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PRO-DEBTOR BIAS, COURT SHOPPING, AND BANKRUPTCY OUTCOMES

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Pro-Debtor Bias, Court Shopping, and Bankruptcy Outcomes

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Abstract

We propose an indicator for pro-debtor bias in Chapter 11 judicial decisions and relate it to court shopping and bankruptcy resolution. We find that pro-debtor bias is significantly higher for the so-called bootstrap shoppers who file in a district that is neither their main place of business or main assets nor the district of incorporation. In addition, we find that pro-debtor bias reputation of a court is a significant driver of success in attracting shoppers. Furthermore, we show that pro-debtor bias is detrimental for bankruptcy outcomes since the cases with more pro-debtor bias tend to have a higher refiling rate.

Keywords: Bootstrap shopping, Court shopping, Chapter 11, Pro-debtor bias

> "The point of having two different courthouses would be compromised
> if the substantive rules in the two cities were different."
>
> (Baird 1987)

I. Introduction

There is a long-standing debate about the fairness and efficiency of court shopping by large firms filing for Chapter 11. According to LoPucki (2005), attracting large Chapter 11 cases is for several bankruptcy courts a matter of prestige or money. Chang and Schoar (2013) argue that when judges promote their services by supplying decisions with pro-debtor bias, it may not only harm creditor interests but also shareholder interests in case of misalignment of incentives between managers and shareholders. The potential unfairness has also attracted legislative proposals to ban court shopping. Specifically, the Bankruptcy Venue Reform Act introduced by Lofgren and Buck (2023) requires firms to file only in districts where the debtor has its main place of business or main assets. From a retroactive viewpoint, if enacted, the bill would mean a change in district for 287 out of 399 large bankruptcy cases that we study over the period 2004–2020.

Opponents to this reform argue that forum shopping improves the efficiency of the Chapter 11 system. Debtors can choose the courts that ensure the most efficient resolution of financial distress by reducing travel and litigation costs (Zywicki 2005). By selecting a district that has dealt with similar cases, they may decrease the uncertainty associated with the bankruptcy process (Ellias 2018). According to Baird (1987), there is a cost to forum shopping when courts treat substantive legal questions differently. Gennaioli and Rossi (2010) propose an equilibrium model in which judges can supply pro-debtor bias in response to a demand by firms. Their model predicts heterogeneity of pro-debtor bias in judicial decisions across cases: besides a "race to the bottom" and "race to the top" in terms of (in)efficient use of judicial discretion, their model also predicts the possibility of an intermediate outcome. Specifically, pro-debtor decision-making is expected to decrease when shopping costs are higher and to increase when judges have more career prospects.

In this paper, we study Chapter 11 cases between 2004 and 2020 for which the presence of pro-debtor bias is most likely — namely, the large, public cases — as described by LoPucki (2005). Indeed, the larger the case, the more substantial the financial incentives are for demanding and supplying pro-debtor bias. Furthermore, when the firm is public, there is often dispersed shareholdership, increasing the ability of managers to extract private

benefits at the expense of shareholders (Chang and Schoar 2013). We rely on the UCLA-LoPucki Bankruptcy Research Database for the definition used of large, public cases.

As in Chang and Schoar (2013), we quantify the heterogeneity in pro-debtor bias of Chapter 11 cases using an indicator based on judicial orders granting and denying the motions filed by debtors and creditors. Unlike Chang and Schoar (2013), we compute the pro-debtor bias indicators at the case level and not the judge level. We compute for each case a proxy for the effective pro-debtor bias based on the observed number of granted and denied debtors' and creditors' motions during the first 120 days following the filing. During this period, the debtor has an exclusive right to file a plan of reorganization. Debtors can file a motion to extend this exclusivity period, use cash, sell assets, or obtain a debtor-in-possession (DIP) loan, among others. Creditors can file a motion to convert Chapter 11 into Chapter 7 or ask to lift the automatic stay, which, if granted, allows them to resume collection efforts against the debtor. We aggregate these decisions into a pro-debtor bias (PDB) index per case indicating the observed propensity of pro-debtor and pro-creditor judicial decisions.

We compute the pro-debtor bias indicator for all voluntary Chapter 11 reorganizations of large, publicly held companies filed between 2004 and 2020 and relate it to the court shopping. Following Lofgren and Buck (2023), we define court shopping as filing in a district where the debtor does not have its main place of business or main assets. This implies that also cases that file in the incorporation state (*e.g.,* in Delaware) but have their main assets and business elsewhere are shoppers. Excluding these cases leads to a stricter definition of shopping, called "bootstrap shopping," in which the debtor acquires venue through the bankruptcy of an affiliate.

Bootstrap shopping can be seen as less legitimate than shopping by filing in the district of incorporation. Levitin (2023) describes several megacases in which he believes the creation of new affiliates has been abused. For instance, Patriot Coal (based in Missouri) and Winn-Dixie (based in Florida) created a New York affiliate in the month before its bootstrap Chapter 11 filing in New York. We study the hypothesis that, for bootstrap shoppers, there is a higher prevalence of pro-debtor-biased decision than in other cases. Our empirical evidence confirms that the PDB indicator is significantly higher for bootstrap shoppers than non-bootstrap shoppers. The result is robust to controls for judge and firm characteristics. Specifically, we find that judges appointed by a Republican president

tend to be more pro-creditor. This is consistent with Taha (2009), who shows that judges appointed by a Democratic president tend to be more favorable to debtors than judges who are nominated by a Republican president.

The market for pro-debtor bias view of Chapter 11 in the United States also raises the question of how different districts compete for shoppers. In addition to the supply of pro-debtor bias, we study two other channels — namely, the historical popularity of the district in terms of place of incorporation and the presence of a standing-order regime in which complex cases are assigned to a small number of designated judges making the cases' outcomes more predictable. Clearly, Delaware has a historical advantage since it is the place of incorporation for the majority of large, public firms. It has a state law that is favorable for incumbent managers to protect themselves against takeovers (Bebchuk and Ferrell 1999). The standing-order regime in Texas Southern District (SD) is a clear advantage for that district. The popularity of New York SD as a destination for shoppers seems to be related to its significantly higher pro-debtor bias than the cases in which there is no shopping and also the cases of Delaware and Texas SD. We test these drivers of district popularity among shoppers using the negative binomial model and find that the pro-debtor bias reputation of the district is a significant predictor of a higher market share of shoppers per district. This result indicates that the pro-debtor bias demand-and-supply model of Gennaioli and Rossi (2010) is a useful representation of the Chapter 11 process over the period that we study.

