Creditor Rights, Implicit Covenants, and the Quality of Accounting Information

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We study a 2013 court decision that enhanced creditor control rights in Israeli firms by allowing them to force distressed companies into bankruptcy. Market participants expected the court ruling to benefit creditors: bond (equity) prices of companies affected by the new rule responded positively (negatively). We attribute this to the ability of creditors to initiate bankruptcy procedures earlier than in the period before the court ruling. We also observe a pronounced increase in the reported net worth of the firms affected by the new rule and provide evidence suggesting that some affected firms increased their net worth by raising equity. We also find, however, that affected firms changed their accounting practices, as reflected by an increase in long-term discretionary accruals and a decrease in accounting conservatism. As a result of these accounting changes, we document a decline in the informativeness of the affected firms' financial reports. We conclude that the benefits from creditor control rights may be mitigated by unintended consequences in the form of increased incentives for firms to adopt aggressive accounting practices and, as a result, a reduction in the informativeness of firms' financial reporting.

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Introduction

Creditor rights are essential for the development of private credit markets (e.g., Djankov, McLiesh and Shleifer, 2007). Strong creditor protection rules, however, might have adverse effects, such as too little risk taking (Amihud et al., 2011) or a creditor-induced "liquidation bias" (Vig, 2013). Moreover, different creditor protection rules, such as the access to collateral or creditor control over bankruptcy procedures may vary in their effect on creditors and debtors. We focus on a legal change that expanded creditor rights to force distressed firms into bankruptcy: a court ruling that granted creditors the power to force into bankruptcy (liquidation or reorganization) firms whose liabilities exceed their assets. We study the effect of this change on creditors, borrowers, and the quality of financial reporting.

We find that the new rule tended to benefit creditors (measured by both the market reaction to the rule and the post-ruling recovery rates in bankruptcy). This finding is consistent with the view that increasing creditor control over distressed firms—granting them the ability to commence bankruptcy procedures early—can prevent asset-stripping and other opportunistic actions by distressed companies and their managers. We also find evidence that distressed firms affected by the new rule raised more capital following the decision. This finding can also explain why the new rule tended to benefit creditors. We find no evidence, however, that distressed firms changed the riskiness of their activities. Finally, the strengthening of creditor control rights seems to have had another, adverse, effect: inducing distressed borrowers to manipulate their financial statements and increase their reported net worth, thereby making it more difficult for creditors to take advantage of their new control rights. The latter effect appears to have detracted from the informativeness of financial statements, potentially undermining bond market efficiency. In other words, while creditors may benefit from strong control rights over distressed borrowers, companies might respond by taking advantage of their discretion in financial reporting so as to alleviate the risk of losing control to creditors. This implies

that certain measures of creditor empowerment may come at the cost of reduced transparency and informativeness of financial statements.[1]

Studies of bankruptcy tend to focus on the degree of creditor control once the firm enters bankruptcy, for example, whether management continues to run the company (Schoenherr and Starmass, 2021) or whether creditors have a say on the choice between liquidation and organization (Agarwal et al., 2022). Our analysis, in contrast, focuses on creditors' power to force firms into bankruptcy. We take advantage of a 2013 legal development that took place in Israel, when bondholders of one of the largest holding companies asked the court to force the company into bankruptcy.[2] Notably, the company was current on its payments and did not breach any bond covenant. Yet, bondholders argued that it was insolvent and should therefore be forced into bankruptcy. The court held that, when a debtor's liabilities exceed its assets ("balance sheet insolvency"), bondholders can force into bankruptcy even companies that do not default on their payments. This decision, therefore, is an exogenous legal change to bankruptcy law that significantly expanded creditor rights vis-à-vis distressed companies.

Several unique features of the Israeli corporate bond market provide us with the opportunity to examine the effect of this change in creditor protection. For reasons that we explain below, regardless of their risk or credit rating, many corporate bonds that were traded on the Tel Aviv Stock Exchange in 2013 lacked customary financial covenants that normally provide bondholders with control rights in case of imminent distress ("no-covenant bonds"). Prior to 2013, no-covenant bondholders lacked the power to take control of distressed companies unless they actually failed to pay some or all of their financial obligations. The ruling, therefore, enhanced the control rights of no-covenant

[1] As we explain below, our study focuses on publicly traded corporate debt (bonds). These creditors are more likely than other financial creditors to rely on borrowers' financial statements as a measure of their ability to repay their debt.

[2] Specifically, the bondholders did not ask for liquidation. Rather, they asked the court to order a court-supervised reorganization and approve a plan under which they will exchange their debt for equity.

bondholders by essentially providing them with the power to force into bankruptcy debtors with a negative net worth. By contrast, this legal change did not meaningfully affect bondholders that were already protected by financial covenants (typically more binding than the newly court-granted power);[3] in companies with covenants, regardless of the court ruling, bondholders could accelerate payments on their bonds and initiate bankruptcy procedures if borrowers failed to satisfy their covenants. We rely on the difference between the two types of corporate bonds to explore the effect of the change on bondholders, companies and the information dissemination in bond markets more generally.

Specifically, we examine the effect of the court decision on firms close to distress that had no covenants as of the end of 2012. These companies are the ones most affected by the decision. Our measure of distress is based on (reported) net worth, scaled by total assets. We choose this measure for two reasons. First, net worth is the proxy for balance sheet insolvency, the condition that could trigger creditor control rights under the new rule. Second, the creditors most affected by the ruing were bondholders. These creditors often rely on issuers' reporting and other publicly available information. We consider firms with no-covenant bonds and whose net worth is below the median (alternatively, no-covenant firms whose net worth is below the 33rd percentile) as "treated" (i.e., affected by the court decision). Firms with covenants (regardless of their net worth) and no-covenant firms with high (above the median, or above the 33rd percentile) net worth serve as the control group in our empirical analysis. These firms were not affected by the court ruling, as they either already had covenants in place (which were typically more stringent than the one granted by the court ruling), or had high net worth and therefore were not sensitive to a court decision affecting firms in the vicinity of financial distress.

[3] The new rule did not materially affect banks and other private lenders. These lenders were likely to include covenants in their loan documents.

Our focus on companies with publicly traded debt allows us to measure the effect of the change in creditor control rights on bondholders and shareholders by analyzing the market reaction to the court's decision. Expanding their control rights is likely to benefit creditors of distressed firms. Under a regime in which managers are displaced once the company enters bankruptcy, companies might fail to restructure their debt even when doing so might be desirable (Schoenherr and Starmass, 2021). Creditor control can overcome these perverse incentives and prevent other forms of opportunistic behavior by shareholders and managers. Consistent with this prediction, we find that the decision was (unexpected and) beneficial to bondholders, but detrimental to shareholders: On the date of the court ruling, no-covenant bonds issued by low-net-worth firms (i.e., firms close to default) exhibited positive excess returns (relative to a portfolio of corporate bonds of similar rating and maturity), while the shares of these firms exhibited negative excess returns (relative to those predicted by the market model). Moreover, we also find evidence that recovery rates for bondholders in defaulting companies increased in the post-court ruling period in comparison with the pre-court ruling period. This finding suggests that an early onset of bankruptcy procedures tends to benefit creditors.

We then examine whether the new rule changed the treated companies' risk-taking or other aspects of their activity. One concern for creditors is that shareholders would lead distressed borrowers to take excessive risks (Jensen and Meckling, 1976). If creditors were given more control, one might expect companies to adopt less risky policies whether as a direct result of creditor power (Becker and Stromberg, 2012) or in order to avoid situations in which creditors could exercise control by forcing the firm into bankruptcy (e.g., Acharya, Amihud, and Litov, 2011; Schoenherr and Starmass, 2021). On the other hand, unlike the setting of Becker and Stromberg (2012), treated firms in our sample are subject to *conditional* creditor control. This may leave shareholders with incentives to engage in risk-shifting. We do not observe any change in measures of risk such as the volatility of corporate profits or stock returns.

As the new rule provided no-covenant bondholders with control rights when firms' liabilities exceeded their assets, it provided distressed, no-covenant firms with strong incentives to increase their net worth by any (legal) means possible to alleviate the threat of involuntary bankruptcy. Consistent with this prediction, we find that, in comparison with the control group, there was a pronounced increase in the treated firms' (reported) net worth following the 2013 court ruling. The group most likely to be affected by the legal change — no-covenant firms with low net worth — were especially likely to experience an increase in their net worth around 2013.

What explains this surge in net worth? We find some evidence for one channel through which the threat of creditor control – we observe an increase in equity issuances among treated firms, as in Becker and Stromberg (2012). Treated firms in the lowest decile of the net worth distribution prior to the court decision were especially likely to increase equity issuance following the ruling. This is effect is presumably beneficial, at least for creditors.[4] However, equity issuances are not the only change we observe among treated firms in the post-2013 period. We also document a consistent link between the court decision and various changes in the treated firms' reporting practices. Using statistical as well as anecdotal evidence, we establish that distressed borrowers responded to the increase in creditor power not only by making some real changes in their financial conditions (raising new equity capital), but also by making changes to the way their financial conditions were reported to investors. We also provide some evidence indicating that the accounting changes were transitory - the earnings of treated firms declined a few years after the court ruling (in the spirit of studies like Barton and Simko, 2002).

To the extent that it induced the distressed firms in our sample to inflate reported earnings, the legal change underlying our study might have affected the informativeness of financial statements. In line with this conjecture, we find that investors (bondholders) seem to have attributed less informational content to the treated firms' reported

[4] It might also alleviate the debt overhang problem associated with distressed firms.

earnings in the post court-ruling period (relative to the pre-ruling period, in comparison with the control group of firms).

Our study joins a growing number of studies using exogenous legal changes to study the effects of an increase in creditor protection and creditor control rights on firm policies. Becker and Stromberg (2012) study the effect of a change in management's fiduciary duties toward creditors on the corporate policies of distressed firms, documenting a reduction in risk. Vig (2013) studies the (sometimes surprising) effects of an increase in creditor rights (access to collateral) on firm capital structure, reporting a reduction in secured and total debt as a result. Agarwal et al. (2022) find that empowering creditors in Denmark to control reorganization procedures increases the likelihood of reorganization of distressed firms, rather than their liquidation. Our contribution to this line of research is twofold. First, we focus on a novel measure of creditor protection—creditors' power to force companies into bankruptcy—and document its impact on creditors and borrowers. Second, we highlight the effect of creditor control rights on financial reporting and accounting practices.

Within the accounting literature, our study is part of a line of research focusing on the link between a firm's financial conditions and managerial incentives, and its financial reporting practices. Franz et al. (2014), for example, report that firms close to covenant violations use earnings management techniques more than other firms. Tan (2013) shows that creditor-controlled firms tend to adopt conservative accounting policies. Our findings complement these studies, emphasizing how firms respond to the strengthening of bondholders' control rights by using discretion in their accounting to inflate net worth. Unlike Tan (2013), in our case, as firms try to prevent creditors from seizing control, they tend to use less conservative accounting practices than other firms.

More generally, our main contribution is in providing new evidence on the nature of the tradeoff underlying rules designed to protect creditors, and especially those aiming to

provide them with control rights. On the one hand, our study shows that a pro-creditor rule can benefit creditors, especially in highly distressed firms, by motivating such firms to raise the required capital or by inducing timely bankruptcy procedures if these firms fail to act. On the other hand, we find that the strong creditor rights may provide distressed firms with incentives to inflate reported earnings, thereby undermining the quality of information that bond issuers provide to the market.[5]

The rest of the paper is organized as follows. The next section describes some of the related literature and presents the legal and institutional background for the reform we study. The data set and the empirical approach are described in Section 3. Section 4 presents our main empirical findings and Section 5 concludes.

2. Related Literature and Institutional background

2.1 Related Literature

The present study is part of the vast Law and Finance literature, which has focused on the relation between investor protection, corporate ownership and financial market development. Within this line of research, the literature on creditor rights (e.g., Djankov et al., 2007, and Djankov et al., 2008) has generally regarded strong creditor protection as essential for the functioning of debt markets.[6] As noted in the introduction, however, a few studies point out the possibility that allocating control rights to creditors at the expense of shareholders might produce adverse consequences, such as too little risk taking (Acharya et al., 2011), or a creditor-induced "liquidation bias" (Vig, 2013). For the most part, the Law and Finance literature has not explored the possible links between creditor rights and accounting reporting practices. A recent exception is Gopalan, Martin and Srinivasan (2016), who examine a pro-debtor bankruptcy code reform in India and its impact on earnings management. They show that the reform has induced borrowers to

[5] This is reminiscent of the model in Guttman and Marimovic (2018), where the ability to manipulate reports affects the efficiency (of endogenously-determined) bond covenants.

[6] A related line of research emphasizes the efficiency of bankruptcy codes around the world (e.g., Davydenko and Franks, 2008).

manipulate their accounting figures downwards in order to qualify for protection from creditors. In contrast with the bankruptcy code reform in India, our study looks at a pro-creditor legal change and documents, using different accounting techniques – changes in long-term discretionary accruals and reduced accounting conservatism – how borrowing firms adjust their reported figures upwards, so as to avoid triggering bondholders' power to force firms into bankruptcy.[7] Taken together, Gopalan et al. (2016) and the present study highlight a possible adverse effect of reforms in creditor rights: changes in creditor rights, even if desirable (we do not take a stand on that), may push firms toward accounting opacity.

