Can Small Businesses Survive Chapter 11?*

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Abstract

A majority of small U.S. businesses attempting to reorganize in bankruptcy fail to successfully do so. Subchapter V of Chapter 11 was introduced in 2020 for firms with less than $7.5 million in total liabilities to streamline the process by reducing bankruptcy costs and negotiation frictions, and enabling entrepreneurs to retain their ownership. Employing regression-discontinuity and difference-in-differences designs, we show that many small businesses reorganize under the new procedures that otherwise would have been liquidated. Further, expected creditor recoveries are at least as high in Subchapter V as in similar small business reorganizations, and post-bankruptcy survival rates are no lower. Our results show that the increased ability to preserve small businesses is not associated with a bias toward continuing unviable firms, and that creditors are not harmed by a shift in bargaining power toward small business owners.

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1. Introduction

The debate as to whether the U.S. bankruptcy system is an efficient mechanism for resolving financial distress, enabling the reorganization of viable firms and leading to the liquidation of those that are not, remains unresolved. Chapter 11 of the Bankruptcy Code contains a number of features aimed at allowing distressed firms to reorganize when creditors otherwise may force the liquidation of the firm. Empirical studies of large companies filing for bankruptcy show that they most often attempt to reorganize under Chapter 11 rather than initially filing to liquidate under Chapter 7, and are often able to either confirm a plan of reorganization or sell the firm as a going concern. Thus, large businesses frequently emerge from bankruptcy and continue their operations (Altman, Hotchkiss, and Wang, 2019; Gilson, Hotchkiss, and Waldock, 2022).

Despite their importance to the U.S. economy, the ability of small businesses to avoid liquidation and emerge from Chapter 11 has been much more limited. In fact, 70% of small businesses entering bankruptcy from 2010 to 2019 filed directly for Chapter 7 liquidation. Even among small businesses that entered Chapter 11, only about one third successfully reorganized, with the other two-thirds either being liquidated in Chapter 7 or dismissed from court altogether.[1] It may not be surprising that Chapter 11 is unfriendly to small businesses seeking to reorganize, as these firms often lack the resources to survive an expensive and time-consuming bankruptcy case (Bris, Welch, and Zhu, 2006). In addition to the significant costs of the process, following the absolute priority rule for a reorganization plan of an insolvent firm means that the pre-bankruptcy equityholders are unlikely to retain their ownership; however, many small businesses would cease to exist without the contribution of human capital from the firms' pre-bankruptcy owners.

[1] Based on filing statistics from the Federal Judicial Center, for all business bankruptcy cases with less than $7.5M in total liabilities.

To provide a more feasible path for small business debtors to successfully utilize the U.S. bankruptcy system, Congress passed the Small Business Reorganization Act of 2019 (SBRA) in August 2019, which became effective in February 2020. The SBRA codifies a new Subchapter V of Chapter 11 (hereafter SubV), providing qualifying small business debtors with a set of tools that reduce some of the obstacles small businesses face in traditional Chapter 11 filings. Key among these tools are the ability to confirm a plan which deviates from absolute priority by preserving pre-bankruptcy owners' equity stake, even when some creditors do not receive a 100% recovery, and removing other costly and time-consuming requirements including the appointment of a creditors' committee and requiring a disclosure statement. The goal of these substantial changes is to lower the otherwise prohibitive fixed costs of bankruptcy, expedite the process, and provide a path for the small business owner to retain equity in the reorganized firm.

At the same time, these provisions of SubV potentially change the balance of negotiating power in bankruptcy, reducing the influence of creditors. This could potentially lead to reduced creditor recoveries and a continuation bias in which more small businesses that are not economically viable are able to reorganize and exit bankruptcy, with a high probability of ultimately failing.

In this paper, we examine the adoption of SubV by small businesses and its impact on Chapter 11 case outcomes. Our goal is to better understand whether SubV impacts the long-term survival of distressed small businesses and if this comes at the cost of lower creditor recoveries. We begin by describing the adoption of SubV by small businesses. Using data from the Federal Judicial Center (FJC) database to track all business bankruptcies for firms with less than $15 million in total liabilities from 2017 to 2023, we find that the total quarterly number of filings drops with the onset of the COVID-19 pandemic in 2020Q2, consistent with evidence from Wang et al. (2021). The decline in total filings is similar for businesses eligible for SubV—those with less than $7.5

million in liabilities[2]—and those above this threshold. Thus, it does not appear that SubV attracted large numbers of firms into the bankruptcy system in its first few years of existence. However, we find an increase in the share of bankrupt firms filing for Chapter 11 after SubV becomes available. This increase occurs only among firms eligible for SubV. For firms with $0 to $7.5 million in liabilities, the share of firms filing for Chapter 11 rises from about 18% to 24% after the introduction of SubV. Among firms with $7.5 to $15 million in liabilities we do not see a change in the share of firms using Chapter 11 after 2020Q2 (see Figure 1). This suggests that, among firms filing for bankruptcy, SubV induced some eligible firms to use Chapter 11 that otherwise would not have.

Did SubV affect bankruptcy outcomes? To answer this question, we employ three empirical strategies: a baseline OLS comparison of SubV cases to non-SubV cases; a regression discontinuity approach that utilizes the fact that only firms with less than $7.5 million in total noncontingent liabilities can use SubV; and a difference-in-differences approach using cases with greater than $7.5 million in liabilities as the "never treated" group, while those with less than $7.5 million have SubV as an option after March 2020.

We first estimate OLS regressions where the dependent variable is an indicator for whether the debtor confirmed a reorganization plan or not. Debtors that did not confirm their plans were either converted to Chapter 7 liquidation or dismissed from court, in which case they likely went out of business as well since they did not get debt relief (Morrison, 2007; Iverson, 2018). Using all Chapter 11 bankruptcies from 2020-2023 with total liabilities less than $15 million, we show that SubV cases are 21 percentage points more likely to have a plan confirmed, after controlling for

[2] Firms with more than $7.5 million in total noncontingent liabilities cannot use SubV. Originally, this threshold was set to $2.725 million, but the threshold was increased to $7.5 million on March 27, 2020 (one month after SubV was introduced) as part of the Coronavirus Aid, Relief, and Economic Security (CARES) Act.

many other observables. This is a significant difference, as the baseline probability of confirming a plan is only 32.9%. We also find that, conditional on confirming a plan, SubV cases reach plan confirmation about 24 % faster than similar firms that use a traditional Chapter 11.

While these baseline results are helpful to establish that there are differences between SubV and traditional Chapter 11, it is possible that the small businesses that select to use SubV are different from those that do not, and these unobserved differences are what drive the differences in outcomes. To examine causality more carefully, we employ a regression-discontinuity design (RDD) that utilizes the $7.5 million eligibility threshold to create variation in who uses SubV. Firms just below this threshold should be quite similar to those just above the threshold along many dimensions except for the fact that those below the threshold can use SubV if they choose. Using this technique, we find that, if anything, the effect of SubV on the probability of confirming a plan is even larger. SubV increases the likelihood of reorganization for this sample by about 36 percentage points, relative to firms just above the threshold who cannot use SubV and only successfully reorganize 20 percent of the time. Thus, SubV more than doubles the probability of reorganization for firms near the $7.5 million threshold. Further, in this analysis we find that SubV cases reach confirmation 42% faster than non-SubV cases.

An alternative to RDD is to use difference-in-differences for identification. For this analysis, we include all Chapter 11 cases with between $4 million and $11 million in total liabilities that filed between 2017 – 2023. Prior to February 2020, none of these firms could use SubV. After February 2020, those with less than $7.5 million in liabilities have SubV available as an option. Thus, *treated* firms are those with less than $7.5 million in liabilities, and *post* identifies cases filed after SubV became available. Because not all firms below the threshold choose to use SubV, the diff-in-diff interaction *treated X post* produces an "intent to treat" estimate—not all "treated" firms

are actually treated because some do not use SubV, either because they choose not to or they are not aware it exists.[3] This pushes the estimated impact of SubV down somewhat, but we still find that firms with less than $7.5 million in liabilities are 10.8 percentage points more likely to have their cases confirmed after February 2020 than control firms. This is a 37.5% increase from the mean confirmation rate of 28.8% in the control group. We also confirm the RDD findings that SubV increases the speed at which confirmation occurs.

The RDD and difference-in-differences estimates are intended to capture the causal effect of SubV on bankruptcy case outcomes. However, these estimates could be biased if the introduction of the SubV option induces firms to opt into bankruptcy that otherwise would not have filed. In examining the firms that select into SubV, we estimate that the initial introduction of SubV had small selection effects and, if anything, firms that file for SubV are more highly-distressed than firms in regular Chapter 11, making it harder to successfully reorganize. Thus, we argue that the observable selection into SubV makes it likely that our estimates are a lower bound of the effect of SubV.

Taken together, our results show that SubV has achieved its goal of allowing small businesses to reorganize at significantly higher rates and to do so at a quicker pace. At the same time, this raises a natural concern as to whether the balance has tipped too far – the increased bargaining power of small business debtors is potentially at the cost of unsecured creditors. We therefore examine the expected recovery rate for unsecured creditors for SubV versus non-SubV Chapter 11 cases. Using court documents (plans of reorganization and disclosure statements) we manually collect estimated recovery rates for all cases filed between March 2020 and September 2023 with

[3] Bernstein et al. (2023) show that knowledge of bankruptcy, and SubV in particular, is very low among small business owners.

total liabilities between $4 million and $11 million which confirm a plan of reorganization. Because we only observe expected recovery rates for cases with confirmed plans, we run a series of regressions in which we assume various recovery rates ranging from 0% to 50% for all cases which are liquidated or dismissed from court. Using the same RDD framework as above, we estimate that unsecured creditors are not made worse off by SubV even if we make the extreme assumption that recovery rates in all non-reorganization cases reach 50%--an unlikely outcome given the average recovery rate of Chapter 11 cases with a confirmed reorganization plan is lower than 50%.

While SubV dramatically increases the likelihood of reorganization, the marginal firms that are able to reorganize using SubV may not be economically viable, and hence are forced to shut down soon after bankruptcy. If this is the case, it could be that SubV simply prolongs the existence of "zombie" firms, when liquidation would be a better option. To study this, we test how SubV affects post-bankruptcy failure rates using our RDD analysis. For firms with confirmed reorganization plans (either in SubV or standard Ch. 11), we manually collect the firm's most recent operating status based on state-level business registry records from OpenCorporate and LexisNexis. Similar to our recovery rate analysis, we test how these results are sensitive to assumed survival rates ranging from 0% to 100% for firms that do not confirm a plan. Firms that do not confirm a plan are likely to fail at high rates, since they are either converted to Ch. 7 (where they are mandatorily liquidated) or dismissed from court and left without bankruptcy protection. We find that SubV causally *increases* firm survival as long as we assume that 20% or fewer of the non-reorganized cases survive. We conclude that SubV almost certainly does not harm firm survival rates, since the estimated effect of SubV on survival turns negative only if we assume that 100% of non-reorganized cases survive (which is clearly not the case).

To summarize, we estimate that the SubV option dramatically increases the likelihood of reorganization for small businesses without harming expected unsecured creditor recovery rates. We also show that SubV likely leads to higher chances of long-run survival for small businesses, suggesting that many of the smaller firms that are liquidated in standard Chapter 11 could survive if the costs of bankruptcy were lower or if owners were able to retain equity in the firms. Given the important role that small businesses play in the growth of the economy and their relatively high failure rates[4], SubV could play an important role in allowing small businesses to recover from financial distress. In theory, small business liquidation need not be costly for an economy if the liquidated assets were easily redeployed to other uses. However, Bernstein, Colonnelli, and Iverson (2019) show that in many cases small business liquidation leads to an inefficient reallocation of assets when the geographic location offers few alternative users for the assets. Thus, the bankruptcy system may lead to less efficient outcomes for firms that are ultimately liquidated.

While our understanding of the efficiency of existing mechanisms for resolving financial distress of viable, small firms is limited, a more substantial literature studies bankruptcy outcomes for larger firms (generally greater than $100 million in liabilities). Early work, documenting poor post-bankruptcy performance, is consistent with excessive reorganization of unviable firms (Hotchkiss, 1995). More recently, Hotchkiss, Thorburn, and Wang (2023) discuss a shift in the balance of negotiating power in bankruptcy to senior creditors, increasing a potential bias toward liquidation. Recent research has also used structural modeling to examine whether reorganization is achieved with the least loss in firm value, but with mixed conclusions regarding the sources of inefficiencies in Chapter 11 (Dou et al., 2021; Antill, 2022). Overall, this literature points out the

[4] The average annual firm death rate from 2017 to 2021 is 8.1% based on Business Dynamics Statistics data from the U.S. Census.

difficulties in resolving this debate. The introduction of SubV studied in this paper provides an opportunity to understand the causal effect of a more pro-debtor system for resolving distress of small firms.

SubV has the potential to have a large impact on small businesses and even the U.S. economy overall. Based on bankruptcy filings from 2015-2023, 88% percent of all corporate filings have liabilities below $7.5 million, so most business bankruptcies are eligible to use SubV. Further, prior to the introduction of SubV, roughly 90% of all small businesses that closed their doors did so outside of bankruptcy entirely (Greenwood, Iverson, and Thesmar, 2020). Presumably, some of those businesses closed their doors because Chapter 11 was too costly and complicated to pursue. An additional implication of our work is that SubV can encourage small businesses to utilize in court bankruptcy restructurings by offsetting the negative stigma of entering bankruptcy (Bernstein et al., 2023). With SubV as an option, some of those firms will likely utilize the bankruptcy system as a path to restructure their business rather than simply shutting down.

2. Economic Framework and Institutional background of Subchapter V

In this section, we briefly discuss some of the economic frictions that may affect small businesses attempting to use Chapter 11 to reorganize. Following that, we lay out the main changes that Subchapter V (SubV) makes to Chapter 11 and how these changes alleviate certain frictions affecting small businesses.

2.1 Economic Framework

Small businesses that wish to restructure under Chapter 11 face several significant hurdles. The most obvious is that the bankruptcy itself has direct costs, including lawyer and court fees,

and also necessitates sufficient working capital to run the business while the bankruptcy is ongoing. Larger firms can more likely access liquidity needed to cover these costs, since the fixed costs of bankruptcy are smaller in comparison to the assets of the firm. Meanwhile, fixed bankruptcy costs can loom large for small businesses (Bris, Welch, and Zhu, 2006) and accessing liquidity (e.g. through debtor-in-possession financing) is likely not an option for these businesses.

A more subtle friction for small businesses is that for many of them the business is inextricably tied to the owner. In many Chapter 11 cases, following absolute priority, old equity owners of the firm are wiped out and secured or unsecured creditors become the new equity owners of the reorganized firm. This means it is up to the new owners to hire management and run the firm after it exits bankruptcy. With a small business, if the original entrepreneur loses her equity in the firm it may be the case that the business cannot continue to exist, as she is the only one who knows the business or has the contacts with suppliers and customers to keep it running (Gotberg, 2021). While new equity owners of the small business could in theory re-hire the original entrepreneur to continue running the company, asymmetric information about the entrepreneur's quality likely makes this difficult. More practically, creditors of small businesses (typically trade creditors and regional banks) may not want to—and may be statutorily unable to—own the equity of those businesses. Thus, if absolute priority is followed and the pre-bankruptcy equity ownership is eliminated, it is more likely that the small firm will be shut down because it lacks a dedicated owner/manager to run it.

Finally, bargaining frictions may leave a small business unable to reach a consensual plan to reorganize. In general, higher priority senior and secured creditors have less incentive to agree to a reorganization, and may push the business to liquidate. Further, differing incentives across creditors can lead to inefficient liquidations, particularly for firms with more complex claims

structures. While this is also true for larger businesses (Hotchkiss, Thorburn, Wang, 2023), the problem is likely more severe when the debtor is small. The time and effort of working through a restructuring process may not be worthwhile for senior creditors when it would not sufficiently increase their recoveries, especially when their claim is relatively small. Instead, these creditors may push for liquidation to simply resolve the case more quickly, even if the firm is viable.

2.2 Institutional Background on Subchapter V

Subchapter V of Chapter 11 (SubV) seeks to address the frictions we discuss in Section 2.1 by streamlining and simplifying the reorganization process for small businesses. The Small Business Reorganization Act of 2019, effective as of February 19, 2020 and as modified by the CARES Act, defines debtors qualified to elect to use SubV as those with "aggregate noncontingent liquidated secured and unsecured debts as of the date of filing of the petition or the date of the order for relief in an amount not more than $7,500,000." Some of the key provisions of SubV are as follows:

1. Modified confirmation requirements. A reorganization plan in SubV can be confirmed over the objections of some or all creditors, without necessarily eliminating equity's ownership interests. This means that the small business owner not only stays in possession of the business during bankruptcy, but can continue to own and control the reorganized firm through a violation of absolute priority. The ability of the pre-bankruptcy owners to retain their stake can be important to preserving the going concern value of the firm, but also makes bankruptcy under SubV more attractive to incumbent owners and managers than a traditional Chapter 11. Although a confirmed plan under SubV is not required to follow absolute priority, a "non-consensual" plan (i.e., one

without sufficient agreement from its creditors) requires the company to pay all of its projected disposable income to creditors over a 3-to-5-year period.[5]

2. Appointment of a SubV Trustee. Although the debtor remains in possession of the bankruptcy estate, a SubV trustee is appointed in most cases. In contrast to a trustee used outside of SubV, (who replaces the incumbent management and often oversees a liquidation), the SubV trustee works in cooperation with the debtor toward the goal of resolving the case, while still providing oversight to make sure the company is reorganized only if it is in the best interests of creditors as well.[6] SubV trustees are typically individuals with experience in small business bankruptcy cases who can help debtors and creditors reach a consensus plan, reducing the costs of a longer stay in bankruptcy. SubV trustee fees are paid by the debtor.

3. Changes to the negotiation process. A committee of unsecured creditors is not required, reducing costs otherwise borne by the debtor, but also potentially reducing creditors' bargaining power. Under the guidance of the SubV trustee, this change is intended to increase the likelihood of reaching a consensual plan to reorganize, and also to decrease the necessary involvement of creditors in the process.

4. Removal of certain Chapter 11 requirements to expedite the case. SubV requires the court to hold a status conference within the first 60 days of the case. When a reorganization plan is feasible, it must be filed within 90 days of the filing date, or the case risks being dismissed. A disclosure statement, which provides significant detail regarding the company and proposed plan to claimants

[5] The idea that the pre-bankruptcy owner can buy back the firm from its creditors using its future cash flows can produce an outcome that is economically similar to that observed for bankruptcy auctions of Swedish firms (Strömberg, 2000). Because the owner-manager in general lacks any funds of her own, the sale-back necessitates agreement with the bank to renegotiate its loan to finance the acquisition. In SubV, this can be accomplished without an auction process under a non-consensual plan, i.e. lacking the bank's consent.

[6] Trustees are infrequently used in U.S. Chapter 11 cases, other than to replace management in cases of mismanagement or fraud. In Chapter 7 cases, a trustee's sole function is to oversee the liquidation (Antill, 2022).

entitled to vote on the plan, is not required in a SubV case. These changes further reduce the costs to the debtor and are intended to expedite the process.

The above changes under SubV are intended to reduce the costs of a prolonged stay in bankruptcy for a small business and allow the small business owner to retain equity in the firm, even if it violates absolute priority. However, these changes also reduce the bargaining power of creditors in the bankruptcy process, potentially reducing their recovery rates and leading to over-continuation of small businesses.

3. Data

We start with all U.S. bankruptcy filings from the Federal Judicial Center (FJC) database. The FJC database keeps records of all bankruptcy filings in the United States since 2008, and is updated quarterly (through September 2023).[7] The FJC database offers detailed information on each case, including the case number, filing date, bankruptcy court, and total assets and liabilities at filing. We also use information extracted from bankruptcy court documents obtained from the Public Access to Court Electronic Records (PACER) and from LexisNexis, including the debtor's name, industry, liabilities, and current case status.