A further key question is whether the pro-debtor bias supplied by judges is truly in the interest of the shareholder. As noted by Chang and Schoar (2013), when managers of distressed firms focus on self-dealing rather than long-term value maximization, there is a risk that emerging from Chapter 11 leads to a higher chance of refiling. In their sample of private firms, they do not find evidence of higher refiling rates in the case of pro-debtor-biased judges. Their analysis differs from ours in two regards. First, we use the revealed pro-debtor bias per case. Second, their estimate of pro-debtor bias is dominated by the large incidence of small, private companies in their sample. They also note that their analysis lacks "sufficient power to identify any potential effect (Chang and Schoar 2013, p. 20)." Our focus on large, public cases addresses this shortcoming in terms of power. For each case, we collect information on the outcome of reaching an organization agreement and, when emerged successfully from Chapter 11, whether the firm stays in business in the next three years. We find that the more judges are lenient on providing debtors what they want, the more chances the firm has to refile for bankruptcy within three years after

emerging from bankruptcy.

The remainder of the paper is organized as follows. Section II presents the data on large case bankruptcies. Section III presents the construction of the PDB indicator of pro-debtor bias. Section IV details the hypothesis development and regression models used in the empirical analysis. Section V provides the empirical results. Section VI concludes.

II. Stylized Facts about Court Shopping

LoPucki (2005) describes how competition for large cases may corrupt bankruptcy courts in the United States He also makes available an extensive Bankruptcy Research Database (BRD) about these large cases filed by public companies. BRD classifies a company as "public" if it filed an annual report (form 10-K or form 10) with the Securities and Exchange Commission for a year ending not less than three years prior to the filing of the bankruptcy case. The company is "large" if that annual report reported assets worth $100 million or more, measured in 1980 dollars (about $355 million in 2022 dollars). We take this definition of the universe of interest and analyze the data about the presence and effects of pro-debtor bias and court shopping. To compute a proxy for pro-debtor bias, we use the motions available in the court dockets published by PACER.

A. Dataset of Large Case Bankruptcies

The data used in this paper originate from two sources: (1) Florida-UCLA-LoPucki BRD and (2) PACER electronic public access service. PACER is an electronic public access service of the U.S. federal court; registered users can access line-by-line docket information of bankruptcy cases. A docket is defined by the Administrative Office of the U.S. Courts as a "log containing the complete history of each case in the form of brief chronological entries summarizing the court proceedings." Our sample starts in January 2004, which is the first year for which court dockets are accessible through PACER.[1]

We first consider all large case bankruptcies filed until December 2020, and when they emerge, we track whether they have refiled for bankruptcy in the three years following the emergence. We then remove cases because of missing data. Specifically, 15 cases are

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[1]https://pacer.uscourts.gov/help/faqs/what-information-available-through-pacer

missing in PACER because PACER updated the system, as VanderHeijden (2014) mentioned.[2] Therefore, after merging the BRD and PACER datasets, we obtain a sample of 490 Chapter 11 cases.

A last set of filters ensures the homogeneity of the population considered. We first remove cases with fewer than 50 employees (leading to 478 cases) and cases with principal businesses or headquarters located outside the United States (resulting in 457 cases) and filter out financial institutions. For the last, we can expect judges to have a different decision framework than for nonfinancial institutions. In total, we end up with 399 cases of large, public, voluntary Chapter 11 filings between 2004 and 2020. Appendix A provides a list of the cases. Panel A of Figure 1a shows on a U.S. country map the geographic distribution of the districts in which these cases have their principal business. Panel B of Figure 1a shows where they actually file. From this comparison, we can conclude that almost all filings are in three districts: Delaware, New York SD, and Texas SD. This graphical evidence gives prima facie evidence that court shopping is the dominant behavior among large case bankruptcies in the United States.

Insert Figure 1 about here

B. Court Shopping: Bootstrap versus Incorporation Shopping

When analyzing court shopping, the first question that arises is its definition. Under the U.S. Bankruptcy Code, firms have the freedom to choose where they file as long as it is in one of the following four locations: (1) the debtor's place of domicile or residence, commonly referred to as the place of incorporation, (2) the debtor's principal place of business, (3) the location of the debtor's principal assets, (4) any district where a bankruptcy case is pending against the debtor's affiliate.

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[2]VanderHeijden (2014) notes that five types of cases are missing: (1) U.S. Court of Appeals for the 2nd Circuit (cases filed prior to January 1, 2010); (2) U.S. Court of Appeals for the 7th Circuit (cases filed prior to January 1, 2008); (3) U.S. Court of Appeals for the 11th Circuit (cases filed prior to January 1, 2010); (4) U.S. Court of Appeals for the Federal Circuit (cases filed prior to March 1, 2012); (5) U.S. Bankruptcy Court for the Central District of California (cases closed prior to February 1, 2001). For our datasets, this leads to the following missing 15 cases: Anchor Glass Container Corporation (2005), Atlas Air Worldwide Holdings Inc., and Colonial Bancgroup, Inc. are missing because of (3); Bally Total Fitness Holding Corporation (2007), Choice One Communications, Inc., Cornerstone Propane Partners, L.P., Delphi Corporation, Fibermark Inc., General Motors Corporation, International Wire Group Inc., Lehman Brothers Holdings Inc., Readers Digest Association, Inc., Sirva, Inc., and Ziff Davis Holdings Inc. are missing because of (1); Metropolitan Mortgage & Securities Co., Inc is missing because of (4).

Throughout this paper, we use two definitions of court shopping. The first definition is based on Lofgren and Buck (2023) and defines court shoppers as bankruptcy cases in which the chosen district is not where the principal place of business or principal assets is located. The second definition is stricter and classifies cases as court shopping when a debtor acquires venue through the bankruptcy of an affiliate.[3] Using the second definition, we can subdivide the group of court shoppers into "bootstrap shoppers" (when they acquire venue through an affiliate) versus "incorporation shoppers" (when they are shoppers but no bootstrap shoppers, and thus acquire venue through the state of incorporation). By definition, the two groups are mutually exclusive.

