Debt Contract Terms and Creditor Control

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Abstract

The law and finance literature characterizes debt covenants as a means to manage agency conflicts between creditors and shareholders. While both banks and bondholders make use of these covenants, they do so in quite different ways. Banks typically monitor their debtors closely and rely on financial maintenance covenants to protect their interests. When these covenants get triggered, banks can use the leverage of accelerating the loan to achieve their governance goals. This ability to monitor and renegotiate suggests that tailoring precise ex ante contract restrictions is not of paramount importance because a bank and a debtor can negotiate around those restrictions based on ex post contract conditions. Bondholders, in contrast, face substantial barriers to monitoring and renegotiating with their debtors because these bondholders tend to be large groups of passive investors who face substantial collective action problems. As a consequence, ex ante restrictive terms in the contract are likely to be the primary means through which bondholders can address potential conflicts with shareholders. These differences in contracting technologies suggest that the restrictions in bond contracts are more likely to respond to changes in background legal rules. This paper tests this theory by treating two Delaware decisions that limited the default duties that the directors of Delaware corporations owe to creditors as a shock to the contracting conditions for Delaware firms. Difference-in-difference and triple difference tests suggest that restrictive terms in bond contracts for Delaware firms increased in reaction to this change, while there was not a detectable shift in the strictness of loan agreements.

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1 Introduction

Covenants in debt contracts have long been described as mechanisms to manage agency conflicts between debt holders and equity holders (Jensen and Meckling, 1976). These covenants accomplish this goal by limiting the ability of debtors to engage in excessive risk taking, dividend payouts, claim dilution, and other actions that can harm the interests of creditors. But different types of creditors go about limiting the agency costs of debt in quite different ways. As a wave of recent research shows, banks manage much of this agency conflict through the use of financial maintenance covenants (Baird and Rasmussen, 2006; Chava and Roberts, 2008; Nini et al., 2012). These covenants allow banks to accelerate the entire amount of the loan if a financial metric—such as the firm's net worth—falls below the level specified in the loan agreement. Loan contracts typically set these covenants tightly, meaning they are set at levels that are close to those present at the time of loan origination. This practice ensures that maintenance covenants will get triggered by even moderate financial distress (Christensen and Nikolaev, 2012). When circumstances trigger these covenants, banks rarely accelerate the debt. Instead, they typically renegotiate with debtors and, through that process, are able to limit actions that favor equity (Nini et al., 2009).

This sort of monitoring and renegotiation is much more difficult for most bond creditors. Their diffuse and largely passive nature makes it difficult to engage in the monitoring and renegotiation that are necessary to use financial maintenance covenants as an effective mechanism to constrain the agency costs of debt (Kwan and Carleton, 2010). Moreover, the Trust Indenture Act requires unanimous consent from bondholders for many potential modifications to bond indentures (Amihud et al., 1999).[1] As a consequence of these substantial impediments to renegotiation, covenants that place direct limitations on actions that favor equity play an especially important role in the context of bonds. Absent these restrictions,

[1]The unanimous consent requirement has received substantial criticism (Roe, 1987). While parties can get around this barrier by using an exchange offer to structure a workout, this approach still allows holdouts to impede renegotiation (Gertner and Scharfstein, 1991).

bondholders have little power to deter shareholder payouts, risk taking, claim dilution, and other actions that can harm their interests.

The difference in these contracting technologies is likely to have consequences for the evolution of contract terms that restrict debtors from taking actions that harm creditor interests. For banks, fine tuning these ex ante restrictions is relatively inconsequential because of their ability to renegotiate contracts. Investments in the drafting and negotiation of ex ante restrictions are thus unlikely to provide much of a payoff. This calculus is different for bond indentures. If these agreements do not include express restrictions, bondholders will have little recourse if the bond issuer wants to take an action that favors equity at the expense of debt. This difference suggests that bondholders are likely to get a larger return from ex ante investments in these types of restrictions. It follows that bond contracts should react more strongly to changes in the background legal rules that affect their rights against debtors.

To test this hypothesis, this article treats two Delaware cases from 2006 as an exogenous shock to the ability of creditors to recover damages for decisions made by directors when corporations are, or are nearly, insolvent. These two cases–decided within weeks each other–both limited the ability of creditors to recover damages from directors for taking creditor-adverse actions. The first of these cases, Trenwick America Litigation Trust v. Ernst Young, L.L.P.[2], declined to recognize deepening insolvency as a cause of action. This claim would allow a creditor to recover when the directors of an insolvent corporation make decisions that further deteriorate the financial condition of the corporation. Two federal courts, the Third Circuit Court of Appeals–which includes Delaware–and the Bankruptcy Court for the District of Delaware, recently recognized deepening insolvency as a viable claim. Some commentators believed the the Delaware Court of Chancery would follow suit (Zelmanovitz and Baribeau, 2006). The Trenwick decision was therefore something of a surprise to legal practitioners.

[2]902 A.2d 168 (Del. Ch. August 10, 2006).

The second decision, North American Educational Programming Foundation, Inc. v. Gheewalla,[3] similarly limited the default rights of the creditors of Delaware corporations. That decision foreclosed the possibility that creditors could assert a direct claim against directors for breach of fiduciary duty and eliminated the possibility that creditors could bring any fiduciary duty claim while in the "zone of insolvency." After Gheewalla, the only viable fiduciary duty claim for creditors of a Delaware corporation was a derivative claim once the corporation was insolvent. This decision reversed course from Credit Lyonnais Bank Nederland, N.V. v. Pathe Communications Corp.,[4] which suggested that creditors were owed fiduciary duties while in the zone of insolvency.

The limitations that Trenwick and Gheewalla placed on the ability of creditors to sue debtors who were in or approaching insolvency were likely to affect how creditors governed their relationships with those debtors. Prior to these cases, the prospect of violating a fiduciary duty may have deterred debtors from taking actions that favor equity. After these cases, creditors would need to increase the overall restrictiveness of the covenants in their debt agreements to make up for this lost deterrence. This deterrence benefit must, however, be traded off against the cost of tailoring these terms to prospective debtors and then negotiating those terms. For banks, that benefit is likely minimal because they can use their ability to monitor and renegotiate with debtors to keep them from taking actions that conflict their interests. Given this small gain, there is little point in bearing the costs of developing a well-tailored package of ex ante restrictions. For bondholders, however, the diminished scope of ex post litigation rights may create real risks because they cannot use maintenance covenant-based governance to influence borrowers. In that case, the cost of negotiating a restriction may be worth the gain in deterrence. This difference suggests that after these decisions, bond contracts for Delaware creditors are likely to be more restrictive than loan agreements everywhere as well as bond contracts for non-Delaware firms.

The evidence is broadly consistent with this expectation. There is no statistically de-

[3] 2006 WL 2588971 (Del. Ch., Sep. 1, 2006), affirmed, 930 A.2d 92 (2007).
[4] 1991 WL 277613 (Nov. 6, 1991).

tectable increase in the restrictiveness of loan contracts for Delaware and non-Delaware firms in the periods before and after these cases (referred to subsequently as pre and post-Gheewalla, for convenience). There is, however, evidence of increased restrictiveness in the bond contracts entered into by Delaware firms relative to non-Delaware firms during the post-Gheewalla period. As one would expect, the results are particularly strong for those borrowers who are in poor financial health. This evidence suggests that the substantial differences in the way banks and bondholders govern their relationships with debtors is borne out in the content of their contracts.

This paper continues as follows. Part II reviews the legal landscape and details the pre and post-Gheewalla understandings of creditors' default legal rights and documents the reactions of commentators to Trenwick and Gheewalla. Part III develops the theory of how different types of creditors are likely to react to the diminishment of their default legal rights and uses this theory to generate hypotheses. Part IV begins with a description of the dataset, which is drawn from Dealscan, the Fixed Income Security Database (FISD), and Compustat. This section continues with a basic statistical overview of pre and post-Gheewalla contract terms. This part then employs difference-in-difference and triple difference designs to test whether Gheewalla had an effect on the content of debt contracts. The evidence broadly supports the hypothesis that bond contracts respond more directly to changes in the background legal environment. Part V discusses the results of some robustness checks and explores some other modeling concerns. Part VI performs a bond event study to assess whether bond prices reacted in the ways that the theory suggests. Part VII concludes and Appendix A provides variable definitions.

2 Legal Background

The directors of a corporation owe fiduciary duties to shareholders. In good times, these duties are synonymous with maximizing the value of equity. Once a firm is insolvent,

however, those duties run to creditors because there is no residual value left for shareholders (Baird and Henderson, 2008). These principles are quite uncontroversial in corporate law. Courts have struggled, however, to determine whether directors should be held to a stricter legal standard when a firm is insolvent and have had difficulty articulating to whom directors owe fiduciary duties as a firm approaches insolvency. In Delaware, the state of incorporation for over half of the public companies in the United States, there were open questions about both these issues until 2006. This section reviews the case law before and after Delaware courts resolved both questions and then documents the corporate legal community's reaction to these changes.

2.1 Deepening Insolvency

The claim of deepening insolvency alleges that it is a breach of fiduciary duty for directors to take on additional debt at a point in time when a bankruptcy filing would have maximized the value of the estate for creditors. Before the Delaware Chancery Court torpedoed this theory in Trenwick, this claim had gained some traction in other courts. The Third Circuit Court of Appeals–which includes Delaware, New Jersey, and Pennsylvania–endorsed deepening insolvency as an independent cause of action in Official Comm. of Unsec. Creditors v. Lafferty.[5] Because a claim for deepening insolvency is a matter of state law, the Lafferty court had to determine how the Pennsylvania Supreme Court would resolve the issue. That court determined that the claim would be allowed although the court dismissed the case because the plaintiffs did not have standing to bring it.