3.1. Regression sample selection

We start with the universe of all Chapter 11 cases (41,350 cases) filed between 2017Q1 and 2023Q3 from FJC. We exclude non-lead cases, cases transferred to another court, non-business cases, cases filed by tax-exempt entities, single asset real estate cases, and cases filed in 2023 with pending status. Given the $7.5 million debt limit for eligibility for SubV, we create three different

[7] The FJC database is publicly available at https://www.fjc.gov/research/idb/bankruptcy-cases-filed-terminated-and-pending-fy-2008-present .

samples of cases with total liabilities centered at $7.5 million: (1) Our baseline analyses use 5,100 cases filed between 2020Q1 and 2023Q3, with total liabilities below $15 million; (2) Our regression discontinuity design uses 959 cases filed between 2020Q1 and 2023Q3, with total liabilities between $4 million and $11 million; (3) Our difference-in-difference analyses use 1,954 cases filed between 2017Q1 and 2023Q3, with total liabilities between $4 million and $11 million. Total liabilities are determined from schedules filed with the bankruptcy petition and subsequent amendments.[8]

3.2. Identifying Subchapter V cases

For firms in the liability size ranges indicated above, we start with a list of SubV cases identified from PACER.[9] In addition, the FJC database starts to indicate Chapter 11 filings electing SubV in 2023. We also use LexisNexis and PACER case summaries to verify which cases are administered under SubV.[10] This provides a sample of 2,899 SubV cases from the total of 5,100 Chapter 11 cases filed between 2020Q1 and 2023Q3, with total liabilities below $15 million.

4. Subchapter V case outcomes and duration

4.1. Adoption of Subchapter V

As discussed in the introduction, the usage of corporate bankruptcy fell with the onset of the pandemic (Wang et al., 2022). This overall decline makes it difficult to determine the extent to

[8] As noted above, the $7.5 million debt threshold for SubV eligibility excludes contingent liabilities. Thus, some firms with reported total liabilities over $7.5 million still file under SubV, with eligibility determined in court. An example is cases where a large judgement resulting from a lawsuit against the firm is unpaid at the time the firm files for Chapter 11. Because reported data do not distinguish contingent and noncontingent liabilities, we hereafter refer to reported liabilities (from PACER documents) as "total liabilities" and refer to the SubV eligibility threshold as "total noncontingent liabilities."

[9] We thank Ed Flynn of the American Bankruptcy Institute (ABI) for providing this listing of SubV cases.

[10] Shortly after the enactment of the SBRA, a small number of cases already in Chapter 11 were changed to elect SubV. Additionally, early in the use of SubV, a small number of cases were determined as ineligible for SubV based on the court's assessment of non-contingent liabilities.

which SubV attracted firms into the bankruptcy system that would not have used it otherwise. However, in Figure 1, Panel A, we find that among firms that file for bankruptcy, a higher share use Chapter 11 after the introduction of SubV than used Chapter 11 before (Figure 1, Panel A). Importantly, Panels B and C show that this increase comes exclusively from firms with less than $7.5 million in liabilities, significantly displacing traditional Chapter 11 filings for those firms.[11] These figures do not, however, demonstrate whether the post-2020Q1 relative increase in firms using Chapter 11 is due to small businesses that absent SubV would have used Chapter 7 or would have remained outside of court.

Concurrent with the enactment of the SBRA, the onset of the pandemic may have decreased the viability of some small businesses which experienced a severe negative cash flow shock, increasing liquidations both in and out of court. At the same time, the cash flow shock was temporary for many firms and pandemic-related government support combined with creditor leniency or access to available credit lines and strong refinancing opportunities (Hotchkiss, Nini, Smith, 2022) made it possible for many firms to avoid bankruptcy. These effects make it difficult to determine if SubV enticed some firms to use the bankruptcy system rather than liquidate out of court.

In Figure 2, we plot the annual Census Business Dynamic statistics for establishment deaths based on firm size groups. Noting that the year 2021 measures deaths from March 2020 to March 2021, which includes the start of the pandemic, establishment closures are surprisingly flat. We observe an increase in closures only for firms with less than 10 employees, and within that group only from just over 10% to over 11%. This is consistent with results of Crane et al. (2022) who

[11] Of course, in order to use SubV, small businesses would need to be aware of the new law and overcome stigma surrounding the usage of bankruptcy. Bernstein et al. (2023) show that awareness of SubV was very limited in 2020 by small business owners, and stigma against bankruptcy was high. This could limit uptake, at least initially.

find that business exit rates appeared lower than the widespread expectations from early in the pandemic, and attribute the lack of a spike in closures to government policy support at the time. We interpret these statistics to indicate that the trends in filing rates we observe are not confounded by a significant change in the number of companies choosing to close down out of court. We further examine whether changes in the characteristics of firms entering bankruptcy impact our empirical strategy and results in Section 6 below.

4.2. Baseline specification and results

We now turn to our main analysis with baseline OLS regressions to examine outcomes and durations of cases filed under SubV as follows:

$$y_i = \alpha + \beta Sub\ V_i + Control\ Variables_{i,t} + \partial_j + \delta_c + \gamma_t + \epsilon_{i,j,c,t}, \qquad (1)$$

where i refers to case and t refers to year. The dependent variable y_i in Equation (1) is either an indicator of the case outcome ($Confirmed_i$) or the number of days for case i to reach the outcome (*Ln(# Days to Confirmation)*). $Confirmed_i$ is a dummy variable that equals one if a plan of reorganization is confirmed for case i and zero otherwise. $Sub\ V_i$ is a dummy variable that equals one if case i is filed under Subchapter V of Chapter 11 and zero otherwise. $X_{i,t}$ is a vector of control variables for case i. $Total\ Asset_{i,t}$ is the debtors' total assets. $Secured\ Debt/\ Total\ Liability_{i,t}$ is the ratio of secured debt over the total debt. We include three proxies for the potential complexity of negotiations: $Jointly\ Filed\ Case_{i,t}$ is a dummy variable that equals one if case i is the lead case of several jointly administered cases and zero if case i is not jointly administered with other cases; $Above\ 50\ Creditors_{i,t}$ is a dummy variable that equals one if case i has 50 or more creditors as reported in the voluntary petition and zero otherwise. ∂_j, δ_k, and γ_t indicate industry (1-digit SIC), court, and filing year fixed effects.

For our baseline analyses, we use the 5,100 Chapter 11 cases filed between 2020Q1 and 2023Q3, with total liabilities below $15 million. Table 1 reports summary statistics for this sample. 32.9% of cases have plans confirmed, which we consider a positive outcome, with an average duration of 299 days. For other (negative) outcomes, 39.9% of cases are dismissed, and 9.8% of cases are converted to Chapter 7.[12] The remaining 17.4% of cases have not been resolved but have been pending more than nine months, which we view as a negative outcome given the median case duration of fewer than nine months for our baseline sample. The average debtor has total liabilities of $2.5 million and a secured debt ratio of 46.6%. More than half of cases (56.8%) elect to be administered under SubV. These small business cases also contrast with the large, complex cases typically examined in prior literature: only 6.8% of cases are jointly administered with other non-lead cases, and less than 15% of cases have more than 50 creditors.

Table 2 Panel A reports the OLS regression results for case outcome. The coefficient estimates for *SubV* are positive and statistically significant across all four columns with different controls and fixed effects, suggesting small business debtors who file their petitions under Subchapter V of Chapter 11 are more likely to have a plan confirmed. Economically, electing SubV is associated with a 21% increase in the probability of confirming a plan. Larger and more complex cases also appear more likely to have a plan confirmed.

Table 2 Panels B and C reports OLS regression results for the time to reach the case outcome. The dependent variable in Panel B is *Ln(# Days to Confirmation)*, the natural logarithm of the number of days for a plan to be confirmed. The coefficient of *SubV* is negative and statistically significant in all four columns in Panel B, suggesting that among small business cases that

[12] We note that confirmed plans in our baseline regressions include both Chapter 11 plans of reorganization and Chapter 11 plans of liquidation. Chapter 7 is used for liquidation under the supervision of a trustee rather than the debtor in possession. Iverson (2018) shows that dismissals largely lead to liquidations for small businesses.

successfully confirm a reorganization plan those that file under SubV complete the process much faster. Economically, SubV reduces the time to confirmation by 24%.[13] Table 2 Panel C reports OLS regression results where the dependent variable is *Ln(# Days to negative outcome)*, where negative outcomes are defined as cases that are dismissed, converted to Chapter 7, or pending for over nine months. Interestingly, the coefficient estimates of *SubV* become positive and significant, suggesting that it takes a significantly longer time for a SubV case to reach a negative outcome. Economically, electing SubV is associated with an increase of 24% in the time to a negative outcome.

While these baseline results are suggestive of SubV's impact on case outcomes, we are careful to note that they measure only correlations. Firms that choose to use SubV may be different along several dimensions, which could lead to the differences we observe in this analysis. To better understand the causal impact of SubV on case outcomes, we next use regression discontinuity and difference-in-differences specifications.

4.3. Regression discontinuity design (RDD)

The baseline results in Section 4.1 document a positive relationship between SubV status and the probability of plan confirmation and a negative relationship to the time until confirmation. However, filing under SubV is a choice of the small business debtor, which makes our baseline results subject to endogeneity issues. In particular, the positive SubV effect may reflect other characteristics of debtors who choose to use SubV. We therefore turn to a regression discontinuity design as one means to address possible endogeneity.

[13] Since these are log-linear models with the independent variable of interest, $SubV_i$, being a dummy variable, the estimated impact of moving to SubV on time to confirmation is $100[\exp(\beta) - 1]$.

The main eligibility requirement for debtors to utilize SubV is having non-contingent liabilities below $7.5 million.[14] By definition, we should observe a discrete jump to a zero probability of a Sub V case above this eligibility threshold. However, the eligibility threshold is based on *non-contingent* liabilities, which are not reported systematically in our data. Because of this, we use *total* liabilities as the forcing variable for our RDD. Thus, our design is a fuzzy RDD since we do not precisely observe the threshold for all cases. In our sample, there are a total of 57 SubV cases with total liabilities greater than $7.5 million. These cases clearly had noncontingent liabilities less than $7.5 million. However, we cannot observe which cases (if any) had total liabilities above $7.5 million and noncontingent liabilities below $7.5 million but *did not* choose to file under SubV. For descriptive purposes, Figure 3 shows the use of SubV (Panel A) and case outcomes (Panels B and C) above and below the observable cutoff of $7.5 million in total liabilities, but removing 57 cases utilizing SubV which are above the $7.5 million cutoff. Panels B and C show a significant decline in the probability of plan confirmation at the cutoff, regardless of the parametric assumption used based on the running variable. While we omit the 57 non-complier cases in Figure 3, in the regression analysis below they are included. Manipulation is especially unlikely during our sample period when SubV was quite new and the increase in the eligibility threshold unexpectedly jumped from $2.75 million to $7.5 million with the onset of COVID in March 2020.

We implement our regressions using a fuzzy regression discontinuity design (RDD) by instrumenting a SubV case with the debt size cutoff, *BelowCutoff*, which equals one if a small business firm's debt is below $7.5 million and zero otherwise. That is, $BelowCutoff_i$ for firm i is defined as follows:

[14] The original threshold was $2.75 million, but it was unexpectedly increased to $7.5 million in March 2020 as part of the CARES Act. For our RDD strategy, it is important to note that the increase in the debt limit for SubV eligibility could not have been anticipated.

$$BelowCutoff_i = \begin{cases} 1, & Total\ liability_i \leq \$7.5\ million, \\ 0, & Total\ liability_i > \$7.5\ million, \end{cases}$$

where *Total liability* is the running variable, measured in millions of USD.

Our identification is based on the assumption that firms around the debt size cutoff are comparable so that the case outcome and the debt size would be continuous around the debt size cutoff in the absence of SBRA. Because the true eligibility threshold is unobserved, we employ a two-stage least squares (2SLS) regression as follows:

$$First\ stage: Sub\ V_i = \alpha + BelowCutoff_i + f(Total\ liability - \$7.5\ million) + BelowCutoff_i \times f(Total\ liability - \$7.5\ million) + X_{i,t} + \delta_c + \gamma_t + \beta + \epsilon_{i,j,c,t},$$

$$Second\ stage: y_i = \alpha + \beta \widehat{Sub\ V_i} + X_{i,t} + \partial_j + \delta_c + \gamma_t + \epsilon_{i,j,c,t},$$

where y_i is either an indicator of the case outcome ($Confirmed_i$) or the time to reach the outcome for case i. $Sub\ V_i$ equals one if case i is filed under Subchapter V of Chapter 11 and zero otherwise. $\widehat{Sub\ V_i}$ is the fitted value of $Sub\ V_i$ from the first-stage regression. f is a polynomial function of $Total\ liability - \$7.5\ million$. We start with a linear probability model and use higher-order polynomial functions as a robustness check (Imbens and Lemieux, 2008). $X_{i,t}$ includes the following control variables: $Total\ Asset_{i,t}$, $Secured\ Debt/Total\ Liability_{i,t}$, $Jointly\ Filed\ Case_{i,t}$, $\#\ Secured\ Creditors_{i,t}$, and $\#\ Unsecured\ Creditors_{i,t}$. ∂_j, δ_k, and γ_t indicate industry, court, and filing year fixed effects.

For the RDD analysis, we use our sample of 959 Chapter 11 cases filed between 2020Q1 and 2023Q3 with total liabilities between $4 million and $11 million. From the FJC data we can

observe if a plan was confirmed, but for a small set of cases the firm confirms a plan of liquidation rather than a plan of reorganization. For all cases with confirmed plans in the RDD sample, we obtain the plan from PACER and manually check to identify whether it is a reorganization or liquidating plan. We identify 31 SubV cases and 39 non-SubV cases with liquidating plans, and group their outcomes together with cases that are converted to Chapter 7 liquidations. Table 3 reports summary statistics for this sample, separately for SubV (Panel A) and non-SubV (Panel B) cases. We immediately observe that over 49% of SubV cases have their reorganization plans confirmed, while only 20% of non-SubV cases have their plans confirmed. On average, total liabilities of SubV cases are somewhat lower ($5.9 million) than that of non-SubV cases ($6.9 million), which is expected due to the eligibility threshold limiting larger firms from using SubV. Finally, the proportion of SubV cases with more than 50 creditors (*Complicated case*) is higher than non-SubV.

Table 4 reports the RDD regression results for case outcomes, including the 57 cases with total liabilities above $7.5 million which utilize SubV (Panel A). In addition to analyses for cases with total liabilities between $4 and $11 million, we also report results for cases with total liabilities between $6 million and $9 million, to show how results change as we limit the sample to firms closer to the threshold. The coefficient estimates of *BelowCutoff* in the first stage are positive and significant in both Columns 1 and 3, with firms below the cutoff being about 24 (27) percentage points more likely to use SubV than those above the cutoff in Column (1) (Column (3)). The *f*-test for these first-stage regressions are 29.12 and 10.53, showing that there is sufficient power to use 2SLS for these sample sizes. We note also that the first stage regression provides interesting insights into which firms choose to use SubV. In particular, the positive and significant coefficient estimates of *# Secured Creditors and # Unsecured Creditors* suggest that the time-consuming

bargaining process in the standard Chapter 11 is an important factor for firms to choose SubV when bargaining with many creditors might be costly.[15]

The second-stage results consistently show that SubV has an economically large effect on the probability a firm confirms a plan of reorganization. The coefficient estimates of *SubV Hat* are positive and statistically significant at the 10% level for both samples. We note that the necessary identification assumptions are most likely to hold for firms closest to the threshold; focusing on these estimates, we find that usage of SubV is causally related to an increased likelihood of plan confirmation of 36 percentage points. Since Table 3 shows that only 20% of non-SubV cases have a reorganization plan confirmed, SubV roughly doubles the probability of reorganizing, relative to nearly identical firms that are just over the size threshold.

One reason for the lack of stronger significance in the second stage for the wider bandwidth is the measurement error for the liability size used to determine SubV eligibility. As mentioned above, there are 57 cases in our sample with total liabilities above $7.5 million that are filed under SubV. This potentially biases the second-stage estimates downwards, because these larger SubV cases act as control firms in the second-stage regressions.[16] Furthermore, we cannot observe within non-SubV cases whether excluding non-contingent liabilities would push them below the eligibility threshold. Therefore, there is some noise in the RDD first stage due to the inability to directly observe the true eligibility threshold.

[15] Table IA.1 reports the OLS results of regressing SubV status on case characteristics using cases filed between 2020Q1 and 2023Q3 that are eligible for choosing SubV (i.e., total liabilities between $4 million and $7.5 million). The results are qualitatively similar to the first-stage results reported in Table 4.

[16] 53% of the 57 SubV cases above the threshold confirm plans of reorganization, while only 20% of non-SubV cases above the threshold confirm a plan. This difference indicates that including the 57 SubV firms as "control" cases when they were actually treated can have a substantial effect on point estimates and statistical significance.

To demonstrate this, Panel B of Table 4 reports the 2SLS RDD results excluding these 57 cases entirely. This greatly increases the power of the first stage, with *f*-stats of 72.63 and 32.32. We now find that the second-stage effects are statistically significant at the 1% level for both bandwidths. For the tighter bandwidth, we estimate that SubV increases reorganization plan confirmation by 35 percentage points, an effect similar to the 36 percentage point increase from Panel A of Table 4. For the $4 – $11 million sample we estimate that SubV increases the likelihood of confirmation of a reorganization plan by 26.2% percentage points. In both cases, dropping these 57 cases boosts our statistical power significantly while leaving the estimated coefficients similar to when we use the full sample. Thus, it does not appear that removing the 57 cases creates a significant bias, but simply adds noise to our sample of cases.

Table 5 follows the analysis in Table 4 but the dependent variable in Column (2) is *Ln(# Days to Confirmation).* Since these regressions use only cases in which a reorganization plan is confirmed, we focus on the bandwidth of $4 to $11 million using the larger sample size. The coefficient of *SubV Hat* is negative and statistically significant regardless of whether we include the 57 firms filing under SubV with liabilities above $7.5 million (Panel A) or not (Panel B). This shows that, conditional on having a reorganization plan confirmed, small business debtors using SubV reach confirmation significantly faster. Economically, electing SubV reduces the time to confirmation by 30% based on Panel A, or 33% based on Panel B of Table 5. At the same time, we find no effect of SubV on the amount of time until a negative outcome occurs, as shown by the small and statistically insignificant coefficient estimates for *SubV Hat* in Column (4) of both Panels A and B.[17]

[17] Tables IA.2 and IA.3 report the RDD regression results using 2nd-order polynomial functions as a robustness check. The results are qualitatively similar to those reported in Tables 4 and 5.

The potential for firms to reduce their liabilities in order to become eligible for SubV is likely to be substantially lower for distressed small businesses than for larger or healthier firms with more access to capital. Still, we perform several additional tests to consider whether firms manipulate their liability size at the threshold. First, Figure 3D presents the density of bankruptcy cases over liability size. If firms were manipulating their liabilities to be under the threshold, or if SubV were attracting a large set of firms into bankruptcy, we would expect a discontinuous drop in the density of firms at the $7.5 million threshold. We apply a McCrary (2008) density test to investigate the distribution of cases around the liability threshold. We find no evidence for any significant discontinuity around the threshold (i.e., $p = 0.14$). Second, Figure 4 shows the leverage ratio and secured debt ratio of bankruptcy filers are also smooth around the liability cutoff, consistent with the necessary identifying assumption for RDD of firm characteristics being smooth across the threshold. Last, if we remove cases with liabilities between $7 million and $7.5 million (those that would be most able to manipulate their liabilities to be under the eligibility threshold) and repeat our RDD analyses, we find that our key coefficients are essentially unchanged (see, Appendix Tables IA.4 and IA.5). Taken together, liability manipulation is unlikely to have impacted our estimates.