Table I describes the distribution of the 399 cases in our samples across their shopping type (nonshopper, bootstrap shopper, incorporation shopper). We have in total 122 bootstrap shoppers and 165 incorporation shoppers. This means that out of the 399 cases in our sample, 72% are shoppers. Around 43% of the shoppers are bootstrap shoppers. Panel A of Table I indicates that Delaware attracts 85.45% of all incorporation shoppers, while New York SD and Texas SD are the most popular venues for bootstrap shopping. This is expected given the popularity of Delaware as a state of incorporation.

<div align="center">Insert Table I about here</div>

C. Time Series Trends

Over the period 2004–2020, we find that 72% of all large case bankruptcies are court shoppers and that Delaware, New York SD, and Texas SD are the most popular venues. Figure 2 reports the number of cases per year. The business cycle induces a time variation in the number of Chapter 11 filings per year. Importantly, the popularity of each district changes as well. Over 2006–2018, Delaware was the most popular venue. From 2019 to the end of the sample (2020), Texas SD was the most popular. Note that the popularity of Texas SD took off in 2016, which coincides with the issuance of the standing order by Chief Bankruptcy Judge David Jones that directs all complex corporate restructuring to

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[3](Eisenberg and LoPucki 1998, p. 975) use an alternative definition and define shoppers as the filing of a case "in a court other than that which serves the location of the debtor's chief executive office." This definition has the advantage of computational convenience since the address of the debtor's principal executive office is readily available on the 10-K of the firm. It, however, leads to classifying a case as a shopper when the city of the headquarters is located in the district, but the city is still different from the city of the court. An example is the case of Ahern Rentals, Inc whose headquarters is in Las Vegas, Nevada, but who filed in Reno, Nevada. This case is not a shopper according to the definition of Lofgren and Buck (2023) but is one according to the definition of Eisenberg and LoPucki (1998). The approach of Eisenberg and LoPucki (1998) also ignores the location of the main business when classifying a case as a shopper. We therefore do not use this definition to avoid spurious classification of cases as shoppers.

Judge Marvin Isgur and himself (Curriden 2020).[4]   Although the standing order explains the sudden rise in popularity of Texas SD, bootstrap shopping is not a new phenomenon. Together with Texas SD, New York SD is a popular venue for bootstrap shoppers.

Figure 2 also reports the numbers for 2021 and 2022. While there is still a significant number of bootstrap shoppers in 2021, all 2022 shoppers filed in their district of incorporation, Delaware. Unfortunately, the Florida-UCLA-LoPucki Bankruptcy Research Database is no longer maintained since December 2022. In 2023, U.S. bankruptcies peaked again and New Jersey emerged as a popular district for bootstrap shopping by large public companies, such as Rite Aid Corporation and WeWork, Inc., which have their main place of business and assets in Pennsylvania and New York, respectively (Knauth 2024). We therefore expect that incorporation and bootstrap shopping will persist. The relative popularity of the districts changes, but firms will continue to file in districts that are not their main place of business and assets, unless the legislature decides to ban shopping, as proposed in the bankruptcy law reform by Lofgren and Buck (2023).

Insert Figure 2 about here

D. Court Shopping and Prefiling Negotiation

Prior to commencing Chapter 11, the debtor or creditor may take the proactive approach to already negotiate the terms of bankruptcy before the debtor files for protection in court. By prenegotiating the plan, debtors and creditors can expect to speed up the Chapter 11 process and reach a faster agreement on emerging from bankruptcy protection.

Panel B of Table I differentiates between three situations: (1) cases without prefiling negotiations, called "free-fall cases," (2) cases with prefiling negotiations but the voting is planned postpetition, called "prenegotiated cases," and (3) cases in which the plan has been voted and accepted by creditors, called "prepackaged cases." We can see that irrespective of the shopping decision, around 50% of cases are free fall. In case of bootstrap shopping, we observe a significantly lower percentage of prepackage cases: only 9.84% of bootstrap shopping cases are prepackaged versus 19.64% and 23.03% in case of no shopping and incorporation shopping, respectively. Bootstrap shoppers are still proactive and prenegotiate in 36.89% of the cases but submit the plan for a vote only after filing for

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[4]In 2023, Judge Jones resigned following a misconduct complaint against him for failing to disclose a romantic relationship with an attorney working at a bankruptcy firm involved in cases pending before the U.S. Bankruptcy Court for the Southern District of Texas.

bankruptcy.

Panel B of Table I also reports the percentage of cases in which, at the time of filing, the debtors indicate that they intend to sell or liquidate all or a substantial part of their assets. These intended sales tend to be more prevalent among incorporation shoppers (26.06% of all cases) versus the nonshoppers (18.75% of cases) and bootstrap shoppers (17.21% of cases).

E. Court Shopping and Emergence from Bankruptcy

We can expect that debtors use court shopping to increase their chances of reaching an agreement with creditors so that, after restructuring the debt, they can stay in business. Based on LoPucki and Doherty (2015), the BRD dataset classifies a case as emerged when the agreed and executed plan contemplates that the debtor continues in business indefinitely after disposition of the bankruptcy case, whether by plan confirmation, 363 sale, or otherwise. The first row of Panel C in Table I shows that there is no significant difference in the probability of emerging between the different types of shoppers. However, as can be expected from the large difference in prenegotiation status, we find that bootstrap shoppers tend to stay longer in Chapter 11 than incorporation shoppers. Specifically, 70.53% of bootstrap shoppers take more than 120 days for emerging, while this is only 63.41% and 52.8% for the nonshoppers and the incorporation shoppers, respectively.

In summary, not all shoppers are equal. Compared with incorporation shoppers, bootstrap shoppers tend to file more in New York SD and Texas SD (and less in Delaware). They reach less often a prepackaging agreement, have less intention to sell assets, and take longer to emerge. These empirical observations are directly observable from the data supplied by the Florida-UCLA-LoPucki Bankruptcy Research Database. A key question is how court shopping relates to a potential pro-debtor bias of judges.