2.2 Fiduciary Duties as Insolvency Approaches

Delaware courts had spoken more directly to director fiduciary duties near insolvency than they had about deepening insolvency. Prior to 1991, the view was that directors owed no, or at least very few, obligations to creditors prior to a firm reaching insolvency.

[5] 267 F.3d 340 (3d Cir. 2001).

In 1991, Chancellor Allen, a widely respected Delaware jurist, suggested otherwise in the Credit Lyonnais case. In a relatively famous footnote, he explained that it was possible for creditors to have a direct claim against directors for actions taken by those directors when the firm is in the "the zone of insolvency."[6] This statement was dicta in the sense that it was not necessary to the outcome of the case. Nevertheless, commentators viewed this statement as a shift in the law of fiduciary duties. Moreover, there is evidence that this legal shift affected the value, behavior, and subsequent contracts of Delaware firms that were in financial distress (Becker and Strömberg, 2012).

This understanding of fiduciary duties endured for a little over a decade before some Delaware opinions began to call the Credit Lyonnais footnote into doubt. In 2004, then-Vice Chancellor Strine issued an opinion suggesting–again in dicta–that creditor rights may be more limited in scope than Credit Lyonnais implied.[7] Strine argued that because creditors can directly negotiate contracts with debtors and can assert fraudulent conveyance claims in bankruptcy, there may not be much need to use fiduciary duties to protect creditor interests. Despite this doubt, the opinion's holding is narrow. The court held only that the creditor could not assert its desired direct claim while the firm was in the zone of insolvency. Strine makes clear that this is not a blanket rule–he notes that there are still some circumstances that might permit a direct claim in the zone of insolvency.

Neither Credit Lyonnais nor Production Resources provide the precise contours of the fiduciary obligations owed to creditors. This changed on September 1, 2006 when the Chancery Court issued its opinion in Gheewalla. The plaintiff creditors sought to hold the directors of the corporation liable for actions they took as the firm approached bankruptcy. After reviewing this line of precedent, the court resolved the case by holding that creditors cannot assert a direct claim against directors for violation of fiduciary duties when the firm is in the zone of insolvency.

On appeal, the Delaware Supreme Court affirmed the opinion and further limited the

[6]Credit Lyonnais at 1155 n.55.
[7]Production Resources Group, L.L.C. v. NCT Group, Inc., 863 A.2d 772 (Del. Ch., 2004).

claims that creditors may assert. The Court made clear that no fiduciary claims of any sort could be asserted by creditors when a firm was in the "zone of insolvency." Rather the firm had to actually be insolvent before creditors could bring this type of claim. The Court also held that at no point could creditors bring a direct claim against the directors of corporation, even if the corporation were insolvent. With this holding, the Court removed any doubt about the viability of Credit Lyonnais's footnote, eliminated the suggestion in Production Resources that a creditor might be able to bring a direct claim before or after a debtor reaches the point of insolvency, and resolved the ambiguity in the trial court's opinion regarding the ability to bring direct claims against creditors when the firm had reached actual of insolvency.

2.3 Cumulative Impact of Trenwick and Gheewalla

Together, Trenwick and Gheewalla sent a distinct message to creditors: Delaware courts will do very little for you beyond enforcing your agreements. Practitioners noticed the import of both these cases almost immediately.[8] Lawyers and courts also made quick use of the cases in ongoing proceedings. Several motions in bankruptcy cases cited the holding and claimed that it justified the dismissal of fiduciary claims against directors by creditors.[9]

At a minimum, these two opinions resolved ambiguities about the extent to which creditors could rely on default rules to police the behavior of debtors. On a more aggressive view, the cases represented a substantial limitation of creditor default rights. Whatever the precise characterization, the sophisticated current and future creditors of Delaware corpora-

[8]See Shearman & Sterling's Bankruptcy and Reorganization Quarterly Newsletter from Fall 2006 available at http://www.shearman.com ("[The Gheewalla decision] will limit the direct causes of action creditors can bring against directors of troubled companies for breach of fiduciary duty."; Jo Ann Brighton, The Trenwick Decision the Death Knell for Deepening Insolvency?, American Bankruptcy Institute Journal (October 1, 2006).

[9]Chapter 7 Trustee for the Bankruptcy Estate of Mosaic Data Solutions, Inc., Plaintiff, v. Marc Byron, Ben Kaak, Dominic Ieraci, David Graff and Catherine Barbaro, Defendants., 2006 WL 3886034 (N.D. Ill.) ("To the extent that the Trustee purports to assert direct - as opposed to derivative - claims on behalf of those creditors, under Delaware law no such action exists in the so-called zone of insolvency and, therefore, any such claims must be dismissed out of hand.") See also Dennis J. Buckly, as Trustee of the Dvi Liquidating Trust, Plaintiff, v. Clifford Chance LLP and Clifford Chance US LLP, Defendants., 2006 WL 5280894 (E.D. Pa.).

tions likely had an increased awareness after Trenwick and Gheewalla that, in the absence of contractual protections, they had few legal options to protect their interests.

3 Theory and Hypothesis Development

The question of interest in this paper is how different types of creditors responded to the changes in the legal environment created by Trenwick and Gheewalla. Those changes are likely to have affected the governance of the relationships that creditors have with debtors. The commonly assumed goal of these relationships is the maximization of contractual surplus and the minimization of the costs associated with the negotiation and administration of these agreements.

The costs of debt governance have both ex ante and ex post dimensions.[10] Ex ante negotiating costs require identifying and reaching agreement on provisions that protect creditors from the agency cost-related dangers like asset substitution and claim dilution. These provisions include express restrictions on certain actions by the debtor firm, such as dividend payments and share repurchases, as well as requiring that the proceeds from asset sales and equity issues be used pay down existing debt. The ex post options include monitoring maintenance covenants and, should they be triggered, negotiating a new arrangement.

The costs of the ex ante and ex post options vary for different types of creditors. Broadly speaking, banks have the ability to monitor the financial condition of debtors and, should circumstances trigger a covenant violation, they have substantial leverage to control the behavior of those debtors. The option to use these ex post mechanisms should lead banks to weigh the costs of ex ante contracting against the costs of ex post renegotiation as governance mechanisms (Gârleanu and Zwiebel, 2009). Bondholders, in contrast, have much less recourse to ex post governance. This light monitoring is largely due to the substantial collective action problems faced by bondholders and the lack of legal and monetary incentives for

[10]There is a substantial legal literature on balancing the ex ante and ex post aspects of contractual governance. Examples include Scott and Triantis (2006), Badawi (2009), Choi and Triantis (2010), and Gilson et al. (2010).

bond trustees to pursue violations of maintenance covenants (Kahan and Rock, 2009). As a consequence, bond trustees will rarely, if ever, use the leverage that a covenant violation provides to insist on operational changes.[11] Their recourse to court is likely to be limited to clear violations of restrictive covenants or, in the absence of covenants, claims that directors have violated fiduciary duties, to the extent courts permit them. The limited monitoring and control rights of bondholders is likely to mean that restrictive contract provisions provide their only meaningful means of governance.

These different governance mechanisms suggest that banks and bondholders will not react in similar ways to legal change. Take the shift that occurred post-Gheewalla. Creditors lost some ability to rely on default fiduciary duties to deter or punish debtor actions that harmed their interests. The safety valve nature of fiduciary duties means that a significant limitation on the ability to assert those claims will require creditors to fill in those gaps in another way. That can mean using maintenance covenant or ex ante restrictive contract terms as mechanisms of governance. The latter approach is likely to require expanded due diligence on potential debtors, additional negotiations, and additional drafting costs.

For banks, the increased costs associated with ex ante governance are likely to be compared with the alternative of using monitoring and renegotiation. Most banks are already paying the costs of this ex post governance so the prospect of higher up front costs is likely to be unappealing. For bondholders, the calculus is likely to be different. The cost of ex post monitoring and renegotiating is extremely high for them. Using this approach to fill in the gaps left open by weakened fiduciary duties would pose substantial hurdles. This is likely to leave increased investment in ex ante governance as the most palatable option for bondholders to deter firm actions that harm their interests.

The increased investment in ex ante governance should lead to a stronger insistence on covenants that restrict debtors from taking actions that favor equity at the expense of

[11]The Trust Indenture Act poses an addition hurdle to renegotiation in the context of bonds. That legislation requires unanimous bondholder consent in order to amend or waive a payment term in a bond issued to the public (Bratton, 2006).

debt. These covenants are likely to include limitations on shareholder payouts, negative pledge covenants (which restrict debtors from issuing future debt that is senior to current debt), and limitations on investment and asset sales. This reasoning predicts that in the post-Gheewalla period, all else being equal, there should be an increase in the number of restrictive covenants in bond indentures for Delaware debtors. In other states, however, there should be no such change because there was no shift in the fiduciary duties owed to creditors.

A related prediction concerns the effect of legal changes on bank loan terms. As discussed above, banks have the option to rely on maintenance covenants to control the agency costs of debt. There are, however, some limitations to that approach. Using maintenance covenants requires that those covenants actually get triggered, which typically requires a firm's finances to become worse than they were at the time of loan origination. To put this another way, the monitoring and renegotiation strategy usually requires a downturn in firm finances to be effective. In good states of the world–meaning the status quo or better–banks will typically not have the leverage that a triggered maintenance covenant provides. There may still be agency cost concerns during these good times and, for that reason, banks may bargain for restrictive covenants to manage those situations.