Our analysis is also related to the accounting literature on International Financial Reporting Standards, IFRS (as opposed to US GAAP). In general, IFRS-based accounting systems allow for more discretion by reporting firms, as it is based on general principles, as opposed to very precise rules. In a summary paper, Ball (2016, Section 6.3.1, p. 553) describes the wide range of choices firms have in implementing IFRS rules. He also discusses the wide use of fair value in IFRS, which requires judgment and discretion by managers, and the choice of alternative accounting methods allowed under IFRS. Empirically, Jeanjean and Stolowy (2008) report that "the application of accounting standards involves considerable judgment and the use of private information, and as a result, IFRS… provide(s) managers with substantial discretion" (p. 481). Callao and Jarne (2010) find that the transition to IFRS in Europe has opened the way for a variety of earnings management methods, including those using long-term discretionary accruals which, according to Teoh et al. (1998), are less amenable to manipulation under the US

[7] Relatedly, using Indian data, Aghamolla and Li (2018) argue that stronger debt contract enforcement induces more accounting conservatism. Tan (2013), mentioned above, makes a similar point with respect to debt covenant violations. More generally, a large literature documents how quantitative thresholds of various forms induce firms to manage their earnings. For example, Burgstahler and Dichev (1997) discuss this phenomenon in the context of firms trying to avoid reporting losses, Matsumoto (2002) suggests that firms manage earnings to meet analysts' expectations, whereas Bergstresser and Philippon (2006) focus on accounting manipulations in the context of executive compensation targets. These and other motivations to manage earnings (e.g., regulatory reasons, lending contracts etc.) are discussed in detail in a survey by Healy and Wahlen (1999).

GAAP system. Ahmed et al. (2013) also argue that the IFRS allows for "aggressive" reporting of accruals. Finally, in the context of Israel, Chen et al. (2019) describe the use of optimistic appraisals under IFRS to justify dividend payouts, resulting in increased risk of future financial distress. Our empirical tests, as well as our empirical findings documenting the use of all of these methods to boost net worth, are consistent with this literature.

2.2 Institutional and Legal Background

In 2013, a group of IDB Pituach Ltd. (IDB) bondholders believed that the company's financial condition was hopeless unless it negotiated with bondholders and other creditors to restructure its financial obligations. IDB, however, refused to commence negotiations on restructuring its debt, and continued to pay its short-term creditors. The bondholders had no contractual remedies against IDB: the company was current on all its payments (the first payment on some of the bonds was due only in five years, in 2018); IDB did not breach any covenant it owed to these bondholders (as the bonds in question had no meaningful covenants).[8] The bondholders, therefore, turned to bankruptcy procedures: they filed an involuntary bankruptcy petition in which they asked the court to appoint a trustee to pursue a debt-for-equity reorganization plan. Their claim was that IDB, although current on its payments, was insolvent (its liabilities outweighed its assets). IDB, in contrast, argued that it was current on all its payments, that its assets exceeded its liabilities, and that the bondholders were opportunistically trying to take control over the company. Moreover, IDB argued that, from a purely legal standpoint, creditors of companies that are current on their payments and do not violate any covenant or other contractual provision cannot force companies into bankruptcy simply by showing that the value of their assets is smaller than their liabilities.

[8] The company, however, did get its bank creditors to waive some of their covenants.

In a precedential decision,[9] the court held that creditors have the power to force a company into bankruptcy by demonstrating that it was insolvent (i.e., that its liabilities exceeded its assets). The court found that IDB was probably insolvent and issued an order appointing trustees to inspect the company's records and issue an independent opinion concerning IDB's insolvency.

This decision offers a unique opportunity to study the effect of an exogenously-imposed change in creditor control rights. Our analysis focuses on the interaction between two instruments of creditor protection: financial covenants and (involuntary) bankruptcy. Both are mechanisms to provide creditors with control rights: If the debtor breaches a covenant, the creditor (in most cases) can call the loan (even if the borrower continues to make payments under the loan contract); if the borrower cannot pay the entire loan amount, the creditor can force it into bankruptcy.

The IDB decision, however, provided more control rights to no-covenant creditors. After the court ruling, if creditors could demonstrate that a borrower's liabilities outweighed her assets, they had the power to force the company into bankruptcy. From an economic standpoint, the decision can be viewed as an exogenous event that introduced an implicit covenant to the contract between bondholders and issuers. Under this implicit covenant, creditors could force the company into bankruptcy if the value of its assets becomes smaller than the value of its liabilities.[10]

[9] The decision was surprising and controversial. First, many bankruptcy judges held the view that creditors' only remedy was liquidation, that is, creditors lack the standing to initiate involuntary bankruptcy aimed at reorganization. In fact, even after the ruling, the senior bankruptcy judge in the Tel Aviv court held that the IDB decision lacked legal basis. Second, many believed that it provided creditors with excessive power against firms that did not breach any financial or other contractual obligation.

[10] Three additional pieces of background information are worth noting. First, in 2013 Israel did not have a debtor-in-possession (DIP) regime for corporate bankruptcy. When companies enter bankruptcy (whether liquidation or reorganization), courts appoint trustees to take over the company. Second, during our sample period, nearly all companies that issued bonds had controlling shareholders. Controllers, in turn, knew that entering bankruptcy could make them lose control over the company. Third, the Israeli market for corporate bonds grew at a rapid pace in the early 2000s. Until 2011, many companies (including IDB) issued bonds without meaningful covenants to protect creditors. The 2008-2009 financial crisis forced many companies that had issued bonds to restructure their debt. This, in turn, led to regulatory reforms aimed at improving the protection of bondholders, including a 2011 reform that pressured companies into issuing bonds with

At a practical level, the new legal rule made reported measures of net worth crucial for companies in our sample for two related reasons. First, holders of publicly traded corporate bonds normally rely on the issuers' reported financial statements (and market prices) to assess the bonds' risk of default. Similarly, the courts, in evaluating whether a company is solvent or not, are also likely to rely on the reported net worth. Second, the companies in our sample were required to report under the IFRS regime. This means that reported measures of net worth are supposed to reflect (to a large extent) economic reality rather than historical book values. Recall that the new rule empowered creditors to force companies into bankruptcy when their debts exceed their assets (balance sheet insolvency). From a purely legal standpoint, accounting measures of asset values are not determinative. Yet, a company that, under the IFRS regime, reports that its liabilities exceed the *fair value* of its assets, would most likely be unable to convince a bankruptcy court that it meets the test for balance sheet solvency.

3. Data and Empirical Approach

Our sample includes all listed Israeli firms with traded corporate debt between 2012 and 2015. We exclude financial companies as well as companies cross-listed on other exchanges, typically high-tech companies listed on NASDAQ. To be included in the sample, firms must have had traded corporate bonds in 2012 (before the court ruling, which took place in April 2013), and in at least one year between 2013 and 2015 (the post-court ruling period). In the main part of our empirical analysis, we exclude firms if they enter/complete debt restructurings during the sample period to ensure that our results are driven by the effect of the court ruling on creditor rights prior to any debt restructurings.

more covenants. In 2013, however, many companies still had outstanding bonds with no meaningful covenants. This implies that the treated companies in our sample, those without corporate bond covenants and potentially affected by the court ruling, had their debt issued earlier, on average, than companies with covenants, included in the control group. We discuss this and other differences between the treatment and control groups below.

The classification of firms into the treatment and control groups is determined by two criteria: the existence and nature of the financial covenants included in each firm's bonds; and the firm's net worth at the end of 2012. Companies with no financial covenants and close to default (i.e., with low net worth) were potentially affected by the court ruling and are therefore considered "treated."

We determine whether a bond includes financial covenants through a manual inspection of the annual financial statements of firms. We consider only covenants stipulating that the issuer must maintain financial ratios above certain thresholds, or that the issuer must not be subject to a credit downgrade.[11] These covenants, described in more detail in Appendix A, resemble in nature many of the covenants commonly used in (private) debt contracts of US firms (Chava and Roberts, 2008, Table 1, p. 2091). Given that the breach of such covenants enables bondholders to demand an immediate repayment of the bonds, companies with covenants of this type were not directly affected by the court ruling (which imposed an implicit net-worth covenant on companies that had outstanding bonds without financial covenants).[12]

In most of the analysis, we measure *Net Worth* as the (IFRS, fair value-based) reported total assets net of total liabilities, scaled by total assets (alternative measures are described below). We classify a firm as "treated" if its bonds did not include financial covenants at the end of 2012 (the last financial statement published prior to the court

[11] We treat rating-based covenants similarly to financial covenants, as the bond rating itself is very sensitive to a deterioration in financial conditions. Our main results are robust to the exclusion of firms with rating-based covenants.

[12] (i) For firms with covenants, we examine their conditions and find that the threshold triggering immediate payment is typically set at a level where net worth (or related measures) are positive, i.e., they are more binding than the court-granted implicit covenant which is triggered when net worth is zero or negative. This corroborates our maintained assumption that companies with covenants were not directly affected by the court ruling. (ii) Throughout our analysis, we focus on financial covenants that pertain to outstanding corporate bonds, ignoring covenants associated with bank loans. Bank loan covenants are different than bond covenants; they allow for more flexibility, renegotiation, and confidentiality than covenants provided to dispersed bondholders. Additionally, the court ruling was supposed to promote the rights of "public" creditors who, prior to the ruling, had limited means to protect their claims.

decision) and it was close to default, that is, its net worth, also measured at the end of 2012, was below the sample median (or, alternatively, below the 33rd percentile).

This process yields 190 firm-year observations (52 distinct firms) with no financial covenants and below-median net worth (treated firms), and 461 firm-year observations (122 distinct firms) either with financial covenants or without covenants but with above-median net worth.[13] The majority of firm-year observations in our data are concentrated in the following four industries: real-estate (47%); services (18%); manufacturing (13%) and holding and investment companies (11%); this distribution is not representative of the Israeli economy, but is consistent with evidence that Israel's corporate bond market tends to over-represent companies in the real estate and service sectors (Brodeski, 2021). Financial statements and trading data are drawn from the Tel Aviv Stock Exchange (TASE) website. We also collect financial statements' filing dates from the Israeli Securities Authority's (ISA) website (www.magna.isa.gov.il), using a web scraping tool. [The filing dates are used for calculating informativeness measures.]

Panel A and Panel B of Table 1 present the treated and control sub-samples in the pre- (2012) and the post- (2013-2015) court ruling periods (Appendix B provides detailed variable definitions). The average reported net worth – our proxy for firm proximity to creditor control – while roughly constant for the control group (at about 33%), doubles for treated firms from about 7% prior to the 2013 court decision to about 14% in the post-

[13] If a firm has issued multiple bond series, we classify the firm as having a covenant if at least one of the issued bonds has a financial covenant attached to it. As noted, we utilize December 31, 2012, which is the year-end immediately preceding the April 2013 IDB court ruling, as our cutoff point to distinguish between companies with and without financial covenants associated with their outstanding bonds. Yet, as of August 11, 2012, two regulatory reforms were promulgated that independently enhanced creditor rights in newly issued bonds. Pursuant to the new reforms, bondholders of every newly-issued bond became entitled to require an immediate repayment of their bond if (1) there has been a deterioration of the issuer's business in relation to its financial situation at the time of the issuance of the bond, and (2) there is a substantive concern that either (i) the issuer will not be able to repay the bonds on time or (ii) the issuer will not meet its material obligations to the bondholders. These triggering events of repayment are applicable even if the contractual terms of the bond do not implicitly include these terms. Therefore, two firms that issued new bonds between August 11, 2012 and the end of 2012 were classified as part of the control group.

court ruling period.[14] This dramatic increase is reflected also in the frequency of firms with negative net worth, which goes down by 50%, from 15% of the treated firms in 2012 to 7% in 2013-2015, while remaining constant at about 2% for the control group firms. These stylized facts will be examined in more detail below.

Treated companies tend to be somewhat smaller and less profitable than firms in the control group (the latter effect is not surprising, given that treated firms are low net worth companies by definition). As bond covenants became common in Israel after 2010 (following a government-appointed committee which recommended that covenants be used), the sub-sample of treated firms includes more "old vintage" bonds issued before 2010. With the exception of profitability, however, these differences are not statistically significant in cross-sectional LPM regressions for 2012 predicting which firms are treated (not shown). Firm size varies within the sub-samples of treated and control firms. Because firms with pre-2010 bonds, no covenants and high net worth are part of the control group, bond vintage is also not a statistically significant predictor of being treated. Finally, the distribution of firms across industries is quite similar in the treated and control samples (not shown).

Our empirical approach is based on a standard difference-in-differences methodology, comparing changes in the various outcome variables in the treated group in 2013-2015 relative to 2012 with changes in the same variables in the control group over the same time period. The first outcome variable we focus on is changes in net worth. After documenting an increase in net worth among treated firms (reflecting a reduction in the likelihood that creditors could impose bankruptcy procedures following the court ruling), we turn to possible factors explaining this change: equity issuances and, in particular, changes in proxies for accounting aggressiveness (discretionary long-term accruals and

[14] The change is more apparent in the means, rather than the medians, because it is driven primarily by companies with very low net worth.

measures of accounting conservatism). Finally, we study the implications of increased accounting aggressiveness among treated firms on the informativeness of their financial statements.[15] For all outcome variables, we present regression results where the main variable of interest is an interaction term representing treated firms in the post-court ruling period (*treated*post*). In all regression specifications we include firm-level control variables, as well as year and firm fixed effects, and cluster the standard errors at the firm level.[16]

4. Main Results

4.1 The Market Reaction to the Court Ruling

We begin by examining the perception of the court ruling by bondholders and shareholders. The objective of this test is to establish that the court ruling was surprising and expected to benefit creditors. It is important to note that corporate bonds in Israel are traded on a centralized exchange (not over the counter, as in most countries), offering high liquidity, low spreads and low trading costs relative to the corporate bond markets in other parts of the world (Abudy and Wohl, 2018), thus rendering credibility to a bond price-based event study approach. Using changes in bond prices on the date of the court ruling, April 30, 2013 (the "Decision Date"), we find that bonds issued by treated companies (with no covenants and net worth below the sample median) experienced, on average, a positive and statistically significant (*t-statistic* of 2.4) excess return relative to bonds of similar rating and maturity of about 0.2%.[17] We use the market model to

[15] The precise definitions and constructions of these variables appear below.