4.4. Difference-in-difference regressions

The introduction of SubV for firms with less than $7.5 million in noncontingent liabilities also lends itself well to a difference-in-difference (diff-in-diff) regression as follows:

$$y_i = \alpha + \beta_1 Treated_i + \beta_2 Post_t + \beta_3 Treated_i \times Post_t + X_{i,t} + \partial_j + \delta_c + \gamma_t + \epsilon_{i,j,c,t},$$

where y_i is either an indicator for the outcome of case i ($Confirmed_i$) or the time for case i to reach its outcome. $Treated_i$ is a dummy variable indicating whether case i has less than $7.5

million in total liabilities, such that it could be "treated" by SubV. $Post_t$ equals one if case i was filed after February 2020 and zero otherwise. $X_{i,t}$ includes the previously defined set of control variables: $Total\ Asset_{i,t}$, $Secured\ Debt/Total\ Liability_{i,t}$, $Jointly\ Filed\ Case_{i,t}$, $\#\ Secured\ Creditors_{i,t}$, and $\#\ Unsecured\ Creditors_{i,t}$. ∂_j, δ_k, and γ_t indicate industry, court, and filing year fixed effects.

We use the 1,954 Chapter 11 cases filed between 2017Q1 and 2023Q3, with total liabilities between \$4 million and \$11 million for our diff-in-diff analyses. We label cases with total liabilities between \$4 million and \$7.5 million as treated cases and those with total liabilities between \$7.5 million and \$11 million as control cases. As in the previous RDD regressions (Section 4.3), we manually check court documents to distinguish reorganization from liquidating plans; we identify 141 cases with liquidating plans, whose outcome we group together with cases converted to Chapter 7 liquidations.

Table 6 reports summary statistics for this diff-in-diff sample. 31.6% of treated cases and 28.6% of control cases have reorganization plans confirmed. These numbers are similar to each other because many "treated" cases are filed before February 2020, when SubV is not yet available: Only 28% of total treated cases are filed under SubV. The average time for treated cases to have a reorganization plan confirmed is 339 days, 82 days faster than control cases. By construction, the average of total liabilities of treated cases (\$5.5 million) is significantly lower than that of control cases (\$9.0 million).

Table 7 reports the diff-in-diff regression results for case outcomes and duration. The coefficient estimate of *Treated x Post* in Column (1) of Panel A is positive and statistically significant at the 5% level, suggesting treated cases are about 10.5 percentage points more likely

to confirm a plan of reorganization after 2020. Further, similar to the RDD results in the previous section, Column (2) of Panel A shows that treated cases reach confirmation faster (but insignificant) after 2020, while cases with negative outcomes are not processed any more quickly in SubV (Column (3)).

The interpretation of these diff-in-diff results is complicated by two factors which we explore in Panel B of Table 7 and in Table 8. First, as discussed for our RDD results, there are 57 SubV cases in our sample that have total liabilities above $7.5 million. In Table 7 Panel A, these observations are "control" cases even though they are in fact treated with SubV. This misclassification biases our coefficients towards zero. To address this issue, in Panel B we drop these 57 cases from the regressions. This adjustment significantly increases the estimated impact of SubV, with the coefficient on *Treated x Post* increasing to 17.1 percentage points, now significant at the 1% level. This is expected, since we remove from the control group a set of cases that are actually treated by SubV. Similarly, SubV reduces the time to confirmation by 26% for this sample. We continue to find no effect on the time to reach negative case outcomes.

Relatedly, the results in Table 7 should be viewed as the "intent-to-treat" effect of SubV status on case outcomes since many cases with total liabilities between $4 million and $7.5 million do not file under SubV even after 2020. To understand the importance of this factor, for Tables 9 and 10 we continue to label cases with total liabilities between $4 million and $7.5 million before 2020 as treated cases, but after 2020 we only label cases as treated if they have under $7.5 million in liabilities *and* they actually file under SubV. Thus, the *Treated X Post* interaction variable compares debtors that in fact use SubV to firms that are never able to use SubV as well as firms that could have used SubV but chose not to. This version of the diff-in-diff is not as clean from an identification standpoint; some of the effects of SubV we observe could be due to the endogenous

choice of small businesses to use SubV. However, these estimates may come closer to the actual treatment of SubV, since we include only firms that are actually treated with the new bankruptcy regime.

Table IA.6 reports the summary statistics using this alternatively defined treatment variable. The difference between treated and control cases for case outcome becomes much larger: 35.7% of treated cases have reorganization plans confirmed, while only 23.6% of control cases do so. Table 8 reports the diff-in-diff regression results using these groups. The coefficient estimate of *Treated x Post* in Column (1) is positive and statistically significant at the 1% level, with a magnitude comparable to the effect documented in our baseline OLS regressions. Economically, treated cases are 27.9 percentage points more likely to have a reorganization plan confirmed after 2020. Results for the time to plan confirmation are very similar to those in Table 7, showing that SubV reduces the time to confirmation by 27%. Meanwhile, we continue to find no effect on the time to reach a negative case outcome.

5. Creditor recoveries and firm post-bankruptcy survival

5.1. Expected creditor recoveries

The results in Section 4 document the positive impact of SubV status for debtors in terms of case outcomes and duration. It is less clear, however, whether creditors also benefit from firms' ability to elect SubV. The factors driving ultimate recoveries for creditors in large bankruptcy cases have been extensively studied (Altman, Hotchkiss, and Wang 2019). Similar studies for smaller firms have been limited, likely because recoveries to unsecured creditors are frequently small or zero (Bris, Welch, and Zhu, 2006), and because statements of expected recoveries are

only observable from manually collected court filings. Since we focus on the changes to bargaining in Chapter 11 as a result of SubV, in this section, we directly examine expected unsecured recoveries for cases where a reorganization plan is confirmed, relative to the likely recoveries for other outcomes where no ongoing business survives Chapter 11.

For 323 Chapter 11 cases filed between March 2020 and September 2023, with total liabilities between $4 million and $11 million and which confirm a plan of reorganization, we are able to obtain the plan (for SubV cases) or disclosure statement (for non-SubV cases) from Pacer. Information from these documents is sufficient to estimate the expected recovery rate to general unsecured creditors for 289 cases.[18] The average expected unsecured creditor recovery rate for confirmed SubV plans is 31.9 percentage points, lower than that for confirmed non-SubV plans, 66.3%, as shown in Table 3.[19]

The unconditional difference in recovery rates between SubV and non-SubV cases could be due to endogenous differences between firms that choose to file SubV and those that do not. For example, if reorganization is more difficult and costly without SubV, only non-SubV debtors with especially strong prospects may successfully confirm a reorganization plan. We therefore focus first on the regression discontinuity design for this analysis.[20] We use the 959 Chapter 11 cases as

[18] We are not able to estimate the expected recovery rate to general unsecured creditors for the remaining 34 cases due to insufficient information. These cases either do not have unsecured debt (7 cases) or do not describe their payment plan to general unsecured creditors in detail.

[19] We calculate a percentage recovery rate for general unsecured creditors as follows: 1) the percentage recovery as directly stated in the plan or disclosure statement; or, 2) the estimated total payments to general unsecured divided by the total general unsecured claims. Total payments are either the full payment if made upon exit from bankruptcy, or the sum of projected monthly/quarterly/annual payments.

[20] We report OLS regression results using only cases that confirm a reorganization plan in Appendix Table IA.9. These regressions suggest unsecured creditors in SubV cases have a higher probability of any positive recovery, but a lower probability of a recovery greater than 20%.

in Section 4.2 and remove the 57 cases in our sample with total liabilities above $7.5 million that elect to use SubV.[21]

Cases that convert to Chapter 7 or that are dismissed from court do not have observable recovery rates, as creditor recoveries are not systematically collected for these cases. For these cases, we assume various unsecured creditor recovery rates ranging from 0% to 50% and test how our conclusions are affected by these assumptions. We report these results in Table 9. Panel A reports the RDD regression results for cases with total liabilities between $4 million and $11 million. The coefficient estimates of *BelowCutoff* in the first stage are positive and significant; firms below the cutoff are about 50 percentage points more likely to use SubV than those above the cutoff with an *f*-test of 73, showing there is sufficient power to use 2SLS with this number of observations. Columns (2) to (7) report the second stage results. If we assume that all non-reorganized cases have a recovery rate of zero (Column 2), we find that the coefficient of *SubV Hat* is 10.0% (significant at the 10% level). In other words, SubV causally increases creditor recovery rates if we assume that unsecured creditors receive no recovery in all cases that do not reorganize. As we increase the assumed unsecured recovery rate in Columns (3) to (7), the coefficient estimates of *SubV Hat* become insignificant but point estimates remain positive as long as we assume recovery rates of less than 30%. Even if we assume that recovery rates in non-reorganization cases reach 50%, we estimate that creditors are no worse off under SubV than in standard Chapter 11 cases. Given that the average recovery rate observed reorganized cases is less than 50%, it is highly unlikely that creditors recovery 50% in liquidated and dismissed cases.

[21] Results are similar if we include the 57 SubV cases above the threshold, but statistical significance is diminished for all point estimates. Even if we include these cases, we never estimate that recovery rates are lower under SubV for any recovery rate assumption we make for liquidated cases.

Table 9 Panel B reports the RDD regression results for the narrower bandwidth of cases with total liabilities between $6 million and $9 million. The coefficient estimates for *SubV Hat* become more statistically significant for these firms closest to the threshold. These results show that the use of SubV is causally related to an increase in unsecured recovery rates of 13 percentage points, even if we assume recovery rates as high as 20% for other outcomes. Moreover, the coefficient estimates for *SubV Hat* remain positive though insignificant even if we assume non-reorganization case recovery rates as high as 50%, suggesting that SubV has not led to a worse outcome for unsecured creditors. Overall, it appears unlikely that SubV causally decreases recovery rates for unsecured creditors.

5.2. Post-bankruptcy firm survival

Do higher confirmation rates from SubV cases lead to lower post-bankruptcy survival rates, as marginal firms are allowed to reorganize in SubV? To answer this question, for firms with reorganization plans confirmed between March 2020 and September 2023 we obtain the firm's most recent operating status based on state-level business registry records from OpenCorporate.[22] We further cross-check the operating status of each firm based on public records from LexisNexis. The average survival rate for firms with confirmed reorganization plans as of December 2023 is 86.0% for SubV cases, higher than the 70.3% survival rate for non-SubV cases.[23]

[22] OpenCorporate provides data sourced from state business registries and can be accessed from the following link: https://opencorporates.com/ .

[23] Cases early in our sample have had longer to fail than those that recently emerged from bankruptcy. Since we only observe the active status of the firm as of December 2023, when we collected the data, and not the date on which the firm went out of business, we cannot run a hazard model or use a time-dependent survival probability as the dependent variable. Instead, our regressions all include year fixed effects to ensure that we are comparing case outcomes for firms that filed for bankruptcy in the same year.

Because of endogeneity concerns similar to those affecting recovery rates, we use our regression discontinuity design to examine survivals.[24] We use the 959 Chapter 11 cases as in Section 4.2 and remove the 57 cases with liabilities above $7.5 million that were filed under SubV. Also similar to our approach for recovery rates, we explore how sensitive our estimates of the effect of SubV status are to assume survival probabilities for firms without confirmed plans ranging from 0% to 100%, though survivals in cases of liquidation should in fact be zero.

Table 10 Panel A reports the RDD regression results for cases with liabilities between $4 million and $11 million. The first stage results in Column (1) report positive and significant coefficient estimates of *BelowCutoff*, with an *f*-test of 73. The second stage results reported in Columns (2) to (7) show that the coefficient estimates for *SubV Hat* are positive and significant in Columns (2) and (3), suggesting that emerging from a SubV plan leads to a higher survival probability, assuming survival rates for non-reorganization cases of up to 20%. The coefficient estimates of *SubV Hat* become insignificant in Columns (4) to (6) where assumed survivals range from 40% to 80%, and become negative and significant in Column (7) when we assume a 100% survival rate for firms without confirmed plans. This exercise suggests it is unlikely that SubV leads to worse survival rates, especially since assuming a survival probability of 100% for firms without a confirmed reorganization plan is inconsistent with the fact that this group consists largely of liquidations.

Table 10 Panel B reports the RDD regression results for cases with liabilities between $6 million and $9 million. The results are qualitatively similar to those reported in Panel A. In sum, under any plausible scenario for a counterfactual survival rate for firms that did not reorganize

[24] Internet Appendix Table IA.10 reports OLS regressions where the dependent variable, *Active Status*, equals one if a firm is active as of December 2023 and zero otherwise. The coefficient of *SubV* is positive and statistically significant in all four columns, suggesting that firms emerging from SubV are more likely to survive.

under Chapter 11, we do not find evidence that SubV firms are less likely to survive over a horizon at least as long as the average time to failure in a pre-SubV regime.[25]

If survival rates of non-reorganized cases are less than 20% we estimate that SubV causally increases firm survival. While it is difficult to know exactly the survival rate of non-reorganized firms, we can use information from Morrison (2007) to give a back-of-the-envelope estimate. Morrison (2007) examines 95 small business bankruptcy cases filed in the Northern District of Illinois and documents outcomes for these cases. In this sample, 39.5% of dismissed cases are either sold as going concerns or survive at least a year after exiting bankruptcy. In our RDD sample, 49.4% of non-reorganized cases were dismissed, 37.1% were converted to Chapter 7, and 13.5% were pending for more than 9 months. Assuming that 0% of Chapter 7 cases survive, 39.5% of dismissed cases survive, and 50% of pending case survive, this leads to an overall survival rate of 26.3% among non-reorganized cases. If we assume this active rate for all non-reorganized cases, we estimate that SubV increases firm survival by 11.2 percentage points, an estimate that is not quite significant at the 5% level.

6. Discussion of causal inference and threats to identification

Both RDD and difference-in-differences estimates document that SubV has significant and large effects on bankruptcy outcomes for firms just below the threshold of eligibility. While both approaches are intended to isolate the causal impact of SubV on firm outcomes, it is possible that

[25] One potential concern is the short measurement window for our active status variable, given all cases are filed after March 2020. To mitigate this concern, we identify 57 firms with total liabilities between $4 million and $11 million filing for Chapter 11 before March 2020, which confirm a reorganization plan but are subsequently inactive. The average time for firms to be out of business after their plan is confirmed is 574 days based on these 57 inactive firms. Based on this estimate as an expected time to failure, we repeat our OLS regressions but include only firms with cases filed in 2020 and 2021. The results are qualitatively similar to those reported in Table IA.10. In addition, Tables IA.7 and IA.8 report the RDD regression results 2nd-order polynomial functions for the recovery rate and survival rate tests. The results are qualitatively similar to those reported in Tables 9 and 10.

these estimates are biased if the set of firms that choose to enter bankruptcy changes because SubV is introduced. If so, the differences in case outcomes that we document could be partially due to selection rather than the SubV treatment. Importantly, this potential selection bias is only due to the set of firms choosing to *enter* bankruptcy, not firms choosing to use SubV or not. The selection into SubV will not affect either the RDD or diff-in-diff estimates because both of these regressions estimate an "intent to treat" effect for firms below the $7.5 million threshold, regardless of whether the firm actually used SubV or not.

However, if SubV changes the set of firms that choose to enter bankruptcy, it could bias our estimates of the causal impact of SubV on bankruptcy outcomes. The direction of this selection bias depends crucially on the quality of firms that select into SubV that otherwise would not have entered Chapter 11 at all. On the one hand, our results can be viewed as a lower bound for SubV's impact if the newly-filed SubV cases come disproportionately from highly-distressed firms—those that would have liquidated (either out of court or in Chapter 7) if SubV did not exist. On the other hand, if SubV induces bankruptcy filings from higher quality, less distressed firms that would likely survive a traditional Chapter 11 but choose to use SubV anyway, then our estimates may be biased upwards.

To examine these alternatives, we examine the level of distress of firms with total liabilities between $4 and $11 million which enter Chapter 11 before and after the introduction of SubV. We use firms' leverage ratio (total liabilities/total assets) as a proxy for the level of distress, noting that prior to the introduction of SubV, firms with a one standard deviation higher leverage ratio are 3.4 percentage points less likely to successfully reorganize (significant at the 5% level). Figure 5 plots the leverage ratio of firms filing for Chapter 11 over time. Panel A compares the leverage ratio of cases with liabilities between $4 million and $7.5 million to those in the $7.5 million - $11

million range. Leverage ratios at the time of bankruptcy are very similar for these firms both before and after the introduction of SubV, suggesting that SubV did not significantly alter the average leverage ratio of firms entering bankruptcy below the $7.5 million threshold. If anything, the leverage ratio of firms above the threshold improves slightly towards the end of our sample, which would bias our estimates towards zero if control firms improve in average quality.

In Panel B of Figure 5, we consider how SubV might affect selection into bankruptcy by examining the leverage ratio of firms with between $4 and $7.5 million total liabilities that choose SubV as compared to similar firms that enter standard Chapter 11. Interestingly, the average leverage ratio of SubV cases is higher than that of non-SubV cases, suggesting that, if anything, the quality of firms filing for SubV is lower than that of non-SubV Chapter 11 firms. Thus, selection into SubV is associated with a higher average distress level for firms below the threshold. As noted above, this selection into SubV will not affect the RDD and diff-in-diff estimates in Tables 4, 5, and 7, as these tests compare case outcomes for *all* firms below the threshold to those above the threshold, regardless of whether firms below the threshold actually chose to use SubV or not. However, to the extent that SubV induces firm to enter bankruptcy, this figure suggests it attracts more highly distressed firms that would be more likely to liquidate rather than reorganize if SubV did not exist.

Lastly, in Appendix Figures IA.1 and IA.2 we test the parallel trends assumption for the validity of the diff-in-diff analysis. These figures plot coefficient estimates (β_t) from the following dynamic version of our diff-in-diff regression:

$$y_i = \alpha + \beta_1 Treated_i + \sum_{t=2017}^{2023} \beta_t Treated_i \times Year_t + X_{i,t} + \partial_j + \delta_c + \gamma_t + \epsilon_{i,j,c,t},$$

where $Year_t$ equals one for year t and zero otherwise. The β_t coefficients are year-specific difference-in-differences (DiD) coefficients (with 2019 acting as the reference year).

Figure IA.1 plots the parallel trend test results for our difference-in-difference sample 1. Panel A plots coefficient estimates (β_t) for *Reorganization Plan Confirmed*. It shows that the significant effects begin in the policy year (not before). Since we find no effects before the policy, our results are likely causal. Panels B and C plot coefficient estimates (β_t) for *Ln(# Days to Confirmation)* and *Ln(# Days to a negative outcome)*. Consistent with the results reported in Table 7B, there is no significant effect on *Ln(# Days to a negative outcome)* throughout our sample period. While there is no single coefficient in the post period that is statistically significant for *Ln(# Days to Confirmation),*[26] we see the largest negative estimates appear only in the post period. Figure IA.2 plots the parallel trend test results for our difference-in-difference sample 2, showing similar results as Figure IA.1. To summarize, there is no evidence of pre-policy period effects for any of the parallel trend tests.

7. Conclusion

Taken together, our results establish that SubV has dramatically changed the bankruptcy landscape for small businesses. Our most credible causal estimates suggest that SubV cases are 36% more likely to successfully reorganize as similar cases that do not file under SubV. In addition, SubV cases that confirm reorganization plans move about 33% faster, reducing the overall costs of bankruptcy for these firms. As small businesses learn about the benefits of the SubV option,

[26] Lack of significance is likely due to small sample sizes, as these regressions do not pool together all post-treatment years.

more and more are using this option as opposed to a traditional Chapter 11, and some appear to switch from Chapter 7 liquidations to SubV.