The legal change created by Trenwick and Gheewalla, however, affected governance only when bad states of the world occur. Recall that the case eliminated any liability to creditors when a firm entered the "zone of insolvency" and also eliminated direct liability of any kind. If loan maintenance covenants are set relatively tightly, a firm's movement into the zone of insolvency or into insolvency itself should trigger those covenants. The diminished ability to bring a lawsuit should thus be relatively inconsequential to loan governance because banks can use the leverage provided by a triggered covenant. This dynamic suggests that banks are unlikely to respond to Gheewalla by investing more in ex ante contract restrictions.

4 Results

4.1 Data

The data in this paper come from three primary sources: FISD, Dealscan, and Compustat. FISD provides detailed information about bond issues, including data on the covenants in the bond indentures. Dealscan provides similar details about bank loans to firms. Each bond and loan in these respective databases gets matched with financial and descriptive information about the debtor from Computsat for the quarter of debt origination. The state of incorporation in Compustat is backfilled, i.e. the historical data for a firm only reports the current state of incorporation. To remedy this problem, accurate incorporation information is obtained from Compustat's historical header file for post-2007 observations and from the Corplist file for observations prior to that period.

The primary sample focuses on the 2004-09 period, which is roughly three years before and three years after the the Trenwick and Gheewalla trial court opinions. The FISD sample uses newly issued bonds and and excludes Canadian, Yankee, foreign currency, and Rule 144A private placement bonds as well as bond exchanges.[12] The Dealscan sample includes all loans that include covenant data during the sample period. Following standard protocol in the corporate finance literature, observations from financial firms (SIC codes 6000-6900) are dropped. To measure whether the debt instrument was issued before or after the decisions that are of interest, I specify whether the bond or loan was issued before or after September 1, 2006, the date that the Chancery Court issued the Gheewalla decision.

4.2 Sample Overview

Table 1 presents a basic statistical overview of the bonds, loans, and firms that entered into these transactions during the sample period. The top half of the table addresses bonds

[12]The reason for excluding private placement bonds is that they typically do not have a large group of passive owners. As a consequence, the bondholders should have the ability to engage in ex post monitoring and renegotiation if they choose.

and issuers and the lower half summarizes loan agreements and borrowers. The debtors that are of particular interest are those who are in relatively poor financial health. The second and third sections of the bond and loan panels report the summary statistics for these borrowers with Z scores below 1.1 in the periods before and after Gheewalla.[13] For both the bond and loan samples, this cutoff point includes roughly the lower third of borrowers.

The primary variables of interest are the restrictions that implicate creditor agency concerns. As discussed above, the chief dangers from the perspective of creditors are shareholder payouts, subordinating existing debt, and selling assets. The bond portion of the table lists the averages for some of these provisions including dividend restrictions (including both the issuer and/or subsidiary restrictions) and restrictions on issuing senior debt. Following other similar work, I construct an index based on some of the most frequently used covenants.[14] Each of these six bond restrictions is coded one if it is present and zero if it is not. The index is the sum of these variables.[15]

The simple trend for the individual bond restrictions and the bond covenant index is clear for at-risk borrowers. The difference in the means between non-Delaware issuers and Delaware issuers is more pronounced after the Gheewalla decision. This trend is most apparent in the negative pledge restrictions. These provisions were more common for non-Delaware issuers prior to Gheewalla (about 74 percent against roughly 62 percent), but after Gheewalla, these provisions appeared more frequently for Delaware issuers (about 68 percent versus approximately 62 percent). Prior to Gheewalla the difference between the percentage of contracts with dividend restrictions was about six percent, but after the cases, Delaware issuers outpace non-Delaware issuers by about eleven percent. The gap the in the mean covenant index between Delaware and non-Delaware issuers was about .26 before Ghewalla,

[13] Z is a measure of firm's financial distress. For non-manufacturing firms, a score lower than 1.1 indicates a significant risk of distress (Altman, 1968).

[14] Examples of other work that uses a similar index include Billett et al. (2007), Fields et al. (2012), and Qi et al. (2011).

[15] The restrictions included in the index are dividend restrictions (including issuer and/or subsidiaries), restrictions on shareholder payouts, cross-default provisions, restrictions on asset sales (issuer and/or subsidiaries), negative pledge covenants, and restrictions on subsidiary debt.

but the spread increases to about .65 in the later period.[16]

[Insert Table 1 about here]

To provide a more detailed sense of the relatively dramatic difference in bond covenant strictness for distressed Delaware and non-Delaware firms after Gheewalla, Figures 1 and 2 track the covenant index over the sample period. The figures depict the 18-month moving average of the covenant index for Delaware and non-Delaware firms in each of the 6 month periods in the sample. Figure 1 shows those differences for non-distressed firms in the Delaware and non-Delaware groups. It demonstrates that the covenant index changed at roughly the same rate for Delaware and non-Delaware firms both before and after Gheewalla. Figure 2 shows the same measure, but only for at-risk firms. As the figures depicts, the Delaware and non-Delaware firms had similar average values in 2004 and 2005. Beginning in 2006, when Trenwick and Gheewalla were decided, there is a spike in strictness for the distressed Delaware firms, while the covenant index for non-Delaware firms is relatively flat through the first half of 2007 and then begins to drop. This change supports the inference that these cases led to an increase in covenant strictness for Delaware firms, but not for non-Delaware firms.

[Insert Figure 1 about here]

[Insert Figure 2 about here]

The second half of the summary statistics table presents information for loans and borrowers. The table reinforces several well-known differences between the loan and bond markets. Bond issuers tend to be larger and less leveraged than borrowers. The typical explanation for this observation is that there tends be less information asymmetry between larger firms and potential passive creditors (Colla et al., 2013). A small firm about which little is known would have to pay high interest on any public bonds and hence they gravitate toward the loan market because the monitoring ability of banks reduces the amount of information

[16]The general trend in the post-Gheewalla period up until the financial crisis was a reduction in overall covenant restrictiveness that has been credited the rise in covenant-lite debt. The focus of this article, however, is the relative difference in between Delaware and non-Delaware firms during the pre and post-Gheewalla periods. For a model of the rise of covenant-lite phenomenon see Ayotte and Bolton (2011).

asymmetry.

The covenant information in the Dealscan database does not map precisely to the equivalent information in FISD. While both report dividend restrictions there is no information on Dealscan on the presence of negative pledge covenants.[17] Dealscan does, however, code whether there are debt sweeps in loan documents. These provisions fulfill much the same function as a negative pledge clause as they require borrowers to use the proceeds of any future debt issuances to pay off the existing loan. The covenant index for loans is the sum of indicator variables for four covenants: dividend restrictions, debt sweeps, equity sweeps, and asset sale sweeps.[18]

When it comes to some provisions, such as dividend restrictions, the loan contracts are substantially more restrictive than the bonds. There are likely two reasons for this state of affairs. First, borrowers tend to have lower credit quality and higher information asymmetry than bond issuers (Krishnaswami and Subramaniam, 1999). As a consequence, loan contracts may contain more restrictive initial terms. Second, the restrictions in loan agreements may not be as restrictive as they seem. The relational nature of lender-borrower contracts means that borrowers may be able to negotiate around a written dividend restriction. Doing so would be much more difficult in the bond context because negotiating with the bondholders to relax a contract term is prohibitively costly.[19]

The shift in these variables in the pre and post-Gheewalla periods are substantially less pronounced than they are for bonds. Prior to Gheewalla, there is about a seven percentage point difference in the number of at-risk Delaware and non-Delaware loans that have dividend

[17]Both FISD and Dealscan code a dividend restriction as present when the agreement contains a term that limits a dividend to a specified percentage of a financial metric. For example, an agreement might specify that the debtor can issue no more than ten percent of quarterly earnings as a dividend.

[18]While the data on dividend restrictions appears reasonably complete, the debt, equity, and asset sales sweeps provisions appear to only rarely get coded as "zero" if the provisions are not present. Most other studies that use the Dealscan database appear to code missing data as zero and I follow that practice here. As a robustness check, I perform the regressions that follow without this correction, and the results are highly similar in both cases.

[19]Kwan and Carleton (2010) find a similar divide when comparing private placement bonds and publicly offered bonds. The private placement bonds are substantially more restrictive than the publicly offered bonds, a phenomenon that the authors partially attribute to the ease of renegotiation in the private placement context.

restrictions and after Gheewalla that difference increases modestly to about eleven percentage points. Prior to Gheewalla, the percentage of debt sweeps for at-risk firms is about 31 percent for non-Delaware firms and 52 percent for Delaware firms. After the case, the non-Delaware number jumps to about 42 percent while the Delaware number only increases to 56 percent. Likewise, relative gap in the covenant index between Delaware firms and non-Delaware firms narrows after Gheewalla. These summary statistics provide an initial indication that the increases in relative restrictiveness of Delaware debt agreements were more pronounced for bonds than for loans.

4.3 Bond and Loan Term Results

The analysis in this section uses a difference-in-difference approach to analyze use of restrictive covenants during the sample period. The unit of analysis is an individual debt agreement, which allows the use of controls for the characteristics of the agreement and the debtor. The dependent variable in the regressions is either an indicator variable for a specific restrictive covenant or is the covenant index. The primary variable of interest is the interaction term for the issuer being a Delaware incorporated firm and the issue date occurring after the Gheewalla period (Lechner et al., 2011). Given the reduction in the ability to rely on default fiduciary duties and the barriers to ex post renegotiation, the expectation is that the coefficient on this interaction term will be positive for bond indentures—especially those issued by distressed debtors—but will be zero for loan agreements.