[16] We cluster standard errors by firm and include year fixed effects throughout the analysis. According to Petersen (2008), when the time dimension is short, two-way clustering (by firm and year) is not recommended: "When there are only a few clusters in one dimension, clustering by the more frequent cluster yields results that are almost identical to clustering by both firm and time" (page 460). In general, he does not advocate clustering by time when the time series dimension is short; in our data set, the time dimension includes four years only. Notwithstanding this reservation, the results reported below continue to hold (i.e., the coefficients of interest remain statistically significant) when the standard errors are clustered at both the firm and the time (year) levels.

[17] About half of the treated companies have positive bond excess returns on the event date. The returns are winsorized at the 1% and 99% percent; the results are qualitatively similar without winsorizing. Since the court decision was made public on 4/30/2013 in the afternoon, we also examine abnormal bond and

examine the stock price reaction to the court ruling, finding negative excess returns of about minus 0.8% (*t-statistic* of 1.7).[18] This suggests that investors interpreted the court ruling as valuable for no-covenant bondholders, possibly through an early onset of insolvency procedures, increasing recovery rates, or by deterring firms from defaulting – these results are corroborated in regression results showing higher (expected) recovery rates in cases of insolvency after the court ruling (Appendix C).[19] In addition, the event study results suggest that providing creditors with control rights is costly for shareholders.

4.2 Real Changes in Corporate Behavior in response to the Court Ruling

Enhancing creditor rights could lead borrowers to change corporate policies so as to reduce risk (e.g., Becker and Stromberg, 2012). We therefore examine if treated firms reduced their risk after 2013, in comparison with the control group. The measures of risk we examine include change in the volatility of ROA and stock return volatility (in the spirit of Merton, 1974, and in line with Rajgopal and Shevlin, 2002).[20] However, we find no evidence of any change in these measures of corporate risk taking. Thus, in contrast with studies like Becker and Stromberg (2012), that examine firm behavior after creditors already have some control rights (or influence on corporate decisions through a change

stock returns on the Decision Date and the following day (4/30/2013-5/1/2013), finding qualitatively similar results. The reported *t*-statistic is based on clustering at the firm level, as some firms have multiple bond series (88 bond-level observations for 45 treated firms; seven treated firms have missing data on bond rating or duration, or no bond price data on the relevant dates). The results are similar when treated firms are defined as having no covenants and net worth below the 33rd percentile.

[18] This is based on the calculation of Scholes-Williams *beta* using daily data for eleven months (month -12 to month -1) prior to the court ruling. There are 38 firms for which data are available (out of the 52 treated firms); six firms have no traded equity (only traded bonds) and for another eight no price information is available on the date of the event (presumably, because of no trading). 23 of these firms exhibit negative excess returns.

[19] We do not examine the pre- and post-ruling probabilities of financial distress because the small number of observations precludes a formal analysis of this issue. The conjecture that the higher recovery rates in the post-2013 period are due to early onset of bankruptcy procedures is consistent with the 2014 report issued by a government-appointed committee to examine the deficiencies of bankruptcy procedures in Israel (the "Andorn Committee"). In an appendix to the report, written by one of the authors of the present paper (Steinberg) it is found that many companies on the verge of financial distress in the period 2008-2013 entered formal bankruptcy procedures only after their financial condition had deteriorated considerably, resulting in substantial "haircuts" to creditors.

[20] As the vast majority of firms in our sample are in non-manufacturing sectors, R&D expenditures, which have been used as a proxy for risk in the literature, are not a good measure of corporate risk taking.

in management's fiduciary duties), we find no evidence that treated firms in our sample responded to the increased potential of creditor control by reducing risk. Instead, as we explain in the next section, treated firms seem to have responded to the increased risk of bankruptcy through some equity issuances (which, indirectly, affect risk), as well as through changes in their accounting policies, designed not to accommodate creditors' preferences but rather to make the prospect of creditor control less likely.

4.3 Changes in Net Worth

We examine differences in (the reported value of) net worth between the treated and control groups. Figure 1 presents the cumulative distribution of net worth around zero (in the range between -10% to +10%) for the treatment and control groups before and after the court ruling. While the net worth of firms in the control group remains qualitatively similar before and after the court ruling (if anything, it goes down a bit), the net worth of treated firms, with no financial covenants and low net worth, at risk of involuntary bankruptcy, increases substantially. These results suggest that treated firms might have found ways to increase their net worth in order to prevent their creditors (bondholders) from activating their conditional control rights.

We now proceed to a difference-in-differences regression model with *Net Worth* as the dependent variable. Table 2A shows that the net worth of treated firms goes up significantly after the court ruling. Columns 1 and 4, the full sample regressions, indicate that net worth increases for treated firms by 3-4 percentage points relative to the control group in the years 2013-2015. In Columns 2 and 3 we split the sample of firms into low net worth and high net worth firms; the dramatic increase in net worth (of five percentage points) is a feature of the no-covenant, low net worth firms only. Similarly, in Columns 5 and 6 we split the sample into firms with very low net worth (below the 33rd percentile) and firms with net worth above the 33rd percentile. The increase in net worth is especially pronounced for the sub-sample of very low net worth, no-covenant firms: their net worth increases by about eight percentage points relative to the very low net worth control

group.[21] The results remain unchanged when non-controlling interests are excluded from the calculation of net worth, as well as when non-tangible assets are excluded (or both). We obtain qualitatively similar results also when running LPM (or probit) regressions, where the dependent variable is a dummy variable that takes the value one if the company has negative net worth (Table 2B). In line with the univariate sample statistics presented in Table 1, the proportion of no-covenant, low net worth firms with negative net worth declines dramatically in the post-court ruling years, even in regressions with controls for other firm characteristics.[22] As in Table 2A, the results are driven by the low net worth no-covenant firms.

What could explain the "miraculous" increase in net worth among treated firms, those facing the risk of impending creditor control? Some no-covenant, low net worth firms raised new equity capital, as illustrated in Figure 2.[23] The tendency of no-covenant, low net worth firms to issue new equity after the court ruling is evident also in difference-in-differences regressions, similar in structure to those of Table 2A (Appendix D).

However, we conjecture that the observed changes in the net worth of treated firms may have been related not only to changes in capital structure, but also to changes in accounting policies and practices. Recall that the court ruling imposed a new implicit covenant on treated firms, such that balance sheet insolvency (negative net worth) grants bondholders the right to impose bankruptcy. In response, we argue that treated firms

[21] Note that in Columns 2 and 5, when the sample is restricted to low net worth firms, treated firms are those with no covenants (and low net worth) and the control group consists of firms with covenants and low net worth. Similarly, in Columns 3 and 6, when the sample is restricted to firms with relatively high net worth, treated firms have no covenants (and high net worth) and the control group consists of firms with covenants and high net worth.

[22] The frequency of negative net worth among treated firms in the pre-court ruling period (2012) is about 15% (Table 1). The coefficients in Table 2B imply a decline by about 40% in this frequency in the full sample and a decline by about 60% in the sub-sample of no-covenant and very low (below the 33rd percentile) net worth.

[23] Naturally, treated firms in low net worth deciles refrained from paying dividends. The link between net worth deciles and long-term discretionary accruals is discussed below.

may have adopted accounting practices that would inflate their net worth, in line with the accounting literature on covenants and earnings management.[24] By contrast, for firms in the control group, whose bonds had already included financial covenants in 2012, or their net worth was high, the incentives to try and increase their reported net worth remained constant before and after the court ruling. We examine this conjecture more formally below.

4.4 Changes in Long-term Discretionary Accruals

What accounting mechanisms could companies have used to increase their net worth? Gopalan et al. (2016) suggest that earnings management is the primary accounting technique used by companies to adjust the value of their net worth, in their case downwards, when facing a pro-debtor bankruptcy regime. However, as noted above, Israeli firms follow the IFRS, whose impact on earnings management (and on the empirical proxy used to measure it, discretionary accruals) is unclear.[25] We argue that the enhanced discretion of management with regard to accounting choices under the IFRS (in comparison with US GAAP) is likely to be especially pronounced with respect to long-term, non-current assets (Jeanjean and Stolowy, 2008). For example, under IFRS, companies can designate certain real-estate assets as "investment property" and measure them at fair value; under US GAAP this would be prohibited. Such differences may make it difficult to detect earnings management in current assets or working capital, but it is possible that earnings management practices would manifest in non-current assets/long-term discretionary accruals.[26]

[24] See Sweeney (1994), and Franz et al. (2014) for an early and a more recent example of changes in accounting practices in response to debt covenants.

[25] Barth et al. (2008), for example, suggest that the introduction of IFRS reduces earnings management, while Jeanjean and Stolowy (2008) find that the mandatory implementation of IFRS is associated with an increase in earnings management in France (and no change in the UK and Australia).

[26] As noted in the literature review, it is possible that discretion might affect such accruals under IFRS (e.g., Callao and Jarne, 2010), even though they are not commonly the focus of the discussion in US GAAP-based studies (e.g., Teoh et al., 1998).

Table 3 presents regression results where the dependent variable is discretionary long-term accruals (defined as in Teoh et al., 1998). In line with our conjecture, we find that low net worth/no covenant firms use more long-term discretionary accruals in the post-court ruling period than in the pre-court ruling period (relative to the control group). When defining treated firms as those with no covenants and very low net worth (below the 33rd percentile), the estimated magnitude of the effect (the difference in differences) is even larger. These findings are illustrated graphically in Figure 2: firms with no covenants in low net worth deciles exhibit a pronounced increase in the use of discretionary long-term accruals.[27]

In contrast with the results for discretionary long-term accruals, we do not observe similar effects when using short-term accruals (not tabulated). We interpret this as evidence of the increased discretion under IFRS with respect to long-term assets, whereas its effect on shorter-term balance sheet items appears to be ambiguous. Stated differently, the court decision induced treated firms to increase their net worth and, given the flexibility and subjectivity of the IFRS, adjusting long-term accruals seems to have been a readily-available option. Although we cannot identify every accounting practice which might have enabled treated firms to increase their net worth, we provide (in section 4.6 below) several examples of discretion-based methods which could have affected the net worth of treated firms, mainly by increasing financial statement items that are components of long-term accruals.

4.5 Decline in Accounting Conservatism in Treated Firms

Another accounting policy change which could explain the increase in net worth of treated firms following the court ruling is their avoidance of timely recognition of losses, i.e., a departure from the accounting principle of conservatism (e.g., Basu, 1997). According to this principle, losses (bad news) should be recognized more quickly and with

[27] The calculations here are based on the original Jones (1991) approach (see Appendix B for details). The coefficients are similar in magnitude and statistical significance when using the modified Jones model (Dechow et al., 1995).

a lower degree of certainty than increased profits (good news). Stated differently, reported earnings should reflect bad news more readily than good news. Ball and Shivakumar (2005) point out that timely loss recognition is related to debt contracting efficiency, since it enables creditors to react immediately (as economic losses are reported promptly) to a deterioration in a firm's condition that triggers a debt covenant violation. Tan (2013) provides evidence consistent with this view, finding more conservative financial statements in firms that violate financial covenants (and are subject to creditor control), in comparison with similar non-violating firms.

In our setting, treated firms are affected by a judicial decision that empowers creditors in the event of negative net worth without actually giving creditors immediate control rights over borrowing firms. We hypothesize that, in such a setting, borrowers are likely to deviate from the principle of conservativism, i.e., postpone loss recognition and perhaps precipitate the recognition of income (in comparison with the control group), so as to avoid reaching the point of violating the newly-imposed implicit covenant by having negative net worth.

