shock on disclosure in firms with outstanding publicly traded debt relative to firms without outstanding publicly traded debt.

Because the EMC ruling changes the bargaining environment facing distressed issuers, managers could have incentives to adjust discretionary information production when negotiating with dispersed public bondholders. We therefore focus on financially distressed firms—where

[3] In unreported results, we also use securities litigation risk measure from Kim and Skinner (2012) as the control variable in our main tests. The results remain similar.

renegotiation is salient—and test whether the EMC shock is reflected in voluntary disclosure choices rather than event-driven mandatory filings. We define distress as firms with a default probability in December 2014 above 5%.

We find a sharp decline in voluntary 8-K filings following the ruling as the coefficient of $Treat_i \times Post_t$ is significantly negative. The magnitude of the marginal effect ranges between -0.210 to -0.234, which is 14.5% to 16.1% of the average voluntary 8-K level. In contrast, mandatory 8-K filings do not exhibit a robust decline once we include quarter and industry fixed effects. This divergence is consistent with the EMC shock affecting managers' discretionary information production rather than underlying event occurrence.

[Insert Table 2]

5.2 Cross-sectional variation in firm disclosure around the EMC ruling

To explore the channels and motivations for firms to reduce disclosure after the EMC ruling, we examine the cross-sectional prediction in H2 and test whether financing switching, as described in Section 3.3, can account for our results.

5.2.1 Blockholder ownership

Table 3 examines whether the post-ruling change in voluntary disclosure differs with blockholder ownership. *High block* is an indicator that equals one if firm *i* has above-median blockholder ownership in quarter *t-1*, and zero otherwise. The specification interacts $Treat_i \times Post_t$ with *High block* to test whether the post-ruling disclosure response differs for firms with concentrated ownership.

Across specifications, the $Treat_i \times Post_t$ coefficient is small and statistically insignificant in the voluntary 8-K regressions, indicating little evidence of a disclosure response among treated firms with low blockholder ownership. In contrast, the $Treat_i \times Post_t \times High\ block$ interaction is negative and statistically significant, implying that treated firms with high blockholder ownership reduce voluntary 8-K filings substantially more than comparable control firms after the ruling. The implied decline ranges from approximately –0.540 to –0.606 voluntary filings per quarter (about 37%–42% of the sample mean).

These cross-sectional patterns support H2 and are consistent with the mechanism developed in Section 3. When bondholder bargaining power increases, firms with powerful blockholders—who both influence disclosure policy and have incentives to preserve informational advantages in renegotiation—respond by curtailing discretionary information production more sharply than firms with diffuse ownership.

[Insert Table 3]

5.2.2 Financing switching as an alternative explanation

Table 4 uses DiD tests that examine whether financing switching drives disclosure around the EMC ruling. Columns (1) – (2) present regressions of disclosures among firms with and without a seasoned equity offering (SEO) in *t-1*. Similar to Table 2, the coefficients on $Treat_i \times Post_t$ are significantly negative in all regressions of voluntary 8-Ks. The coefficients on $Treat_i \times Post_t \times SEO$ are insignificant in regressions of voluntary 8-Ks. Affected firms that switch to equity financing do not increase voluntary 8-Ks to meet shareholders' demand for public information.

The bank debt results follow the same pattern, such that treated firms reduce voluntary disclosure regardless of their reliance on bank financing. Columns (3) – (4) include disclosure

results for firms with high versus low bank debt financing. *Bank debt* is an indicator that equals one if firm *i* is above-median bank debt/total debt in *t-1*. The coefficients of $Treat_i \times Post_t$ are significantly negative in regressions of voluntary 8-Ks, but coefficients on $Treat_i \times Post_t \times Bank\ debt$ are insignificant in all regressions.

The insignificance of the *Treat* × *Post* × *SEO* and *Treat* × *Post* × *Bank debt* interactions indicates that disclosure reductions are not concentrated among firms that alter their financing mix. This pattern is inconsistent with financing switching as the primary driver of our results and supports the interpretation that disclosure is an independent strategic response to the shift in bondholder bargaining power rather than a mechanical consequence of capital structure changes.

[Insert Table 4]

5.3 Changes in the Content, Readability, and Sentiment of 8-K Disclosures

The analyses above document that treated firms reduce the *quantity* of disclosure following the EMC ruling, particularly discretionary 8-K filings (Tables 2–4). We next examine whether firms also adjust the *content* of the disclosures they continue to provide. Changes in filing volume alone cannot distinguish strategic information management from mechanical reductions in reporting. In bargaining settings, the informativeness and interpretation of disclosures shape creditors' beliefs about continuation values and recovery prospects and can therefore affect creditors' incentives to coordinate and hold out. Accordingly, we test whether the post-EMC disclosures become (i) less favorable in content, and (ii) more difficult to process, consistent with firms strategically limiting the informativeness of public information after the loss of exit-consent leverage.

Table 5 provides evidence consistent with this mechanism. Columns (1) – (2) examine changes in disclosure content using textual measures. Prior work has shown that complex and litigious

words are positively related to less favorable ratings, a higher cost of debt, and higher litigious risks (Bonsall and Miller, 2017; Humphery-Jenner, Liu, Nanda, Silveri, and Sun, 2024). Following the ruling, treated firms increase the use of litigation-related language (LM litigious words) and the complexity of voluntary 8-K filings (Fog index), consistent with lower readability and greater interpretive frictions. The magnitude of the coefficients of *Treat* × *Post* is 5.556% and 2.677% of the average level.

Column (3) examines how markets interpret these disclosures. We estimate logit models of whether abnormal returns around 8-K filings are positive. *Positive stock CAR around voluntary 8-K*$_{i,j,t}$ is a binary variable, which equals one if stock CAR of voluntary 8-K filed by firm *i* in quarter *t* is positive, and zero otherwise. CARs are estimated using the Fama-French three-factor model. The estimation window is [-200, -50], and the event window is [-5,5]. We examine stock CARs voluntary 8-Ks and control fixed effects using two-digit SIC codes, quarter, and 8-K items.