It is possible that SubV swings the pendulum too far, resulting in small businesses being allowed to continue when they are not truly economically viable or potentially lowering creditor recovery rates. However, our estimates suggest that unsecured creditors are no worse off under SubV even if we make the extreme assumption that recovery rates in non-reorganization cases. Meanwhile, it is likely the case that SubV leads to higher chances of long-run survival for small businesses, suggesting that many of the smaller firms that are liquidated in standard Chapter 11 could reorganize and survive in a more pro-debtor system. Lastly, although our estimates are not affected by manipulation of liability size to become eligible for SubV, going forward, the benefits of this procedure to small business owners above the current $7.5 million threshold may make such behavior more attractive.

Reference

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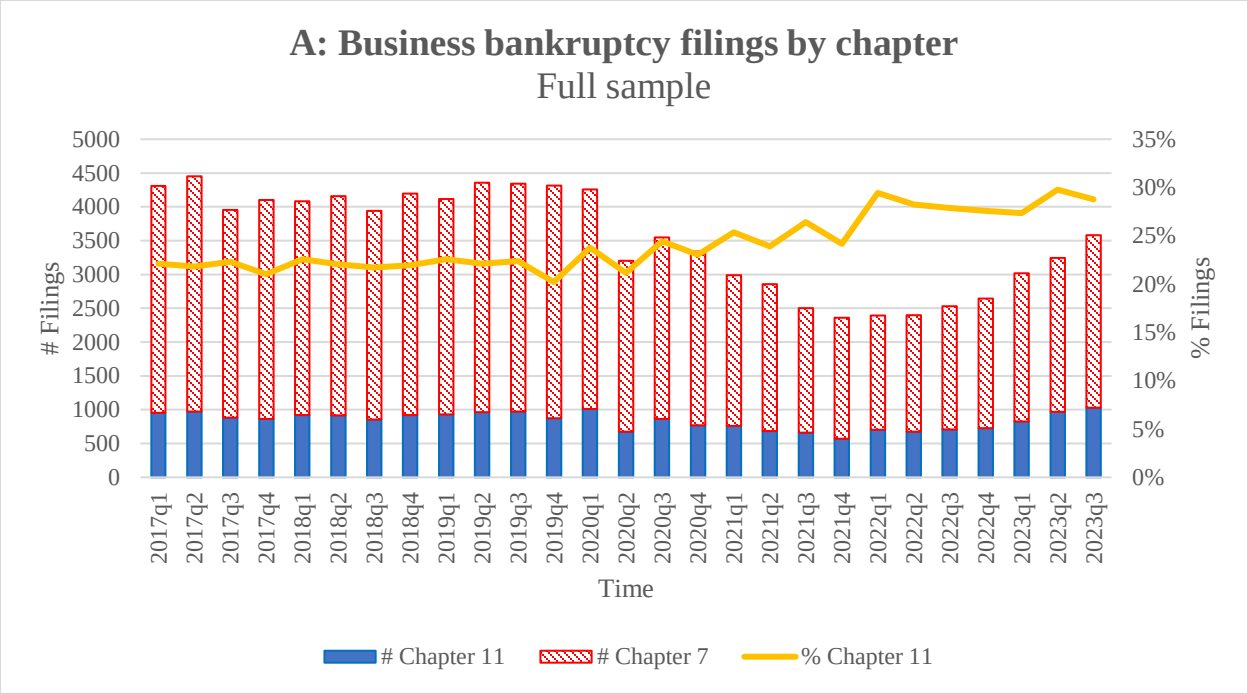
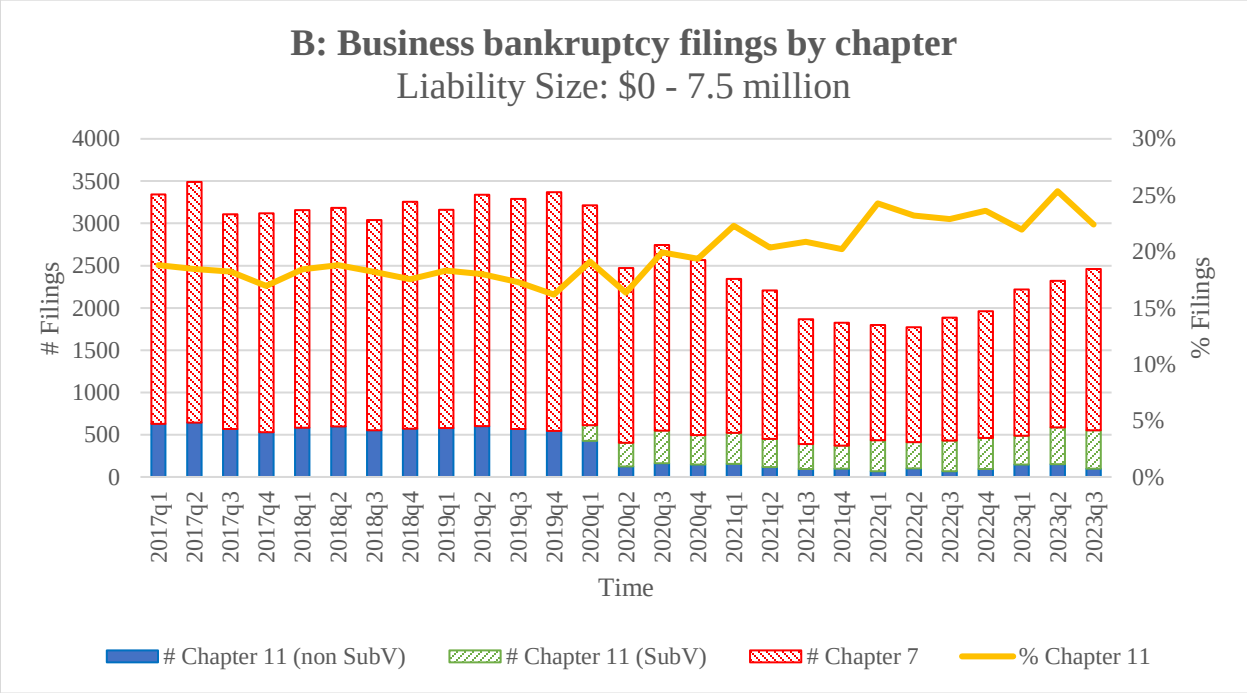

A: Business bankruptcy filings by chapter
Full sample
Filings
% Filings
Time
Chapter 11
Chapter 7
% Chapter 11


B: Business bankruptcy filings by chapter
Liability Size: $0 - 7.5 million
Filings
% Filings
Time
Chapter 11 (non SubV)
Chapter 11 (SubV)
Chapter 7
% Chapter 11

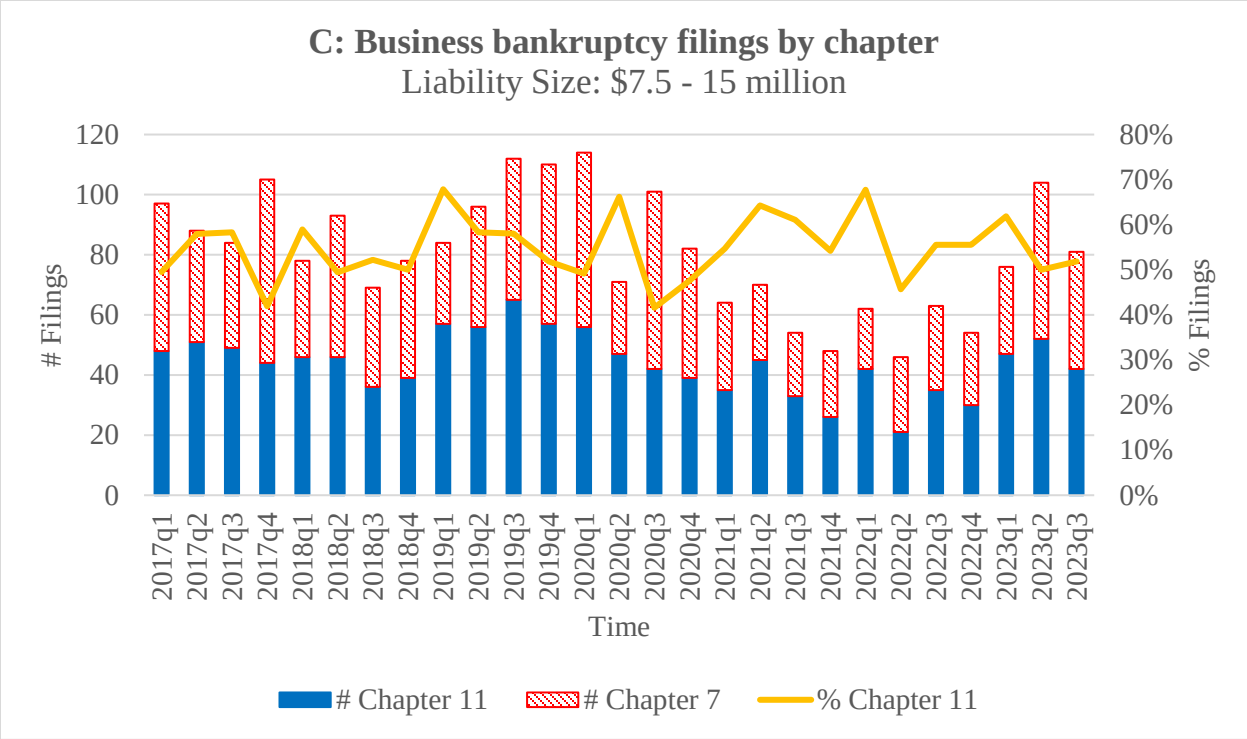


Figure 1: Time trend of Chapter 11 and 7 bankruptcy filings

The figure plots the time trend of Chapter 11 and 7 filings from 2017 to 2023. The dark (light) blue histogram represents the number of Chapter 11 (7) filings. The orange line represents the percentage of Chapter 11 filings over total (Chapter 11+ Chapter 7) bankruptcy filings. Panel A is based on the full sample; Panel B is based on filings with liabilities less than $7.5 million; Panel C is based on filings with liabilities between $7.5 million and $15 million.

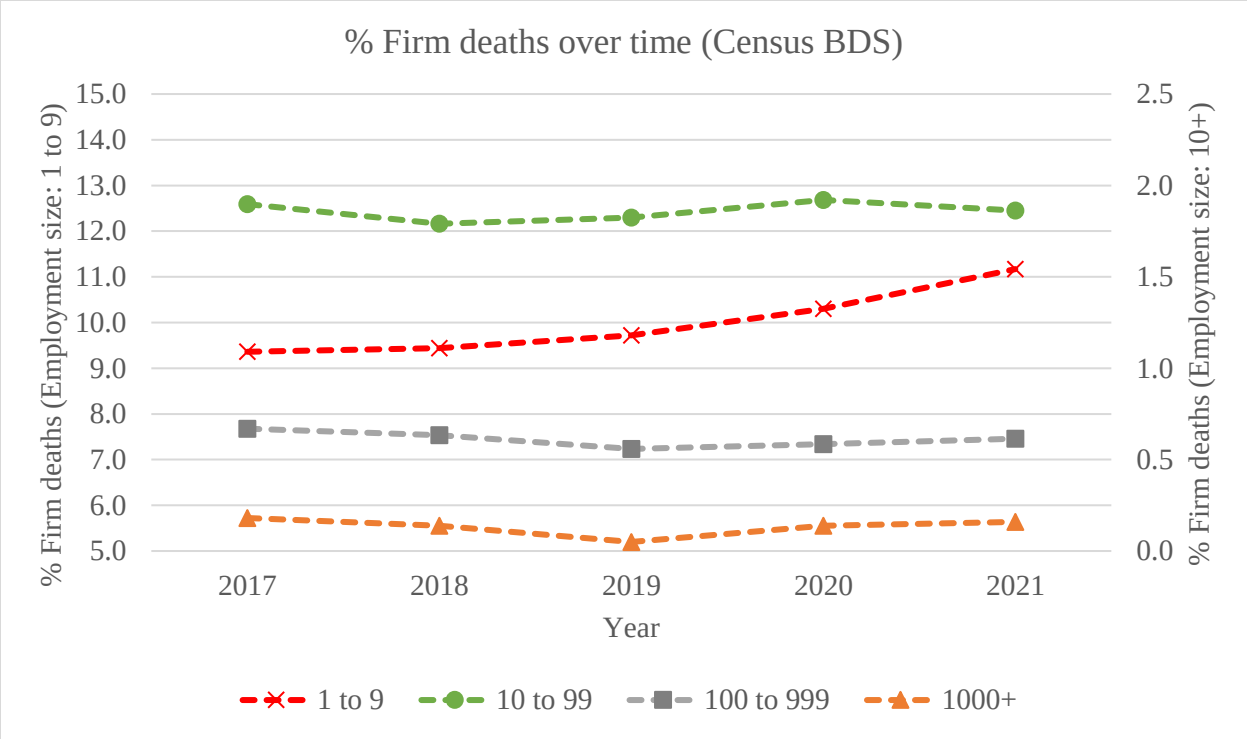


Figure 2: Firm death rate over time

The figure plots percentage of firm that die over time from 2017 to 2021. The red line represents the death rate for firms with less than 10 employees. The green line represents the death rate for firms with 10 to 99 employees. The gray line represents the death rate for firms with 100 to 999 employees. The orange line represents the death rate for firms with more than 1,000 employees. Data source: Census Business Dynamics Statistics

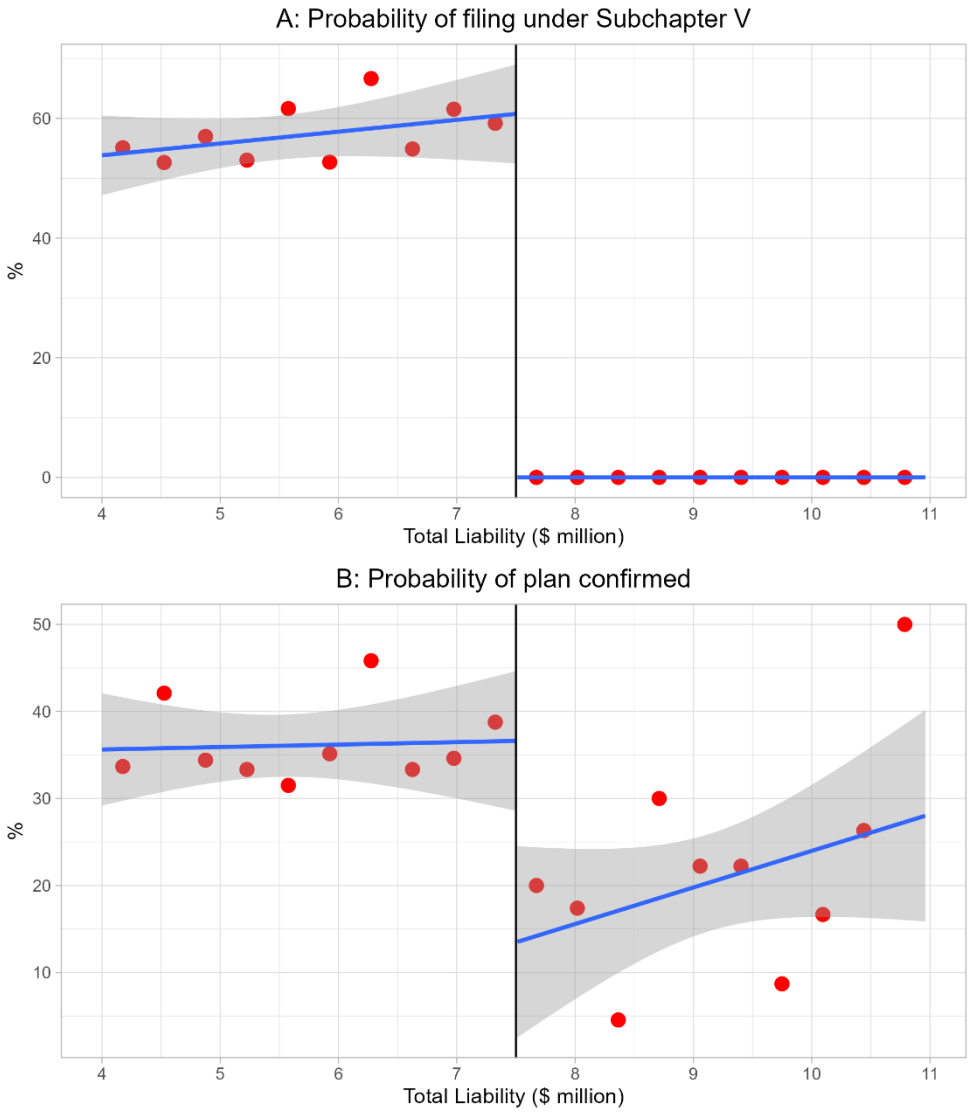
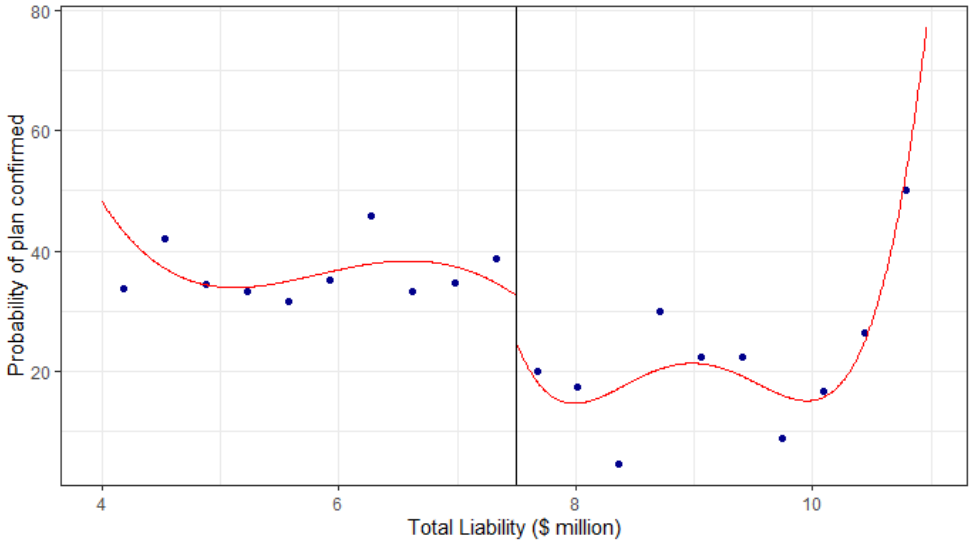


Figure 3: Probability of filing bankruptcy under Subchapter V and case outcome

The figure plots the distribution of Subchapter V filings and case outcomes around the cutoff. The x-axis presents the forcing variable Total Liability, measured in millions USD. The y-axis corresponds to the probability of filing bankruptcy under Subchapter V (A) and the case outcome being confirmed (B and C). Each dot in A (B and C) represents the average probability of filing bankruptcy under subchapter V (percentage of case outcome being confirmed). The vertical line represents the cutoff amount of total liability, $7.5 million. The solid lines represent the fitted values of a second-degree polynomial of Total Liability estimated on the interval $4 million ≤ Total Liability ≤ $11 million. Figure 3D plots the density discontinuity test around the cutoff liability.