In order to measure the degree of conservatism of treated and control firms, before and after the court ruling, we adopt a specification proposed by Ball and Shivakumar (2005), which is based on Basu's (1997) interpretation of conservatism using the tendency-to-reverse of net income:[28]

[28] Our tendency-to-reverse measure uses income statement data, as in Ball and Shivakumar (2005), rather than the earnings-returns measure of Basu (1997). This is primarily because of the shortcomings of the earnings-returns measure discussed in Dechow et al. (2010, starting on p. 363). In addition, this approach allows us to test the extent of timely loss recognition in firms with traded bonds but non-traded equity (14 treated firms and 22 control firms in our dataset did not have traded equity at the court ruling date and we lose more than third of our firm-year observations when estimating equity based measures). Ball and Shivakumar (2005) propose also an accruals-based test of conservatism which we do not use here, given that the effects we document tend not to be evident in standard (rather than long-term) accruals-based measures. In passing, although Ball and Shivakumar (2005) use data from the UK, their sample period predates the adoption of IFRS there, which may explain why they choose to use a standard accruals-based measure in some of their empirical tests.

$$\Delta Net\_Income_t = \alpha_0 + \alpha_1 Neg\_\Delta Net\_Income_{t-1} + \alpha_2 \Delta Net\_Income_{t-1} + \alpha_3 Neg\_\Delta Net\_Income_{t-1} * \Delta Net\_Income_{t-1} + \varepsilon_t \quad (1)$$

Where ΔNet_Income_t is the change in total income from fiscal year *t-1* to fiscal year *t*, scaled by the book value of total assets at *t-1*, and $Neg\_\Delta Net\_Income_{t-1}$ is a dummy variable that takes the value one if the income change is negative. In accordance with the principle of conservatism, α_2 is expected to be equal to zero, since the recognition of economic gains (unlike losses) takes place at a later stage – corresponding to the actual realization of the gains by a parallel increase in cash flows – making these gains persistent and unlikely to be reversed. α_3 is expected to be negative, since losses are recognized to their full extent in a timely fashion (i.e., when they are known). This implies that losses are recognized as a transitory income decreases and hence tend to reverse in the next period.[29]

We modify Equation (1) to allow for differences between treated and control firms before and after the court ruling:

$$\Delta Net\_Income_t = \alpha_0 + \alpha_1 Neg\_\Delta Net\_Income_{t-1} + \alpha_2 \Delta Net\_Income_{t-1} + \alpha_3 Neg\_\Delta Net\_Income_{t-1} * \Delta Net\_Income_{t-1} + \alpha_4 Post * Treated + \alpha_5 Neg\_\Delta Net\_Income_{t-1} * Post * Treated + \alpha_6 \Delta Net\_Income_{t-1} * Post * Treated + \alpha_7 Neg\_\Delta Net\_Income_{t-1} * \Delta Net\_Income_{t-1} * Post * Treated + Size + Fixed\ Effects + \varepsilon_t \quad (2)$$

[29] To illustrate this, Basu (1997) describes "a firm receiving news that changes its estimate of the productive life of a fixed asset. If the new estimated life is longer, the firm is economically better off, but under historical cost accounting no gain is recorded currently. Instead, the depreciation charges that would have been taken in the current and future periods are spread out over the new remaining life, resulting in lower depreciation charges. If the expected life decreases… the accountant records an asset impairment which results in… reduced current income, but no effect on future income" (pp. 4-5). As a result, "since accountants typically report the capitalized value of bad news as losses, bad news earnings is more timely but less persistent. In contrast, good news is reflected in earnings on a less timely basis, but good news earnings tends to be more persistent. Good news earnings is less timely because accountants require more verifiable information before they recognize good news. But good news earnings is more persistent than bad news earnings because the capitalized value of the good news is only partially reflected in current earnings, and after verification, is also reflected in subsequent earnings" (p. 6).

As before, treated firms are defined as firms with financial covenants and net worth in 2012 below the sample median (33rd percentile); *Post* takes the value one for the years 2013-2015. We control for firm size and include year and firm fixed effects.[30] If, after the court ruling, treated firms became less conservative, we would observe either the recognition of non-persistent transitory gains, in which case we would expect α_6 to be negative, and/or a delay in loss recognition (if, after the court ruling, treated firms do not report losses in a timely manner), in which case we would expect α_7 to be positive.

Panel A of Table 4 presents the results. In Column 1, α_6 is negative (though not statistically significant) and α_7 is significantly positive, indicating that, after the court ruling, treated firms delayed the recognition of losses, thus increasing their net worth and avoiding foreclosure by creditors. As in Table 2, we split the sample to low (below the sample median) and high net worth firms (Columns 3 and 4, respectively), finding that the decline in conservatism is driven by no-covenant low net worth firms. Columns 4 – 6 present similar regressions when low net worth firms are defined using the 33rd percentile. In line with the results in Table 2 regarding changes in net worth, we find that reduced conservatism is especially pronounced in the sub-sample of very low net worth firm with no covenants.

Another approach to measuring accounting conservatism is that of Binz and Graham (2021), who study the information content of corporate earnings following the promulgation of the Securities and Exchange Act of 1934. In testing whether the Act has affected the degree of conservatism in reported earnings, they present an earnings-response-coefficient estimation (measuring the stock price response to earnings changes) distinguishing between firms disclosing good news (positive changes) and bad news (losses or reduced earnings). The prevalence of conservatism, in this approach, should be reflected in a differential (a-symmetric) investor response to good vs. bad news, with the response being larger, in absolute value, for positive news which are deemed, under the

[30] Thus, absorbing the effects of the post and treated dummy variables, respectively.

principle of conservatism, as both more certain and more permanent than bad news (indeed, the study reports an increase in conservatism following the SEC Act).

Panel B of Table 4 presents regressions based on the Binz and Graham (2021) approach.[31] We use excess bond (rather than stock) returns, in line with our focus on the perception of creditors, where excess (or abnormal) bond returns are calculated relative to bonds of matched maturity and rating (as in Bessembinder et al., 2009). We find that treated firms became less conservative in their accounting policies and practices after 2013 in comparison with the control group (the differential response to positive news declines). The magnitudes of the change are similar when treated firms are defined on the basis of the median net worth, or on the basis of the 33rd percentile.

Yet another approach to the measurement of accounting conservatism is the *C-Score*, used in Khan and Watts (2009) and in Tan (2013). The results of the *C-Score* estimation, presented in Appendix E, are consistent with reduced conservatism among treated firms.

4.6 Illustrations of Practices Increasing Net Worth

Increased long-term discretionary accruals and reduced conservatism may manifest in various ways, although the following examples need not necessarily be reflected in either one of them. In our sample, over 70% of the treated firms have registered revenues from at least one of the following four accounting practices in the post-court ruling period, possibly to inflate their net worth: Registering revenues from fair value asset appraisals/revaluations (27 treated firms, over half of all treated firms); registering revenues from business combinations by revaluating the assets and liabilities of a subsidiary/associate company (13 treated firms, a quarter of all treated firms); registering revenues from the early adoption of new accounting standards (six treated firms); and

[31] Instead of interaction terms, the latest version of Binz and Graham (2021) splits the sample into firms reporting good news and firms reporting bad news.

registering revenues from the cancelation of goodwill impairment provisions (four treated firms). A detailed illustration of the use of these methods appears below.

4.6.1 Fair Value Appraisals of Investment Property under IFRS (used by 27 treated firms)

As noted above, IFRS enables the use of managerial discretion in accounting reports. For example, the use of fair value accounting, whereby companies regularly (in each reporting period) adjust the value of certain items in their financial statements (e.g., real estate), opens the door to aggressive revaluations that increase the company's net income and net worth, as changes in the fair value estimates are recognized as a profit/loss when they occur. Dietrich, Harris and Muller (2000) find that UK firms exploit the fair value of investment property to report higher earnings and smooth (reported) net asset changes. Chen, Gavious and Steinberg (2019) find that Israeli firms exploit fair value accounting to increase dividends to the detriment of bondholders. Moreover, an audit report published by ISA with regard to the practice of revaluation of investment property by public companies sheds light on the ways in which firms manipulate their fair value appraisals: Most investment properties are evaluated using the Discounted Cash Flow (DCF) method; ISA points out the possibility of manipulations both in estimating higher projected income (e.g., rent) from the asset (the numerator in the DCF model), as well as in using a lower discount rate (the denominator in the DCF model). To illustrate, a real estate company in our sample changed the method used to value its property from the DCF approach, combined with a comparison to similar assets before 2013, to the (easier to manipulate?) DCF method only after the court ruling. We also observe firms inflating the cash flow projections (the numerator) associated with their property in comparison with prior years, as well as firms lowering the discount rates (the denominator) used in estimations prior to the court ruling. Although these changes in the estimation methods and assumptions could conceivably reflect the company's actual expectations regarding the cash flows and risk of the asset, they highlight the relative ease of changing the underlying assumptions and of recording optimistic appraisals of investment assets.

4.6.2 Revenues from Business Combinations (used by 13 treated firms)

When control of a business is obtained, its value is recorded according to the acquisition method, whereby the assets acquired and the liabilities assumed are measured at fair value. Importantly, the fair value measurement is applied when control is achieved, or when it ceases to exist, regardless of whether non-controlling shares in the acquired company were held by the acquirer prior to the date of achieving control, or whether non-controlling shares in the acquired company remain with the acquirer after the date of formally losing control.[32] Therefore, a firm can potentially buy/sell a relatively small equity stake in an existing associate/subsidiary, leading to a revaluation of the assets and liabilities of the investee so as to record any resultant gain in the profit and loss statement, increasing the acquiring company's net worth. To illustrate the use of this mechanism, one of the treated companies in our sample applied this method to record a transitory profit as follows: at the beginning of 2013, it held 36.7% of the outstanding shares of an affiliated company, giving it "effective control,[33]" and therefore the financial statements were consolidated. During the second quarter of 2013 (following the court ruling), the company sold 3.6% of its holdings in the affiliate, remaining with an equity stake of 33.1% and claiming that its effective control had ceased to exist. This change led to the revaluation of the investment in the affiliate at fair value and a profit of 686 million NIS (about $200 million) was recorded as a result.

4.6.3 Additional Mechanisms

In addition to the practices described above, two treated real estate companies in our sample chose to adopt IFRS 15 before it became mandatory. This enabled them to include

[32] See International Financial Reporting Standard No. 3 (IFRS 3) regarding the accounting for business acquisition, including business combination, achieved in stages, as well as International Accounting Standard No. 28 (IAS 28) regarding the accounting for investment in associates.

[33] Note, that IFRS and US GAAP define control differently. Under IFRS there is more discretion in the determination of control (which incorporates the concepts of effective control and substantive potential voting rights) that may lead to divergent accounting results relative to US GAAP. See pp. 1-2 in PWC's guide for business combinations https://www.pwc.nl/nl/audit-assurance/assets/documents/pwc-guide-business-combinations-noncontrolling-interests.pdf.

future profits from current contracts with customers earlier than these sources of income would have been recorded otherwise, resulting in a significant increase in the profitability and net worth of the two companies. Another company registered an income of NIS 14 million from the cancelation of past impairments of land and inventory. The firm explained the cancelation of impairment by a reduction in the uncertainty surrounding one project and by a revised external appraisal of another real estate project.

How long-lasting are the effects of these aggressive accounting practices? Figure 3 suggests that the post-2013 rise in earnings of treated firms was a relatively short-lived phenomenon, with earnings rising sharply (relative to the control group) in 2013 and 2014, but reversing their trend and declining afterwards. This is consistent with the view that the ability to overstate earnings (in various ways) is limited to a certain time period, as companies are subject to some form of an inter-temporal balance sheet constraint (Barton and Simko, 2002).[34]

4.7 Informativeness

Bondholders are concerned with the ability of accounting information to adequately and promptly convey downside risks and unfavorable information (Givoly, Hayn and Katz, 2017). If treated firms' financial statements are subject to aggressive accounting practices, their informational content to bondholders may be reduced. We test this conjecture by examining abnormal bond returns, where the calculation is, as in Table 4B, relative to bonds of matched maturity and rating, within three-days of the financial statements' filing date before and after the court ruling, for treated and control firms.[35]

Table 5 reports the results. If earnings reported in accounting statements were registered (recognized) using aggressive accounting techniques, the price response to their

[34] Barton and Simko's (2002) analysis is carried out in the context of US GAAP rather than IFRS. Somewhat related is Hirshleifer et al. (2004) who discuss the impact of "bloated" balance sheets on stock prices. They also show (in Panel A of their Figure 1, on page 313) that earnings cannot remain "bloated" forever.

[35] In Israel firms do not report an early earnings announcement. Therefore, the filing date of the financial statements is the relevant date to estimate market response to earnings.

publications should be limited. In line with this conjecture, the interaction term denoting treated firms after the court ruling (times earnings) is negative (Columns 1 and 4), with the results being driven primarily by low net worth/no covenant firms (below the sample median in Column 2 and below the 33rd percentile in Column 5). We conclude that the increased incentive of firms to make sure their accounting statements do not make them vulnerable to creditor control may result in reduced informational content that accounting disclosures convey to creditors.[36]

4.8 Further Robustness

4.8.1 Calculations using Propensity-Score-Matching (PSM)

As an alternative to the linear regression models used in our empirical analyses so far, we use PSM to match treated companies with similar firms in the control group on the basis of their 2012 size, profitability and industry (we use the nearest-neighbor, one-to-one matching with no replacement). Appendix F presents the results, corresponding to the results presented in Tables 2A, 2B and 3. The coefficients are very similar (in signs, magnitudes and statistical significance) to those reported in the original tables.[37]

4.8.2 Falsification/Placebo Test

Although it is impossible to rule out completely other changes which may have affected the treated and control firms during our sample period, Appendix G presents a figure similar to Figure 1 comparing changes in net worth of treated and control firms which are close to distress. In contrast with Figure 1, where we focus on 2013, the year of the court

[36] This test of informativeness is similar in spirit to the Binz and Graham (2021) test of conservatism (Table 4B), except that the test for conservatism distinguishes (indeed, is based on the differences) between good and bad news. We also examine changes in the informativeness of share prices and do not find significant results. One possible explanation for this is that in companies close to default, like the treated companies in our sample, the relevant security prices are bond rather than equity prices. Another, technical reason, could be that the sample of firms with available equity prices is smaller than that for which we have bond price information, partly because of companies with no traded equity (only corporate bonds) and partly because of companies whose equity trading is infrequent and not very liquid. See also footnotes 18 and 28.

[37] We also re-estimate the regressions presented in Tables 4 and 5 using PSM, with similar results to the main results presented in these tables. The full results are available upon request.

ruling, in Appendix G we focus on 2012 instead. There are no observable differences between the treatment and control groups.