Treated firms are significantly less likely to experience positive abnormal returns around their 8-K filings after the ruling. Together with the textual evidence, we interpret this evidence as consistent with remaining disclosures becoming less favorable and/or less informative, rather than as a definitive measure of tone. This evidence complements Tables 2 – 4 by showing that firms adjust not only the amount of discretionary disclosure but also its content and interpretation following the increase in bondholder bargaining power.

[Insert Table 5]

6. Consequences of disclosure

6.1 Information Asymmetry around the EMC ruling

The results in Sections 5.1–5.3 show that following the EMC ruling, treated firms reduce discretionary (voluntary) disclosure and the content of remaining disclosures becomes less readable and more legalistic. We next examine whether these changes are reflected in firms' broader information environments. If disclosure adjustments reduce the informativeness of public information available to dispersed investors, we should observe a deterioration in market-based measures of information asymmetry.

To test this implication, we analyze changes in bid–ask spreads measured at the quarterly frequency. We also use the Corwin and Schultz (2012) monthly high–low spread estimator as our second measure of trading frictions and information asymmetry. We estimate a difference-in-differences specification analogous to the main disclosure tests, with bid–ask spread in quarter *t* as the dependent variable and *Treat* × *Post* as the main regressor of interest. To align this analysis with the mechanism evidence in Section 5.2, we also estimate heterogeneous effects by blockholder ownership by including *High block* and the triple interaction *Treat* × *Post* × *High block*. Specifically, we run the following regression:

$$\textit{Bid-ask spread}_{i,t} = b_0 + b_1 \textit{Treat}_i \times \textit{Post}_t + b_2 \textit{Treat}_i + b_3 \textit{Post}_t + b_4 \textit{High block}_{i,t-1} + b_5 \textit{Treat}_i \times \textit{High block}_{i,t-1} + b_6 \textit{Post}_t \times \textit{High block}_{i,t-1} + b_7 \textit{Treat}_i \times \textit{Post}_t \times \textit{High block}_{i,t-1} + b_{control} \textit{Controls}_{i,t-1} + \epsilon_{i,t} \quad (3)$$

Table 6 reports the results. In the baseline specification, the coefficient on *Treat* × *Post* captures the post-EMC differential change in bid–ask spreads for treated firms relative to control firms among low-blockholder firms (i.e., when *High block* = 0). The coefficient on *Treat* × *Post* × *High block* captures the incremental post-EMC change for treated firms with high blockholder ownership. Therefore, the implied post-EMC differential change in spreads for high-block treated firms is **(***Treat* × *Post*) + (*Treat* × *Post* × *High block*).

The estimates indicate that the deterioration in the information environment is concentrated among treated firms with high blockholder ownership. In particular, the triple interaction *Treat* × *Post* × *Highblock* is positive and statistically significant, implying that bid–ask spreads widen following the ruling for high-block treated firms relative to comparable control firms. The marginal effect of treated and low-block firm is -0.064 (Column 3) and 0.003 (Column 4). The overall bid-ask spread does not experience a significant change among treated and low-block firms. Among treated and high-block firms, the marginal effect of the treatment is 0.243 (Column 3) and 0.158 (Column 4). This pattern is consistent with the disclosure evidence in Sections 5.1–5.3: the firms most likely to curtail discretionary disclosure and to issue less readable/more legalistic filings are also those that experience the largest increase in trading frictions. Taken together, these results suggest that the EMC ruling affects not only firms' disclosure choices but also the broader information environment in which these firms trade.

[Insert Table 6]

6.2 Covenants of newly issued bonds following the EMC ruling

We next examine whether disclosure responses following the EMC ruling are associated with changes in subsequent debt contract design. A central implication of renegotiation-based contracting models is that when renegotiation becomes more difficult or costly, creditors place greater weight on ex ante protections embedded in contract terms (Garleanu and Zwiebel, 2009). If treated firms respond to the ruling by reducing the informativeness of public disclosure, particularly among firms with concentrated ownership, then subsequent creditors may demand tighter contractual protections to compensate for greater informational frictions and reduced transparency.

To test this idea, we analyze covenant restrictiveness in newly issued bonds following the EMC ruling. We construct measures of covenant intensity and related contract features using issue-level data (e.g., from FISD and the covenant coding approach described in Section 4 and Appendix A). The dependent variables in Table 7 capture covenant restrictiveness (and, where applicable, subcomponents such as limitations on investment, additional debt, or asset sales). Our key explanatory variables include post-ruling disclosure behavior and/or interactions that capture differential changes for treated firms after the ruling, depending on the specification.

$$Number\ of\ covenants_{i,j,t} = b_0 + b_1 Disclosure_{i,t} \times Post_t + b_2 Disclosure_{i,t} + b_{control} Controls_{i,t\text{-}1} + \mu_t + \alpha_i + \Theta_j + \epsilon_{i,t} \quad (4)$$

Table 7 reports the results. Across specifications, we find that post-ruling disclosure behavior is systematically related to subsequent covenant design. In particular, firms that provide more discretionary disclosure in the post-EMC period (or treated firms with relatively higher disclosure post-EMC, depending on the specification) are associated with less restrictive covenant structures, whereas lower disclosure is associated with more restrictive covenants. These patterns are consistent with creditors demanding stronger ex ante protections when information environments are weaker and renegotiation frictions are higher.

Importantly, we interpret these findings as contracting responses associated with shifts in information environments and renegotiation incentives, rather than as causal effects of disclosure on covenant design. Disclosure policies and covenant structures are jointly determined outcomes of firms' financing choices and creditors' contracting demands. Nevertheless, the results provide evidence that the disclosure adjustments documented earlier in the paper coincide with meaningful changes in subsequent debt contract terms in a manner consistent with the mechanism: when

creditor bargaining power increases and information becomes more valuable to dispersed claimholders, firms' information policies and contract terms move together in predictable ways.