The general form estimated in the regressions is:

$$COV_i = \alpha + \beta_1 DEL_i + \beta_2 POST_i + \beta_{DiD} DEL_i \times POST_i + X_i + \epsilon_i \tag{1}$$

where i indexes issues, COV is the covenant restriction or index of interest, DEL is an indicator variable for whether the issuer is incorporated in Delaware, POST is an indicator variable for whether the debt issuance occurred after the Gheewalla decision, and

X_i is a vector of issue controls, firm controls, firm fixed effects, and year fixed effects and $\epsilon_i is a stochastic error. The coefficient on the$DEL $\times POST$ interaction term is the estimated treatment effect of a debt issuance to a Delaware-incorporated firm after the Gheewalla decision. The standard errors are clustered by state of incorporation. All regressions use firm fixed effects to account for unobserved heterogeneity between firms. Doing so should limit the potential influence of omitted variables. The use of firm fixed effects presumably accounts for the generally tight fit of the models.

Before presenting the primary regression results, it is important to assess evidence about whether the bond contracts for Delaware and non-Delaware firms meet the parallel trends assumption. While this assumption cannot be tested directly, one can examine the pre-treatment trends using a leads and lags model. Figure 3 shows the coefficients on the lead and lag coefficients of regressions that use the covenant index, negative pledge covenant, and dividend restrictions in distressed firm bond issuances as dependent variables.[20] The regressions take the following form:

$$COV_i = \alpha + \beta_1 DEL_i + \beta_2 T_i + \sum_{k=-m_0}^{+m_1} (\beta^k * D_{DEL}^k) + X_i + \epsilon_i \tag{2}$$

where i indexes issues, DEL is an indicator for whether the issuer is incorporated in Delaware, T_i is an indicator for the 18-month period for when the firm issued bond i, and k indexes event time relative to the issuance of Gheewalla.[21] X_i is a vector of issue controls, firm controls, and firm fixed effects. I set the initial 18-month period, which runs from 36 months prior to the issuance of the Gheewalla opinion to 18 months prior to the issuance of the opinion to zero ($\beta^{-2} \equiv 0$). The β^k for other periods captures the difference in the use of the relevant measure (Delaware−non-Delaware) relative to the base period. For a bond issued by a Delaware-incorporated state $D_{DEL}^k = 1$ during the 18-month period immediately following Gheewalla, and 0 otherwise; $D_{DEL}^k = 1$ in period k relative to the opinion, and

[20] I limit this analysis to distressed bond issues because that is the group of issues of primary interest.
[21] I use 18-month periods in order have sufficient statistical power for each coefficient.

zero otherwise. The β^k estimates capture the estimated effect of the Gheewalla decision on the k period after (before) the issuance of the decision.

[Insert Figure 3 about here]

The first panel in Figure 3 shows that, for the covenant index of distressed bond issues, there appeared to be little difference between Delaware and non-Delaware incorporated firms prior to the Gheewalla decision. After the decision, however, there was an increase in the covenant index of bonds issued by distressed Delaware incorporated firms that did not appear to be shared with bonds issued by distressed non-Delaware incorporated firms. The pre-Gheewalla evidence here provides support for the parallel trends assumption. A similar pattern plays out in the last panel, which shows the analysis for dividend restrictions in distressed bond contracts. The estimates are flat and near-zero prior to Gheewalla and differences only emerge after the decision. There is some evidence of non-parallelism in the second panel, which depicts the estimates for the presence of negative pledge covenants. The increase in the use of the covenants began to appear prior to the issuance of Gheewalla and only accelerated in the +18 to +36 month period relative to Gheewalla. For that reason, one should be especially cautious of ascribing a causal impact to the use of negative pledge covenants as a consequence of the Gheewalla decision.

Table 2 presents the difference-in-difference results for the covenant index, negative pledge covenant, and dividend restriction regressions for the entire sample of bonds. The variable of interest is the interaction term that indicates that the bond was issued to a Delaware-incorporated firm after the Gheewalla trial court case. The controls include the log of the bond amount, time to maturity, the log of total firm assets in the quarter of bond issuance, and firm leverage in that quarter.

[Insert Table 2 about here]

The coefficients for the interaction term are all positive and and the negative pledge and dividend restriction coefficients are statistically significant at the five-percent and ten-percent levels, respectively. This provides some preliminary evidence that Trenwick and

Gheewalla led to tightened restrictions on bonds issued to Delaware firms. Given, however, that Trenwick and Gheewalla altered creditor rights when firms are in or near insolvency, one would expect its impact to be strongest when firms are less financially stable. To assess the magnitude of these cases' effect on the least financially stable firms, Table 3 performs the same regressions as Table 2, but for bonds issued to firms with Altman-Z scores below 1.1.

[Insert Table 3 about here]

As expected, the effect of Trenwick and Gheewalla on the prevalence of restrictive covenants is stronger for these at-risk firms. The coefficients for the interaction term are substantially larger in the regressions for at-risk firms than they are is for the entire sample. The coefficients are also all statistically significant at either the one or five percent levels. These results provide substantial evidence that bond lawyers noticed the effect of Trenwick and Gheewalla on Delaware issuers. They appear to have responded by increasing the strength of protections on those bonds, especially when there was a substantial chance that a firm would approach insolvency over the course of the issue.

Table 4 turns to an analysis of covenants in loan agreements. The hypothesis developed in the previous section predicts that loan restrictiveness is less likely to respond to Trenwick and Gheewalla, if there is any response at all. As explained above, the Dealscan coding of restrictions does not map exactly to those in FISD. The dependent variables used in the loan regressions include the Dealscan covenant index, the presence of a debt sweep covenant, and the presence of a dividend restriction. The controls used in the loan regressions are largely similar to those used in the bond regressions. The only difference is the addition of a variable to control for whether the loan is syndicated.[22]

[Insert Table 4 about here]

As predicted, the cases appear to have had little influence on loan contract restrictiveness. The coefficients of interest are not statistically significant in any of the specifications in Table

[22]The results are unchanged if the syndication variable is omitted.

4. This table, however, includes all of the loans in the sample. As discussed previously, if the cases are to have an effect on debt contracts, it is most likely to affect those firms that are close to distress. Post-Gheewalla, creditors of those firms have substantially less recourse to default debtor duties than they did beforehand. Table 5 performs the same regressions as Table 4, but limits the sample to loans to firms that have Altman-Z scores below 1.1.

[Insert Table 5 about here]

The covenant index and dividend restriction coefficients are not statistically significant in Table 5.[23] While the debt sweep coefficient is statistically significant at the ten-percent level, it is negative. This evidence provides additional support for the hypothesis that the availability of ex post monitoring and negotiation in the bank lending environment means that loan contract terms are less responsive to background legal rules. This account is consistent with banks not investing much in the upfront drafting of terms and instead devoting their governance resources to what happens after the agreement has been signed. If financial distress is the concern, the most effective way to deal with that worry appears to be setting tight covenants and negotiating a resolution that protects the interest of the lender.

4.4 Triple Difference Regressions

The previous regressions provide evidence that, within bond contracts, there was a tightening in contract restrictiveness during the post-Gheewalla period for Delaware firms. Within bank loan contracts, there is not evidence of this shift. This showing, however, does not demonstrate that there is a statistically detectable difference between the two groups of contracts. To ascertain whether there is such a difference, this section reports the results of triple difference regressions. The interaction term of interest indicates whether the contract is for a Delaware incorporate firm and was entered into after the Gheewalla decision and was for a bond issuance. The triple difference regressions are of the form:

[23]The results for the not-at-risk firms are not reported. The coefficient on the interaction term is not statistically significant in any of the specifications.

$$
\begin{aligned}
COV_i =& \alpha + \beta_1 DEL_i + \beta_2 POST_i + \beta_3 BOND_i + \beta_{DiD1} DEL_i \times POST_i \\
&+ \beta_{DiD2} DEL_i \times BOND_i + \beta_{DiD3} POST_i \times BOND_i \\
&+ \beta_{DiDiD} DEL_i \times POST_i \times BOND_i + X_i\beta + \epsilon_i
\end{aligned} \tag{3}
$$

One concern with combining the two datasets is the comparability of the contract variables. To address this problem, I limit the analysis to the most analogous terms in the contracts. These variables include the amount of the borrowed funds, the time to maturity, whether the loan is secured, the presence of a debt restriction, and the presence of a dividend restriction. The covenant index in this part of the analysis is the sum of the debt restriction and dividend restriction variables. Table 6 presents the results of this analysis.

The coefficient of interest, the triple difference indicator, is large, positive, and statistically significant in all specifications. These results provides evidence that there is something different about the bond agreements entered into by Delaware incorporated firms during the post-Gheewalla period. As expected, the differences are larger for the at-risk firms than they are for the entire sample of firms each of the dependent variables. This evidence suggests that the limitation on creditor duties caused a particularly strong reaction among Delaware bond creditors who were most likely to have to resort to the default rules that applied to creditors.

[Insert Table 6 about here]

5 Modeling Concerns

This section discusses two related modeling concerns. The first is that the model may be sensitive to different specifications. The first subsection runs some robustness checks to assess these worries. The second is the specific concern that other states may follow Delaware corporate rules. If so, there is unlikely to be variation between the states after the Trenwick and Gheewalla decisions.

5.1 Robustness Checks

The chief result of interest–the relative increase in bond covenant strictness for distressed firms in Delaware after Gheewalla–is robust to changes in time frame, altered thresholds for financial distress, the omission of firm fixed effects, and tests on a subsample with better covariate balance.