5. Concluding Remarks

We study the effects of an exogenous positive shock to creditor rights, emanating from a high-profile 2013 court case in Israel, where unsecured creditors were granted an implicit financial covenant enabling them to force borrowing companies into bankruptcy if the value of the borrower's liabilities exceeded the value of its assets. We find that, while the court ruling empowering creditors seem to have had some positive effects (manifest in higher recovery rates than in the pre-court ruling period), it also had unintended consequences, inducing borrowing companies to use (legal) accounting "tricks" to inflate their net worth. As a result, we observe a significant decrease in a commonly-used measure of informativeness of financial reports to bondholders by treated firms. These findings emphasize one possible downside associated with policies that strengthen creditor rights: stronger creditor rights may be mitigated by reduced transparency and lower value of mandatory disclosure policies. Thus, our paper supports the idea that enhancing creditor rights can backfire, at least to some extent, as firms adjust their behavior in response to the new regime. Previous studies have shown how firms adjust their capital structure and risk-taking behavior in response to creditors' empowerment (e.g., Becker and Stromberg, 2012; Vig, 2013;); our study complements this literature and demonstrates how firms, in addition to making some changes in their capital structure (by issuing new equity), also adjust the way in which reality is reflected in their accounting reports.

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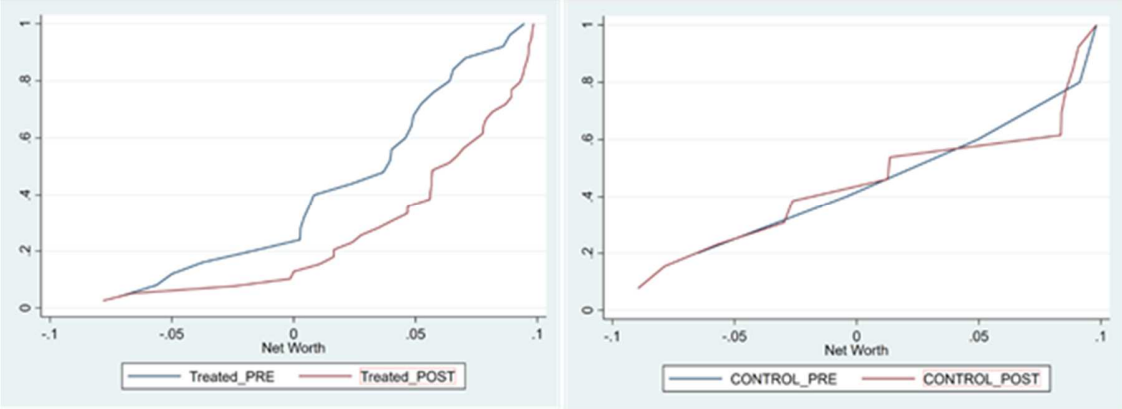
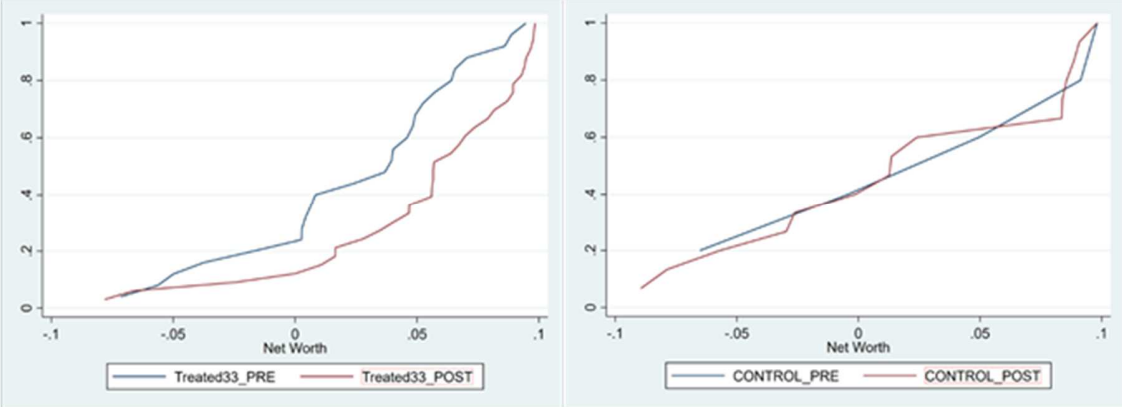
Figure 1. The Distribution of Net Worth (scaled by total assets) around Zero

Panel A: Treated firms (with no covenants and net worth below the sample median) vs. control firms before and after the Court Ruling (2012 vs. 2013-2015)

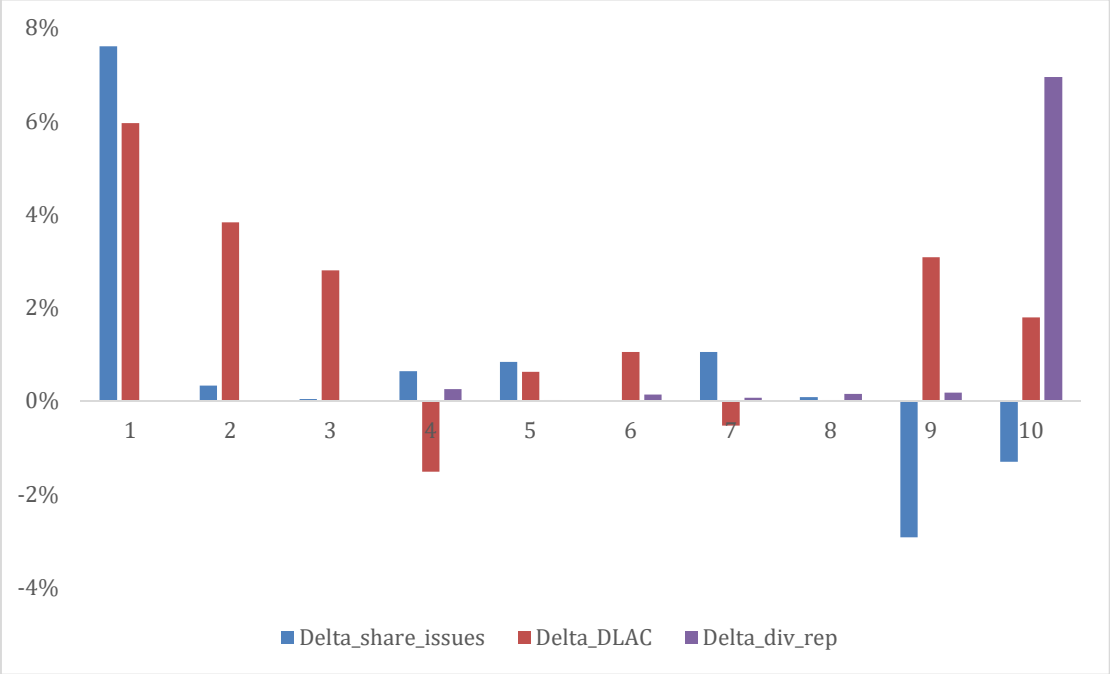


Panel B: Treated firms (with no covenants and net worth below the 33rd percentile) vs. control firms before and after the Court Ruling (2012 vs. 2013-2015)



The figure is based on the cumulative distribution functions for treated and control firms before and after the court ruling. We separately compute, and show in the figure, eight cumulative net worth distribution functions in the scaled net worth range (-0.1, 0.1) for the treatment and control groups before (PRE, in blue) and after (POST, in red) the court ruling (2012 vs. 2013-2015). Panel A presents the distributions of treated firms (with no covenants and net worth below the sample median) vs. control (other) firms; while in Panel B treated firms are defined as firms with no covenants and net worth below the *33rd percentile*; the control (other) firms are defined accordingly.

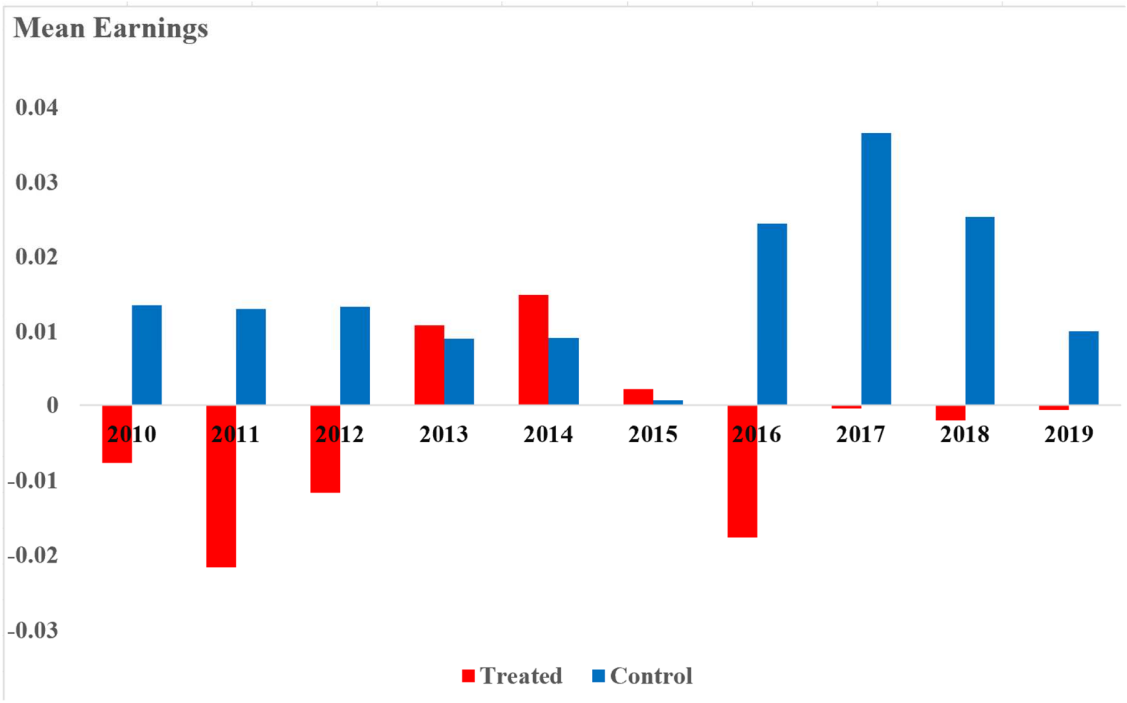
Figure 2. Changes in Share Issuances, Share Repurchases and Long-term Discretionary Accruals by Net Worth Deciles.



The figure presents, for all firms without covenants, the change in share issuances (in blue), dividends and share repurchases (in purple), and discretionary long term accruals (in red) by net worth deciles in 2012. For each firm, and for each variable, we calculate the percent change in the firm's mean value in the post-court ruling period (2013-2015) relative to its 2012 value. The bars represent the average change by net worth (scaled by total assets) deciles in 2012 (where the deciles are calculated for all firms with no covenants, omitting observations where net worth scaled by total assets is larger than +1 or smaller than -1). Treated firms are firms that do not have covenants and whose scaled net worth in 2012 is below the sample median, hence they are included in deciles 1 through 5. Share issues are new shares offered on the Tel-Aviv Stock Exchange, scaled by total assets. Dividends and share repurchases are the sum of dividends distributed to shareholders plus share repurchases, scaled by total assets. Discretionary long-term accruals are calculated as in Teoh et al. (1998), see Table 4 below.

Figure 3. Time Trends in Earnings for Treated vs. Control Firms

Mean earnings of treated (red bars) and control (blue bars) portfolios.



The figure presents the time series of average earnings for the treated and control firms. Mean Earnings are the simple average of net income, normalized by total assets within each group (treated /control firms) The earnings are winsorized at the 1st and 99th percentiles.