[Insert Table 7]

7. Robustness

7.1 Pre-treatment parallel trends

A key identification assumption is that, absent the EMC ruling, disclosure outcomes for treated and control firms would have evolved similarly. We assess this assumption using an event-time specification that replaces the post indicator with a full set of leads and lags relative to the ruling date. We construct dummy variables for each quarter from 2013Q2 to 2016Q4. Then, we run regressions of corporate disclosures on interactions between the *Treat* indicator and the quarter dummy variables. The dependent variables and control variables are the same as in Table 2 Columns (1) – (2). The coefficients on the interactions measure the difference in disclosure between treated and control groups, compared to that in 2013Q1.

Figures 1 and 2 plot the coefficients (and their 95% confidence intervals) of *Treat-Quarter* interactions from the regressions of the number of voluntary 8-Ks and mandatory 8-Ks. Without controlling for time fixed effects, the coefficients in regressions of mandatory 8-Ks (Figure 2) show an annual cycle that peaks in Q2[4]. However, the level of the coefficients in the regression of voluntary 8-Ks significantly decreases after the EMC ruling (Figure 1), indicating a clear pre-treatment parallel trend exists for voluntary 8-Ks, and the level of coefficients decreases after the EMC ruling. The joint F-test of the interactions between *Treat* and the pre-treatment quarter

[4] Among mandatory 8-K disclosures, Item 5.07—Submission of Matters to a Vote of Security Holders—often results in a peak during Q2. This is primarily because many companies schedule their annual general meetings during this quarter.

indicators yields a p-value of 0.387, providing no evidence of differential pre-trends in voluntary 8-K disclosures. Overall, our pre-treatment parallel trend assumption holds for voluntary 8-Ks.

[Insert Figures 1 to 2]

7.2 PSM-DID

In Table 1, treated and control firms show different characteristics. To increase the similarity between treated and control groups, we use propensity score matching methodology. We run a logit regression to estimate propensity scores based on leverage, MB ratio, ROA, size, block ownership, bank debt ratio, and SEO in 2014Q4. The matched control firm is identified as the single nearest neighbor without replacement. Table A-3 Panel A shows the summary statistics of the matched treated and control groups. Although the differences in some variables between treated and control firms are significantly different from zero, the magnitudes of the differences of most variables are smaller than those in Table 2. In Table A-3 Panel B, we re-estimate the main regressions using the matched sample. Consistent with Table 2, the coefficients on *Treat* × *Post* in regressions of voluntary 8-Ks are all significantly negative.

7.3 Alternative disclosure measure using 8-K item numbers

Our main disclosure measure used in Tables 2 through 7 is the number of voluntary 8-K filings. An alternative measure is to use the number of items that are included within each 8-K, which indicates the firm is revealing more types of information in a single filing. For example, a single 8-K can include multiple item numbers. To assess whether this alternative measure affects our conclusions, we re-estimate the specification from Table 2 using the number of items in a quarter rather than the number of voluntary 8-Ks filed. As shown in Table A-4, the conclusions are robust, and we continue to find that treated firms reduce disclosure following the EMC ruling.

8. Conclusion

This paper examines how financially distressed firms adjust their disclosure practices in response to an exogenous increase in public bondholder bargaining power. Exploiting the 2014 *Marblegate Asset Management v. Education Management Corporation* ruling, which constrained the use of exit consents in out-of-court bond restructurings, we study how changes in renegotiation incentives affect firms' choices about public information production.

We find that when public bondholders' bargaining power increases, financially distressed firms reduce disclosure, with the effect concentrated in voluntary disclosures. This pattern is strongest among firms with high blockholder ownership, consistent with informed shareholders seeking to preserve private information advantages when renegotiation outcomes become more sensitive to public information. We find no evidence that financing switching explains these disclosure changes, indicating that disclosure represents an independent strategic response rather than a mechanical consequence of changes in capital structure.

These findings contribute to the accounting literature by highlighting disclosure as an endogenous strategic choice shaped by bargaining considerations within the capital structure. While prior research emphasizes the role of disclosure in improving monitoring and contracting efficiency, our evidence indicates that disclosure can also be strategically curtailed when creditor protections strengthen and renegotiation incentives change.

Our results also speak to the literature on shareholder–creditor conflicts. Existing work documents how such conflicts influence investment, financing, and payout decisions near financial distress. We extend this literature by showing that disclosure policies are similarly sensitive to shifts in bargaining power, particularly when ownership is concentrated among informed

blockholders. Importantly, these disclosure reductions are accompanied by changes in the content of remaining disclosures, reinforcing the interpretation that firms strategically adjust information content—not merely disclosure frequency—when bondholder bargaining power increases. Information production thus represents an important and previously underexplored margin through which shareholder–creditor conflicts operate.

Finally, our findings have implications for policy discussions surrounding creditor protection and bond restructuring regulation. Legal changes that strengthen creditor rights can alter firms' incentives to supply public information, with consequences for market transparency and subsequent contracting. While such protections aim to improve enforcement and reduce opportunism, our evidence suggests they may also generate unintended informational effects by weakening disclosure incentives when outside stakeholders rely most heavily on public information. More broadly, our evidence suggests that models of debt renegotiation and disclosure should treat information production as an endogenous strategic choice that responds to shifts in bargaining institutions, rather than as a passive input to contracting.

Taken together, our results show that disclosure is a fundamental component of debt renegotiation strategy, linking financial reporting, capital structure, and contracting in ways that are central to both theory and policy.