III. Pro-Debtor Bias

In this section, we introduce our framework to use judge orders to quantify pro-debtor bias of judge decisions per case. To do so, we first collect the relevant judicial orders over the first 120 days of the Chapter 11 process. When accepted to the Chapter 11 process, the debtor automatically has the exclusive right to file a reorganization plan over this 120-day period. The reason for considering the first 120 days is that this is an essential period for both debtors and creditors to take rights to maximize their benefits. When

accepted to the Chapter 11 process, the debtor benefits from the automatic stay and has automatically the exclusive right to file a reorganization plan over this 120-day period. Debtors can file motions to use cash, sell assets, or extend the exclusivity period, among other things, while creditors can file motions to lift the automatic stay and even dismiss the case or request to convert it to Chapter 7. We collect the orders of the judges about these motions and aggregate these decisions into a PDB indicator to measure the effective judicial decision's tendency at the case level. The case-level approach allows us to investigate the effective pro-debtor behavior for a specific case and understand its effect on the long-term survival prospects of the firms. We further recommend aggregating to the district level to study the effect of pro-debtor-bias reputation of districts and the popularity of bankruptcy districts.

A. Selection of Relevant Motion Types

The large-scale analysis of judge decisions on motions was pioneered by Chang and Schoar (2013). They conclude that the most important orders are those granting or denying the motions to use cash collateral, to sell assets, to obtain an extension of the exclusivity period, to dismiss a case from Chapter 11 or convert it to Chapter 7, and to lift the automatic stay. Based on our analysis of all motions, we believe there is an additional order that is important to include — namely, the motion to obtain a DIP loan. We reached this conclusion by analyzing the most common motions filed by debtors and creditors in a Chapter 11 (as reported in Appendix B). We then excluded motions that are related to (1) motions for either time extension or reduction of Chapter 11, (2) motions regarding procedural issues such as the appointment of the examiner, appeals, withdrawal, requests of documents, removals, modifications, reconsiderations, and default preliminary/summary judgments decisions, and (3) motions to invoke sanctions. We further excluded orders related to motions to objections and orders about motions that are filed under too-specific conditions leading to less than two orders in our sample.

Table II provides a detailed explanation of each of the selected motions. Panel A shows the four motions applied for by debtors: (1) motion to use cash collateral, (2) motion to sell assets, (3) motion to obtain a DIP loan, and (4) motion to extend the exclusivity period. Panel B shows the three selected motions used by creditors: (1) motion to lift the automatic stay, (2) motion to dismiss the case, and (3) motion to convert the case to Chapter 7.

Insert Table II about here

Appendix C provides details on how the motions have been collected from the docket list of each case on PACER. We restrict ourselves to the orders published in the first 120 days of the bankruptcy process. Figure 3 shows the frequency of these debtors, and creditors' filed orders across the number of days since filings. The left-hand graphs show the orders, and the right-hand graphs show the corresponding motions. We see a clear peak in the number of motions on the first day of filing for the motions to use cash, sell assets, and obtain the DIP loan. As can be expected, the motions to extend the exclusivity period are more clustered toward the end of the 120 days.

Insert Figure 3 about here

The approach to handling both granted and denied motions poses a conundrum. On the one hand, Chang and Schoar (2013) recommend to not consider the motions that have been denied since debtors might endogenously decide not to file the motion when they expect the judge to be pro-debtor. On the other hand, our sample consists of only large cases for which the expected gain of an order can be expected to be high enough to offset the anticipated effect of pro-debtor bias. Even if chances of granting are slim, it would be still rational to file the motion. It is therefore difficult to accept that throwing away data about judges denying a motion would be an optimal solution. The judge decision to deny a motion carries substantial information about the pro-debtor bias of the judge.

Table III reports the number of cases with at least one granted and one denied motion in the first 120 days after filing for bankruptcy protection. We note that there are no cases in which pro-debtor motions are denied. There are 34 cases in which the motion to lift the automatic stay was denied and 3 cases for which the motion to dismiss the case was denied. All other motion types were always granted. The most common orders are, in the order of decreasing frequency, the order to grant the motion to use cash collateral (304 cases out of 399), the order to authorize the use of a DIP loan (242 cases), the order to sell assets (188 cases), followed by the pro-creditor motion to lift the automatic stay (122 cases). The motion to dismiss the case or convert it to Chapter 7 is granted in 13 cases.

Insert Table III about here

B. From Orders to Pro-Debtor Scores per Case

We now map all the collected orders into a score per case indicating the pro-debtor bias present in the judicial orders of that case. As in Chang and Schoar (2013), we first focus

on the decision of the judge to grant motions. For each case i and motion type k, we compute the dummy variable indicating that the judge has granted at least once the motion during the first 120 days of the bankruptcy process. Specifically, $G_{i,k}^*$ is a dummy variable that equals 1 when there is at least one granted motion over all the orders for case i ($i = 1, \ldots, 399$) and motion type k ($k = 1 \ldots, 9$). To compare across action types, we standardize these indicators using the z-score transformation

$$G_{i,k} = \frac{G_{i,k}^* - \mu_k}{\sigma_k},$$ (1)

where μ_k and σ_k refer to mean and standard deviation of $G_{i,k}^*$.

We then add up this standardized indicator across all three motion types applied for by debtors: (1) use of cash collateral, (2) sale of assets, and (3) extend the exclusivity period. This leads to the Granted Debtor Motions (GDM) indicator

$$GDM_i = \frac{1}{4}(G_i^{cashcollateral} + G_i^{saleofassets} + G_i^{DIPloan} + G_i^{extendexclusivityperiod}),$$ (2)

where i represents the case $i = 1, \ldots, 399$.