5.1.1 Time Frame

The choice of time frame in difference-in-difference studies poses a tradeoff between statistical power and the ability to attribute observed effects to the exogenous shock. The concern is that, as time goes on, it is less likely that differences between states depends on an earlier policy change. In addition, there is a worry that stretching the window too far back will inappropriately change the baseline for the post-shock comparison of the treated and untreated groups. With these caveats, I run a robustness check that expands the time frame an additional year before and an additional year after the sample period used above. This unreported check, which includes bonds issued from 2003 to 2010, shows similar results to those reported above in Table 3. The interaction coefficient for the covenant index is slightly lower, but remains significant at the five-percent level. The negative pledge regression produces a slightly higher interaction coefficient and it is significant at the one-percent level. The dividend restriction variable has an interaction coefficient that is about 25% lower, but remains significant at the one-percent level.

5.1.2 The Threshold for Financial Distress

These results are also relatively robust to adjustments in the threshold for financial distress. In unreported regressions that increase the Z-Score cutoff to 1.5 instead 1.1, the value of all the coefficients of interest in Table 3 drop, as one would expect. But the coefficient of interest remains statistically significant for the negative pledge and dividend restriction variables at the ten-percent and five-percent levels, respectively. At a threshold of 1.8, the

results are similar with a coefficient that is significant at the ten-percent level for the negative pledge covenant and at the five-percent level for the dividend restriction. The results are essentially equivalent at a threshold of 2.1.

5.1.3 Omission of Firm Fixed Effects

The use of firm fixed effects might pose an additional concern. Including these fixed effects mean that the regressions are capturing changes in the bond contracts of the firms that appear multiple times in the sample. These changes should tell us something meaningful, but the relatively small number of firms might pose concerns that a handful of small changes are accounting for the observed effects. To address this issue, I run the bond contract regressions without fixed effects. Doing so means that I am no longer controlling for unobserved heterogeneity in the makeup of firms and, to address this concern, I run the regressions both with and without controls for two-digit SICs. The specification makes little difference–both with and without controls, the results are similar to those reported in Tables 2 and 3. For the regressions that include all firms, the results are largely the same as in Table 2 except that the coefficient on the difference-in-difference estimator for dividend restrictions is no longer statistically significant (both with and without the SIC controls). The results for distressed bond issues are highly similar to Table 3 with the only substantial change being that the coefficient on the difference-in-difference estimator is not statistically significant for the negative pledge regressions that include the SIC controls.

5.1.4 Covariate Balance

Yet another concern might be the degree of balance among the covariates. Specifically, the pre and post-Gheewalla bonds issued by distressed Delaware firms show some quite stark differences for some of the independent variables. These issues are most pressing for total sales and total assets. Returning to Table 1 shows that there is about a three-fold increase in the average total sales of distressed, Delaware bond issuers after Gheewalla. For

average total assets, there is almost a four-fold increase after the change in the law. The pre-post differences create the concern the bonds issued by distressed Delaware firms in the pre-period differ in fundamental ways from those distressed Delaware firms that issued in the post-period. Although this concern might be tempered by the larger asset base in the post-period if those assets create less risky conditions for lending (which would, of course, depend on the capital structures and financial outlooks of these larger firms). If these are less risky issuers than in the pre-period, one would expect fewer restrictive covenants, which is at odds with the findings above of more restrictions in the post-period.

To address the potential problems introduced by a lack of covariate balance, I use propensity score matching to create a sample of pre and post firms that are more similar with respect to covariates. The bonds that are most dissimilar from the rest are those issued by Delaware firms prior to Gheewalla. These bonds are, on average, issued by much smaller firms than those by non-Delaware firms and those issued by Delaware firms after Gheewalla. For this reason, I match the pre-Gheewalla Delaware firms to bonds that are outside of this category. I do so using the log amount of the bond, the time to maturity, log assets, and leverage, which are all covariates in the regressions of interest. I match the three nearest neighbor bonds for each pre-Gheewalla Delaware bond. Doing so produces a substantial improvement in covariate balance. There is less than a two-fold difference between the average total assets for the Delaware firms that issue pre-Gheewalla bonds and the average assets for non-Delaware issuers and the post-Gheewalla Delaware issuers. The balance is even better for sales where the average for non-Delaware issues and post-Gheewalla Delaware issues is within a standard deviation of the average for pre-Gheewalla Delaware issues.

Repeating the regressions for Table 3 on the matched sample with and without firm fixed effects produces results that are largely similar to the full sample.[24] Using the covenant index as the dependent variable on the matched sample produces difference-in-difference coefficient

[24]These regressions have 154 observations because some of the observations get matched to the pre-Delaware, pre-Gheewalla bonds multiple times. With this relatively small number of observations, the number of firms appearing multiple times is rather small. To mitigate against the danger of identifying off of changes to a few firms, I run the regressions with and without firm fixed effects.

that is larger than that in the complete sample and is significant at the one-percent level when including firm fixed effects. When omitting firm fixed effects and including two-digit SIC controls, the coefficient is again large and is significant at the five-percent level. For regressions using the presence of a negative pledge covenant and dividend restrictions as the dependent variable, neither difference-in-difference coefficient is statistically significant when using firm fixed effects, but when using two-digit SIC fixed effects instead of firm fixed effects the interaction coefficient is statistically significant for the dividend restriction. Overall, these results suggest that the primary results hold on a sample that has better covariate balance, although some caution is appropriate for the negative pledge covenant where the results are statistically insignificant in the matched sample.

5.2 The Influence of Delaware Law

One potential issue with treating Trenwick and Gheewalla as a shock to debt contracts entered into with Delaware-incorporated firms is the influence that Delaware law may exert over the corporate law of other states. This is not a hollow concern.[25] As a New Jersey court has put it, "When considering issues of first impression in New Jersey regarding corporate law, we frequently look to Delaware for guidance or assistance."[26] If this influence extends to the topic of creditor rights, there is unlikely to be much of a difference across states in the pre and post-Gheewalla bond covenants.

There are two reasons why this concern is unlikely to have materialized. First, the rules articulated in Trenwick and Gheewalla were specifically rejected by a number of the states that considered the issue after Delaware courts decided those cases. It is understandable that non-Delaware courts declined to follow these cases because while some courts will adopt Delaware's view when addressing an issue for the first time, many states had existing law on creditor rights near insolvency. For example, a South Carolina court rejected the Gheewalla

[25]Delaware's influence is not limited to its case law. Several studies show that the language used in Delaware corporate agreements and charters migrates to other states. (Broughman et al., 2014; Cain and Davidoff Solomon, 2012)

[26]Casey v. Brennan, 780 A.2d 553, 567 (2001).

rule on the following basis:

> Defendants have urged the Court to consider law from outside of South Carolina in determining whether Plaintiffs have the right and ability to bring a direct action against the Defendant-directors for a breach of their fiduciary duties to Debtor's creditors. Specifically, Defendants have directed the Court to a case decided by the Delaware Supreme Court, North American Catholic Educational Programming Foundation, Inc. v. Gheewalla, 930 A.2d 92 (Del.2007). ... Defendants ... cannot point the Court to (nor has the Court been able to find) any cases decided by South Carolina courts or under South Carolina law which have applied the rationale set forth in Gheewalla. As stated above, South Carolina law governs Plaintiffs' breach of fiduciary duty to creditors claims and, therefore, the previously cited standard set forth in the [governing South Carolina] case is the appropriate standard under which the Court must review these claims.[27]

Courts in other states have likewise refused to follow Delaware's revised approach to fiduciary duties owed to creditors. At least two other states have expressly stated after Gheewalla that directors owe fiduciary duties to creditors when the firm is in the zone of insolvency.[28] Similarly, non-Delaware courts have endorsed potential liability for deepening insolvency, or claims much like it, after the issuance of the Trenwick decision.[29]

Beyond opinions that have declined to follow Trenwick and Gheewalla, there are statutory impediments to reigning in creditor rights in some states. Approximately 32 states have constituency statutes that either permit or require directors to take into account the interests of non-shareholders groups, such as employees and creditors. For example, the relevant Connecticut statute states that "a director of a corporation ... shall consider, in determining what he reasonably believes to be in the best interests of the corporation ... the interests of the corporation's employees, customers, creditors and suppliers."[30] A law like this imposes a substantially stronger obligation on directors to take creditor interests into account relative

[27]In re Joseph Walker Company, Inc., 522 B. R. 165, 196 n. 42.

[28]Dooley v. O'Brien, 244 P.3d 586, 591 (Ariz. Ct. App. 2010) ("fiduciary obligations can apply even to creditors when a corporation enters the zone of insolvency, without regard to the terms in the underlying contracts"); Gladstone v. Stuart Cinemas Inc., 178 Vt. 104, 117 (Vt. 2005).

[29]Official Comm. of Unsecured Creditors of Allegheny Health, Educ. Research Found. v. PricewaterhouseCoopers, LLP, 2007 WL 141059, at *7 (W.D.Pa. Jan.17, 2007); Thahault v. Chait, 541 F.3d 512, 520, 523 (3d Cir.2008).

[30]Conn. Gen. Stat. Ann. §33-756.

to the low thresholds set by Trenwick and Gheewalla. To be sure, a court could square the language of the statute with the view that it should just enforce agreements between firms and creditors. After all, doing so would take into account the interests of creditors. And if the statute were merely permissive—meaning that it allowed directors to take into account non-shareholder interests, but did not require doing so—it would be even easier to adopt positions that are consistent with Trenwick and Gheewalla. Nevertheless, the broad use of these statutes suggests some reason to believe that non-Delaware courts were not likely to follow the Chancery Court in immediate lockstep.

6 Bond Price Reaction

Bond prices are another place to look for a reaction to the Trenwick and Gheewalla decisions. If those decisions made it harder for the bondholders of Delaware firms to obtain court judgments for decisions that harmed their interests, we should expect the prices of bonds issued before those decisions to decline relative to the bonds of non-Delaware firms. This effect should be especially noteworthy for those firms that are in worse financial condition since limitations to bondholder remedies are more likely to have consequences.