C: Probability of plan confirmed (non-parametric)



D: Density test for filings around the cutoff

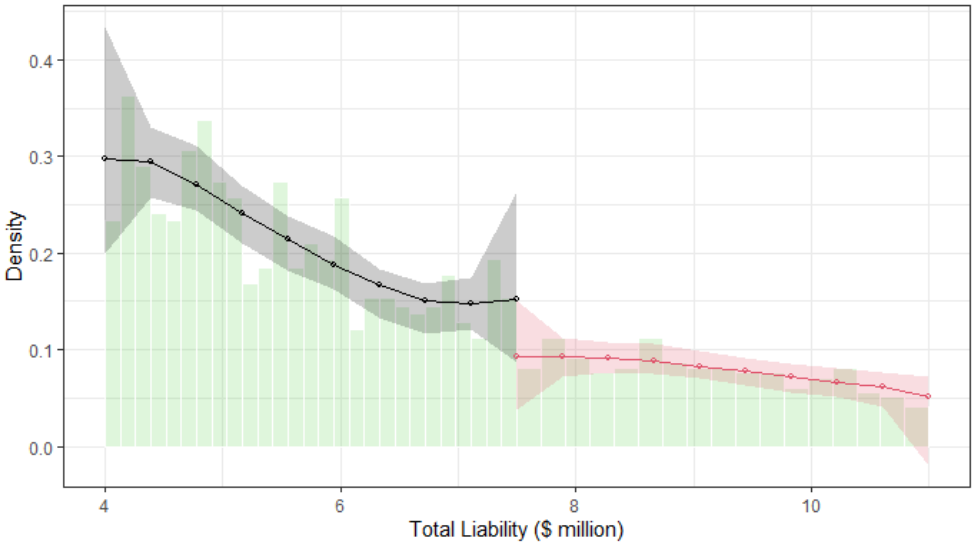


Figure 3: continued

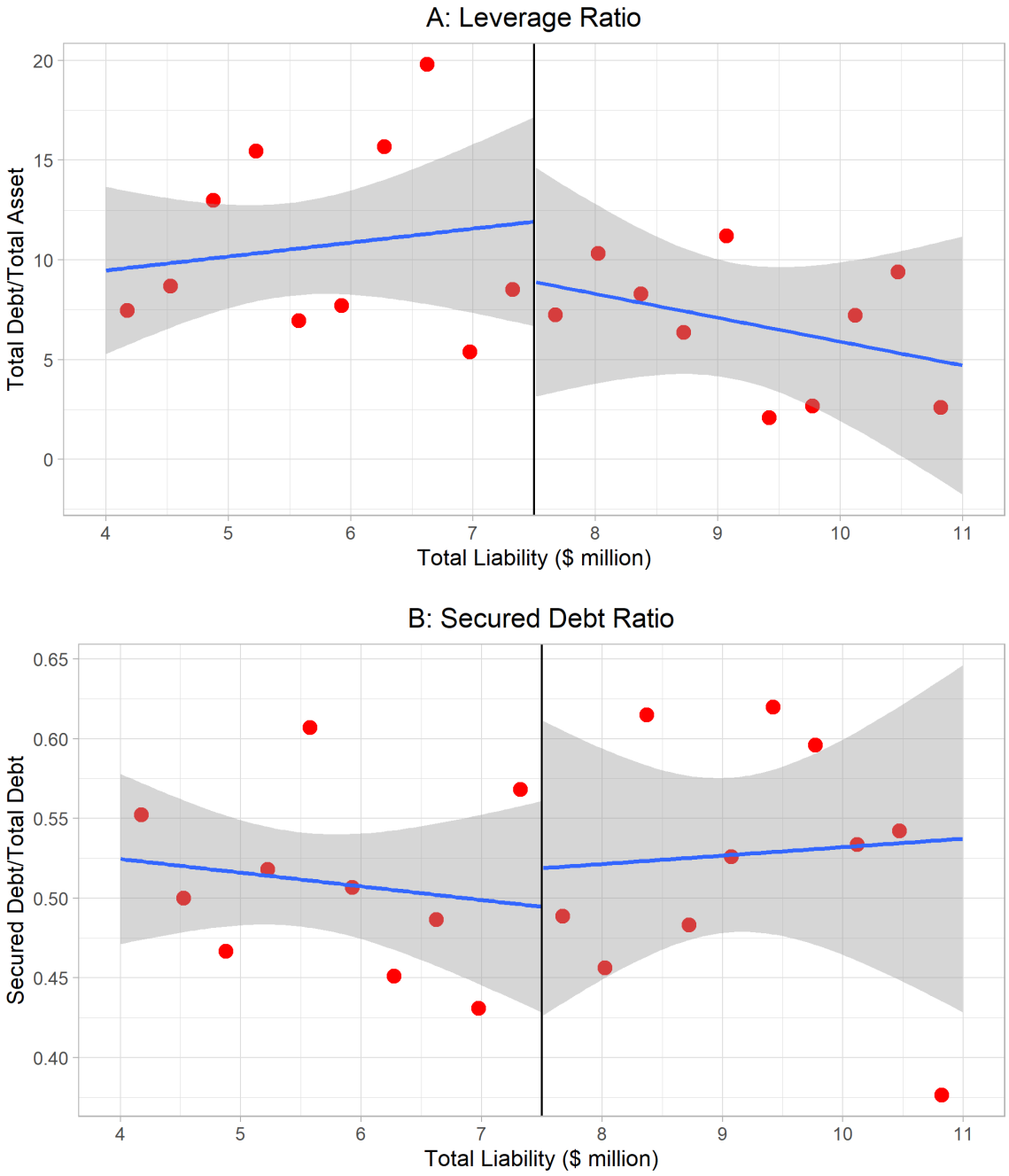


Figure 4: Distribution of case characteristics

The figure plots the distribution of case characteristics around the cutoff. The x-axis presents the forcing variable Total Liability, measured in millions USD. The y-axis corresponds to the leverage ratio (A) and the secured debt ratio (B). Each dot in A (B) represents the average leverage ratio (the secured debt ratio). The vertical line represents the cutoff amount of total liability, $7.5 million. The solid lines represent the fitted values of a second-degree polynomial of Total Liability estimated on the interval $4 million ≤ Total Liability ≤ $11 million.

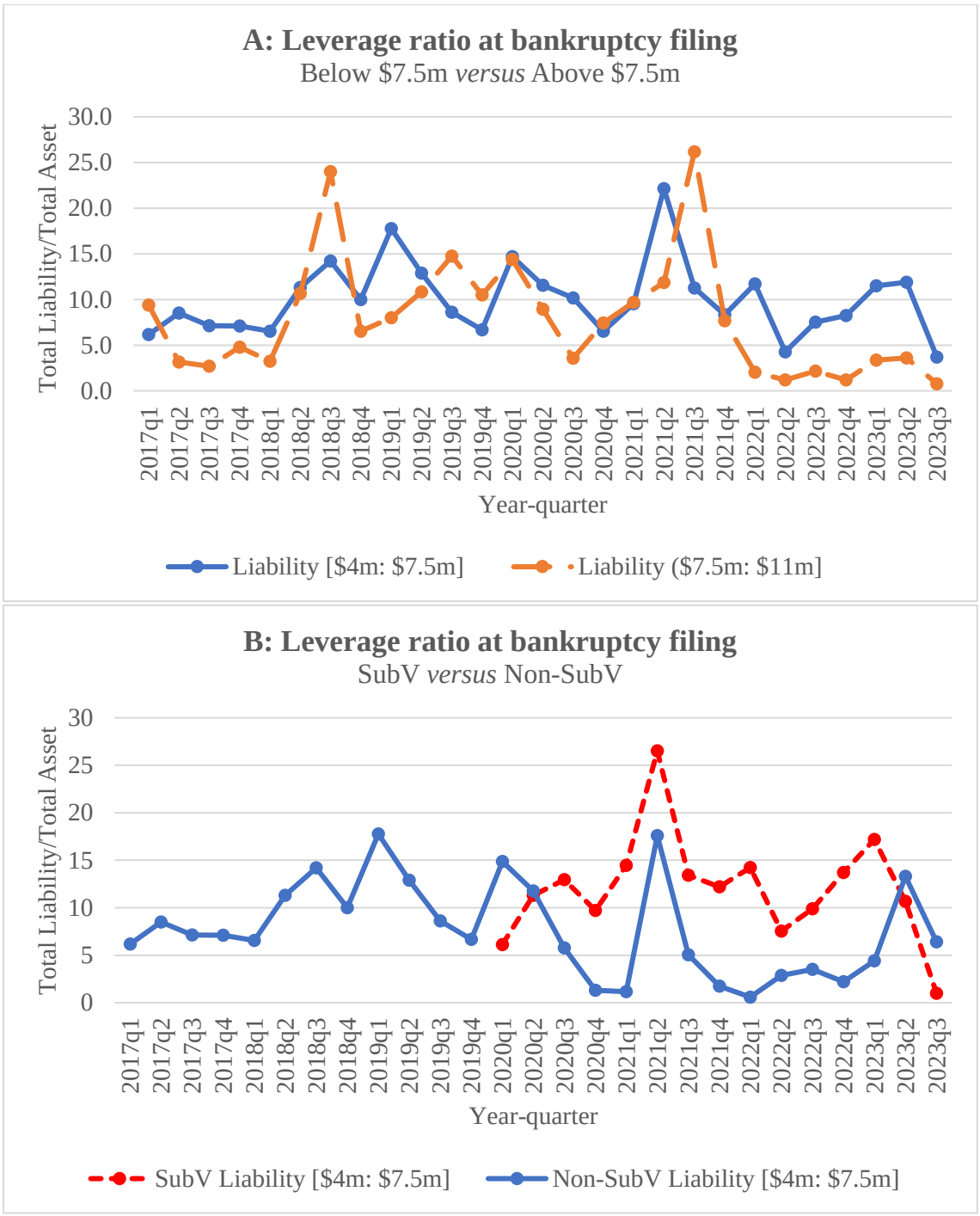


Figure 5: Time trend of leverage ratio of bankruptcy filings

The figure plots the time trend of leverage ratio of bankruptcy filings from 2017 to 2023. Panel A compares the leverage ratio of cases with liability below $7.5 million to those with liability above $7.5 million. The blue (orange dash) line represents the leverage ratio of cases with liability below (above) $7.5 million. Panel B compares the leverage ratio of SubV cases to the leverage ratio of non-SubV cases. The blue (red dash) line represents the leverage ratio of non-SubV cases (SubV cases).

Table 1: Summary statistics - Baseline sample

This table presents summary statistics for outcomes and characteristics of cases used in our baseline analyses. The sample covers Chapter 11 cases filed from March 2020 to September 2023 with total liabilities below $15 million.

	Mean	Min	p50	Max	S.D.	N
Case Outcome						
Plan Confirmed	0.329	0	0	1	0.470	5,100
Dismissed	0.399	0	0	1	0.490	5,100
Converted to Chapter 7	0.098	0	0	1	0.297	5,100
Case Pending	0.174	0	0	1	0.379	5,100
# Days to Confirmation	299	2	251	1,142	174	1,678
# Days to Dismissal	190	0	144	1,046	163	2,066
# Days to Conversion	271	1	196	1,232	243	509
Case Characteristics						
Total Liability	2,517,525	45	1,348,389	14,968,420	2,957,938	5,100
Total Asset	2,634,983	0	444,380	996,000,000	19,430,957	5,100
Secured Debt/Total Liability	0.466	0	0.456	1	0.410	5,100
Sub V	0.568	0	1	1	0.495	5,100
Jointly Filed Case	0.068	0	0	1	0.252	5,100
Complicated Case	0.141	0	0	1	0.348	5,100

Table 2: Subchapter V, case outcome, and duration (Baseline OLS, 2020-2023)

This table presents case-level OLS regression results estimating the impact of Subchapter V on the case outcome and duration. The sample covers Chapter 11 cases filed from March 2020 to September 2023 with total liabilities below $15 million. The outcome variable in Panel A is *Plan Confirmed*, which equals one if a plan is confirmed for the case and zero otherwise. The outcome variable in Panel B is Ln(*# Days to Confirmation)*, the natural logarithm of the number of days from the case filing date to the plan confirmation date. The outcome variable in Panel C is *Ln*(*# Days to negative outcome)*, the natural logarithm of the number of days from the case filing date to the negative outcome date. A negative case outcome includes dismissal, conversion to Chapter 7, or pending more than nine months. *Sub V* is a dummy indicating whether a case is filed under Subchapter V. *t*-statistics are reported in parentheses. *, **, and *** denote 10%, 5%, and 1% statistical significance levels, respectively.

Panel A: Case Status

	Plan Confirmed			
	(1)	(2)	(3)	(4)
Sub V	0.238***	0.204***	0.205***	0.205***
	(18.63)	(14.94)	(15.04)	(14.96)
Total Liability	0.026***	0.026***	0.024***	0.020***
	(12.24)	(12.02)	(11.10)	(8.65)
Total Asset			0.001**	0.001**
			(2.08)	(1.99)
Jointly Filed Case			0.114***	0.107***
			(4.56)	(4.30)
Secured Debt/Total Liability				0.033**
				(1.96)
Complicated Case				0.140***
				(7.25)
Year FE	Yes	Yes	Yes	Yes
SIC FE	No	Yes	Yes	Yes
Court FE	No	Yes	Yes	Yes
Number of observations	5100	5094	5094	5094
R^2	0.104	0.159	0.163	0.172

Panel B: # Days to Confirmation

	Ln(# Days to Confirmation)			
	(1)	(2)	(3)	(4)
Sub V	-0.281***	-0.286***	-0.281***	-0.276***
	(-9.43)	(-8.98)	(-8.82)	(-8.63)
Total Liability	-0.016***	-0.016***	-0.016***	-0.012**
	(-3.69)	(-3.46)	(-3.57)	(-2.49)
Total Asset			0.001*	0.001**
			(1.92)	(2.02)
Jointly Filed Case			-0.000	0.005
			(-0.01)	(0.10)
Secured Debt/Total Liability				-0.011
				(-0.30)
Complicated Case				-0.105***
				(-3.05)
Year FE	Yes	Yes	Yes	Yes
SIC FE	No	Yes	Yes	Yes
Court FE	No	Yes	Yes	Yes
Number of observations	1678	1674	1674	1674
R^2	0.120	0.215	0.217	0.221

Panel C: # Days to negative outcome

	Ln(# Days to negative outcome)			
	(1)	(2)	(3)	(4)
Sub V	0.265***	0.198***	0.199***	0.212***
	(7.42)	(5.18)	(5.23)	(5.52)
Total Liability	0.012*	0.015**	0.009	0.011
	(1.89)	(2.39)	(1.31)	(1.54)
Total Asset			0.004	0.004
			(1.61)	(1.40)
Jointly Filed Case			0.313***	0.330***
			(3.96)	(4.17)
Secured Debt/Total Liability				0.128***
				(2.78)
Complicated Case				-0.115*
				(-1.83)
Year FE	Yes	Yes	Yes	Yes
SIC FE	No	Yes	Yes	Yes
Court FE	No	Yes	Yes	Yes
Number of observations	3420	3412	3412	3412
R^2	0.072	0.141	0.145	0.149

Table 3: Summary statistics - RDD sample, 2020-2023

This table presents summary statistics for outcomes and characteristics of Chapter 11 cases filed from 2017Q1 to 2023Q3 with total liabilities between $4 million and $11 million. *Sub V* is a dummy indicating whether a case is filed under Subchapter V.

	Mean	Min	p50	Max	S.D.	N
Panel A: Sub-V Cases						
Case Outcome						
Reorganization Plan Confirmed	0.488	0	0	1	0.500	455
Dismissed	0.215	0	0	1	0.412	455
Converted to Ch 7 or Liquidating Plan	0.226	0	0	1	0.419	455
Case Pending	0.070	0	0	1	0.256	455
# Days to Confirmation	247	51	216	903	128	222
# Days to Dismissal	229	37	193	753	155	101
# Days to Conversion	243	16	188	1,179	196	104
Case Characteristics						
Total Liability	5,949,800	4,001,547	5,607,626	10,995,571	1,486,606	455
Total Asset	3,935,811	0	1,531,830	208,600,000	11,572,312	455
Secured Debt/Total Liability	0.418	0	0.414	1	0.366	455
Jointly Filed Case	0.09	0	0	1	0.287	455
# Secured Creditors	6.281	0	4	114	7.924	455
# Unsecured Creditors	19.147	0	11	547	39.77	455
Plan recovery for unsecured creditors						
% Recovery rate	0.319	0	0.130	1	0.371	199
Recovery rate (>0%)	0.986	0	1	1	0.116	222
Recovery rate (>20%)	0.347	0	0	1	0.477	222
Recovery rate (>50%)	0.221	0	0	1	0.416	222
Recovery rate (=100%)	0.171	0	0	1	0.378	222
Post-plan firm survival						
Active status	0.860	0	1	1	0.347	222

Panel B: Non-sub-V cases						
Case Outcome						
Reorganization Plan Confirmed	0.200	0	0	1	0.401	504
Dismissed	0.429	0	0	1	0.495	504
Converted to Ch 7 or Liquidating Plan	0.264	0	0	1	0.441	504
Case Pending	0.107	0	0	1	0.310	504
# Days to Confirmation	339	76	299	916	174	101
# Days to Dismissal	206	0	169	778	159	221
# Days to Conversion	239	27	203	1,083	181	137
Case Characteristics						
Total Liability	6,924,273	4,033,139	6,633,793	10,959,117	2,048,116	504
Total Asset	9,122,662	0	4,598,128	772,000,000	36,634,553	504
Secured Debt/Total Liability	0.604	0	0.790	1	0.403	504
Jointly Filed Case	0.119	0	0	1	0.324	504
# Secured Creditors	4.635	0	3	41	5.16	504
# Unsecured Creditors	10.510	0	4	112	15.546	504
Plan recovery for unsecured creditors						
% Recovery rate	0.663	0	1	1	0.434	90
Recovery rate (>0%)	0.950	0	1	1	0.218	101
Recovery rate (>20%)	0.614	0	1	1	0.489	101
Recovery rate (>50%)	0.584	0	1	1	0.495	101
Recovery rate (=100%)	0.525	0	1	1	0.502	101
Post-plan firm survival						
Active status	0.703	0	1	1	0.459	101

Table 4: Subchapter V and case outcome (RDD sample, 2020-2023)

This table presents case-level 2SLS regression results using a regression discontinuity design. The outcome variable is *Reorganization Plan Confirmed*, which equals one if a reorganization plan in the case is confirmed and zero otherwise. *Sub V* is a dummy indicating whether a case is filed under Subchapter V. *BelowCutoff* is a dummy variable, which equals one if total liabilities are below $7.5 million and zero otherwise. *p(Total liability-$7.5 mil)* is the polynomials of the assignment variable, which is the total liability minus $7.5 million. Panel A includes SubV cases with liabilities larger than $7.5 million. Panel B excludes SubV cases with liabilities larger than $7.5 million. *t*-statistics are reported in parentheses. *, **, and *** denote 10%, 5%, and 1% statistical significance levels, respectively.