Table 1: Descriptive Statistics

Panel A: Pre-court Ruling Period (2012):

	Treated=1			Treated=0				
Variable	N	Mean	p50	N	mean	p50	Difference	SE
Net_Worth	52	0.0750	0.1412	122	0.3247	0.3169	-0.250***	(0.0293)
Negative_Net_Worth	52	0.1538	0	122	0.0164	0	0.137***	(0.0373)
SIZE	52	13.7186	13.3350	122	13.9741	13.6583	-0.256	(0.283)
ROA	52	0.0153	0.0270	122	0.0443	0.0504	-0.0289**	(0.0124)
ΔNet_Income_t	51	0.0270	-0.0029	114	0.0117	0.0079	0.0153	(0.0151)
$\lvert\Delta Net\_Income\rvert_{it}$	51	0.0699	0.0231	114	0.0292	0.0222	0.0407***	(0.0134)
$Neg\_\Delta Net\_Income_{t-1}$	51	0.6078	1	114	0.5877	1	0.0201	(0.0832)
$\mathrm{Pos}\_\Delta Net\_Income_t$	51	0.4510	0	114	0.6053	1	-0.154*	(0.0833)
DLAC_t	46	-.0173	-.0156	109	-.0014	.0051	-0.0159**	(0.0074)
Abnormal Bond Returns (-1,+1)	37	0.0053	0.0014	92	0.0020	0.0010	0.0033*	(0.0019)

Panel B: Post-court Ruling Period (2013-2015)

	Treated=1			Treated=0				
Variable	N	Mean	p50	N	mean	p50	Difference	SE
Net_Worth	138	0.1424	0.1621	339	0.3378	0.3167	-0.195***	(0.0204)
Negative_Net_Worth	138	0.0725	0	339	0.0206	0	0.0518***	(0.0186)
SIZE	138	13.8930	13.7064	339	14.0825	13.8584	-0.189	(0.1720)
ROA	138	0.0312	0.0329	339	0.0381	0.0511	-0.00699	(0.0084)
ΔNet_Income_t	135	0.0048	0.0055	319	-0.0085	0.0030	0.0133	(0.0172)
$Neg\_\Delta Net\_Income_{t-1}$	135	0.4889	0	319	0.4889	0	0.0845*	(0.0508)
$\mathrm{Pos}\_\Delta Net\_Income_t$	135	0.5852	1	319	0.5737	1	0.0115	(0.0508)
DLAC_t	128	.0011	-.0041	305	.0008	-.0020	0.0003	(0.0028)
Abnormal Bond Return (-1,+1)	92	-0.0010	-0.0006	241	-0.0002	-0.0005	-0.0008	(0.0008)

Note: The table provides descriptive statistics for the treated and control (non-treated) firms. Panel A presents the pre-court ruling year (2012) and Panel B the post-court ruling period (2013-2015). Treated firms are firms that do not have covenants and whose net worth over assets in 2012 is below the sample median. Control firms are firms that do not have financial covenants but whose net worth over assets in 2012 is above the sample median, or firms that have financial covenants, regardless of their net worth. Net Worth is measured as the total assets net of total liabilities, scaled by total assets (observations above one in absolute value are omitted); Negative Net Worth is an indicator variable that takes the value one if Net Worth is negative, and zero otherwise; *SIZE* is natural log of total assets; *ROA* is operating profit over total assets ; ΔNet_Income_t is the change in total income from fiscal year t-1 to year t, scaled by year t-1 book value of total assets; $Neg\_\Delta Net\_Income_{t-1}$ is a dummy variable that takes the value one if ΔNet_Income_{t-1} is negative, and zero otherwise; $\mathrm{Pos}\_\Delta Net\_Income_t$ A dummy variable that takes the value one if ΔNet_Income_t is positive and zero otherwise; DLAC_t is Discretionary Long-term Accruals calculated as in Teoh et al.(1998); Abnormal Bond Return is the value-weighted average of cumulative abnormal bond return in a three day window around the earnings announcement date. Abnormal Bond Return is calculated using the matching portfolio model of Bessembinder et al. (2009); Appendix B provides a detailed description of the variable construction. *SIZE*, *ROA*, ΔNet_Income_t and DLAC_t are winsorized at the 1st and 99th percentiles of their distribution. The last two columns show the statistical difference between the means of the treated and control firms. Standard errors are reported in parentheses. ***, **, and *, indicate that a t-test for the difference between the means is significant at the 0.01, 0.05, and 0.10 levels, respectively.

Table 2: Difference in Differences in Net Worth

Panel A: Scaled Net Worth

	Dependent Variable: Net_Worth					
	Median Net Worth			p33 Net Worth		
	All Firms	Low Net Worth	High Net Worth	All Firms	Low Net Worth	High Net Worth
	(1)	(2)	(3)	(4)	(5)	(6)
Post*Treated	0.0334*	0.0505*	-0.000101	0.0451*	0.0792**	-0.00591
	(0.0193)	(0.0266)	(0.0179)	(0.0251)	(0.0387)	(0.0139)
SIZE	0.0450	0.134	-0.0724*	0.0445	0.206*	-0.0707**
	(0.0566)	(0.0838)	(0.0421)	(0.0563)	(0.104)	(0.0303)
ROA	0.202	0.435***	0.204	0.198	0.377**	0.227
	(0.177)	(0.164)	(0.140)	(0.175)	(0.186)	(0.140)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes
N	651	318	333	651	203	448
adj. R^2	0.060	0.182	0.080	0.063	0.274	0.106

Panel B: Negative Net Worth

	Dependent Variable: Negative_Net_Worth					
	Median Net Worth			p33 Net Worth		
	All Firms	Low Net Worth	High Net Worth	All Firms	Low Net Worth	High Net Worth
	(1)	(2)	(3)	(4)	(5)	(6)
Post*Treated	-0.0665**	-0.0926**	0.0122	-0.0868*	-0.145**	0.00929
	(0.0312)	(0.0437)	(0.0123)	(0.0445)	(0.0707)	(0.00934)
SIZE	-0.0269	-0.0385	-0.0103	-0.0260	-0.0450	-0.00746
	(0.0668)	(0.115)	(0.0107)	(0.0660)	(0.157)	(0.00772)
ROA	-0.0235	-0.166	0.0155	-0.0160	-0.166	0.0110
	(0.0630)	(0.107)	(0.0179)	(0.0583)	(0.138)	(0.0128)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes
N	651	318	333	651	203	448
adj. R^2	0.024	0.030	0.000	0.031	0.041	0.000

Note: The table reports the results of difference-in-differences regressions explaining the changes in firms' Net Worth due to the court ruling. In Panel A, the dependent variable is Net Worth calculated as total assets net of total liabilities, scaled by total assets (values below -1 or above +1 are omitted). In Panel B, the dependent variable is Negative Net Worth, a dummy variable equal to one if Net Worth is negative, and zero otherwise. Treated firms are firms that do not have covenants and whose net worth over assets in 2012 is below the sample median (33rd percentile). *Post* is an Indicator variable that takes the value one for the three years after the court ruling (2013-2015) and zero for the prior year (2012). *Size* (log of assets) and *ROA* (operating profits over assets) are both winsorized at the 1st and 99th percentiles. Columns (1) and (4) include the full sample. Columns (2)-(3) and ((5)-(6) include sub-samples of firms that are below/above the sample median (33rd percentile) of net worth in 2012. Firm and year fixed effects are included throughout. Robust standard errors clustered by firm are reported in parentheses. ***, **, and *, indicate significance levels of 0.01, 0.05, and 0.10, respectively.

Table 3: Discretionary Long-Term Accruals (Teoh et al. 1998)

	Dependent Variable: Discretionary Long-Term Accruals (DLA)					
	Median Net Worth			P33 Net Worth		
	All Firms	Low Net Worth	High Net Worth	All Firms	Low Net Worth	High Net Worth
	(1)	(2)	(3)	(4)	(5)	(6)
Post*Treated	0.0174*	0.0230**	0.0187*	0.0325**	0.0376**	0.0133*
	(0.00973)	(0.0105)	(0.0101)	(0.0136)	(0.0158)	(0.00742)
SIZE	-0.00607	-0.00603	-0.0102	-0.00699	-0.00452	-0.00845
	(0.00855)	(0.0117)	(0.0128)	(0.00803)	(0.0186)	(0.00778)
ROA	-0.0460	-0.0232	-0.0435	-0.0507	-0.0876	-0.0396
	(0.0686)	(0.108)	(0.0780)	(0.0670)	(0.157)	(0.0756)
Year	Yes	Yes	Yes	Yes	Yes	Yes
Firm	Yes	Yes	Yes	Yes	Yes	Yes
N	588	298	290	588	183	405
adj. R-sq	0.121	0.148	0.100	0.142	0.192	0.103

Note: The table reports the results of difference-in-differences regressions explaining changes in firms' Discretionary Long-Term Accruals (DLA) due to the court ruling. The dependent variable, DLA, is calculated as in Teoh et al. (1998), where discretionary and non-discretionary total accruals are calculated using the cross-sectional Jones (1991) model and are decomposed into short-term and long-term discretionary and non-discretionary components; Appendix B provides further details. Treated firms are firms that do not have covenants and whose net worth over assets in 2012 is below the sample median (33rd percentile). *Post* is an Indicator variable that takes the value one for the three years after the court ruling (2013-2015) and zero for the prior year (2012). *Size* (log of assets) and *ROA* (operating profits over assets) are both winsorized at the 1st and 99th percentiles. Columns (1) and (4) include the full sample. Columns (2)-(3) and ((5)-(6) include sub-samples of firms that are below/above the sample median (33rd percentile) net worth in 2012. Firm and year fixed effects are included throughout. Robust standard errors clustered by firms are reported in parentheses. ***, **, and *, indicate significance levels of 0.01, 0.05, and 0.10, respectively.

Table 4: Timely Loss Recognition and Conservatism Tests

Panel A: Timely Loss Recognition Tests (Ball and Shivakumar, 2005)

	Dependent Variable: ΔNet_Income_t					
	Median Net Worth			p33 Net Worth		
	All Firms	Low Net Worth	High Net Worth	All Firms	Low Net Worth	High Net Worth
	(1)	(2)	(3)	(4)	(5)	(6)
$Neg\_\Delta Net\_Income_{t-1}$	-0.00590	-0.0145	0.00552	-0.00713	-0.00937	0.00578
	(0.00981)	(0.0193)	(0.0118)	(0.00956)	(0.0263)	(0.0104)
ΔNet_Income_{t-1}	0.200	0.486	0.167	0.190	0.634	0.128
	(0.210)	(0.530)	(0.248)	(0.204)	(0.634)	(0.216)
$Neg\_\Delta Net\_Income_{t-1}$*$\Delta Net\_Income_{t-1}$	-1.288***	-2.646***	-0.237	-1.291***	-3.025***	-0.538
	(0.454)	(0.940)	(0.603)	(0.430)	(1.109)	(0.499)
Post*Treated	0.0115	0.00114	-0.0292	0.00384	0.00110	-0.0173
	(0.0287)	(0.0326)	(0.0268)	(0.0413)	(0.0478)	(0.0221)
$Neg\_\Delta Net\_Income_{t-1}$*Post*Treated	0.0114	0.0193	-0.0090	0.0229	0.0248	-0.0154
	(0.0261)	(0.0353)	(0.0331)	(0.0338)	(0.0514)	(0.0287)
ΔNet_Income_{t-1}*Post*Treated	-0.433	-0.448	-0.809	-0.402	-0.539	-0.847
	(0.316)	(0.559)	(0.793)	(0.326)	(0.656)	(0.752)
ΔNet_Income_{t-1}*$Neg\_\Delta Net\_Income_{t-1}$	0.802*	1.776**	0.475	0.799**	2.065**	0.757
*Post*Treated	(0.409)	(0.715)	(0.955)	(0.398)	(0.843)	(0.854)
SIZE	0.0857**	0.132**	0.0734	0.0853**	0.188***	0.0330
	(0.0393)	(0.0523)	(0.0460)	(0.0390)	(0.0700)	(0.0318)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes
N	617	314	303	617	199	418
adj. R^2	0.249	0.370	0.114	0.250	0.392	0.116

Note: Panel A reports results of a regression model that estimates changes in timely loss recognition after the court ruling, following Ball and Shivakumar (2005). The dependent variable ΔNet_Income_t is the change in total income from fiscal year t-1 to t, scaled by year t-1 book value of total assets. Treated firms are firms that do not have covenants and whose net worth over assets in 2012 is below the sample median (33rd percentile). *Post* is an Indicator variable that takes the value one for the three years after the court ruling (2013-2015) and zero for the prior year (2012). $Neg\_\Delta Net\_Income_{t-1}$ is a dummy variable that takes the value one if ΔNet_Income_{t-1} is negative, and zero otherwise; ΔNet_Income_{t-1} is the lag of ΔNet_Income_t; *Size* is the natural log of assets. Columns (1) and (4) include the full sample. Columns (2)-(3) and ((5)-(6) include sub-samples of firms that are below/above the sample median (33rd percentile) net worth in 2012. Firm and year fixed effects are included throughout. Continuous variables are winsorized at the 1st and 99th percentiles. Robust standard errors clustered by firms are reported in parentheses. ***, **, and *, indicate significance levels of 0.01, 0.05, and 0.10, respectively.

Panel B: Conservatism, Binz and Graham (2021) Specification

	Dependent Variable: Abnormal Bond Return (-1,+1)					
	Median Net Worth			p33 Net Worth		
	All Firms	Low Net Worth	High Net Worth	All Firms	Low Net Worth	High Net Worth
	(1)	(2)	(3)	(4)	(5)	(6)
ΔNet_Income_t*Post*Treated	0.0127*	0.0128*	-0.0621	0.0136*	0.0143*	-0.0591*
	(0.0074)	(0.0074)	(0.0379)	(0.0077)	(0.0079)	(0.0347)
ΔNet_Income_t*Pos_ΔNet_Income_t *Post*Treated	-0.080***	-0.0734***	0.0213	-0.093***	-0.074***	0.0246
	(0.0249)	(0.0244)	(0.0722)	(0.0269)	(0.0252)	(0.0623)
Pos_ΔNet_Income_t	0.0003	0.0001	0.0022*	0.0003	-0.0003	0.0020*
	(0.0009)	(0.0013)	(0.0012)	(0.0009)	(0.0016)	(0.0012)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes
N	462	244	218	462	157	305
adj. R^2	0.067	0.105	0.050	0.071	0.153	0.043

Note: Panel B reports results of a regression model that estimates changes in accounting conservatism after the ruling, following Binz and Graham (2021). The dependent variable Abnormal Bond Return (-1,+1), is the value-weighted firm average of cumulative abnormal bond return in a three day window around the earnings announcement date (to account for the possibility of multiple bond series issued by a single firm). Abnormal bond returns are calculated using the matching portfolio model of Bessembinder et al. (2009). ΔNet_Income_t is the change in total income from fiscal year t-1 to t, scaled by year t-1 book value of total assets; Pos_ΔNet_Income_t is a dummy variable that takes the value one if ΔNet_Income_t is positive and zero otherwise; Treated firms are firms that do not have covenants and whose net worth over assets in 2012 is below the sample median (33rd percentile); *Post* is an Indicator variable that takes the value one for the three years after the court ruling (2013-2015) and zero for the prior year (2012). Columns (1) and (4) include the full sample. Columns (2)-(3) and ((5)-(6) include sub-samples of firms that are below/above the sample median (33rd percentile) net worth in 2012. Firm and year fixed effects are included throughout. Continuous variables are winsorized at the 1st and 99th percentiles. Robust standard errors clustered by firms are reported in parentheses. ***, **, and *, indicate significance levels of 0.01, 0.05, and 0.10, respectively.