Similarly, we construct a Granted Creditor Motions (GCM) indicator by adding the standardized indicators across the granted creditor motions — namely, the motion to relief from automatic stay and the motions to dismiss the case or convert to Chapter 7:

$$GCM_i = \frac{1}{3}(G_i^{relieffromautomaticstay} + G_i^{casedismissal} + G_i^{converttoChapter7}).$$ (3)

The proposed pro-debtor bias indicator framework also tracks a third dimension of judge orders — namely, the frequency of denying the motion. Table III shows that in terms of debtor motions, we only observe orders that grant them. In contrast, for creditor motions, we also observe that motions to relief from automatic stay or motions to dismiss the case are denied by the judge. We account for these denied motions in our pro-debtor bias construction by computing an indicator based on the presence of creditor motions that are rejected. Let $D_{i,k}^*$ be the dummy variable that equals 1 when there is at least one rejected motion over all the orders for case i ($i = 1, \ldots, 399$) and motion type k ($k = 1 \ldots, 9$). Denote $D_{i,k}$ its standardized version. Then the indicator for Denied Creditor Motions

(DCM) is given by

$$DCM_i = \frac{1}{2}(D_i^{relieffromautomaticstay} + D_i^{casedismissal}). \tag{4}$$

The total indicator of leniency of the judge decisions toward debtors for a specific Chapter 11 case is obtained by adding the pro-debtor indicators (GDM, DCM) and subtracting the pro-creditor indicator (GCM) of that case. We refer to this as the PDB indicator:

$$PDB_i = GDM_i + DCM_i - GCM_i. \tag{5}$$

Table III illustrates the calculation of the PDB score. It shows for the different types of shoppers the average score per motion type and tests the difference with respect to the cases that are not a shopper. It also shows the aggregation into GDM, DCM, GCM, and the total PDB score. We see that bootstrap shoppers on average have more granted motions on the use of cash collateral and the sale of assets. More striking is that judges tend to deny more often creditor motions to lift the automatic stay. Overall, we see that for bootstrap shoppers, the aggregate PDB indicator is significantly more positive than for nonshoppers and incorporation shoppers, confirming the conjecture that bootstrap shoppers receive more pro-debtor decisions.

Figure 4 shows the correlations between the component standardized GDM indicators and the aggregate GDM indicator. By design, the PDB indicator has a strong positive correlation with the GDM (0.55) and DCM (0.65) indicators and a negative correlation with the GCM pro-creditor indicator (–0.34). The GDM, DMC, and GCM have no strong correlation, indicating that they capture different dimensions and are thus complementary. Since for some cases, a creditor order to dismiss the case or relief from automatic stay is first denied and then granted, there is a significant positive correlation between the indicators for granting and denying these orders.

Insert Figure 4 about here

C. District Pro-Debtor Bias Reputation

A key contribution of this paper is to investigate the presence of pro-debtor bias reputation of a district and the popularity of that district for shoppers. While Delaware attracts

85.45% of all incorporation shoppers, New York SD and Texas SD are the most popular venues for bootstrap shopping, as shown in Panel A of Table I. Figure 2 shows that there is time variation in the relative popularity of court districts. This raises the question as to whether court shopping choices can be explained by the observed pro-debtor bias in prior decisions by the district's bankruptcy court. We refer to this as the district's pro-debtor bias reputation. Specifically, for district d in year t, we compute the end-of-year pro-debtor bias reputation as follows:

$$RepPDB_{d,t} = \frac{1}{N_{d,t}} \sum_{j \in S_{d,t}} PDB_j, \tag{6}$$

$$RepGDM_{d,t} = \frac{1}{N_{d,t}} \sum_{j \in S_{d,t}} GDM_j, \tag{7}$$

$$RepGCM_{d,t} = \frac{1}{N_{d,t}} \sum_{j \in S_{d,t}} GCM_j, \tag{8}$$

$$RepDCM_{d,t} = \frac{1}{N_{d,t}} \sum_{j \in S_{d,t}} DCM_j, \tag{9}$$

where $S_{d,t}$ is the collection of cases filed in district d between the start of the estimation sample and 120 days prior to the end of year t. [56]

Table IV compares the pro-debtor bias reputation of the three most popular bankruptcy districts with the remaining ones. We note that New York SD attracts a high proportion of bootstrap shoppers and has a significantly higher pro-debtor bias reputation in terms of leniency to grant debtor motions and reject creditor motions. There is also a below-average number of creditor motions being granted.

In contrast with New York SD, the other two popular court shopping districts (Delaware and Texas SD) do not have a significantly higher pro-debtor bias. We conjecture that their popularity is due to other elements of attractiveness for court shoppers. Thanks to the standing order that directs all large case bankruptcies to only two judges, Texas SD is attractive because of the advantage of predictability of the judge you can expect to have. For Delaware, we also find a below-average pro-debtor bias. Delaware has a natural

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[6]The pro-debtor bias indicators are computed using the information in the judicial orders issued during the first 120 days after filing for Chapter 11. To avoid data leakage when predicting the number of shoppers in year $t+1$, we thus only compute the pro-debtor reputation using the cases that have been filed at the latest 120 days prior to the end of the year.

competitive advantage for attracting shoppers given the large share of companies that are incorporated in Delaware and for all the reasons that explain this popularity as a district of incorporation (Bebchuk and Ferrell 1999).

Insert Table IV about here

D. Within-District Variation of Pro-Debtor Bias Reputation of Judges

The pro-debtor bias reputation of a district is computed on average across previous cases. Because of random assignment to judges within the district, a case may still have a different pro-debtor bias than expected (Chang and Schoar 2013). To quantify this within-district variability in pro-debtor bias reputation of judges, we compute here the pro-debtor bias reputation of the individual judges in the districts for which we have sufficient observations — namely, the three most popular districts: Delaware, New York SD, and Texas SD.

We compute the pro-debtor bias reputation of a judge in the same way as we do per district in Equation (6) — namely, for judge j in district d at year-end t, we compute the pro-debtor bias reputation as the average pro-debtor bias in the prior cases handled by that judge:

$$RepPDB_{d,j,t} = \frac{1}{N_{d,j,t}} \sum_{k \in S_{d,j,t}} PDB_k, \tag{10}$$

where $S_{d,j,t}$ is the set of all cases handled by judge j in district t prior to year-end t. We then compare this pro-debtor bias reputation of the judge with the pro-debtor bias reputation of the district computed excluding the cases handled by that judge — namely,

$$RepPDB_{d,-j,t} = \frac{1}{N_{d,-j,t}} \sum_{k \in S_{d,-j,t}} PDB_k, \tag{11}$$

where $S_{d,-j,t}$ are all cases in district d prior to year t that are not handled by judge j.

The scatterplot in Figure 5 shows the pro-debtor bias reputation of the judges versus the pro-debtor bias reputation of the district. We see the strong positive association between them with an estimated slope coefficient of 0.77 (with standard error 0.15) and R square of 18%. This plot indicates that the pro-debtor bias reputation of the district is a good predictor of the pro-debtor bias reputation of the judge they may have. This is consistent with the hypothesis that the pro-debtor bias reputation of the district is a driver of popularity of the number of shoppers in a district.