Panel A: Including SubV cases with liabilities larger than $7.5 million

	Reorganization Plan Confirmed			
	1st-stage	2nd-stage	1st-stage	2nd-stage
	(1)	(2)	(3)	(4)
Sub V Hat		0.181*		0.361**
		(1.69)		(2.07)
BelowCutoff	0.245***		0.281**	
	(3.72)		(2.58)	
p(Total liability-Cutoff liability)	-0.041		-0.028	
	(-1.38)		(-0.28)	
BelowCutoff x p(Total liability-Cutoff liability)	0.041		0.022	
	(1.20)		(0.18)	
Secured Debt/Total Liability	-0.228***	-0.096*	-0.199**	0.062
	(-5.42)	(-1.93)	(-2.53)	(0.71)
Total Asset	-0.001	0.001	0.004*	-0.003
	(-1.34)	(1.04)	(1.68)	(-1.11)
Jointly Filed Case	-0.088*	0.069	-0.171**	0.062
	(-1.78)	(1.36)	(-1.99)	(0.68)
# Secured Creditors	0.004*	0.006**	0.002	-0.003
	(1.82)	(2.52)	(0.32)	(-0.59)
# Unsecured Creditors	0.001**	-0.001	0.001*	-0.000
	(2.36)	(-1.15)	(1.93)	(-0.50)
Year FE	Yes	Yes	Yes	Yes
SIC FE	Yes	Yes	Yes	Yes
Court FE	Yes	Yes	Yes	Yes
Sample	[$4 million: $11 million]		[$6 million: $9 million]	
Polynomial Degree	1	1	1	1
R^2		0.089		0.147
Observations	950	950	323	323
1st-stage *F*-test	29.12		10.53	

Panel B: Excluding SubV cases with liabilities larger than $7.5 million

	Reorganization Plan Confirmed			
	1st-stage	2nd-stage	1st-stage	2nd-stage
	(1)	(2)	(3)	(4)
Sub V Hat		0.262***		0.349***
		(3.64)		(3.24)
BelowCutoff	0.495***		0.507***	
	(7.23)		(4.59)	
p(Total liability-Cutoff liability)	-0.002		-0.022	
	(-0.06)		(-0.20)	
BelowCutoff x p(Total liability-Cutoff liability)	-0.002		0.002	
	(-0.06)		(0.02)	
Secured Debt/Total Liability	-0.162***	-0.080*	-0.113	0.082
	(-3.98)	(-1.75)	(-1.48)	(0.99)
Total Asset	-0.001	0.001	0.001	-0.004
	(-1.06)	(1.46)	(0.38)	(-1.17)
Jointly Filed Case	-0.039	0.079	-0.076	0.025
	(-0.82)	(1.58)	(-0.94)	(0.29)
# Secured Creditors	0.005**	0.005**	0.004	-0.012**
	(2.19)	(1.97)	(0.73)	(-2.13)
# Unsecured Creditors	0.001***	-0.001	0.001**	-0.000
	(2.64)	(-1.47)	(1.97)	(-0.58)
Year FE	Yes	Yes	Yes	Yes
SIC FE	Yes	Yes	Yes	Yes
Court FE	Yes	Yes	Yes	Yes
Sample	[$4 million: $11 million]		[$6 million: $9 million]	
Polynomial Degree	1	1	1	1
R^2		0.093		0.169
Observations	892	892	284	284
1st-stage *F*-test	72.63		32.32	

Table 5: Subchapter V and case duration (RDD sample, 2020-2023)

This table presents case-level 2SLS regression results estimating regression discontinuity design. The outcome variable in Columns (1) and (2) is *Ln(# Days to Confirmation)*, the natural logarithm of the number of days from the case filing date to the reorganization plan confirmation date. The outcome variable in Columns (3) and (4) is, *Ln(# Days to a negative outcome)*, the natural logarithm of the number of days from the case filing date to the negative outcome date. A negative case outcome includes dismissal, conversion to Chapter 7, or pending more than nine months. *Sub V* is a dummy indicating whether a case is filed under Subchapter V. *BelowCutoff* is a dummy variable, which equals one if the liability of a case is below $7.5 million and zero otherwise. *p(Total liability-$7.5 mil)* is the polynomials of the assignment variable, which is the total liability minus $7.5 million. Panel A includes SubV cases with liabilities larger than $7.5 million. Panel B excludes SubV cases with liabilities larger than $7.5 million. *t*-statistics are reported in parentheses. *, **, and *** denote 10%, 5%, and 1% statistical significance levels, respectively.

Panel A: Including SubV cases with liabilities larger than $7.5 million

	Ln(# Days to Confirmation)		Ln(# Days to negative outcome)	
	1st-stage	2nd-stage	1st-stage	2nd-stage
	(1)	(2)	(3)	(4)
Sub V Hat		-0.353**		-0.029
		(-2.02)		(-0.11)
BelowCutoff	0.343***		0.157**	
	(2.85)		(1.99)	
p(Total liability-Cutoff liability)	-0.088*		-0.033	
	(-1.69)		(-0.93)	
BelowCutoff x p(Total liability-Cutoff liability)	0.145**		-0.004	
	(2.43)		(-0.10)	
Secured Debt/Total Liability	-0.307***	0.086	-0.175***	-0.086
	(-3.97)	(0.84)	(-3.42)	(-0.80)
Total Asset	-0.000	0.000	-0.000	0.004
	(-0.77)	(0.42)	(-0.22)	(1.50)
Jointly Filed Case	-0.037	0.048	-0.077	0.296**
	(-0.48)	(0.55)	(-1.18)	(2.37)
# Secured Creditors	0.009*	0.002	0.004	0.019***
	(1.93)	(0.29)	(1.34)	(3.50)
# Unsecured Creditors	0.002	0.001	0.001*	-0.000
	(1.42)	(0.89)	(1.92)	(-0.29)
Year FE	Yes	Yes	Yes	Yes
SIC FE	Yes	Yes	Yes	Yes
Court FE	Yes	Yes	Yes	Yes
Sample	[$4 million: $11 million]		[$4 million: $11 million]	
Polynomial Degree	1	1	1	1
R^2		0.117		0.035
Observations	299	299	617	617
1st-stage *F*-test	14.17		17.79	

Panel B: Excluding SubV cases with liabilities larger than $7.5 million

	Ln(# Days to Confirmation)		Ln(# Days to negative outcome)	
	1st-stage	2nd-stage	1st-stage	2nd-stage
	(1)	(2)	(3)	(4)
Sub V Hat		-0.395***		0.007
		(-3.21)		(0.03)
BelowCutoff	0.697***		0.351***	
	(4.87)		(4.44)	
p(Total liability-Cutoff liability)	-0.058		0.021	
	(-0.89)		(0.59)	
BelowCutoff x p(Total liability-Cutoff liability)	0.116		-0.066	
	(1.63)		(-1.59)	
Secured Debt/Total Liability	-0.259***	0.026	-0.109**	-0.111
	(-3.44)	(0.27)	(-2.19)	(-1.08)
Total Asset	-0.000	0.000	-0.001	0.003
	(-0.21)	(0.40)	(-0.81)	(1.15)
Jointly Filed Case	0.000	0.076	-0.023	0.294**
	(0.00)	(0.82)	(-0.37)	(2.34)
# Secured Creditors	0.009**	0.003	0.004	0.019***
	(2.01)	(0.50)	(1.50)	(3.46)
# Unsecured Creditors	0.001	0.001	0.001**	-0.000
	(1.09)	(0.81)	(2.30)	(-0.34)
Year FE	Yes	Yes	Yes	Yes
SIC FE	Yes	Yes	Yes	Yes
Court FE	Yes	Yes	Yes	Yes
Sample	[$4 million: $11 million]		[$4 million: $11 million]	
Polynomial Degree	1	1	1	1
R^2		0.122		0.037
Observations	273	273	589	589
1st-stage *F*-test	33.19		35.84	

Table 6: Summary Statistics - Diff-in-diff sample, 2017-2023

This table presents summary statistics for outcomes and characteristics of Chapter 11 cases filed from 2017Q1 to 2023Q3 with total liabilities between $4 million and $11 million. *Treated* equals one if the total liability of a case is between $4 million and 7.5 million and zero otherwise.

	Mean	Min	p50	Max	S.D.	N
Panel A: Treated Group						
Case Outcome						
Reorganization Plan Confirmed	0.316	0	0	1	0.465	1,402
Dismissed	0.372	0	0	1	0.483	1,402
Converted to Ch 7 or Liquidating Plan	0.259	0	0	1	0.438	1,402
Case Pending	0.053	0	0	1	0.225	1,402
# Days to Confirmation	339	21	280	1,480	218	443
# Days to Dismissal	288	3	222	1,917	262	536
# Days to Conversion	399	15	251	2,205	413	377
Case Characteristics						
Total Liability	5,505,783	4,000,214	5,367,841	7,498,760	1,001,802	1,402
Total Asset	4,934,621	0	2,701,418	245,200,000	12,898,238	1,402
Secured Debt/Total Liability	0.555	0	0.637	1	0.375	1,402
Sub V	0.284	0	0	1	0.451	1,402
Jointly Filed Case	0.122	0	0	1	0.327	1,402
# Secured Creditors	5.653	0	4	114	6.712	1,402
# Unsecured Creditors	17.328	0	8	722	39.300	1,402
Panel B: Control Group						
Case Outcome						
Reorganization Plan Confirmed	0.286	0	0	1	0.452	552
Dismissed	0.377	0	0	1	0.485	552
Converted to Ch 7 or Liquidating Plan	0.266	0	0	1	0.442	552
Case Pending	0.072	0	0	1	0.259	552
# Days to Confirmation	421	55	365	1,190	253	158
# Days to Dismissal	309	0	238	1,644	268	212
# Days to Conversion	400	16	236	2,384	469	151
Case Characteristics						
Total Liability	9,047,726	7,507,877	8,949,968	10,995,571	968,375	552
Total Asset	10,577,887	0	4,769,748	772,000,000	38,364,400	552
Secured Debt/Total Liability	0.553	0	0.621	1	0.365	552
Sub V	0.103	0	0	1	0.305	552
Jointly Filed Case	0.139	0	0	1	0.347	552
# Secured Creditors	6.342	0	4	72	7.019	552
# Unsecured Creditors	22.904	0	12	798	49.547	552

Table 7: Subchapter V, case outcome, and duration - Diff-in-diff sample, 2017-2023 (Treated Group 1)

This table presents case-level OLS regression results estimating the impact of subchapter V options on case outcome and duration. The sample covers Chapter 11 cases filed from 2017Q1 to 2023Q3 with total liabilities between $4 million and $11 million. The outcome variable in Column (1) is *Reorganization Plan Confirmed*, which equals one if a reorganization plan in the case is confirmed and zero otherwise. The outcome variable in Column (2) is *Ln(# Days to Confirmation)*, the natural logarithm of the number of days from the case filing date to the plan confirmation date. The outcome variable in Column (3) is *Ln(# Days to negative outcome)*, the natural logarithm of the number of days from the case filing date to the negative outcome date. A negative case outcome includes dismissal, conversion to Chapter 7, or pending more than nine months. *Treated* equals one if the total liability of a case is between $4 million and 7.5 million and filed and zero otherwise. *Post* is an indicator that equals one for cases filed between March 2020 and 2023Q3. *t*-statistics are reported in parentheses. *, **, and *** denote 10%, 5%, and 1% statistical significance levels, respectively.

Panel A: Including SubV cases with liabilities larger than $7.5 million

	Reorganization Plan Confirmed	Ln(# Days to Confirmation)	Ln(# Days to negative outcome)
	(1)	(2)	(3)
Treated x Post	0.105**	-0.165	0.010
	(2.27)	(-1.57)	(0.09)
Treated	0.023	-0.090	-0.205*
	(0.48)	(-0.85)	(-1.73)
Post	0.148**	-0.349**	-0.179
	(2.01)	(-2.00)	(-1.04)
Total Liability	0.015	-0.013	-0.037
	(1.42)	(-0.54)	(-1.43)
Total Asset	-0.080***	0.150**	-0.102
	(-2.62)	(2.12)	(-1.40)
Jointly Filed Case	0.000	0.000	-0.000
	(0.72)	(0.60)	(-0.17)
Secured Debt/Total Liability	0.031	0.121*	0.240***
	(0.97)	(1.77)	(2.96)
# Secured Creditors	0.007***	0.007*	0.025***
	(3.99)	(1.92)	(5.98)
# Unsecured Creditors	-0.001***	0.000	0.001*
	(-3.27)	(0.38)	(1.86)
Year FE	Yes	Yes	Yes
SIC FE	Yes	Yes	Yes
Court FE	Yes	Yes	Yes
Number of observations	1945	587	1344
R^2	0.114	0.418	0.234

Panel B: Excluding SubV cases with liabilities larger than $7.5 million

	Reorganization Plan Confirmed	Ln(# Days to Confirmation)	Ln(# Days to negative outcome)
	(1)	(2)	(3)
Treated x Post	0.171***	-0.309***	0.019
	(3.53)	(-2.64)	(0.16)
Treated	0.022	-0.100	-0.203*
	(0.44)	(-0.94)	(-1.70)
Post	0.078	-0.183	-0.188
	(1.04)	(-1.01)	(-1.08)
Total Liability	0.014	-0.014	-0.035
	(1.34)	(-0.58)	(-1.37)
Total Asset	-0.072**	0.131*	-0.117
	(-2.34)	(1.82)	(-1.58)
Jointly Filed Case	0.000	0.000	-0.001
	(0.99)	(0.43)	(-0.57)
Secured Debt/Total Liability	0.034	0.130*	0.239***
	(1.04)	(1.89)	(2.92)
# Secured Creditors	0.006***	0.008**	0.025***
	(3.80)	(2.14)	(5.89)
# Unsecured Creditors	-0.001***	0.000	0.001*
	(-3.30)	(0.30)	(1.84)
Year FE	Yes	Yes	Yes
SIC FE	Yes	Yes	Yes
Court FE	Yes	Yes	Yes
Number of observations	1888	556	1317
R^2	0.121	0.429	0.234

Table 8: Subchapter V, case outcome, and duration - Diff-in-diff sample, 2017-2023 (Treated Group 2)

This table presents case-level OLS regression results estimating the impact of subchapter V options on case outcome and duration. The sample covers Chapter 11 cases filed from 2017Q1 to 2023Q3 with total liabilities between $4 million and $11 million. The outcome variable in Column (1) is *Reorganization Plan Confirmed*, which equals one if a reorganization plan in the case is confirmed and zero otherwise. The outcome variable in Column (2) is *Ln(# Days to Confirmation)*, the natural logarithm of the number of days from the case filing date to the plan confirmation date. The outcome variable in Column (3) is *Ln(# Days to negative outcome)*, the natural logarithm of the number of days from the case filing date to the negative outcome date. A negative case outcome includes dismissal, conversion to Chapter 7, or pending more than nine months. *Treated* equals one if the total liability of a case is between $4 million and 7.5 million and filed before March 2020, or a case is filed under Subchapter V, and zero otherwise. *Post* is an indicator that equals one for cases filed between March 2020 and 2023Q3. *t*-statistics are reported in parentheses. *, **, and *** denote 10%, 5%, and 1% statistical significance levels, respectively.

	Reorganization Plan Confirmed	Ln(# Days to Confirmation)	Ln(# Days to negative outcome)
	(1)	(2)	(3)
Treated x Post	0.279***	-0.309***	0.169
	(5.90)	(-2.91)	(1.42)
Treated	0.004	-0.007	-0.079
	(0.10)	(-0.08)	(-0.81)
Post	0.108	-0.291*	-0.261
	(1.54)	(-1.71)	(-1.56)
Total Liability	0.010	0.012	-0.001
	(1.41)	(0.78)	(-0.05)
Total Asset	-0.045	0.110	-0.093
	(-1.48)	(1.57)	(-1.27)
Jointly Filed Case	0.000	0.000	-0.000
	(0.97)	(0.35)	(-0.10)
Secured Debt/Total Liability	0.044	0.110	0.240***
	(1.39)	(1.64)	(2.95)
# Secured Creditors	0.006***	0.007**	0.025***
	(3.56)	(2.14)	(5.95)
# Unsecured Creditors	-0.001***	0.001	0.001*
	(-3.33)	(0.63)	(1.79)
Year FE	Yes	Yes	Yes
SIC FE	Yes	Yes	Yes
Court FE	Yes	Yes	Yes
Number of observations	1945	587	1344
R^2	0.148	0.435	0.233

Table 9: Subchapter V, plan recovery rate for general unsecured creditors - RDD sample, 2020-2023

This table presents case-level 2SLS regression results estimating regression discontinuity design. The outcome variable *% Recovery rate*, which is the actual percentage of recovery rate for general unsecured creditors stated in the plan for cases with confirmed plans and the assumed percentage of recovery rate for general unsecured creditors for cases without confirmed plans. *Sub V* is a dummy indicating whether a case is filed under Subchapter V. *BelowCutoff* is a dummy variable, which equals one if the liability of a case is below $7.5 million and zero otherwise. *p(Total liability-$7.5 mil)* is the polynomials of the assignment variable, which is the total liability minus $7.5 million. Panel A uses cases with liabilities between $4 million and $11 million. Panel A uses cases with liabilities between $6 million and $9 million. *t*-statistics are reported in parentheses. *, **, and *** denote 10%, 5%, and 1% statistical significance levels, respectively.

Panel A: Cases with liabilities between $4 million and $11 million

	% Recovery rate for general unsecured creditors						
	1st-stage	2nd-stage					
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Sub V Hat		0.100*	0.073	0.047	0.021	-0.005	-0.031
		(1.93)	(1.57)	(1.10)	(0.53)	(-0.14)	(-0.84)
BelowCutoff	0.495***						
	(7.23)						
p(Total liability-Cutoff liability)	-0.002						
	(-0.06)						
BelowCutoff x p(Total liability-Cutoff liability)	-0.002						
	(-0.06)						
Secured Debt/Total Liability	-0.162***	0.005	0.013	0.021	0.029	0.037	0.045*
	(-3.98)	(0.15)	(0.43)	(0.76)	(1.13)	(1.52)	(1.88)
Total Asset	-543.736	1040.832***	961.157***	881.483***	801.808***	722.134**	642.459**
	(-1.06)	(2.67)	(2.71)	(2.71)	(2.65)	(2.50)	(2.26)
Jointly Filed Case	-0.039	0.128***	0.120***	0.112***	0.104***	0.096***	0.088***
	(-0.82)	(3.55)	(3.66)	(3.73)	(3.73)	(3.62)	(3.37)
# Secured Creditors	0.005**	0.001	0.001	0.000	-0.000	-0.001	-0.001
	(2.19)	(0.68)	(0.45)	(0.16)	(-0.18)	(-0.56)	(-0.95)
# Unsecured Creditors	0.001***	-0.001*	-0.001*	-0.001*	-0.000	-0.000	-0.000
	(2.64)	(-1.83)	(-1.79)	(-1.70)	(-1.57)	(-1.36)	(-1.10)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SIC FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Court FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
% Recovery rate assumed for non-confirmed case		0%	10%	20%	30%	40%	50%
Polynomial Degree	1	1	1	1	1	1	1
R^2		0.021	0.017	0.017	0.021	0.032	0.049
Observations	892	892	892	892	892	892	892
1st-stage *F*-test	72.63						

Panel B: Cases with liabilities between $6 million and $9 million

	% Recovery rate for general unsecured creditors						
	1st-stage	2nd-stage					
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Sub V Hat		0.159**	0.125*	0.090	0.055	0.020	-0.015
		(2.00)	(1.71)	(1.34)	(0.88)	(0.34)	(-0.26)
BelowCutoff	0.507***						
	(4.59)						
p(Total liability-Cutoff liability)	-0.022						
	(-0.20)						
BelowCutoff x p(Total liability-Cutoff liability)	0.002						
	(0.02)						
Secured Debt/Total Liability	-0.113	0.079	0.071	0.062	0.054	0.046	0.038
	(-1.48)	(1.28)	(1.26)	(1.21)	(1.13)	(1.01)	(0.85)
Total Asset	1334.852	358.047	794.139	1230.231	1666.322	2102.414	2538.505
	(0.38)	(0.13)	(0.31)	(0.53)	(0.77)	(1.03)	(1.27)
Jointly Filed Case	-0.076	0.144**	0.142**	0.139**	0.137***	0.134***	0.132***
	(-0.94)	(2.25)	(2.42)	(2.59)	(2.74)	(2.83)	(2.84)
# Secured Creditors	0.004	-0.007*	-0.006	-0.005	-0.003	-0.002	-0.001
	(0.73)	(-1.69)	(-1.54)	(-1.33)	(-1.06)	(-0.73)	(-0.35)
# Unsecured Creditors	0.001**	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
	(1.97)	(-0.62)	(-0.60)	(-0.56)	(-0.50)	(-0.42)	(-0.32)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SIC FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Court FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
% Recovery rate assumed for non-confirmed case		0%	10%	20%	30%	40%	50%
Polynomial Degree	1	1	1	1	1	1	1
R^2		0.060	0.048	0.039	0.035	0.041	0.057
Observations	284	284	284	284	284	284	284
1st-stage *F*-test	32.32						

Table 10: Subchapter V, post-plan survival - RDD sample, 2020-2023

This table presents case-level 2SLS regression results estimating regression discontinuity design. The outcome variable *Active Status*, which is the actual survival status as of December 2023 for firms with confirmed plans based on state registration records and assumed survival probability for firms with confirmed plans. *Sub V* is a dummy indicating whether a case is filed under Subchapter V. *BelowCutoff* is a dummy variable, which equals one if the liability of a case is below $7.5 million and zero otherwise. *p(Total liability-$7.5 mil)* is the polynomials of the assignment variable, which is the total liability minus $7.5 million. Panel A uses cases with liabilities between $4 million and $11 million. Panel A uses cases with liabilities between $6 million and $9 million. *t*-statistics are reported in parentheses. *, **, and *** denote 10%, 5%, and 1% statistical significance levels, respectively.