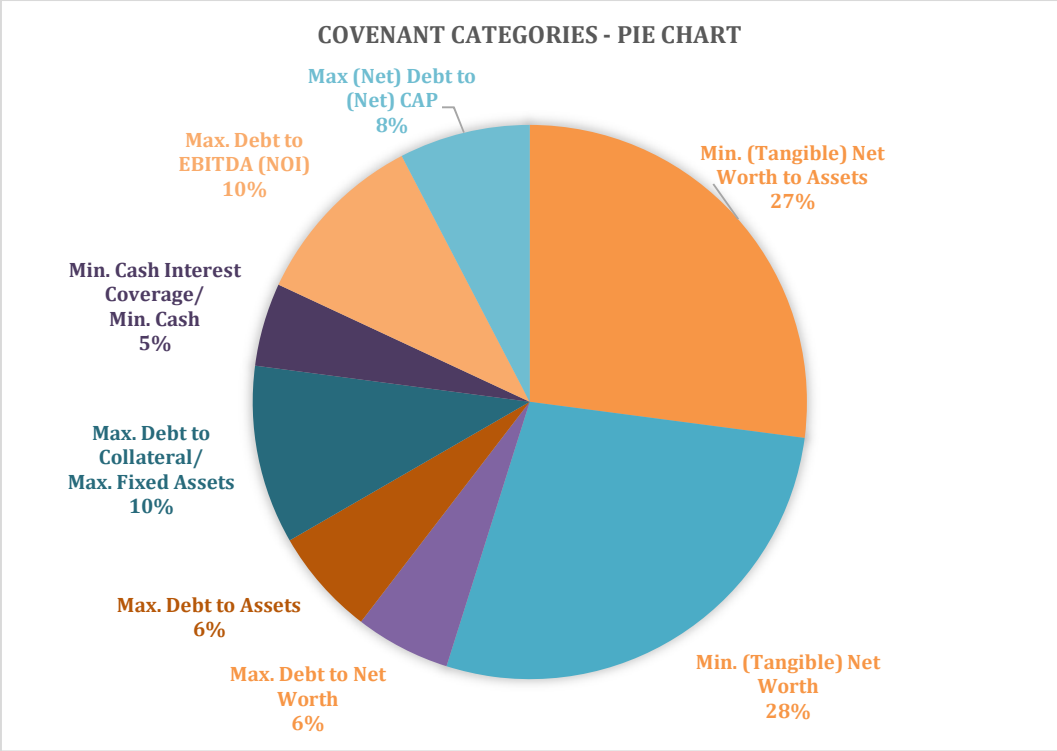
Table 5: Informativeness using Bond Abnormal Returns

	Dependent Variable: Abnormal Bond Returns (-1,+1)					
	Median Net Worth			p33 Net Worth		
	All Firms	Low Net Worth	High Net Worth	All Firms	Low Net Worth	High Net Worth
	(1)	(2)	(3)	(4)	(5)	(6)
ΔNet_Income_t	0.00661	-0.0922	0.0744***	0.00681	-0.128*	0.0705***
	(0.0122)	(0.0608)	(0.0265)	(0.0120)	(0.0751)	(0.0260)
ΔNet_Income_t*Treat	0.139***	0.236***	-0.0773***	0.151***	0.283***	-0.0736***
	(0.0492)	(0.0774)	(0.0269)	(0.0468)	(0.0885)	(0.0264)
Post*Treat	-0.00475**	-0.00602**	0.00263	-0.00766***	-0.00917**	0.00230
	(0.00199)	(0.00267)	(0.00302)	(0.00233)	(0.00355)	(0.00228)
ΔNet_Income_t* Post	-0.0293	0.0670	-0.0660*	-0.0279	0.0673	-0.0581
	(0.0205)	(0.0696)	(0.0388)	(0.0200)	(0.0884)	(0.0371)
ΔNet_Income_t*Post*Treat	-0.122**	-0.215**	0.0311	-0.138***	-0.227**	0.0263
	(0.0524)	(0.0847)	(0.0455)	(0.0507)	(0.100)	(0.0425)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes
N	462	244	218	462	157	305
adj. R^2	0.118	0.195	0.085	0.139	0.329	0.066

Note: The table reports the results of a regression model that estimates changes to informativeness by measuring the bond response to earnings announcements. The dependent variable, Abnormal Bond Return, is the value-weighted firm average of cumulative abnormal bond return in a three-day window around the earnings announcement date (to account for the possibility of multiple bond series issued by a single firm). Abnormal Bond Return is calculated using the matching portfolio model of Bessembinder et al. (2009); Appendix B provides further details. ΔNet_Income_t is the change in total income from fiscal year t-1 to t, scaled by year t-1 book value of total assets; Treated firms are firms that do not have covenants and whose net worth over assets in 2012 is below the sample median (33rd percentile); *Post* is an Indicator variable that takes the value one for the three years after the court ruling (2013-2015) and zero for the prior year (2012). Columns (1) and (4) include the full sample. Columns (2)-(3) and ((5)-(6) include sub-samples of firms that are below/above the sample median (33rd percentile) net worth in 2012. Firm and year fixed effects are included throughout. Continuous variables are winsorized at the 1st and 99th percentiles. Robust standard errors clustered by firms are reported in parentheses. ***, **, and *, indicate significance levels of 0.01, 0.05, and 0.10, respectively.

Appendix A: Financial Covenants in Debt Contracts of Firms in the Control Group

The chart below describes the types of financial covenants and their prevalence in debt contracts of the control group in 2012, prior to the court ruling. The table below provides additional information on each covenant type. Credit downgrade covenants (not included in the chart) account for 26% of covenants in the control group (our results are robust to the exclusion of control firms that had only credit downgrade covenants).



Covenant	Explanation
Min. (Tangible) Net Worth to Assets	Min. ratio of book net worth, or tangible net worth, to book assets.
Min. (Tangible) Net Worth	Min. monetary value of net worth, tangible net worth or net worth excluding capital reserves.
Max. Debt to EBITDA (NOI)	Max. ratio of debt to EBITDA, or debt to net operating income (NOI).
Max. Debt to Assets	Max. ratio of debt to assets.
Max. Debt to Collateral/ Max. Fixed Assets	Max. ratio of debt to collateral including limitations on debt to non-collateral assets.
Min. Cash Interest Coverage/ Min. Cash	Min. ratio of cash interest coverage or minimum monetary amount of cash.
Max. Debt to Net Worth	Max. ratio of debt to net worth, or debt to the equity stake (net worth) of controlling shareholders (alternatively, min. ratio of equity to debt).

Appendix B: Variable Definitions

Variable	
$Treated_i$	Indicator variable that takes the value one for companies whose bonds did not include financial covenants at the time of the court decision and their net worth was below the sample median (or 33rd percentile) as of 2012.
$Post_t$	Indicator variable that takes the value one for the three years after the court ruling (2013-2015) and zero for the prior year (2012).
Net_Worth_{it}	Total assets net of total liabilities, of firm *i* in year *t,* scaled by total assets.
$Negative\_Net\_Worth_{it}$	Indicator variable that takes the value one if Net_Worth_{it} is negative, and zero otherwise
$SIZE_{it}$	Natural logarithm of total assets (measured in thousands of NIS, about 4 NIS equal 1 USD).
ROA_{it}	Operating profit deflated by total assets
ΔNet_Income_t	The change in the total income from fiscal year t-1 to t, scaled by year t-1 book value of total assets.
$Neg\_\Delta Net\_Income_{t-1}$	A dummy variable that takes the value one if ΔNet_Income_t is negative, and zero otherwise.
$Pos\_\_\Delta Net\_Income_t$	A dummy variable that takes the value one if ΔNet_Income_t is positive and zero otherwise.
DLA	Discretionary Long-term Accruals (DLA) are calculated in a similar manner to Teoh et al. (1998), where discretionary and non-discretionary total accruals are calculated using the cross sectional Jones (1991) model and are decomposed into short-term and long-term discretionary and non-discretionary components. Total accrual is the difference between net income and cash flow from operation: $$AC = Net\ Income - Cash\ Flows\ from\ Operation$$ Current accruals are defined as the change in noncash current assets minus the change in operating current liabilities:

$$CA = \Delta Current\ Assets - \Delta Cash\ and\ Cash\ Equivalent - (\Delta Current\ Liabilities - \Delta Short\ Term\ Debt)$$

Non-discretionary accruals are expected accruals from a cross-sectional Jones (1991) model and the discretionary variables are the residuals. Expected current accruals for a firm in a given year are estimated from a cross-sectional regression in that year of current accruals on the change in sales using an estimation sample of all companies within the same industry. Thus, for the expected current accruals of firm *i* in year *t*, we run the following cross-sectional OLS regression:

$$\frac{CA_{j,t}}{TA_{j,t-1}} = \alpha_0 \left(\frac{1}{TA_{j,t-1}}\right) + \alpha_1 \left(\frac{\Delta Sales_{j,t}}{TA_{j,t-1}}\right) + E_{j,t}$$

where ΔSales is the change in sales, and TA is total assets. Non-discretionary current accruals are calculated as:

$$NDCA_{i,t} = \hat{\alpha}_0 \left(\frac{1}{TA_{i,t-1}}\right) + \hat{\alpha}_1 \left(\frac{\Delta Sales_{i,t}}{TA_{i,t-1}}\right)$$

where $\widehat{\alpha_0}$ is the estimated intercept and $\widehat{\alpha_1}$ is the slope coefficient for firm *i* in year *t.* Discretionary current accruals, DCAi,t, for firm *i* for year *t* are represented by the residual:

$$DCA_{i,t} = \frac{CA_{j,t}}{TA_{j,t-1}} - NDCA_{i,t}$$

To obtain discretionary and non-discretionary long-term accruals, discretionary and non-discretionary total accruals are first estimated. The discretionary total accrual, DAC*i*,*t*, for firm *i* for year *t* is calculated in a similar manner as for current accruals except that now total accruals *AC* is used as the dependent variable and the regression includes gross property, plant, and equipment (PPE) as an additional explanatory variable:

$$\frac{AC_{j,t}}{TA_{j,t-1}} = b_0\left(\frac{1}{TA_{j,t-1}}\right) + b_1\left(\frac{\Delta Sales_{j,t}}{TA_{j,t-1}}\right) + b_2\left(\frac{\Delta PPE_{j,t}}{TA_{j,t-1}}\right) + E_{j,t}$$

Non-discretionary total accruals or NDTAC are calculated as:

$$NDTAC_{i,t} = \hat{b}_0\left(\frac{1}{TA_{i,t-1}}\right) + \hat{b}_1\left(\frac{\Delta Sales_{i,t}}{TA_{i,t-1}}\right) + \hat{b}_2\left(\frac{\Delta PPE_{i,t}}{TA_{i,t-1}}\right)$$

$\hat{b}_0$ is the estimated intercept, and $\hat{b}_1$ and $\hat{b}_2$ are the estimated slope coefficients from previews regression. Thus, non-discretionary long-term accrual is the difference between nondiscretionary total accrual and non-discretionary current accrual.

$$NDLA = NDTAC - NDCA$$

Finally, discretionary long-term accrual is the difference between assets-scaled long-term accruals and non-discretionary long-term accruals.

$$DLA = \frac{AC_{i,t}}{TA_{i,t-1}} - NDLA$$

$Abnormal\ Bond\ Return\ (-1+1)_{it}$

Value-weighted average of cumulative abnormal bond returns in a three-day window around the earnings announcement date (day zero). Abnormal bond returns are calculated separately for each bond series using the matching portfolio model of Bessembinder et al. (2009). As in Bessembinder et al. (2009), twelve matching portfolios are created by classifying bonds into six major rating categories (AA- or above, A+, A, A-, between BBB+ to BB, below BB), and then segmenting each of these categories into intermediate and long-term indices based on time to maturity (below three years, or equal and above three years). The 12 indices' daily returns are value-weighted and used as the expected bond return (EBR) for a matched bond in our sample. The abnormal bond return (ABR) for bond *b* of firm *i* at day *d* is calculated as the difference between the bond return (BR) and the expected return of the matched portfolio:

$$ABR_{bid} = BR_{bid} - EBR_{pd}$$

We than add up the three-day abnormal return of bond *b* of firm *i*, around the earnings announcement day *t*:

$$CABR(-1+1)_{bit} = \sum_{d=-1}^{1} ABR_{bid}$$

We calculate the firm-level Abnormal Bond Return as the weighted average of all bonds issued by firm *i* that were traded around the earnings announcement date *t*:

$$Abnormal\ Bond\ Return\ (-1+1)_{it} = \sum_{b=1}^{n} W_b * CABR(-1+1)_{bit}$$

Appendix C: Expected Bond Recovery Rates, conditional on Insolvency, 2008-2017

	Dependent Variable: Expected Recovery Rate			
	Median Net Worth		p33 Net Worth	
	All Firms	Low Net Worth	All Firms	Low Net Worth
	(1)	(2)	(3)	(4)
Post*Treated	0.456***	0.508***	-0.0650	0.494***
	(0.0567)	(0.0460)	(0.0960)	(0.0494)
Size	0.0167	-0.0239	0.0151	-0.00925
	(0.0145)	(0.0262)	(0.0147)	(0.0403)
ROA	-0.0281	0.0300	-0.0290	0.0131
	(0.0176)	(0.0353)	(0.0176)	(0.0505)
Year FE	YES	YES	YES	YES
N	62	40	32	29
adj R^2	0.133	0.153	0.117	0.105

Note: The table reports the results of difference-in-differences regressions explaining the changes in the bond recovery rates of defaulting firms after the court ruling. The sample includes the traded bonds of firms that entered a debt-restructuring process (based on the Bank of Israel's records) in the years 2008-2017 (excluding financial firms and dually-listed firms). The dependent variable, the expected recovery rate, is calculated on the basis of the bond price at the beginning of the debt restructuring process relative to its par value. Treated firms are firms that do not have covenants and whose net worth over assets in 2012 is below the sample median (33rd percentile). *Post* is an Indicator variable that takes the value one for the years after the court ruling (2013-2017) and zero for the prior years (2008-2012). *Size* (log of assets) and *ROA* (operating profits over assets) are both winsorized at the 1 and 99th percentile. Columns (1) and (3) include the full sample. Columns (2) and (4) include sub-samples of firms that are below the sample median (33rd percentile) of net worth in 2012 (we do not present the results for firms above the sample median or 33rd percentile of net worth due to the extreme paucity of insolvency cases in this sub-sample). Year fixed effects are included throughout. Robust standard errors clustered by firms are reported in parentheses. ***, **, and *, indicate significance levels of 0.01, 0.05, and 0.10, respectively.