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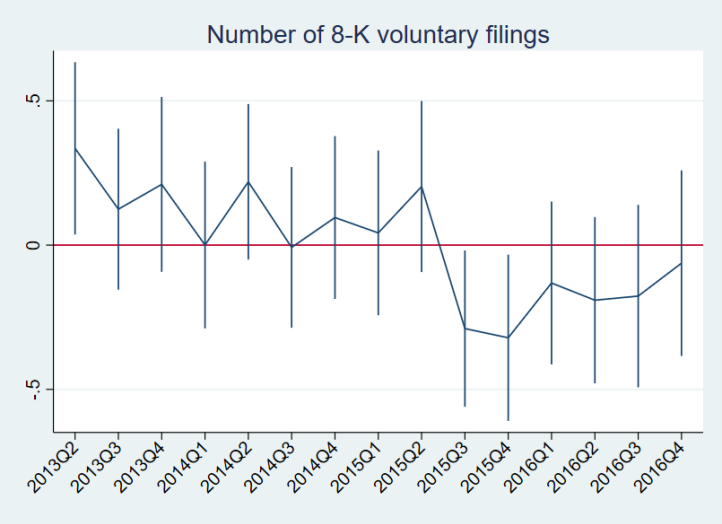
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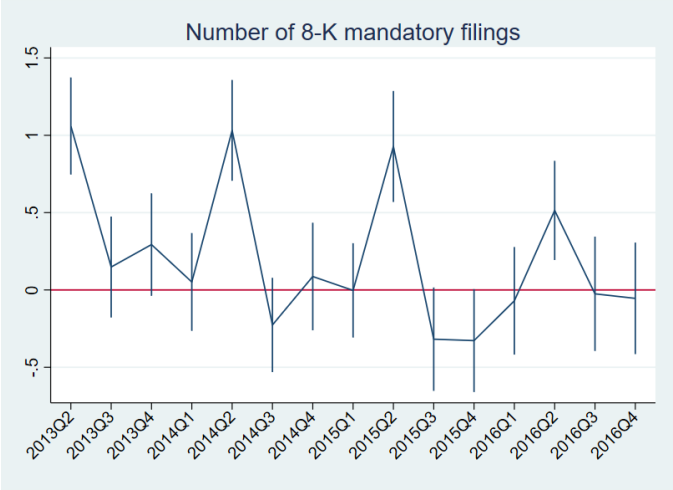
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Figure 1 Average difference in the number of voluntary 8-Ks between treated and control groups



The figure displays the coefficients of interactions between quarter dummy variables and $Treat_i$, and 95% confidence intervals of coefficients. The treated group includes firms with outstanding bonds with an offering amount of $10 million or above from 2013 to 2016. The sample period spans from 2013Q1 to 2016Q4. The event date is 2014Q4. The sample and control variables are the same as in Table 2 Column (1).

Figure 2 Average difference in the number of mandatory 8-Ks between treated and control groups



The figure displays the coefficients of interactions between quarter dummy variables and $Treat_i$, and 95% confidence intervals of coefficients. The treated group includes firms with outstanding bonds with an offering amount of $10 million or above from 2013 to 2016. The sample period spans from 2013Q1 to 2016Q4. The event date is 2014Q4. The sample and control variables are the same as in Table 2 Column (2).

Table 1 Summary statistics

Panel A: Firm Characteristics									
	ROA	Size	Leverage	MB	Top plf views	Default probability 2014/12	Block ownership	Bank/Total debt	SEO ($million)
Full sample									
Mean	-0.039	6.08	1.325	2.482	0.317	0.433	0.205	52.739	2.45
N	9,785	9,785	9,785	9,785	9,785	9,785	5,654	5,900	9,785
Treat									
Mean	-0.013	7.723	1.658	1.964	0.485	0.444	0.245	25.018	3.677
N	2,100	2,100	2,100	2,100	2,100	2,100	1,619	1,285	2,100
Control									
Mean	-0.046	5.631	1.234	2.624	0.272	0.43	0.189	60.458	2.114
N	7,685	7,685	7,685	7,685	7,685	7,685	4,035	4,615	7,685
T-test	0.032***	2.092***	0.424***	-0.660***	0.213***	0.014*	0.056***	-35.440***	1.562***

Panel B: Corporate Disclosures and Characteristics					
	Voluntary 8-Ks	Mandatory 8-Ks	Positive stock CAR [-5,5] around Voluntary 8-Ks	Litigious Voluntary 8-Ks	Gunning Fog Index Voluntary 8-Ks
Full sample					
Mean	1.453	3.112	0.487	0.018	21.666
N	9,785	9,785	9,518	15,374	15,374
Treat				0.018	22.207
Mean	1.718	3.295	0.498	3,788	3,788
N	2,100	2,100	2,520		
				0.018	21.489
Control				11,586	11,586
Mean	1.38	3.062	0.483	0.001***	0.719***
N	7,685	7,685	6,998		
T-test	0.338***	0.234***	0.015	0.001***	0.719***

Panel C: New Bond Issue Characteristics								
	Debt issue Covenant	Distress Covenant	Asset Covenant	Investment Covenant	TTM	Offering Amount	Callable	Convertible
Mean	0.404	0.620	0.945	0.438	31.291	360,228	0.519	0.180
N	416	416	416	416	416	416	416	416

Panel D: Information Environment		
	Bid-ask spread	High-low spread
Full Sample		
Mean	0.864	1.353
N	9,759	7,010
Treat		
Mean	0.262	1.001
N	2,098	1,572
Control		
Mean	1.028	1.455
N	7,661	5,438
T-test	-0.766***	-0.454***