This section conducts a bond event study to assess whether there is a discernible price reaction to the Delaware cases. To do so, I use bond trade data from FINRA's Trade Reporting and Compliance Engine (TRACE), which I combine with rating information from FISD and the state of incorporation data from Compustat. [31] I begin with the entire sample of TRACE trades from 2005 to 2007, which includes about 16.85 million individual bond trades. I exclude any bond issued after September 1, 2006 to help restrict the sample to

[31] As is well-known in the finance literature, bond event studies pose some unique challenges relative to event studies that use equities. The foremost problem is that bonds are far less liquid than public stocks. As reported by Bessembinder et al. (Bessembinder et al. (2008)), from 2002 to 2006 the average bond traded only 52 days per year and, if traded on a given day, there was an average of 4.62 trades of the bond. An additional concern is that firms often have multiple bond issues, which poses the question of how to aggregate these prices in an event study. These issues are not especially troubling for the analysis that follows because I conduct a wide-scale comparison of Delaware and non-Delaware incorporated firms. Doing so should reflect a large number of overall trades rather a small number of trades for a single bond.

bonds that were negotiated prior to the issuance of the Gheewalla opinion. To focus on the bonds with the lowest execution costs (in terms of basis points), I screen out all trades that are for less than 100,000 units.[32] Following standard protocol, I exclude private placement bonds and exchange offers from the analysis. I use rating data from FISD to associate the most recent rating of each bond with each trade and exclude investment (non-speculative) grade bonds.[33] Some firms have multiple bond issues. To address, this I use the issue for each firm that trades in the highest number of months during the initial sample period and, if there are any ties, I use the issue with the highest number of total trades during the sample period. For the selected issue, I treat the last trade a given month as the price for that month. The return is simply the percentage change in price from the previous month. To minimize the effect of outliers, I winsorize the returns at the first percentile and 99th percentile.

[Insert Figure 4 about here]

Figure 4 shows the difference in cumulative raw return for speculative grade bonds for both Delaware and non-Delaware incorporated firms from May 2006 to July 2007. The two vertical lines depict when the Chancery Court and Delaware Supreme Court decided the Gheewalla opinions. As the figure demonstrates, the cumulative return for Delaware firms began to diverge from the non-Delaware firms in the period after Gheewalla. This divergence is in the expected direction; the return for Delaware firms is lower than that of the non-Delaware firms. This pattern is consistent with concerns that bondholders might have about the difficulty of relying on fiduciary duties to sue the directors of the issuing firms. Table 7 compares the month-over-month cumulative bond return for Delaware and non-Delaware incorporated firms for the eight months following Gheewalla. As implied by Figure 4, for every month the cumulative bond return for Delaware firms is lower than that of the non-Delaware firms. That difference is statistically significant starting the fourth month

[32] About one-third of the trades in the initial TRACE sample are of 100,000 units or more.

[33] FISD provides bond ratings from Moody's, Standard and Poor's, and Fitch. I follow the definition of investment grade provided by the National Association of Insurance Commissioners.

after Gheewalla and remains so for through the eighth month after the trial court decision (which is when the Delaware Supreme Court affirmed).

[Insert Table 7 about here]

This evidence is consistent with bondholders having a diminished ability to rely on fiduciary duty claims to recover from issuers. This evidence is not overwhelming—it takes several months before the differences are statistically significant—but that could be a product of bond traders taking into account the possibility that the Supreme Court would not affirm the ruling. It is also worth noting that the groups of people who draft bond indentures and who trade bonds may react to legal changes at different rates. The legal and financial professionals who draft the indentures may be acutely aware of a change to fiduciary duties, while traders in illiquid bond markets may take time to recognize the importance of the decision across bond issues. Alternatively, the traders may be quick to realize the potential pricing implications of bond priced under the Credit Lyonnais rule. Whatever the reality is, there is a possibility that these groups may incorporate and apply this information at different rates.

7 Concluding Remarks

The Trenwick and Gheewalla decisions placed strong limitations on the ability of the creditors of distressed firms to assert fiduciary duty claims. Because these decisions affected only those firms incorporated in Delaware, it creates a quasi-natural experiment that should be able to detect the response of creditors to a limitation of their default rights. This article predicts that the different cost of the governance mechanisms available to loan and bond creditors should lead them to react in different ways. Loan creditors have the ability to perform ex post monitoring after the parties have signed an agreement. They can set tight maintenance covenants and then use the leverage provided when financial distress triggers those covenants. Given that loan creditors are already engaging in this type of ex post

governance, they are unlikely to want to bear the costs of investing in the development of an optimal suite of ex ante restrictions. Bond creditors generally do not have the option of ex post governance through maintenance covenants. One would thus expect them to react to Gheewalla by investing more in ex ante contract restrictions that will protect their interests.

The evidence developed through the quasi-natural experiment broadly supports this theory. Bonds issued to Delaware corporations after Gheewalla show more ex ante restrictions than those issued to firms incorporated outside of Delaware. This effect is substantially stronger for less financially stable firms, who are more likely to be affected by the legal rules articulated in Trenwick and Gheewalla. The restrictive terms of bank loan agreements, however, do not appear to have responded to these cases. This evidence suggests the governance abilities of different creditors have a substantial effect on how they structure and manage their agreements with debtors.

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Appendix A: Variable Definitions

Variable	Definition
Delaware	Indicator variable for whether the firm was incorporated in Delaware at the time of debt issuance.
Post-Gheewalla	Indicator variable for whether debt was issued after the trial court's Gheewalla decision.
Log Bond Amount	The natural logarithm of the amount of bond principal.
Dividend Restriction	Indicator variable for whether the debt restricts the ability of the issuer and/or its subsidiaries to pay dividends.
Negative Pledge	Indicator variable for whether the bond restricts the ability of the borrower to issue additional debt.
Assets	The total assets of the corporation during the quarter of debt origination.
Sales	The total sales of the company in the quarter of debt origination.
Shareholder Equity	The amount of shareholder equity during the quarter of debt origination.
Leverage	(Long Term Debt+Current Debt)/Total Assets during the quarter of debt origination.
Secured	Indicator variable for whether the debt was secured.
Syndicated	Indicator variable for whether a loan was syndicated.
Altman-Z	The value of the following formula during the quarter of debt origination: 1.2*((Current Assets - Current Liabilities)/Total Assets) + 1.4*(Retained Earnings/Total Assets) + 3.3*(EBIT/Total Assets) + .6*(Market Capitalization/Total Liabilities) + .999*(Sales/Total Assets)

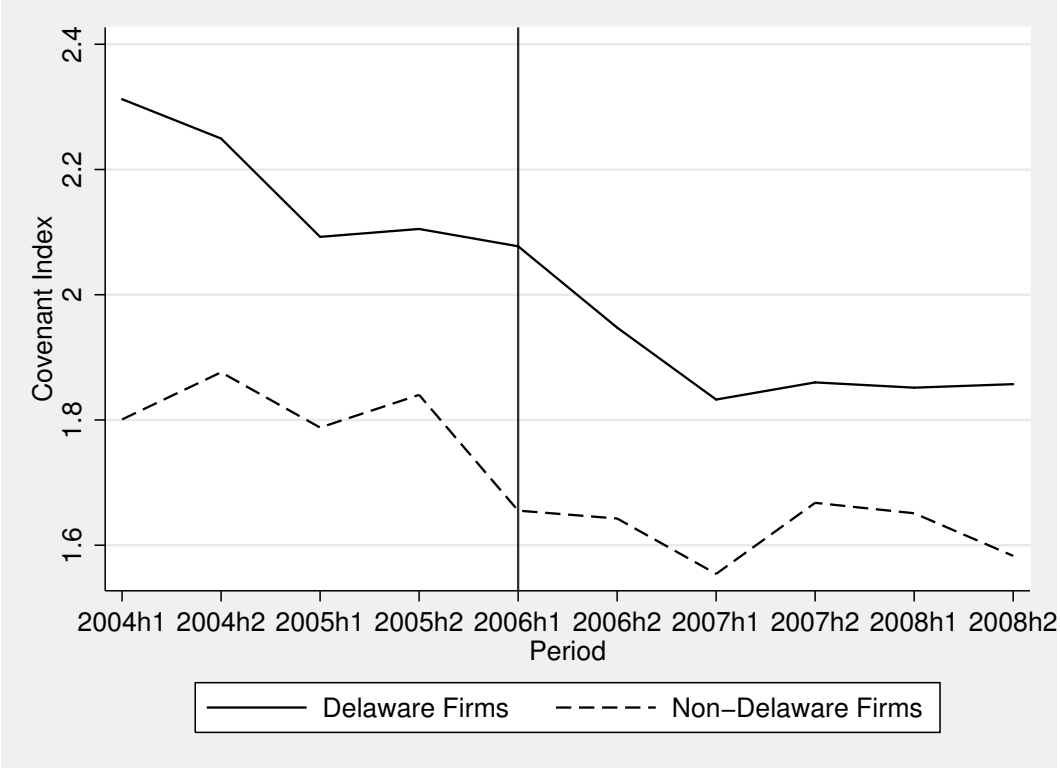

Figure 1: Moving Average of Covenant Index for Bonds Issued by Non-Distressed Firms