Insert Figure 5 about here

IV. Models

In this section, we introduce the models used to analyze the causes and effects of pro-debtor bias at three stages of a Chapter 11 case: (1) the decision of shopping observed at the time of filing, (2) the pro-debtor tendency in the orders of the judge during the first 120 days of the case, and (3) the probability of refiling when the firm has emerged from Chapter 11. The variables used in these models are presented first.

A. Overview of the Variables

Table V provides an overview of all the variables used in the regression. Panel A covers the variables that are specific to the Chapter 11 case, such as shopping status, prenegotiation status, judge characteristics, and case outcomes. Panel B presents the characteristics of the district — namely, the presence of a standing order, pro-debtor bias reputation, and percentage of Chapter 11 cases that are incorporated in the district. Panel C groups the accounting and financial characteristics of the firms. Most variables are directly obtained from the Florida-UCLA-LoPucki Bankruptcy Research Database and are standard in the literature.

The novel variables are the definition of court shopping status based on Lofgren and Buck (2023), the pro-debtor bias indicators, and also the Herfindahl-Hirschman index (HHI) variable proxying the bargaining power of the creditors (Ayotte and Morrison 2009). To obtain a proxy for this available to all cases in our sample, we compute an indicator based on the reported list of creditors holding the 20 largest unsecured claims, which is a mandatory disclosure in the voluntary petition. This leads us to proxy bargaining power of creditors by computing the HHI on these 20 largest unsecured claims:

$$HHI_i = \sum_{j=1}^{20} S_{i,j}^2, \tag{12}$$

where $S_{i,j}$ represents the jth largest claim share percentage of total claims of case i. We can expect that when the HHI is higher, the more bargaining power the creditor with the highest claim has.

Table VI presents the summary statistics of all variables. Panel A shows the variables that are known at the start of the Chapter 11 procedure. We find that 70% of the cases

are shoppers, 30% are bootstrap shoppers, 50% are prepackaged or prenegotiated, and 20% have a sale intended. A Chapter 11 case in our sample has on average 2,728 million assets, 2,355 million noncurrent assets (property, plant, and equipment), a debt ratio of 1.1, and a negative return on assets (ROA) (–0.23) and employs 7,230 people. Panel A shows the summary statistics for the judicial treatment during Chapter 11. We find that 80% of cases are handled by a male judge with a tenure of on average 3,842 days (10.5 years) of being a bankruptcy judge and who has been appointed by a Republican president in 60% of the cases. We find 70% of the cases emerging from bankruptcy, and 10% of the emerged cases refile for bankruptcy. We note that our data show similar bankruptcy case characteristics to those documented by LoPucki and Doherty (2015).

Insert Table VI about here

B. Popularity of Districts

We present our models and results following the timeline of a Chapter 11 case. Prior to filing, the debtor chooses the district in which the case is filed. We propose to use a market share model to test the hypothesis that the pro-debtor bias reputation of a district explains the number of shoppers in a district. Formally, the market share of a district d in year t is defined as the ratio between the number of cases that are shopping to acquire venue in district d in year t (denoted by $Y_{d,t}$) and the number of cases filing for Chapter 11 in year t (denoted by N_t). The proposed model for this market share $Y_{d,t}/N_t$ uses a generalized linear regression model and accounts for four features of attractiveness of the district for debtors to file their case: (1) the pro-debtor bias reputation of the district, (2) the presence of standing order that directs complex cases to a panel of specialized judges, (3) the percentage of cases filing for Chapter 11 in year t that are incorporated in the district, and (4) year fixed effects γ_t to control for business cycle effects, regulation changes, and other macroeconomic influences:

$$E[Y_{d,t}|x_{d,t}] = N_t \cdot \exp(\gamma_t + \beta_1 RepPDB_{d,t} + \beta_2 StandingOrder_{d,t} + \beta_3 IncorpShare_{d,t}),$$
(13)

where $t = 2004, \ldots, 2020$ and the panel of district is unbalanced as we only include districts for which the pro-debtor bias has been observed in the preceding year. In total, we have 418 observations. We also do this regression separately for the number of bootstrap shoppers in district d in year t and the number of incorporation shoppers. We use the dispersion test of Dormann (2020) to decide on the specification. If the test indicates

overdispersion at the 5% significance level, we use the negative binomial regression model; otherwise, we use the Poisson model.

We expect that $\beta_1, \beta_2, \beta_3 \geq 0$ since they correspond to district characteristics that make the district more attractive a venue for filing for Chapter 11. For the positive effect of pro-debtor bias reputation on district attractiveness, we refer to the demand and supply of the pro-debtor bias model of Gennaioli and Rossi (2010). Indeed, the percentage of Chapter 11 cases that are incorporated in the district can be considered as a home advantage for the district and also a long-term plan of incorporating in a district where, in case of bankruptcy, one could also file for bankruptcy. The incorporation share is especially high for Delaware in which over 50% of public companies are incorporated. According to LoPucki (2005), the main benefit of Delaware incorporation is that regardless of where in the world the corporation actually does business, the corporate law of Delaware applies. A specific source of Delaware's popularity as state of incorporation is its takeover law that protects incumbent managers (Bebchuk and Ferrell 1999). In addition, given the large number of cases handled by Delaware business courts, judge decisions tend to be more predictable. It can be expected that the reasons explaining the choice for Delaware as a state of incorporation also explain the choice for Delaware as a district for filing Chapter 11.

In the presence of a complex cases standing order, local regulations dictate that cases deemed complex or of considerable size are assigned to a restricted group of judges within the district or a designated subdivision. Texas SD (2016), Ohio SD (2018), and Georgia North District (2019) have issued such panels to direct all the big and complex cases to only two or three specific judges, which makes the judge predictable (Levitin 2023). There are two possible explanations for the expected positive effect of the presence of a complex cases standing order on district popularity. One explanation is the assurance that debtors will get a judge with expertise in the matter (Church 2020). Another explanation is the expectation of pro-debtor bias. According to Levitin (2023), the rationale for establishing a complex case panel appears to be solely to provide debtors with assurance that they can secure a specific judge and thus more predictability about the orders. It differs from the pro-debtor bias reputation indicator which uses revealed pro-debtor bias in previous decisions, while the standing order dummy is an indication that the district is actively seeking to attract bankruptcy filings and may therefore supply pro-debtor bias.