This table describes the sample of financially distressed firms used in the empirical analysis. The sample is limited to firms with default probabilities in 2014Q4 above 5%. The treated group includes firms with outstanding bonds with an offering amount of $10 million or more from 2013 to 2016. Panel A displays summary statistics of firm characteristics, which are defined in Appendix Table A-1. Panel B provides information on firm disclosures including sentiment and content. Voluntary 8-Ks is the number of voluntary 8-K filings submitted in a quarter, which include 7.01 and 8.01. Mandatory 8-Ks include all item numbers not deemed voluntary. Positive stock CAR [-5,5] around voluntary 8-Ks is a binary variable that equals one if stock CAR [-5,5] around the voluntary 8-K filing is positive, and zero otherwise. Litigious Voluntary 8-Ks is the proportion of Loughran–McDonald litigious words in the voluntary 8-K. Gunning Fog Index is a readability measure that estimates how many years of formal education someone would need to understand the voluntary 8-K filing. Panel C reports summary statistics of new bond issues from the Mergent Fixed Income Securities Database. TTM is the number of quarters between issuance date and maturity date. Offering amount is face value of debt initially issued. Callable is a binary variable that equals one if the bond has a call provision. Convertible is a binary variable that equals one if the bond is convertible. The definitions of number of debt issuance covenants, distress or default covenants, asset covenants, and investment covenants of each new bond are in Appendix Table A-1. Panel D has information environment statistics. A two-sample t-test compares the means of the treated and control groups. All continuous variables are winsorized at the 1% and 99% levels. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

Table 2 Firm public disclosure around the EMC ruling

VARIABLES	(1) Voluntary 8-Ks	(2) Mandatory 8-Ks	(3) Voluntary 8-Ks	(4) Mandatory 8-Ks
Treat × Post	-0.234**	-0.192*	-0.210**	-0.184
	(0.022)	(0.096)	(0.033)	(0.112)
Treat	0.161	0.328**	0.191	0.335**
	(0.261)	(0.011)	(0.199)	(0.015)
Post	-0.048	-0.072		
	(0.285)	(0.223)		
ROA	-2.694***	-4.151***	-2.075***	-4.129***
	(0.000)	(0.000)	(0.000)	(0.000)
Size	0.175***	0.055*	0.143***	0.057*
	(0.000)	(0.079)	(0.000)	(0.099)
Leverage	0.015	-0.012	0.005	-0.007
	(0.538)	(0.554)	(0.830)	(0.753)
MB	0.001	0.002	-0.000	0.002
	(0.692)	(0.570)	(0.961)	(0.613)
Top plf views	-0.011	0.078***	0.001	0.078***
	(0.531)	(0.000)	(0.957)	(0.000)
Constant	0.277*	2.587***	0.476***	2.535***
	(0.073)	(0.000)	(0.009)	(0.000)
Quarter FE	No	No	Yes	Yes
SIC2 FE	No	No	Yes	Yes
Observations	9,785	9,785	9,785	9,785
Adjusted R-squared	0.040	0.027	0.075	0.067

This table reports difference-in-differences estimates of the effect of the EMC ruling on disclosure. Dependent variables are the numbers of voluntary 8-K filings (Columns (1) and (3)) and mandatory 8-K filings (Columns (2) and (4)). *Treat* is a dummy variable, which equals one if firm *i* has outstanding public bonds with an offering amount of $10 million or more from 2013 to 2016. *Post* is a dummy variable, which equals one after 2014. Regressions 1 – 2 include no fixed effects, and regressions 3 – 4 include quarter and SIC2 fixed effects. Control variables are defined in Appendix Table A-1. Standard errors are clustered by firm. P-values are in parentheses. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

Table 3 Ownership and voluntary 8-K disclosure responses

VARIABLES	(1) Voluntary 8-Ks	(2) Voluntary 8-Ks
Treat × Post × High block	-0.606**	-0.540**
	(0.012)	(0.017)
Treat × Post	0.021	0.034
	(0.901)	(0.835)
Treat	-0.095	-0.167
	(0.608)	(0.408)
Post	-0.058	
	(0.462)	
High block	-0.051	0.007
	(0.700)	(0.959)
Treat × High block	0.594**	0.630***
	(0.013)	(0.008)
Post × High block	0.013	-0.050
	(0.910)	(0.657)
ROA	-2.939***	-2.090***
	(0.000)	(0.000)
Size	0.213***	0.187***
	(0.000)	(0.000)
Leverage	-0.005	-0.001
	(0.888)	(0.975)
MB	-0.002	-0.003
	(0.602)	(0.408)
Top plf views	-0.012	0.002
	(0.506)	(0.929)
Constant	-0.002	0.143
	(0.993)	(0.500)
Quarter FE	No	Yes
SIC2 FE	No	Yes
Observations	5,652	5,652
Adjusted R-squared	0.063	0.110

This table reports difference-in-differences estimates of the effect of the EMC ruling on voluntary disclosure, conditioning on blockholder ownership. The dependent variable is the number of voluntary 8-K filings in quarter *t*. *Treat* indicates financially distressed firms with publicly traded bonds outstanding prior to the ruling; *Post* indicates quarters after the ruling. *High block* equals one for above-median blockholder ownership (based on 13F holdings) measured in quarter *t–1*. The interaction *Treat* × *Post* × *High block* captures whether treated firms with high blockholder ownership exhibit a stronger post-ruling change in disclosure. Regression 1 includes no fixed effect, and regression 2 includes quarter and SIC2 fixed effects. Standard errors are clustered by firm. P-values are in parentheses. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