Panel A: Cases with liabilities between $4 million and $11 million

	Active status as of December 2023						
	1st-stage	2nd-stage					
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Sub V Hat		0.181***	0.128**	0.076	0.024	-0.029	-0.081*
		(2.65)	(2.25)	(1.60)	(0.58)	(-0.75)	(-1.96)
BelowCutoff	0.495***						
	(7.23)						
p(Total liability-Cutoff liability)	-0.002						
	(-0.06)						
BelowCutoff x p(Total liability-Cutoff liability)	-0.002						
	(-0.06)						
Secured Debt/Total Liability	-0.162***	-0.123***	-0.107***	-0.091***	-0.075***	-0.059**	-0.043
	(-3.98)	(-2.82)	(-2.94)	(-3.01)	(-2.88)	(-2.39)	(-1.62)
Total Asset	-543.736	763.320	603.971	444.622	285.273	125.924	-33.425
	(-1.06)	(1.48)	(1.40)	(1.24)	(0.93)	(0.43)	(-0.11)
Jointly Filed Case	-0.039	0.021	0.005	-0.011	-0.027	-0.043	-0.058**
	(-0.82)	(0.44)	(0.12)	(-0.33)	(-0.94)	(-1.58)	(-2.02)
# Secured Creditors	0.005**	0.005**	0.004**	0.003*	0.002	0.001	0.000
	(2.19)	(2.18)	(2.12)	(1.96)	(1.58)	(0.94)	(0.19)
# Unsecured Creditors	0.001***	-0.001	-0.000	-0.000	-0.000	-0.000	0.000
	(2.64)	(-1.27)	(-1.15)	(-0.93)	(-0.56)	(-0.05)	(0.47)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SIC FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Court FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Active probability assumed for non-confirmed case		0%	20%	40%	60%	80%	100%
Polynomial Degree	1	1	1	1	1	1	1
R^2		0.087	0.077	0.058	0.028	0.001	-0.002
Observations	892	892	892	892	892	892	892
1st-stage *F*-test	72.63						

Panel B: Cases with liabilities between $6 million and $9 million

	Active status as of December 2023						
	1st-stage	2nd-stage					
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Sub V Hat		0.215**	0.145*	0.076	0.006	-0.064	-0.134**
		(2.15)	(1.73)	(1.07)	(0.09)	(-1.05)	(-2.01)
BelowCutoff	0.507***						
	(4.59)						
p(Total liability-Cutoff liability)	-0.022						
	(-0.20)						
BelowCutoff x p(Total liability-Cutoff liability)	0.002						
	(0.02)						
Secured Debt/Total Liability	-0.113	0.009	-0.008	-0.024	-0.041	-0.057	-0.073
	(-1.48)	(0.11)	(-0.12)	(-0.44)	(-0.84)	(-1.21)	(-1.42)
Total Asset	1334.852	-3.4e+03	-2.5e+03	-1.6e+03	-737.906	134.278	1006.461
	(0.38)	(-0.97)	(-0.85)	(-0.66)	(-0.34)	(0.06)	(0.43)
Jointly Filed Case	-0.076	-0.018	-0.023	-0.028	-0.033	-0.038	-0.043
	(-0.94)	(-0.22)	(-0.34)	(-0.49)	(-0.65)	(-0.77)	(-0.80)
# Secured Creditors	0.004	-0.010*	-0.008*	-0.005	-0.003	-0.001	0.002
	(0.73)	(-1.96)	(-1.79)	(-1.48)	(-0.94)	(-0.21)	(0.50)
# Unsecured Creditors	0.001**	-0.000	-0.000	-0.000	0.000	0.000	0.000
	(1.97)	(-0.29)	(-0.20)	(-0.06)	(0.14)	(0.35)	(0.50)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SIC FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Court FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Active probability assumed for non-confirmed case		0%	20%	40%	60%	80%	100%
Polynomial Degree	1	1	1	1	1	1	1
R^2		0.115	0.089	0.053	0.013	0.004	0.036
Observations	284	284	284	284	284	284	284
1st-stage *F*-test	32.32						

Internet Appendix

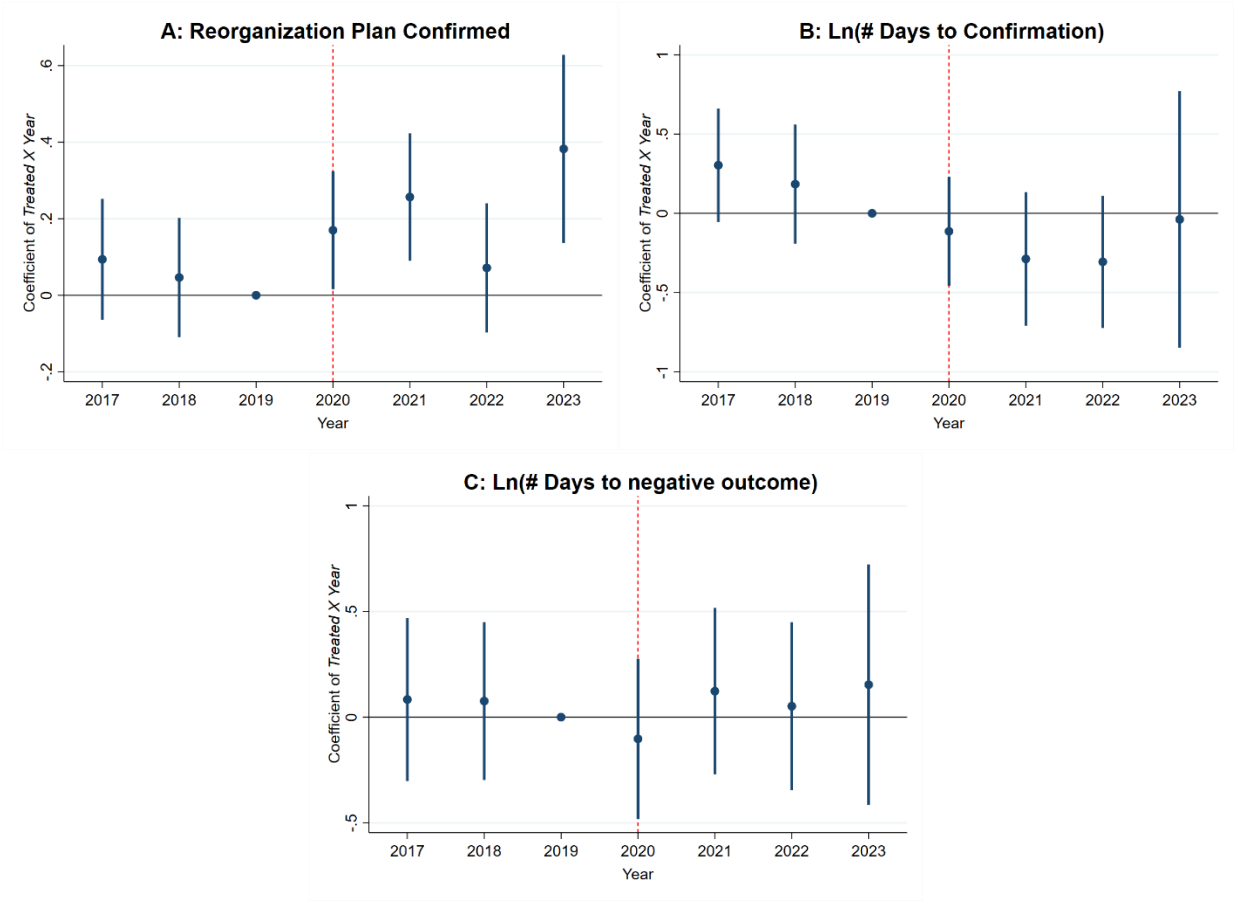


Figure IA.1: Parallel trend tests for difference-in-difference sample 1

Figure IA.1 plots coefficients and 95% confidence intervals from an OLS regression where case outcome or duration is regressed onto yearly indicator variables interacted with the treatment indicator variable, which equals one if the total liability of a case is between $4 million and 7.5 million and filed and zero otherwise. The outcome variable in Panel A, *Reorganization Plan Confirmed*, equals one if the plan in the case is confirmed and zero otherwise The outcome variable in Panel B, *Ln(# Days to Confirmation)*, is the natural logarithm of the number of days from the case filing date to the reorganization plan confirmation date. The outcome variable in Panel C, *Ln(# Days to a negative outcome)*, is the natural logarithm of the number of days from the case filing date to the negative outcome date. A negative case outcome includes dismissal, conversion to Chapter 7, or pending more than nine months. The regression specification includes the same set of control variables and fixed effects outlined in Table 7. The vertical dotted line marks the year SubV is available. The sample covers Chapter 11 cases filed from 2017Q1 to 2023Q3 with total liabilities between $4 million and $11 million. SubV cases with liabilities larger than $7.5 million are excluded.

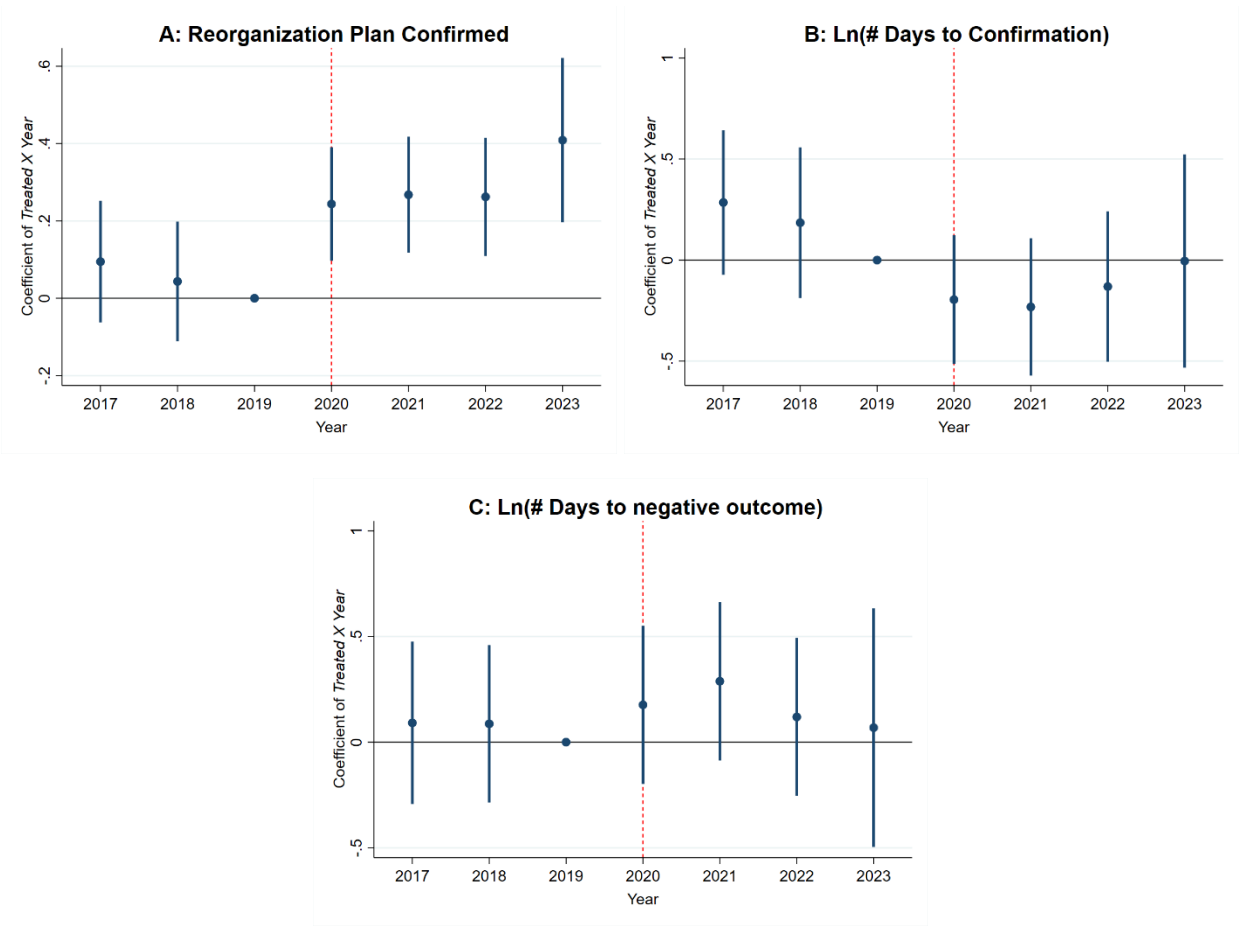


Figure IA.2: Parallel trend tests for difference-in-difference sample 2

Figure IA.2 plots coefficients and 95% confidence intervals from an OLS regression where case outcome or duration is regressed onto yearly indicator variables interacted with the treatment indicator variable, which equals one if the total liability of a case is between $4 million and 7.5 million and filed before March 2020, or a case is filed under Subchapter V, and zero otherwise. The outcome variable in Panel A, *Reorganization Plan Confirmed*, equals one if the plan in the case is confirmed and zero otherwise. The outcome variable in Panel B, *Ln(# Days to Confirmation)*, is the natural logarithm of the number of days from the case filing date to the reorganization plan confirmation date. The outcome variable in Panel C, *Ln(# Days to a negative outcome)*, is the natural logarithm of the number of days from the case filing date to the negative outcome date. A negative case outcome includes dismissal, conversion to Chapter 7, or pending more than nine months. The regression specification includes the same set of control variables and fixed effects outlined in Table 7. The vertical dotted line marks the year SubV is available. The sample covers Chapter 11 cases filed from 2017Q1 to 2023Q3 with total liabilities between $4 million and $11 million. SubV cases with liabilities larger than $7.5 million are excluded.

Table IA.1: Case characteristics and Subchapter V, 2020-2023

This table presents case-level OLS regression results estimating the impact of case characteristics on subchapter V options. The sample covers Chapter 11 cases filed from 2017Q3 to 2023Q3 with total liabilities between $4 million and $7.5 million. The outcome variable in Column (1) is *Sub V*, a dummy indicating whether a case is filed under Subchapter V. *t*-statistics are reported in parentheses. *, **, and *** denote 10%, 5%, and 1% statistical significance levels, respectively.

	Sub V			
	(1)	(2)	(3)	(4)
Total Liability	-0.008	-0.008	-0.008	-0.008
	(-0.46)	(-0.47)	(-0.46)	(-0.44)
Total Asset	-0.005**	-0.005**	-0.005**	-0.005**
	(-2.36)	(-2.29)	(-2.21)	(-2.23)
Secured Debt/Total Liability	-0.179***	-0.168***	-0.189***	-0.192***
	(-3.44)	(-3.24)	(-3.61)	(-3.58)
Jointly Filed Case	-0.043	-0.035	-0.038	-0.039
	(-0.70)	(-0.57)	(-0.63)	(-0.65)
# Creditors	0.002***	0.001**		
	(3.64)	(2.54)		
HHI Creditors		-0.221***		
		(-3.31)		
# Secured Creditors			0.005*	0.006**
			(1.96)	(2.18)
# Unsecured Creditors			0.002***	0.002***
			(3.01)	(3.13)
HHI Secured Creditors				0.025
				(0.47)
HHI Unsecured Creditors				0.072
				(1.25)
Year FE	Yes	Yes	Yes	Yes
SIC FE	Yes	Yes	Yes	Yes
Court FE	Yes	Yes	Yes	Yes
Number of observations	686	686	686	686
R^2	0.311	0.323	0.314	0.316

Table IA.2: Subchapter V and case outcome - RDD sample, 2020-2023

This table presents case-level 2SLS regression results estimating regression discontinuity design. The outcome variable is, *Reorganization Plan Confirmed*, which equals one if the plan in the case is confirmed and zero otherwise. *Sub V* is a dummy indicating whether a case is filed under Subchapter V. *BelowCutoff* is a dummy variable, which equals one if the liability of a case is below $7.5 million and zero otherwise. *p(Total liability-$7.5 mil)* is the polynomials of the assignment variable, which is the total liability minus $7.5 million. Panel A includes SubV cases with liabilities larger than $7.5 million. Panel B excludes SubV cases with liabilities larger than $7.5 million. *t*-statistics are reported in parentheses. *, **, and *** denote 10%, 5%, and 1% statistical significance levels, respectively.

Panel A: Including SubV cases with liabilities larger than $7.5 million

	Reorganization Plan Confirmed			
	1st-stage	2nd-stage	1st-stage	2nd-stage
	(1)	(2)	(5)	(6)
Sub V Hat		0.179*		0.353**
		(1.67)		(2.02)
BelowCutoff	0.270***		0.310***	
	(5.49)		(3.83)	
p(Total liability-Cutoff liability)	-0.010		-0.004	
	(-1.23)		(-0.07)	
BelowCutoff x p(Total liability-Cutoff liability)	0.011		-0.004	
	(1.13)		(-0.05)	
Controls	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
SIC FE	Yes	Yes	Yes	Yes
Court FE	Yes	Yes	Yes	Yes
Sample	[$4 million: $11 million]		[$6 million: $9 million]	
Polynomial Degree	2	2	2	2
R^2		0.088		0.147
Observations	950	950	323	323
1st-stage *F*-test	28.97		10.52	

Panel B: Excluding SubV cases with liabilities larger than $7.5 million

	Reorganization Plan Confirmed			
	1st-stage	2nd-stage	1st-stage	2nd-stage
	(1)	(2)	(3)	(4)
Sub V Hat		0.262***		0.345***
		(3.64)		(3.21)
BelowCutoff	0.493***		0.535***	
	(9.67)		(6.58)	
p(Total liability-Cutoff liability)	-0.001		-0.007	
	(-0.13)		(-0.10)	
BelowCutoff x p(Total liability-Cutoff liability)	0.003		0.006	
	(0.29)		(0.07)	
Controls	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
SIC FE	Yes	Yes	Yes	Yes
Court FE	Yes	Yes	Yes	Yes
Sample	[$4 million: $11 million]		[$6 million: $9 million]	
Polynomial Degree	2	2	2	2
R^2		0.093		0.169
Observations	892	892	284	284
1st-stage *F*-test	72.68		32.27	

Table IA.3: Subchapter V and case duration - RDD sample, 2020-2023

This table presents case-level 2SLS regression results estimating regression discontinuity design. The outcome variable in Columns (1) and (2) is, *Ln(# Days to Confirmation)*, the natural logarithm of the number of days from the case filing date to plan confirmation date. The outcome variable in Columns (3) and (4) is, *Ln(# Days to negative outcome)*, the natural logarithm of the number of days from the case filing date to the negative outcome date. A negative case outcome includes dismissal, conversion to Chapter 7, or pending more than nine months. *Sub V* is a dummy indicating whether a case is filed under Subchapter V. *BelowCutoff* is a dummy variable, which equals one if the liability of a case is below $7.5 million and zero otherwise. *p(Total liability-$7.5 mil)* is the polynomials of the assignment variable, which is the total liability minus $7.5 million. Panel A includes SubV cases with liabilities larger than $7.5 million. Panel B excludes SubV cases with liabilities larger than $7.5 million. *t*-statistics are reported in parentheses. *, **, and *** denote 10%, 5%, and 1% statistical significance levels, respectively.