C. Case Characteristics and Pro-Debtor Bias

The second model that we use is a predictive model that relates the case characteristics with the pro-debtor bias observed based on the judicial orders that are issued in the first 120 days of the Chapter 11 case. The main explanatory variable of interest is the shopping decision. Based on LoPucki (2005), we expect more pro-debtor decisions for shoppers than for nonshoppers. This corresponds to a positive coefficient for β_1 when we use the pro-debtor bias indicators PDB_i, GDM_i, and DCM_i and a negative one for the granted creditor motions (GCM_i):

$$Y_i = \beta_0 + \beta_1 Shopper_i + \gamma' Controls_i + \epsilon_i, \tag{14}$$

where $Y_i = PDB_i$, GDM_i, GCM_i, DCM_i. The variable $Controls_i$ is a vector of control variables that includes characteristics of judges, firm financial performance, and industry fixed effect. The variable ϵ_i is the error term for case i, and all cases $i = 1, \ldots, 399$ are ordered in ascending order based on their filing date. We also estimate this regression by including the dummies for bootstrap shopping and incorporation shipping:

$$Y_i = \beta_0 + \beta_1 BootstrapShopper_i + \beta_2 IncorporationShopper_i + \gamma' Controls_i + \epsilon_i. \tag{15}$$

For $Y_i = PDB_i$, GDM_i, DCM_i, we expect $\beta_1 > \beta_2$ and $\beta_1 > 0$. For $Y_i = GCM_i$, we expect $\beta_1 < 0$ and $\beta_1 < \beta_2$ since we expect that a bootstrap shopping case is associated with fewer granted creditor motions.

D. Pro-Debtor Bias and Case Outcomes

The third model that we use links the pro-debtor bias decision-making during the first 120 days of the Chapter 11 case with the probability of refiling when the firm has emerged from bankruptcy. If we find a positive association, it would support the hypothesis of Chang and Schoar (2013) that due to agency problems between firm managers and firm shareholders, pro-debtor bias can also be detrimental for shareholders.

Our empirical framework differs from Chang and Schoar (2013), as we compute pro-debtor bias at the case level (instead of a judge fixed effect) and only consider the large, public cases in our analysis. As in Chang and Schoar (2013), we use a logistic regression to study how pro-debtor bias and the shopping decision affect case outcome in terms of the probability of refiling for bankruptcy within three years of emerging from the Chapter 11 process. The logistic regression model that we use to study the effect of pro-debtor bias

and shopping on the probability of refiling is as follows:

$$E[Refile_i|x_i] = [1 + \exp(-(\beta_1 Shopper_i + \beta_2 PDB_i + \gamma'Controls_i))]^{-1}, \qquad (16)$$

where $Refile_i$ is a dummy variable that is one if the company files for bankruptcy within three years after emerging. The sample consists of the 302 large public bankruptcy cases that have emerged after filing for Chapter 11. They are ordered in terms of their filing date, based on which the pro-debtor bias indicator is computed using the orders issued in the first 120 days after filing.

The variable $Controls_i$ includes the firm characteristics and Chapter 11 case characteristics. We expect that pro-debtor bias and court shopping increase the chance of refiling and thus $\beta_1, \beta_2 > 0$. We also analyze the same regression but distinguish across the two types of shoppers:

$$E[Refile_i|x_i] = [1 + \exp(-(\beta_1 BootstrapShopper_i + \beta_2 IncorpShopper_i + \beta_3 PDB_i + \gamma'Controls_i))]^{-1}.$$
$$(17)$$

V. Results for Court Shopping and Pro-Debtor Bias

This section uncovers the information embedded in the shopping decision for the pro-debtor treatment of the case by the judge and the effect of that pro-debtor treatment on the refiling probability of the case, and the shopping behavior of others. We organize our analysis along the typical timeline in a Chapter 11 reorganization process. The course of action is that debtors first make informed decisions about where to file and which motions to file. Judges then decide on the motions filed by debtors and creditors, which, for the first 120 days, we aggregate into the pro-debtor bias indicator per case. When Chapter 11 leads to the conclusion that the firm can emerge indefinitely, the company may still face financial distress and refile for bankruptcy.

We exploit these time lags between shopping decisions, orders, and refiling to study the information value of the observed actions for future decisions. Specifically, we test (1) the information value of the district pro-debtor bias reputation for shopping decisions, (2) the information value of the shopping decision for the pro-debtor bias of the case, and (3) the information value of pro-debtor bias and shopping decision on refiling. The methods used are as described in Section IV.

A. Pro-Debtor Bias Reputation and Court Shopping

Let us first study the choice of district from the aggregate viewpoint of what predicts the share of shoppers each district has on a yearly basis. Panel B of Table VII shows the estimation results of the regression model in (13) predicting the total share of shoppers (columns (1) and (2)), the share of bootstrap shoppers (columns (3) and (4)), and the share of incorporation shoppers (columns (5) and (6)). Based on the test of overdispersion in Panel A, we use the negative binomial regression model for predicting the total share of shoppers and the share of bootstrap shoppers, and the Poison model for the number of incorporation shoppers.

Insert Table VII about here

The empirical evidence in Table VII confirms that the popularity of the district to attract shoppers follows from three factors. First, districts with a higher pro-debtor bias reputation are more popular. For all shopper definitions, we find that districts with a reputation of being lenient on granting creditor motions tend to attract fewer shoppers. A reputation of frequently granting debtor motions leads to a higher share of bootstrap shoppers. These findings are consistent with the presence of incentives for judges to supply pro-debtor bias in order to attract more cases, as assumed by Gennaioli and Rossi (2010).

Second, the popularity of the district in a given year among shoppers is positively affected by the percentage of Chapter 11 firms that are incorporated in that district. This is as expected since the state of incorporation may have been chosen by the incumbent managers to protect themselves against takeovers (Bebchuk and Ferrell 1999). The motives for this choice could thus correlate with the district choice when filing for Chapter 11. It seems that these districts are also more popular for bootstrap shoppers. Peer effects in corporate decision-making may be an explanation for this (Leary and Roberts 2014).