Appendix D: Shares Issuance

	Dependent Variable: New Shares Issued Scaled by Total Assets					
	Median Net Worth			p33 Net Worth		
	All Firms	Low Net Worth	High Net Worth	All Firms	Low Net Worth	High Net Worth
	(1)	(2)	(3)	(4)	(5)	(6)
Post*treated	0.0178***	0.0163***	-0.00321	0.0203**	0.0178**	-0.000551
	(0.006)	(0.006)	(0.006)	(0.008)	(0.008)	(0.005)
SIZE	-0.00884	0.00351	-0.0252	-0.00910	0.00853	-0.0210*
	(0.011)	(0.015)	(0.015)	(0.011)	(0.019)	(0.012)
ROA	-0.0467	-0.0512	-0.0358*	-0.0477	-0.0413	-0.0409*
	(0.030)	(0.076)	(0.020)	(0.030)	(0.091)	(0.021)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes
N	651	318	333	651	203	448
adj. R^2	0.046	0.035	0.076	0.046	0.045	0.058

Note: The table reports results of a difference-in-differences regressions where the dependent variable is capital raised through new share issues after the court ruling. The dependent variable is the equity capital raised (in seasoned public offerings), scaled by total assets. Treated firms are firms that do not have covenants and whose net worth over assets in 2012 is below the sample median (33rd percentile). *Post* is an indicator variable that takes the value one for the three years after the court ruling (2013-2015) and zero for the prior year (2012); *Size* (log of assets) and *ROA* (operating profits over assets) are both winsorized at the 1st and 99th percentiles. Columns (1) and (4) include the full sample. Columns (2)-(3) and ((5)-(6) include sub-samples of firms that are below/above the sample median (33rd percentile) net worth in 2012. Firm and year fixed effects are included throughout. Robust standard errors clustered by firms are reported in parentheses. ***, **, and *, indicate significance levels of 0.01, 0.05, and 0.10, respectively.

Appendix E: C-Score Measures of Conservatism (Khan and Watts, 2009; and Tan, 2013)

	Dependent Variable: C_SCORE					
	Median Net Worth			p33 Net Worth		
	All Firms	Low Net Worth	High Net Worth	All Firms	Low Net Worth	High Net Worth
	(1)	(2)	(3)	(4)	(5)	(6)
Post*Treat	-0.698**	0.00916	0.190	-0.695*	-0.0454	0.215
	(0.291)	(0.360)	(0.240)	(0.375)	(0.518)	(0.229)
SIZE	0.580**	0.278	0.848**	0.599**	0.00190	0.823***
	(0.254)	(0.357)	(0.343)	(0.258)	(0.576)	(0.305)
ROA	-2.048**	-6.445**	-1.207*	-2.061**	-6.819*	-1.536**
	(0.872)	(2.669)	(0.679)	(0.856)	(4.039)	(0.690)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes
Constant	-7.382**	-2.462	-11.59**	-7.645**	1.430	-11.04**
	(3.511)	(4.996)	(4.695)	(3.566)	(8.036)	(4.205)
N	522	236	286	522	151	371
adj. R^2	0.163	0.231	0.178	0.157	0.191	0.164

Note: The table reports the results of difference-in-differences regression estimates of conservatism after the court ruling. The dependent variable, *C_SCORE*, is a firm-year conservatism measure, based on Khan and Watts (2009) and Tan (2013). It is estimated by first running the following cross-sectional model:

$$
\begin{aligned}
ScaledEarnings_i &= \beta_0 + \beta_1 NegReturn_i + Return_i(\mu_1 + \mu_2 SIZEMV_i + \mu_3 MB_i + \mu_4 Leverage_i) \\
&+ NegReturn_i * Return_i(\lambda_1 + \lambda_2 SIZEMV_i + \lambda_3 MB_i + \lambda_4 Leverage) \\
&+ (\delta_1 SIZEMV_i + \delta_2 MB_i + \delta_3 Leverage_i + \delta_4 NegReturn_i SIZEMV_i \\
&+ \delta_5 NegReturn_i MB_i + \delta_6 NegReturn_i Leverage_i)
\end{aligned}
$$

$ScaledEarnings_i$ is earnings scaled by the lagged market value of equity; $Return_i$ is the annual buy and hold stock return of firm i; $NegReturn_i$ is a dummy variable that takes the value one if $Return_i$ is negative, and zero otherwise; $SIZEMV_i$ is the natural log of market value of equity of firm i; MB_i is market value of equity divided by book value of equity; and $Leverage_i$ is the leverage ratio of firm i (short term and long term debt/market value of equity). The estimated coefficients are then used to construct a firm-year specific C_SCORE, which is calculated as: $C\_SCORE_i = \hat{\lambda}_1 + \hat{\lambda}_2 SIZEMV_i + \hat{\lambda}_3 MB_i + \hat{\lambda}_4 Leverage_i$

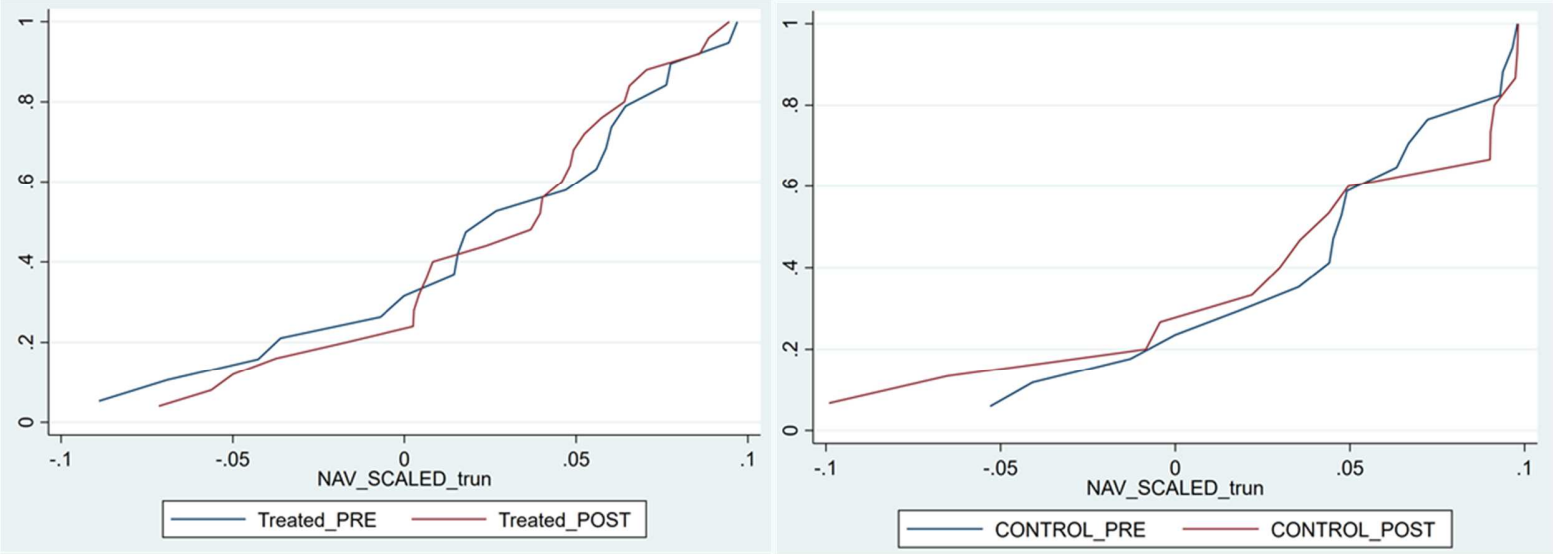
Treated firms are firms that do not have covenants and whose net worth over assets in 2012 is below the sample median (33rd percentile). *Post* is an Indicator variable that takes the value one for the three years after the court ruling (2013-2015) and zero for the prior year (2012). *Size* is the natural log of assets. Columns (1) and (4) include the full sample. Columns (2)-(3) and ((5)-(6) include sub-samples of firms that are below/above the sample median (33rd percentile) net worth in 2012. Firm and year fixed effects are included throughout. Continuous variables are winsorized at the 1st and 99th percentiles. Robust standard errors clustered by firms are reported in parentheses. ***, **, and *, indicate significance levels of 0.01, 0.05, and 0.10, respectively.

Appendix F: Propensity Score Matching Results corresponding to the Results in Tables 2A, 2B and 3, Columns (1) – (3)

	Dependent Variable: Net Worth			Dependent Variable: Neg. Net Worth			Dependent Variable: DLA		
		Median Net Worth			Median Net Worth			Median Net Worth	
	All Firms	Low Net Worth	High Net Worth	All Firms	Low Net Worth	High Net Worth	All Firms	Low Net Worth	High Net Worth
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Post*Treat	0.0335	0.0508*	-0.0214	-0.0657*	-0.0781*	0.0220	0.0150	0.0246**	0.0177
	(0.0235)	(0.0268)	(0.0234)	(0.0343)	(0.0454)	(0.0221)	(0.0104)	(0.0104)	(0.0117)
Year FE	YES	YES	YES	YES	YES	YES	YES	YES	YES
Firm FE	YES	YES	YES	YES	YES	YES	YES	YES	YES
N	381	254	238	381	254	238	330	240	213
Adj R^2	0.035	0.011	-0.001	0.028	0.020	0.010	0.148	0.179	0.053

Note: The table reports results of difference in differences regressions explaining changes in net worth, negative net worth, and discretionary long-term accruals (DLA) following the court ruling, corresponding to the results of Columns (1)-(3) in Tables 2A, 2B and 3, respectively. Unlike the original tables, the estimation here is based on matching treated firms to control firms on the basis of *Size* (log of assets) and *ROA* (operating profits over assets), both winsorized at the 1st and 99th percentiles, as well as industry. Matching is based on the "nearest neighbor propensity score matching" without replacement, hence the number of observations is smaller than in the original tables. Columns (1) through (3) correspond to the same columns in Table 2A; Columns (4) through (6) correspond to Columns (1) through (3) in Table 2B; and Columns (7) through (9) correspond to Columns (1) through (3) in Table 3. Treated firms are firms that do not have covenants and whose net worth over assets in 2012 is below the sample median. *Post* is an indicator variable that takes the value one for the three years after the court ruling (2013-2015) and zero for the prior year (2012). In Columns (1)-(3), the dependent variable is Net Worth, calculated as total assets net of total liabilities, scaled by total assets (values below -1 or above +1 are omitted). In columns (4)-(6), the dependent variable is Negative Net Worth, a dummy variable which takes the value one if Net Worth is negative, and zero otherwise. In columns (7)-(9) the dependent variable discretionary long-term accruals, DLA, calculated as in Teoh et al. (1998), where discretionary and non-discretionary total accruals are calculated using the cross-sectional Jones (1991) model and are decomposed into short-term and long-term discretionary and non-discretionary components; Appendix B provides further details. Columns (1), (4), (7) include the full sample. Columns (2)-(3), ((5)-(6) and (8)-(9) include sub-samples of firms that are below/above the sample median of net worth in 2012. Firm and year fixed effects are included throughout. Robust standard errors clustered by firms are reported in parentheses. ***, **, and *, indicate significance levels of 0.01, 0.05, and 0.10, respectively.

Appendix G: Falsification/Placebo Test (using 2012 as the change year instead of 2013)



The figure is similar to Figure 1 except that, instead of examining changes around the court decision year, 2013, it presents changes in net worth around an arbitrary ("placebo") year, 2012. The calculation is based on the cumulative distribution functions for treated and control firms in 2011 and 2012. We separately compute, and show in the figure, four cumulative net worth distribution functions in the scaled net worth range (-0.1, 0.1) for the treatment and control groups for 2011 (in blue) and 2012 (in red). Treated firms are firms with no covenants and net worth below the sample median.