Panel A: Including SubV cases with liabilities larger than $7.5 million

	Ln(# Days to Confirmation)		Ln(# Days to negative outcome)	
	1st-stage	2nd-stage	1st-stage	2nd-stage
	(1)	(2)	(3)	(4)
Sub V Hat		-0.360**		-0.033
		(-2.03)		(-0.13)
BelowCutoff	0.359***		0.200***	
	(3.96)		(3.40)	
p(Total liability-Cutoff liability)	-0.022		-0.010	
	(-1.51)		(-0.96)	
BelowCutoff x p(Total liability-Cutoff liability)	0.008		0.020*	
	(0.48)		(1.67)	
Controls	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
SIC FE	Yes	Yes	Yes	Yes
Court FE	Yes	Yes	Yes	Yes
Sample	[$4 million: $11 million]		[$4 million: $11 million]	
Polynomial Degree	2	2	2	2
R^2		0.117		0.034
Observations	299	299	617	617
1st-stage *F*-test	13.71		17.81	

Panel B: Excluding SubV cases with liabilities larger than $7.5 million

	Ln(# Days to Confirmation)		Ln(# Days to negative outcome)	
	1st-stage	2nd-stage	1st-stage	2nd-stage
	(1)	(2)	(3)	(4)
Sub V Hat		-0.399***		-0.008
		(-3.23)		(-0.04)
BelowCutoff	0.689***		0.369***	
	(6.44)		(6.24)	
p(Total liability-Cutoff liability)	-0.016		0.006	
	(-0.88)		(0.53)	
BelowCutoff x p(Total liability-Cutoff liability)	0.001		0.006	
	(0.05)		(0.49)	
Controls	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
SIC FE	Yes	Yes	Yes	Yes
Court FE	Yes	Yes	Yes	Yes
Sample	[$4 million: $11 million]		[$4 million: $11 million]	
Polynomial Degree	2	2	2	2
R^2		0.122		0.036
Observations	273	273	589	589
1st-stage *F*-test	32.92		35.73	

Table IA.4: Subchapter V and case outcome - RDD sample, 2020-2023

This table presents case-level 2SLS regression results estimating regression discontinuity design. Cases with liabilities greater than $7 million and less or equal to $7.5 million are excluded. The outcome variable is, *Reorganization Plan Confirmed*, which equals one if the plan in the case is confirmed and zero otherwise. *Sub V* is a dummy indicating whether a case is filed under Subchapter V. *BelowCutoff* is a dummy variable, which equals one if the liability of a case is below $7.5 million and zero otherwise. *p(Total liability-$7.5 mil)* is the polynomials of the assignment variable, which is the total liability minus $7.5 million. Panel A includes SubV cases with liabilities larger than $7.5 million. Panel B excludes SubV cases with liabilities larger than $7.5 million. *t*-statistics are reported in parentheses. *, **, and *** denote 10%, 5%, and 1% statistical significance levels, respectively.

Panel A: Including SubV cases with liabilities larger than $7.5 million

	Reorganization Plan Confirmed			
	1st-stage	2nd-stage	1st-stage	2nd-stage
	(1)	(2)	(5)	(6)
Sub V Hat		0.189*		0.326*
		(1.74)		(1.86)
BelowCutoff	0.290***		0.457***	
	(3.96)		(2.76)	
p(Total liability-Cutoff liability)	-0.032		-0.034	
	(-1.10)		(-0.34)	
BelowCutoff x p(Total liability-Cutoff liability)	0.047		0.167	
	(1.27)		(1.00)	
Controls	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
SIC FE	Yes	Yes	Yes	Yes
Court FE	Yes	Yes	Yes	Yes
Sample	[$4 million: $11 million]		[$6 million: $9 million]	
Polynomial Degree	1	1	1	1
R^2		0.086		0.133
Observations	876	876	252	252
1st-stage *F*-test	28.70		11.32	

Panel B: Excluding SubV cases with liabilities larger than $7.5 million

	Reorganization Plan Confirmed			
	1st-stage	2nd-stage	1st-stage	2nd-stage
	(1)	(2)	(3)	(4)
Sub V Hat		0.256***		0.336***
		(3.49)		(2.93)
BelowCutoff	0.534***		0.709***	
	(7.19)		(4.70)	
p(Total liability-Cutoff liability)	0.006		-0.009	
	(0.19)		(-0.09)	
BelowCutoff x p(Total liability-Cutoff liability)	0.002		0.143	
	(0.07)		(0.95)	
Controls	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
SIC FE	Yes	Yes	Yes	Yes
Court FE	Yes	Yes	Yes	Yes
Sample	[$4 million: $11 million]		[$6 million: $9 million]	
Polynomial Degree	1	1	1	1
R^2		0.085		0.167
Observations	819	819	213	213
1st-stage *F*-test	72.59		35.13	

Table IA.5: Subchapter V and case duration - RDD sample, 2020-2023

This table presents case-level 2SLS regression results estimating regression discontinuity design. Cases with liabilities between $7 million and $7.5 million are excluded. The outcome variable in Columns (1) and (2) is, *Ln(# Days to Confirmation)*, the natural logarithm of the number of days from the case filing date to plan confirmation date. The outcome variable in Columns (3) and (4) is, *Ln(# Days to negative outcome)*, the natural logarithm of the number of days from the case filing date to the negative outcome date. A negative case outcome includes dismissal, conversion to Chapter 7, or pending more than nine months. *Sub V* is a dummy indicating whether a case is filed under Subchapter V. *BelowCutoff* is a dummy variable, which equals one if the liability of a case is below $7.5 million and zero otherwise. *p(Total liability-$7.5 mil)* is the polynomials of the assignment variable, which is the total liability minus $7.5 million. Panel A includes SubV cases with liabilities larger than $7.5 million. Panel B excludes SubV cases with liabilities larger than $7.5 million. *t*-statistics are reported in parentheses. *, **, and *** denote 10%, 5%, and 1% statistical significance levels, respectively.

Panel A: Including SubV cases with liabilities larger than $7.5 million

	Ln(# Days to Confirmation)		Ln(# Days to negative outcome)	
	1st-stage	2nd-stage	1st-stage	2nd-stage
	(1)	(2)	(3)	(4)
Sub V Hat		-0.437**		-0.102
		(-2.48)		(-0.39)
BelowCutoff	0.389***		0.199**	
	(2.97)		(2.23)	
p(Total liability-Cutoff liability)	-0.088		-0.026	
	(-1.65)		(-0.73)	
BelowCutoff x p(Total liability-Cutoff liability)	0.158**		0.004	
	(2.45)		(0.10)	
Controls	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
SIC FE	Yes	Yes	Yes	Yes
Court FE	Yes	Yes	Yes	Yes
Sample	[$4 million: $11 million]		[$4 million: $11 million]	
Polynomial Degree	1	1	1	1
R^2		0.122		0.024
Observations	278	278	568	568
1st-stage *F*-test	13.92		16.95	

Panel B: Excluding SubV cases with liabilities larger than $7.5 million

	Ln(# Days to Confirmation)		Ln(# Days to negative outcome)	
	1st-stage	2nd-stage	1st-stage	2nd-stage
	(1)	(2)	(3)	(4)
Sub V Hat		-0.431***		-0.035
		(-3.43)		(-0.18)
BelowCutoff	0.746***		0.396***	
	(4.86)		(4.51)	
p(Total liability-Cutoff liability)	-0.056		0.029	
	(-0.83)		(0.82)	
BelowCutoff x p(Total liability-Cutoff liability)	0.130*		-0.057	
	(1.71)		(-1.30)	
Controls	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
SIC FE	Yes	Yes	Yes	Yes
Court FE	Yes	Yes	Yes	Yes
Sample	[$4 million: $11 million]		[$4 million: $11 million]	
Polynomial Degree	1	1	1	1
R^2		0.133		0.032
Observations	252	252	540	540
1st-stage *F*-test	31.91		35.28	

Table IA.6: Summary Statistics - Diff-in-diff sample 2, 2017-2023

This table presents summary statistics for outcomes and characteristics of Chapter 11 cases filed from 2017Q1 to 2023Q3 with total liabilities between $4 million and $11 million. *Treated* equals one if the total liability of a case is between $4 million and 7.5 million and filed before March 2020, or a case is filed under Subchapter V, and zero otherwise.

	Mean	Min	p50	Max	S.D.	N
Panel A: Treated Group						
Case Outcome						
Reorganization Plan Confirmed	0.357	0	0	1	0.479	1,157
Dismissed	0.341	0	0	1	0.474	1,157
Converted to Ch 7 or Liquidating Plan	0.259	0	0	1	0.438	1,157
Case Pending	0.042	0	0	1	0.201	1,157
# Days to Confirmation	335	21	274	1,480	220	413
# Days to Dismissal	317	3	251	1,917	283	406
# Days to Conversion	434	15	264	2,205	441	313
Case Characteristics						
Total Liability	5,685,323	4,000,214	5,472,416	10,995,571	1,237,401	1,157
Total Asset	4,905,265	0	2,422,450	245,200,000	14,344,975	1,157
Secured Debt/Total Liability	0.527	0	0.573	1	0.365	1,157
Sub V	0.393	0	0	1	0.489	1,157
Jointly Filed Case	0.119	0	0	1	0.324	1,157
# Secured Creditors	6.041	0	4	114	7.077	1,157
# Unsecured Creditors	20.028	0	10	722	42.695	1,157
Panel B: Control Group						
Case Outcome						
Reorganization Plan Confirmed	0.236	0	0	1	0.425	797
Dismissed	0.419	0	0	1	0.494	797
Converted to Ch 7 or Liquidating Plan	0.263	0	0	1	0.441	797
Case Pending	0.083	0	0	1	0.276	797
# Days to Confirmation	416	75	364	1,190	243	188
# Days to Dismissal	266	0	211	1,644	235	342
# Days to Conversion	350	16	222	2,384	408	215
Case Characteristics						
Total Liability	7,698,286	4,033,139	8,044,155	10,994,408	2,007,912	797
Total Asset	8,885,747	0	4,664,800	772,000,000	31,925,434	797
Secured Debt/Total Liability	0.594	0	0.722	1	0.379	797
Sub V	0	0	0	0	0	797
Jointly Filed Case	0.138	0	0	1	0.345	797
# Secured Creditors	5.567	0	4	72	6.384	797
# Unsecured Creditors	17.271	0	7	798	42.206	797

Table IA.7: Subchapter V, plan recovery rate for general unsecured creditors - RDD sample, 2020-2023

This table presents case-level 2SLS regression results estimating regression discontinuity design. The outcome variable *% Recovery rate*, which is the actual percentage of recovery rate for general unsecured creditors stated in the plan for cases with confirmed plans and the assumed percentage of recovery rate for general unsecured creditors for cases without confirmed plans. *Sub V* is a dummy indicating whether a case is filed under Subchapter V. *BelowCutoff* is a dummy variable, which equals one if the liability of a case is below $7.5 million and zero otherwise. *p(Total liability-$7.5 mil)* is the polynomials of the assignment variable, which is the total liability minus $7.5 million. Panel A uses cases with liabilities between $4 million and $11 million. Panel A uses cases with liabilities between $6 million and $9 million. *t*-statistics are reported in parentheses. *, **, and *** denote 10%, 5%, and 1% statistical significance levels, respectively.

Panel A: Cases with liabilities between $4 million and $11 million

	% Recovery rate for general unsecured creditors						
	1st-stage	2nd-stage					
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Sub V Hat		0.100*	0.074	0.047	0.021	-0.005	-0.031
		(1.94)	(1.57)	(1.10)	(0.53)	(-0.13)	(-0.83)
BelowCutoff	0.493***						
	(9.67)						
p(Total liability-Cutoff liability)	-0.001						
	(-0.13)						
BelowCutoff x p(Total liability-Cutoff liability)	0.003						
	(0.29)						
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SIC FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Court FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
% Recovery rate assumed for non-confirmed case		0%	10%	20%	30%	40%	50%
Polynomial Degree	2	2	2	2	2	2	2
R^2		0.021	0.017	0.017	0.021	0.032	0.049
Observations	892	892	892	892	892	892	892
1st-stage *F*-test	72.68						

Panel B: Cases with liabilities between $6 million and $9 million

	% Recovery rate for general unsecured creditors						
	1st-stage	2nd-stage					
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Sub V Hat		0.156*	0.121*	0.087	0.052	0.018	-0.017
		(1.95)	(1.66)	(1.30)	(0.84)	(0.30)	(-0.29)
BelowCutoff	0.535***						
	(6.58)						
p(Total liability-Cutoff liability)	-0.007						
	(-0.10)						
BelowCutoff x p(Total liability-Cutoff liability)	0.006						
	(0.07)						
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SIC FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Court FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
% Recovery rate assumed for non-confirmed case		0%	10%	20%	30%	40%	50%
Polynomial Degree	2	2	2	2	2	2	2
R^2		0.060	0.049	0.040	0.036	0.042	0.058
Observations	284	284	284	284	284	284	284
1st-stage *F*-test	32.27						

Table IA.8: Subchapter V, post-plan survival - RDD sample, 2020-2023

This table presents case-level 2SLS regression results estimating regression discontinuity design. The outcome variable *Active Status*, which is the actual survival status as of December 2023 for firms with confirmed plans based on state registration records and assumed survival probability for firms with confirmed plans. *Sub V* is a dummy indicating whether a case is filed under Subchapter V. *BelowCutoff* is a dummy variable, which equals one if the liability of a case is below $7.5 million and zero otherwise. *p(Total liability-$7.5 mil)* is the polynomials of the assignment variable, which is the total liability minus $7.5 million. Panel A uses cases with liabilities between $4 million and $11 million. Panel A uses cases with liabilities between $6 million and $9 million. *t*-statistics are reported in parentheses. *, **, and *** denote 10%, 5%, and 1% statistical significance levels, respectively.

Panel A: Cases with liabilities between $4 million and $11 million

	Active status as of December 2023						
	1st-stage	2nd-stage					
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Sub V Hat		0.181***	0.128**	0.076	0.024	-0.029	-0.081*
		(2.65)	(2.25)	(1.60)	(0.58)	(-0.75)	(-1.95)
BelowCutoff	0.493***						
	(9.67)						
p(Total liability-Cutoff liability)	-0.001						
	(-0.13)						
BelowCutoff x p(Total liability-Cutoff liability)	0.003						
	(0.29)						
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SIC FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Court FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Active probability assumed for non-confirmed case		0%	20%	40%	60%	80%	100%
Polynomial Degree	2	2	2	2	2	2	2
R^2		0.087	0.077	0.058	0.028	0.001	-0.002
Observations	892	892	892	892	892	892	892
1st-stage *F*-test	72.68						

Panel B: Cases with liabilities between $6 million and $9 million

	Active status as of December 2023						
	1st-stage	2nd-stage					
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Sub V Hat		0.210**	0.141*	0.072	0.003	-0.066	-0.135**
		(2.10)	(1.68)	(1.01)	(0.04)	(-1.09)	(-2.03)
BelowCutoff	0.535***						
	(6.58)						
p(Total liability-Cutoff liability)	-0.007						
	(-0.10)						
BelowCutoff x p(Total liability-Cutoff liability)	0.006						
	(0.07)						
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SIC FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Court FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Active probability assumed for non-confirmed case		0%	20%	40%	60%	80%	100%
Polynomial Degree	2	2	2	2	2	2	2
R^2		0.114	0.089	0.052	0.012	0.004	0.036
Observations	284	284	284	284	284	284	284
1st-stage *F*-test	32.27						

Table IA.9: Subchapter V, plan recovery rate for general unsecured creditors - confirmed reorganization plan sample, 2020-2023

This table presents case-level OLS regression results estimating the impact of subchapter V options on plan recovery rates. The sample covers Chapter 11 cases filed from March 2020 to September 2023 with total liabilities between $4 million and $11 million and reorganization plans confirmed. The outcome variable in Panel A *% Recovery rate*, which is the percentage of recovery rate for general unsecured creditors stated in the plan. The outcome variables in Panel B are dummy variables of recovery rate. For example, *Recovery rate dummy (*> 0%*)* in Column (1) equals one if the recovery rate for general unsecured creditors stated in the plan is greater than 0% and zero otherwise. *t*-statistics are reported in parentheses. *, **, and *** denote 10%, 5%, and 1% statistical significance levels, respectively.

Panel A: % Recovery rate for unsecured creditors

	% Recovery rate			
	(1)	(2)	(3)	(4)
Sub V	-0.351***	-0.267***	-0.255***	-0.245***
	(-6.94)	(-4.66)	(-4.47)	(-4.12)
Total Liability	-0.025**	-0.032**	-0.033**	-0.033**
	(-2.00)	(-2.29)	(-2.40)	(-2.32)
Total Asset			0.000	0.000
			(0.56)	(0.66)
Jointly Filed Case			0.164**	0.161**
			(2.27)	(2.19)
Secured Debt/Total Liability				0.069
				(0.90)
# Secured Creditors				0.001
				(0.31)
# Unsecured Creditors				-0.000
				(-0.37)
Year FE	Yes	Yes	Yes	Yes
SIC FE	No	Yes	Yes	Yes
Court FE	No	Yes	Yes	Yes
Number of observations	289	269	269	269
R^2	0.172	0.449	0.462	0.466

Panel B: Recovery rate dummy for unsecured creditors

	Recovery rate dummy			
	>0%	>20%	>50%	`=100%
	(1)	(2)	(3)	(4)
Sub V	0.046*	-0.190**	-0.304***	-0.346***
	(1.88)	(-2.59)	(-4.62)	(-5.51)
Total Liability	-0.001	-0.020	-0.042***	-0.057***
	(-0.23)	(-1.16)	(-2.69)	(-3.81)
Total Asset	-0.018	0.055	0.095	0.039
	(-0.56)	(0.59)	(1.14)	(0.49)
Jointly Filed Case	0.000	0.000	0.000	0.000
	(0.50)	(0.39)	(0.65)	(0.81)
Secured Debt/Total Liability	0.003	0.094	0.081	0.158**
	(0.09)	(1.04)	(1.00)	(2.04)
# Secured Creditors	0.000	0.007	-0.000	-0.003
	(0.06)	(1.35)	(-0.10)	(-0.64)
# Unsecured Creditors	-0.000	-0.000	-0.001	-0.000
	(-0.02)	(-0.21)	(-0.54)	(-0.43)
Year FE	Yes	Yes	Yes	Yes
SIC FE	Yes	Yes	Yes	Yes
Court FE	Yes	Yes	Yes	Yes
Number of observations	299	299	299	299
R^2	0.273	0.318	0.403	0.400

Table IA.10: Subchapter V, post-plan survival - confirmed reorganization plan sample, 2020-2023

This table presents case-level OLS regression results estimating the impact of subchapter V options on post-plan survival status. The sample covers Chapter 11 cases filed from March 2020 to September 2023 with total liabilities between $4 million and $11 million and reorganization plan confirmed. The outcome variable *Active Status*, which equals one if the firm is still active as of December 2023 based on state registration records and zero otherwise. *t*-statistics are reported in parentheses. *, **, and *** denote 10%, 5%, and 1% statistical significance levels, respectively.

	Active status as of December 2023			
	(1)	(2)	(3)	(4)
Sub V	0.161***	0.136**	0.136**	0.113*
	(3.40)	(2.34)	(2.33)	(1.84)
Total Liability	0.017	0.009	0.007	0.005
	(1.44)	(0.61)	(0.45)	(0.34)
Total Asset			0.001	0.001
			(0.94)	(0.98)
Jointly Filed Case			-0.048	-0.031
			(-0.64)	(-0.41)
Secured Debt/Total Liability				-0.110
				(-1.41)
# Secured Creditors				0.005
				(1.20)
# Unsecured Creditors				-0.001
				(-0.53)
Year FE	Yes	Yes	Yes	Yes
SIC FE	No	Yes	Yes	Yes
Court FE	No	Yes	Yes	Yes
Number of observations	323	299	299	299
R^2	0.055	0.224	0.228	0.237