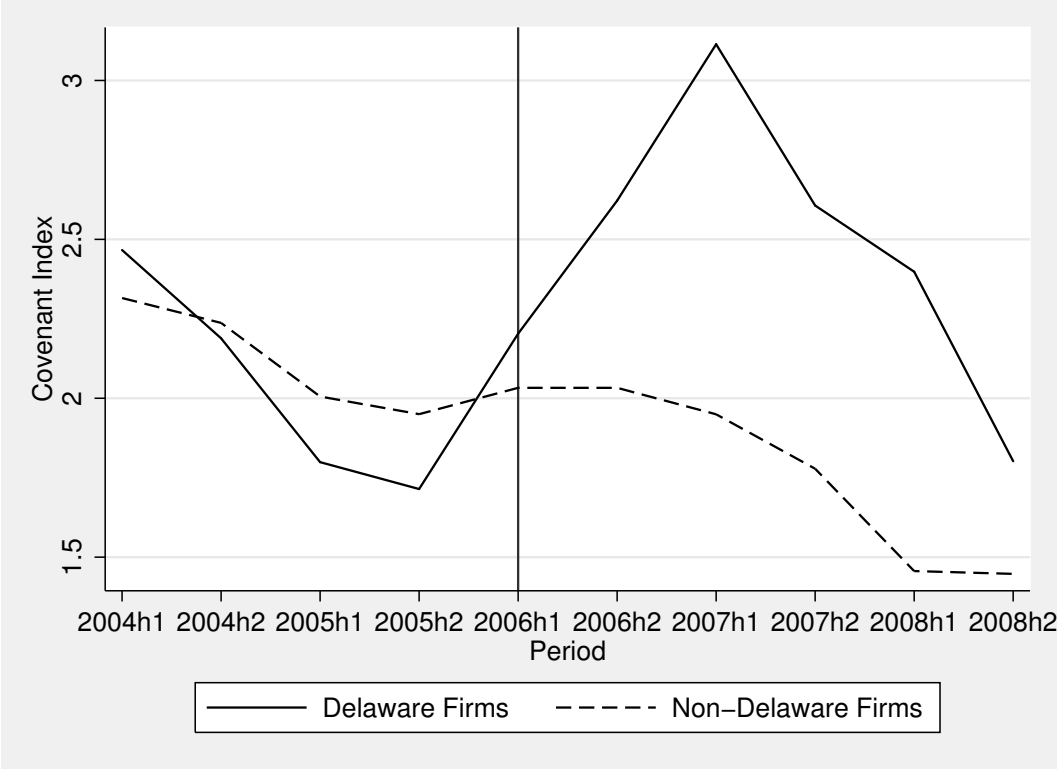

Figure 2: Moving Average of Covenant Index for Bonds Issued by Distressed Firms

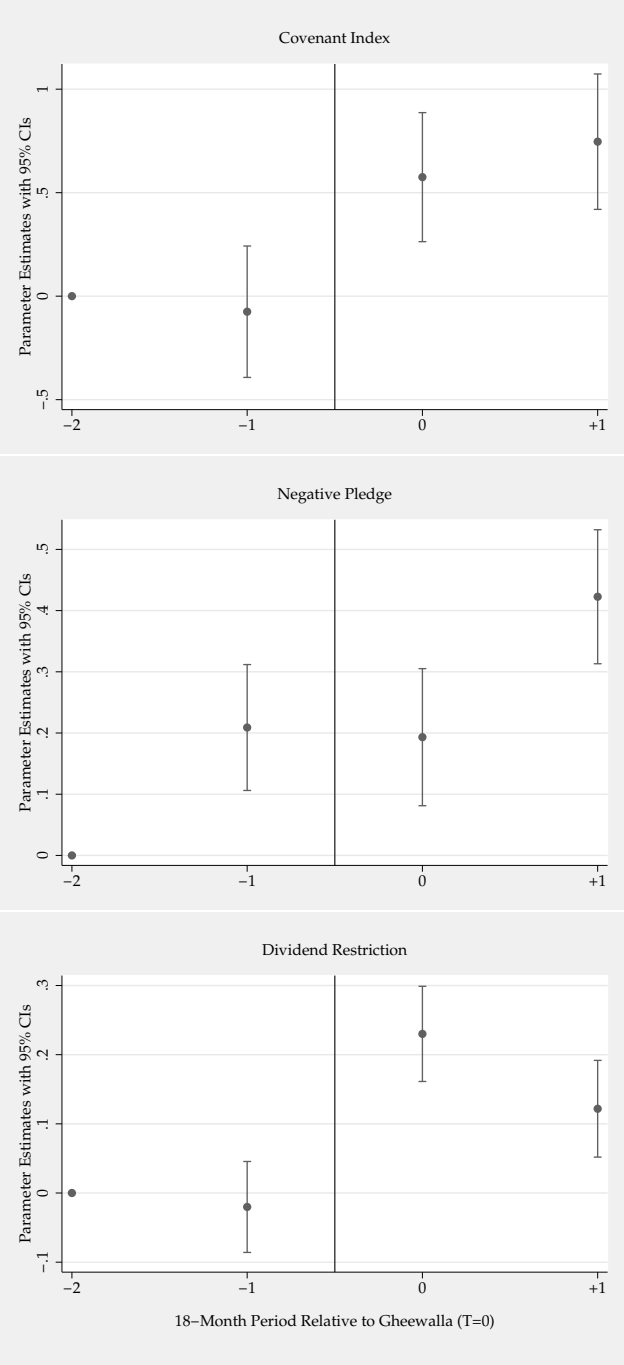

Figure 3: Leads and Lags for Distressed Bond Features Relative to the Issuance of the Gheewalla Opinion

Note: The figures show the estimated impact of the Gheewalla opinion on the overall covenant index, negative pledge covenants, and dividend restrictions in 18-month periods before and after the issuance of the opinion. The regressions use each of these respective measures as the dependent variable and the figures depict the value of the coefficients for a variable that is equal to one if the bond is issued by a Delaware incorporated firm during the relevant period. The regressions also include firm fixed effects and controls for log bond amount, time to maturity, log assets, leverage, and whether the bonds are secured. Standard errors are clustered by state of incorporation. N=379.

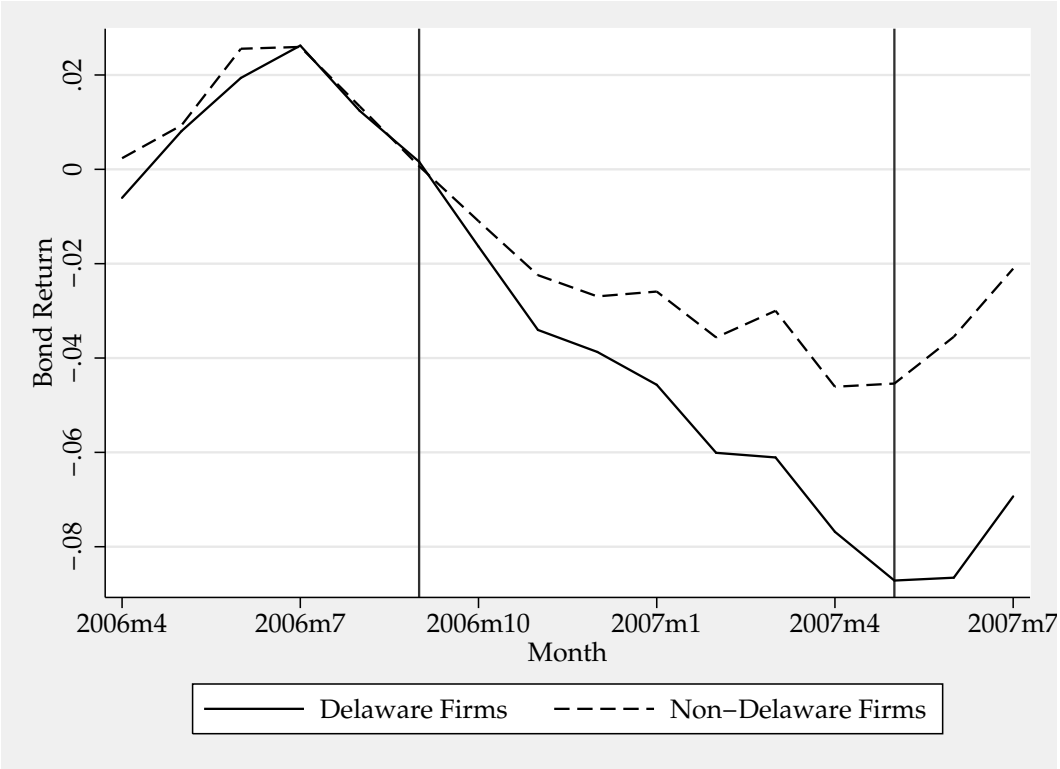

Figure 4: Cumulative Monthly Raw Returns for Speculative-Grade Bonds Issued Prior to Gheewalla

Note: This figure charts the cumulative monthly raw return of bonds issued by Delaware and non-Delaware incorporated firms. The left horizontal line represents the Delaware Court of Chancery opinion in Gheewalla and the right horizontal line represents the Delaware Supreme Court's affirmance of Gheewalla.