Table 4 Financing choices and voluntary 8-K disclosure responses

	(1)	(2)	(3)	(4)
VARIABLES	Voluntary 8-Ks			
Treat × Post × SEO	0.595	0.541		
	(0.308)	(0.343)		
Treat × Post × Bank loan			0.489	0.392
			(0.140)	(0.214)
Treat × Post	-0.259**	-0.232**	-0.356**	-0.327**
	(0.013)	(0.022)	(0.014)	(0.022)
Treat	0.171	0.205	-0.012	0.013
	(0.232)	(0.165)	(0.958)	(0.954)
Post	-0.036		0.081	
	(0.432)		(0.382)	
SEO	0.277*	0.273*		
	(0.065)	(0.062)		
Treat × SEO	-0.178	-0.368		
	(0.688)	(0.406)		
Post × SEO	-0.233	-0.246		
	(0.243)	(0.197)		
Bank loan			-0.063	-0.089
			(0.644)	(0.531)
Treat × Bank loan			-0.415	-0.381
			(0.126)	(0.169)
Post × Bank loan			-0.132	-0.085
			(0.307)	(0.523)
ROA	-2.659***	-2.047***	-2.466***	-1.628***
	(0.000)	(0.000)	(0.000)	(0.004)
Size	0.175***	0.143***	0.182***	0.157***
	(0.000)	(0.000)	(0.000)	(0.000)
Leverage	0.015	0.005	0.043	0.033
	(0.521)	(0.819)	(0.279)	(0.388)
MB	0.001	-0.000	0.002	-0.000
	(0.713)	(0.941)	(0.637)	(0.974)
Top plf views	-0.011	0.001	-0.013	-0.001
	(0.533)	(0.962)	(0.581)	(0.976)
Constant	0.267*	0.471***	0.247	0.472**
	(0.085)	(0.010)	(0.218)	(0.042)
Quarter FE	No	Yes	No	Yes
SIC2 FE	No	Yes	No	Yes
Observations	9,785	9,785	5,895	5,895
Adjusted R-squared	0.041	0.075	0.052	0.103

This table presents OLS estimates of corporate disclosure regressions. The sample consists of firm-quarter observations from 2013 to 2016 in Compustat. The sample is limited to firms with default probabilities in 2014Q4 above 5%. The dependent variable is the number of voluntary 8-K filings. *Treat* is a dummy variable, which equals one if firm *i* has outstanding public bonds with an offering amount of $10 million or more from 2013 to 2016. *Post* is a dummy variable, which equals one after 2014. SEO is an indicator of whether firm *i* has an SEO in *t-1*. *Bank debt* is an indicator that equals one if firm *i* has above median bank debt/total debt in *t-1*. Regressions 1 & 3 include no fixed effect and regressions 2 & 4 include quarter and SIC2 fixed effects. P-values are in parentheses. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

Table 5 Changes in disclosure content, readability, and market interpretation

VARIABLES	(1) Litigious words voluntary8-Ks	(2) Gunning Fog Index voluntary8-Ks	(3) Positive stock CAR [-5,5] around voluntary 8-Ks
Treat × Post	0.001*	0.580**	-0.179*
	(0.057)	(0.042)	(0.059)
Treat	0.000	0.212	0.150**
	(0.852)	(0.447)	(0.035)
ROA	-0.006***	-3.289***	-0.021
	(0.003)	(0.000)	(0.152)
Size	0.000	0.176***	0.039***
	(0.550)	(0.004)	(0.002)
Leverage	0.000	0.009	-0.001
	(0.173)	(0.852)	(0.786)
MB	0.000	-0.004	0.014
	(0.933)	(0.568)	(0.361)
Top plf views	0.000**	0.064	0.014
	(0.041)	(0.134)	(0.361)
Constant	0.016***	20.243***	0.486*
	(0.000)	(0.000)	(0.098)
SIC2 FE	Yes	Yes	Yes
Quarter FE	Yes	Yes	Yes
Item FE	Yes	Yes	Yes
Observations	14,784	14,784	9,430
Adjusted R-squared	0.044	0.049	
Pseudo R-square			0.012

This table tests whether firms adjust the content and interpretation of the disclosures they continue to provide following the EMC ruling. In Column (1), the dependent variable is Loughran-McDonald litigious word proportion of voluntary 8-Ks filing. In Column (2), the dependent variable is Gunning Fog Index of voluntary 8-Ks filing. In Column (3), the dependent variable is an indicator of whether [-5,5] stock CAR around voluntary 8-K filings is positive. Abnormal returns are estimated using the Fama-French three-factor model. The estimation window is [-200, -50]. *Treat* is a dummy variable, which equals one if firm *i* has outstanding public bonds with an offering amount of $10 million or more from 2013 to 2016. *Post* is a dummy variable, which equals one after 2014. Control variables are defined in Appendix Table A-1. Standard errors are clustered by firm. P-values are in parentheses. *, **, and *** indicates statistical significance at the 10%, 5%, and 1% levels, respectively.

Table 6 Implications for the information environment

	(1) Bid-ask spread (×100)	(2) High-low spread (×100)	(3) Bid-ask spread (×100)	(4) High-low spread (×100)
Treat × Post × High block	0.328**	0.100	0.307**	0.155**
	(0.021)	(0.213)	(0.025)	(0.023)
Treat × Post	-0.309***	-0.084	-0.325***	-0.115*
	(0.009)	(0.192)	(0.006)	(0.052)
Treat	0.276**	0.142**	0.261**	0.118**
	(0.017)	(0.016)	(0.038)	(0.041)
Post	0.219***	0.246***		
	(0.004)	(0.000)		
High block	-0.175**	-0.047	-0.133	-0.024
	(0.042)	(0.173)	(0.107)	(0.496)
Treat × High block	-0.011	-0.080	-0.027	-0.073
	(0.927)	(0.158)	(0.826)	(0.184)
Post × High block	-0.111	-0.034	-0.078	-0.059
	(0.261)	(0.444)	(0.415)	(0.160)
ROA	1.196**	-1.927***	0.788	-1.363***
	(0.035)	(0.000)	(0.141)	(0.000)
Size	-0.468***	-0.197***	-0.493***	-0.224***
	(0.000)	(0.000)	(0.000)	(0.000)
Leverage	0.147***	0.031**	0.132***	0.059***
	(0.000)	(0.037)	(0.000)	(0.000)
MB	-0.011***	-0.001	-0.008***	-0.001
	(0.000)	(0.457)	(0.009)	(0.703)
Top plf views	-0.004	-0.001	0.011	0.010**
	(0.717)	(0.918)	(0.283)	(0.038)
Constant	3.539***	2.267***	3.783***	2.535***
	(0.000)	(0.000)	(0.000)	(0.000)
SIC2 FE	No	No	Yes	Yes
Quarter FE	No	No	Yes	Yes
Observations	5,652	4,623	5,652	4,623
Adjusted R-squared	0.434	0.478	0.482	0.578