Table 1: Summary Statistics

Bond Issues and Issuers

	ln(Amt.)	Yrs. to Mat.	Div. Res.	Neg. Pledge	Cov. Index	Assets	Sales	Lev.	N
Non-Delaware	19.827	13.188	0.064	0.721	1.862	35163.604	5,307.905	1.174	484
Delaware	19.907	11.400	0.088	0.693	2.006	28421.819	7,122.681	1.064	775
Total	19.876	12.087	0.079	0.704	1.951	31013.577	6,425.023	1.107	1259
At-Risk Firms Pre-Gheewalla									
Non-Delaware	19.613	14.917	0.125	0.736	2.153	39509.354	3,507.416	1.157	72
Delaware	19.553	10.321	0.189	0.623	2.415	10466.416	1,833.786	1.320	53
Total	19.588	12.968	0.152	0.688	2.264	27195.149	2,797.797	1.226	125
At-Risk Firms Post-Gheewalla									
Non-Delaware	19.796	14.228	0.050	0.624	1.584	48452.739	5,252.763	1.440	101
Delaware	19.926	10.451	0.157	0.680	2.235	38978.028	5,550.154	1.513	153
Total	19.874	11.953	0.114	0.657	1.976	42745.531	5,431.900	1.484	254

Loan Agreements and Borrowers

	ln(Amt.)	Yrs. to Mat.	Div. Res.	Debt Sweep	Cov. Index	Assets	Sales	Lev.	N
Non-Delaware	18.923	4.170	0.797	0.312	1.763	5,879.716	1,025.358	1.135	2218
Delaware	18.987	4.420	0.842	0.429	2.129	5,568.246	1,176.089	1.325	4338
Total	18.966	4.336	0.827	0.389	2.005	5,673.621	1,125.094	1.261	6556
At-Risk Firms Pre-Gheewalla									
Non-Delaware	18.835	4.071	0.807	0.311	1.778	8,159.279	964.444	2.324	409
Delaware	18.695	4.504	0.875	0.520	2.537	5,181.044	780.829	1.907	769
Total	18.744	4.353	0.851	0.447	2.273	6,215.083	844.580	2.052	1178
At-Risk Firms Post-Gheewalla									
Non-Delaware	18.955	3.929	0.771	0.416	2.000	8,280.406	1,050.010	2.115	279
Delaware	18.992	4.450	0.886	0.561	2.491	6,472.439	1,062.926	2.501	599
Total	18.980	4.284	0.850	0.515	2.335	7,046.952	1,058.822	2.378	878

Table 2: Bond Contract Restrictions

	Cov. Index	Neg. Pledge	Div. Restrict
Del. X Post-Gheewalla	0.303	0.143	0.0491
	(0.206)	(0.0696)**	(0.0256)*
Log Bond Amount	0.0891	0.00553	0.0227
	(0.117)	(0.0327)	(0.0184)
Time to Maturity	-0.000945	-0.000591	0.0000696
	(0.00192)	(0.00105)	(0.000521)
Log Assets	0.0525	-0.154	0.0249
	(0.161)	(0.0399)***	(0.0507)
Leverage	0.0328	0.00292	0.00375
	(0.0116)***	(0.00198)	(0.00126)***
Secured	0.146	-0.313	0.172
	(0.485)	(0.184)*	(0.0996)*
Observations	1259	1259	1259
R^2	0.818	0.729	0.811
Firm Fixed Effects	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes

Note: This table presents coefficient estimates from ordinary least squares regressions. The column titles list the dependent variables for each of the regressions. The Delaware and Post-Gheewalla coefficients are not reported. Standard errors are clustered by the state of incorporation. ***, **, and * denote significance at the 1%, 5%, and 10% confidence levels, respectively.

Table 3: Bond Contract Restrictions for Distressed Issuers

	Cov. Index	Neg. Pledge	Div. Restrict
Del. X Post-Gheewalla	0.923	0.185	0.218
	(0.349)**	(0.0828)**	(0.0506)***
Log Bond Amount	0.397	0.0544	0.0720
	(0.224)*	(0.0396)	(0.0470)
Time to Maturity	-0.000787	-0.00271	0.00129
	(0.00694)	(0.00247)	(0.00177)
Log Assets	-0.0103	-0.0677	0.00759
	(0.700)	(0.139)	(0.168)
Leverage	0.0330	0.00135	0.00739
	(0.00652)***	(0.00381)	(0.00166)***
Secured	0.105	-0.329	0.230
	(0.499)	(0.208)	(0.189)
Observations	379	379	379
R^2	0.788	0.808	0.765
Firm Fixed Effects	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes

Note: This table presents coefficient estimates from ordinary least squares regressions. The column titles list the dependent variables for each of the regressions. The Delaware and Post-Gheewalla coefficients are not reported. Standard errors are clustered by the state of incorporation. ***, **, and * denote significance at the 1%, 5%, and 10% confidence levels, respectively.

Table 4: Bank Loan Contract Restrictions

	Cov. Index	Debt Sweep	Div. Restrict
Del. X Post-Gheewalla	-0.121	-0.0330	0.000222
	(0.102)	(0.0376)	(0.0303)
Log Loan Amount	0.0429	0.0217	0.00353
	(0.0156)***	(0.00514)***	(0.00380)
Time to Maturity	-0.00909	-0.00305	0.00822
	(0.00983)	(0.00563)	(0.00400)**
Log Assets	0.271	0.116	0.0126
	(0.0625)***	(0.0320)***	(0.0200)
Leverage	0.00989	0.00447	-0.00112
	(0.00297)***	(0.000786)***	(0.000948)
Syndicated	-0.206	-0.103	0.00418
	(0.188)	(0.0553)*	(0.0598)
Secured	0.713	0.232	0.0385
	(0.0740)***	(0.0263)***	(0.0178)**
Observations	6105	6105	6105
R^2	0.788	0.765	0.629
Firm Fixed Effects	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes

Note: This table presents coefficient estimates from ordinary least squares regressions. The column titles list the dependent variables for each of the regressions. The Delaware and Post-Gheewalla coefficients are not reported. Standard errors are clustered by the state of incorporation. ***, **, and * denote significance at the 1%, 5%, and 10% confidence levels, respectively.

Table 5: Bank Loan Contract Restrictions for Distressed Firms

	Cov. Index	Debt Sweep	Div. Restrict
Del. X Post-Gheewalla	-0.247	-0.0934	0.0627
	(0.176)	(0.0524)*	(0.0643)
Log Loan Amount	0.0591	0.0312	0.00745
	(0.0196)***	(0.00654)***	(0.00852)
Time to Maturity	0.00806	0.00749	0.00409
	(0.0140)	(0.00643)	(0.00766)
Log Assets	0.00904	0.0658	-0.0377
	(0.139)	(0.0531)	(0.0270)
Leverage	0.00245	0.00235	-0.00161
	(0.00159)	(0.000644)***	(0.000805)*
Syndicated	-0.0395	-0.0543	-0.0706
	(0.253)	(0.0830)	(0.0590)
Secured	0.665	0.164	0.153
	(0.203)***	(0.0506)***	(0.0766)*
Observations	1923	1923	1923
R^2	0.800	0.798	0.598
Firm Fixed Effects	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes

Note: This table presents coefficient estimates from ordinary least squares regressions. The column titles list the dependent variables for each of the regressions. The Delaware and Post-Gheewalla coefficients are not reported. Standard errors are clustered by the state of incorporation. ***, **, and * denote significance at the 1%, 5%, and 10% confidence levels, respectively.

Table 6: Triple Difference Regressions

	Cov. Index		Debt Control		Div. Restrict	
	All	At-Risk	All	At-Risk	All	At-Risk
Del.×POST×Bond	0.329	0.520	0.210	0.358	0.109	0.174
	(0.0782)***	(0.127)***	(0.0694)***	(0.0831)***	(0.0413)**	(0.0856)**
Log Loan Amount	0.0115	0.0385	0.0180	0.0274	0.00162	0.0106
	(0.00627)*	(0.00900)***	(0.00502)***	(0.00415)***	(0.00347)	(0.00704)
Time to Maturity	-0.00207	-0.00254	-0.00223	-0.00337	0.0000564	0.000384
	(0.000837)**	(0.00285)	(0.000943)**	(0.00246)	(0.000820)	(0.000907)
Log Assets	0.0861	0.0268	0.0851	0.0768	0.00649	-0.0253
	(0.0190)***	(0.0495)	(0.0310)***	(0.0328)**	(0.0181)	(0.0223)
Leverage	0.00358	0.00107	0.00563	0.00468	-0.000855	-0.00182
	(0.00092)***	(0.00077)	(0.00064)***	(0.00086)***	(0.00087)	(0.00081)**
Secured	0.331	0.313	0.198	0.0760	0.0791	0.182
	(0.0341)***	(0.0874)***	(0.0256)***	(0.0567)	(0.0209)***	(0.0489)***
Observations	7364	2302	8294	2709	7364	2302
R^2	0.701	0.731	0.665	0.689	0.753	0.747
Firm Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes

This table presents coefficient estimates from ordinary least squares regressions. The column titles provide list the dependent variables for each of the regressions. The Delaware, Post-Gheewalla, Bond, Del. × Post-Gheewalla, Del. × Bond, and Post-Gheewalla × Bond coefficients are not reported. Standard errors are clustered by the state of incorporation. ***, **, and * denote significance at the 1%, 5%, and 10% confidence levels, respectively.

Table 7: Cumulative Raw Returns for Speculative-Grade Bonds Issued Prior to Gheewalla

Months from Event	[0,+1]	[0,+2]	[0,+3]	[0,+4]	[0,+5]	[0,+6]	[0,+7]	[0,+8]
Mean Non-DE Firm Return	-0.0123	-0.0237	-0.0299	-0.0238	-0.0338	-0.0231	-0.0419	-0.0407
Mean DE Firm Return	-0.0191	-0.0355	-0.0403	-0.0487	-0.0597	-0.0599	-0.0779	-0.0929
Difference	-0.00675	-0.0117	-0.0104	-0.0248	-0.0260	-0.0357	-0.0360	-0.0522
	(0.00597)	(0.00812)	(0.0101)	(0.0122)**	(0.0139)*	(0.0152)**	(0.0177)**	(0.0219)**

This table presents cumulative raw returns for speculative grade bonds issued by Delaware and non-Delaware incorporated firms for each of the eight months after the Delaware Court of Chancery decided the Gheewalla case. For the differences between the Delaware and non-Delaware returns, ***, **, and * denote significance at the 1%, 5%, and 10% confidence levels, respectively, in a two-tailed t-test.