This table presents OLS estimates of bid-ask spread regressions. The sample consists of firm-quarter observations from 2013 to 2016 in Compustat. The sample is limited to firms with default probabilities in 2014Q4 above 5%. The dependent variables are quarterly bid-ask spread × 100 and quarterly high-low spread × 100, estimated following Corwin and Schultz (2012). *Treat* is a dummy variable, which equals one if firm *i* has outstanding public bonds with an offering amount of $10 million or more from 2013 to 2016. *Post* is a dummy variable, which equals one after 2014. *High block* is an indicator that equals one if firm *i* has above median blockholder ownership in quarter *t-1*. Regressions 1 – 2 include no fixed effect and regressions 3 – 4 include quarter and SIC2 fixed effects. Standard errors are clustered by firm. P-values are in parentheses. *, **, and *** indicates statistical significance at the 10%, 5%, and 1% levels, respectively.

Table 7 Disclosure responses and subsequent bond contract design

	(1)	(2)	(3)	(4)
	Debt issue covenant	Distress covenant	Asset covenant	Investment covenant
Voluntary 8-Ks × Post	-0.046	-0.074**	-0.109**	-0.078***
	(0.109)	(0.015)	(0.024)	(0.000)
Voluntary 8-Ks	0.026	0.050**	0.091***	0.047***
	(0.209)	(0.011)	(0.003)	(0.001)
TTM	-0.002*	0.000	-0.003	-0.000
	(0.084)	(0.360)	(0.108)	(0.901)
Offering amount	-0.000	0.000	-0.000	0.000
	(0.434)	(0.133)	(0.773)	(0.473)
Callable	0.174	0.068	0.305	0.053
	(0.143)	(0.337)	(0.175)	(0.326)
Convertible	-0.691***	-0.049	-1.115***	-0.336***
	(0.000)	(0.607)	(0.000)	(0.000)
Constant	0.461***	0.461***	0.891***	0.380***
	(0.000)	(0.000)	(0.000)	(0.000)
Quarter FE	Yes	Yes	Yes	Yes
SIC2 FE	Yes	Yes	Yes	Yes
Rating FE	Yes	Yes	Yes	Yes
Observations	416	416	416	416
Adjusted R-squared	0.758	0.812	0.851	0.796

This table examines whether firms' post-ruling disclosure behavior is associated with the restrictiveness of covenants in subsequent bond issues. The dependent variables are the numbers of Debt issue covenants, Distress covenants, Asset covenants, and Investment covenants of new bond issues. *Post* is a dummy variable, which equals one after 2014. Voluntary 8-Ks is the number of voluntary 8-K filings by firm *i* in quarter *t*. All regressions include quarter, SIC2, and rating fixed effects. Standard errors are clustered by firm. P-values are in parentheses. *, **, and *** indicates statistical significance at the 10%, 5%, and 1% levels, respectively.

Appendix

Table A-1 Variable Descriptions

Variable	Definition	Source
Voluntary 8-Ks	The number of voluntary 8-K filings submitted in a quarter, which include 7.01 and 8.01.	
Mandatory 8-Ks	The number of mandatory 8-K filings submitted in a quarter, which include all items except for 7.01, 8.01, and 9.01.	
Positive stock CAR [-5,5] around voluntary 8-Ks	A binary variable that equals one if an 8-K filing has positive stock CAR [-5,5].	
Litigious voluntary 8-Ks	The proportion of Loughran-McDonald litigious words in the voluntary 8-K filing.	
Gunning Fog Index voluntary 8-Ks	An index based on average sentence length and the percentage of complex words.	
Bid-ask spread	The quarterly *bid-ask spread* is (*ask-bid*)/((*ask+bid*)/2)×100.	CRSP
High-low spread	The quarterly *high-low spread* is the average monthly bid-ask spread)×100 in a quarter, estimated following Corwin and Schultz (2012)	Corwin and Schultz (2012)
Treat	A binary variable that equals one if the firm has outstanding bonds with an offering amount of $10 million or more from 2013 to 2016, and zero otherwise.	Mergent Fixed Income Securities Database
ROA	Net income divided by total assets	
Size	Natural logarithm of *Atq*	Compustat
Leverage	(*Dlttq* +*Dlcq*)/*Atq*	
M/B	Market value of equity (*Cshoq*×*Prccq*) scaled by the book value of equity.	
Top plf views	The total number of EDGAR views by plaintiffs' law firms ranked among the top plaintiffs' law firms by Chambers and Partners as of June 2011 during the fiscal year	Kartapanis and Yust (2024)
Default probability in 2014/12	Merton distance-to-default model to estimate default probability in December 2014	Bharath and Shumway (2008)
Block ownership	Total shares owned by block institutional investors scaled by monthly total outstanding shares. Block holders are institutional investors who hold at least 5% of the firm's outstanding shares.	13(f) filings data from Backus et al. (2021)
High block	An indicator that equals one if firm *i* has above median block holder ownership in quarter *t-1*.	
Bank/Total debt	Bank debt/Total debt	Capital IQ
Bank debt	An indicator that equals one if firm i has above median bank debt/total debt in t-1.	
SEO ($million)	Total proceeds amount of seasoned equity offering ($million) in a quarter	Refinitiv

Debt issue covenant	The number of debt issuance covenants included in a new bond. Debt issuance covenants restrict additional debt issuance and leverage.	Mergent Fixed Income Securities Database
Distress covenant	The number of distress covenants included in a new bond. Distress or default covenants safeguard bondholders in distress, including cross-default and cross-acceleration clauses.	
Asset covenant	The number of asset covenants included in a new bond. Asset covenants impose limitations on asset sales and negative pledges.	
Investment covenant	The number of investment covenants included in a new bond. Investment covenants that restrict mergers and direct investment.	
TTM	The number of quarters between the offering date and maturity date of a bond.	
Offering amount	The face value of debt initially issued.	
Callable	Indicates if the bond is callable	
Convertible	Indicates if the bond is convertible	

Table A-2 Stock CARs around December 30, 2014

Event window	Distressed	Non-distressed	Distressed minus Non-distressed
[-5,5]	-0.029**	0.001	-0.029***
[-3,3]	0.006	0.000	0.006
[-1,1]	0.007	0.001	0.006**
[0]	-0.002	-0.000	-0.001

Table A-2 displays univariate tests of stock CARs of firms around the 2014 EMC ruling. All firms in the sample are categorized into distressed and non-distressed groups. Abnormal returns are estimated using the Fama-French three-factor model. The estimation window is [-200, -50]. Differences in CARs between distressed and non-distressed firms are reported. Distressed firms have default probabilities in 2014Q4 above 5%. The remaining firms are non-distressed firms. The sample is limited to treated firms. Treated firms are those with outstanding bonds with an offering amount of $10 million from 2013 to 2016

Table A-3 Firm public disclosure around the EMC ruling (propensity score matching)

Panel A: Summary statistics of matched sample

Variable	Voluntary 8-Ks	ROA	Size	Leverage	M/B	Top plf views	Block ownership	Bank/Total debt	SEO ($million)
Treat									
Mean	1.610	-0.004	8.065	1.293	2.245	0.430	0.222	24.340	3.865
N	1,012	1,009	1,009	1,004	1,009	1009	1,002	1,010	1,012
Control									
Mean	1.401	-0.003	6.780	1.182	2.625	0.433	0.239	54.180	4.007
N	993	980	980	973	980	976	973	976	993

Panel B: Firm Public Disclosure Around the EMC Ruling (Matched Sample)

	(1)	(2)
	Voluntary 8-Ks	
Treat × Post	-0.382**	-0.379**
	(0.011)	(0.011)
Treat	0.121	0.058
	(0.587)	(0.795)
Post	0.055	
	(0.583)	
ROA	-4.321**	-3.421**
	(0.010)	(0.044)
Size	0.205***	0.159**
	(0.002)	(0.046)
Leverage	0.024	0.050
	(0.632)	(0.318)
MB	-0.002	0.002
	(0.843)	(0.791)
Top plf views	-0.026	-0.015
	(0.293)	(0.542)
Constant	-0.028	0.324
	(0.950)	(0.585)
Quarter FE	No	Yes
SIC2 FE	No	Yes
Observations	1,972	1,972
Adjusted R-squared	0.042	0.145

This table shows the PSM-DID results of corporate disclosures. The sample is limited to firms with default probabilities in 2014Q4 above 5%. We run a logit regression to estimate propensity scores based on leverage, M/B ratio, ROA, size, block ownership, bank debt ratio, and SEO in 2014Q4. The matched control firm is identified as the single nearest neighbor without replacement. Panel A shows firm disclosures and firm characteristics of matched treated and control groups around the 2014 EMC ruling. The treated group includes firms with outstanding bonds with an offering amount of $10 million or more from 2013 to 2016. Voluntary 8-Ks is the number of voluntary 8-K filings submitted in a quarter. Panel B presents OLS estimates of corporate disclosure regressions using the matched sample. Dependent variable is the number of voluntary 8-K filings. *Post* is a dummy variable, which equals one after 2014. Control variables are defined in Appendix Table A-1. Regression 1 includes no fixed effect and regression 2 includes quarter and SIC2 fixed effects. Standard errors are clustered by firm. P-values are in parentheses. *, **, and *** indicates statistical significance at the 10%, 5%, and 1% levels, respectively.

Table A-4 Firm public disclosure around the EMC ruling (alternative measurement of 8-K filings)

VARIABLES	(1) Voluntary 8-Ks item	(2) Mandatory 8-Ks item	(3) Voluntary 8-Ks item	(4) Mandatory 8-Ks item
Treat × Post	-0.076*	-0.124*	-0.066*	-0.117
	(0.063)	(0.098)	(0.098)	(0.114)
Treat	0.077	0.256***	0.090*	0.263***
	(0.130)	(0.002)	(0.086)	(0.004)
Post	0.003	-0.008		
	(0.854)	(0.838)		
ROA	-0.901***	-2.591***	-0.716***	-2.564***
	(0.000)	(0.000)	(0.000)	(0.000)
Size	0.064***	0.038*	0.055***	0.041*
	(0.000)	(0.078)	(0.000)	(0.084)
Leverage	0.006	-0.004	-0.001	-0.002
	(0.536)	(0.766)	(0.910)	(0.887)
M/B	-0.000	0.001	-0.001	0.001
	(0.801)	(0.587)	(0.449)	(0.706)
Top plf views	-0.004	0.043***	0.002	0.041***
	(0.588)	(0.001)	(0.786)	(0.001)
Constant	0.342***	2.119***	0.413***	2.094***
	(0.000)	(0.000)	(0.000)	(0.000)
Quarter FE	No	No	Yes	Yes
SIC2 FE	No	No	Yes	Yes
Observations	9,785	9,785	9,785	9,785
Adjusted R-squared	0.033	0.022	0.068	0.080

This table presents OLS estimates of corporate disclosure regressions. The sample consists of firm-quarter observations from 2013 to 2016 in Compustat. The sample is limited to firms with default probabilities in 2014Q4 above 5%. Dependent variables are the number of voluntary 8-K filing items and mandatory 8-K filing items. *Treat* is a dummy variable, which equals one if firm *i* has outstanding public bonds with an offering amount of $10 million or more from 2013 to 2016. *Post* is a dummy variable, which equals one after 2014. Control variables are defined in Appendix Table A-1. Regressions 1 – 2 include no fixed effect and regressions 3 – 4 include quarter and SIC2 fixed effects. Standard errors are clustered by firm. P-values are in parentheses. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

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