Third, we find that the presence of a standing order that directs complex cases to a panel of judges is in all cases a significant predictor of popularity of the district among shoppers. A debtor filing in a district with a complex order has the benefit of a higher predictability of the judge handling the case.

B. Court Shopping and Pro-Debtor Bias

The share-of-market analysis indicates that firms shop in order to benefit from pro-debtor bias. A necessary condition for such pro-debtor-bias-motivated shopping to be effective is that we indeed find data evidence that cases with court shopping have more pro-debtor bias on average than other cases. We test this in Panels C, D, and E of Table III using a *t*-test of equality of mean of the GDM score, the DCM score, GCM score, and the aggregate PDB score between the cases without shopping (column (1)) and the cases with shopping (column (2)). The *p*-value of the test is shown in column (3). We find that shoppers on average have significantly more favorable decisions in terms of granted use of cash collateral and sale of assets. The average pro-debtor bias indicator is significantly higher for shoppers than for nonshoppers.

The more granular analysis that distinguishes between bootstrap shoppers and incorporation shoppers show that incorporation shoppers typically have the same average pro-debtor bias as nonshoppers, and that the result of a higher average pro-debtor bias for shoppers is driven by bootstrap shoppers.

The pro-debtor bias of a case should clearly also depend on case characteristics. The more likely the firm is to emerge successfully, the more lenient we expect the judge to be in terms of granting pro-debtor motions. To disentangle the predictive value of the shopping decision for pro-debtor bias from other influences, we use in Table VIII a multivariate regression setup with variables describing specific characteristics of the case (shopping decision, extent of prenegotiation, sale intention, judge characteristics, standing order) and variables describing the economic and financial status of the firm (size in terms of assets and employees, debt ratio, ROA, earnings before interest and taxes [EBIT]). All variables are summarized in Table VI. The regression also includes fixed effects for industry and year of filing.

<div align="center">Insert Table VIII about here</div>

Our main variable of interest in Table VIII is the (bootstrap) shopping decision. We find that firms that engage in bootstrap shopping tend on average to have a relatively higher pro-debtor bias, and this effect is robust to all the control variables included. Note that this is a predictive relationship but not necessarily a causal relationship because of the

endogeneity between the shopping decision and the pro-debtor bias observed in the case.[7]

We further find that the effect of the political orientation of the judge is as predicted in Taha (2009) — namely, that Democratic judges are more favorable to debtors than Republican judges. Specifically, we find that cases handled by a judge who was appointed at the time of a Republican president tend to have fewer pro-debtor-lenient judge decisions. We also find that male judges tend to be more pro-debtor biased, which could be explained by the more general finding that men tend to be more overconfident (Barber and Odean 2001). For prepackaged cases, there are naturally fewer motions filed, explaining that prepackaged cases have a lower pro-debtor bias. The financial and accounting variables have no significant effect on the pro-debtor bias indicator. When analyzing the effect of the standing order on pro-debtor bias at the case level, we find in Table VIII that the effect is negative, and thus that districts with a standing order have on average less pro-debtor bias.

The PDB indicator studied in Table VIII is a composite indicator based on the GDM, GCM, and DMC subindicators. In Table IX, we study for which subindicator we find the most predictive value of the shopping decision. We find that bootstrap shoppers tend to have on average a higher GDM score. Similarly as using the t-test analysis, we find that incorporation shoppers do not benefit from more pro-debtor bias than nonshoppers. On the contrary, they tend to have fewer denied creditor motions, which may be linked to the higher predictability of judicial decisions in those districts that are popular for company incorporation (most notably Delaware).

In terms of the control variables, we find that the concentration of unsecured creditor claims (HHI) has a negative effect on both the DCM and GCM indicators. This is consistent with the hypothesis that when a creditor is dominant, there are fewer motions filed by creditors, leading to both fewer granted and denied creditor motions. It has no effect on the motions filed by the debtor.

<div align="center">Insert Table IX about here</div>

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[7]Accounting for this endogeneity at the case level is an important topic for further research. Our approach to this has been to study the causality at the district level using the pro-debtor bias reputation and share of market of bootstrap shopping.

C. Pro-Debtor Bias, Court Shopping, and Refiling

In large, public firms, managers tend to be powerful. They decide where to file and which motions to file. As such, they influence the amount of pro-debtor bias of their case. From a principal-agent perspective, the firm's management should maximize the long-term firm value. We would thus expect that cases with a higher pro-debtor bias tend to have a higher survival rate. Chang and Schoar (2013) propose an opposite view in case of agency conflicts. Managers act in their self-interest leading to lower survival rates of firms in case of pro-debtor bias.

We test these two views by studying the probability of refiling. Indeed, the emergence of a firm from Chapter 11 reorganization is only a success for the shareholder when the company stays in business. In the alternative case, judges are kicking the can, which comes at an increased cost of the bankruptcy process and losses for creditors and shareholders and is also detrimental in terms of the macroeconomic impact of an inefficient use of capital.

We study this question using a logistic regression model that tests the effect of pro-debtor bias on the future probability of refiling. LoPucki and Doherty (2002) recommend to use three years as a horizon for evaluating the refiling probability. A failure to survive is thus when the firm needs to refile within three years after emerging. In addition to the direct cost of the bankruptcy process and the losses for creditors, there is the macroeconomic impact of an inefficient use of capital.

Table X presents the logistic model regression estimates, as presented in Equations (16) and (17). The sample only includes the cases that emerged successfully. Of the 302 large, public companies that sought protection to remain in business through bankruptcy reorganization, 10% refiled for bankruptcy. We find that cases with more pro-debtor-biased judge orders effectively tend to refile more often. A higher score of granted debtor motion increases the chance of refiling, while granting more creditor motions decreases the probability of refiling. Pro-debtor bias is thus partly futile: in addition to a potential unfair treatment of creditors, it also leads to less success in delivering the promise of staying in business indefinitely after emerging from bankruptcy. Pro-debtor bias is thus not only at the detriment of debtors. Due to agency problems, it can also be a disadvantage for the shareholder. In terms of court shopping, we find that there is no general effect of bootstrap shoppers on refiling. It is thus only when bootstrap shoppers have a higher pro-debtor bias that they tend to refile more often.

Insert Table X about here

VI. Conclusion

The permissive design of the U.S. Bankruptcy Code provides ample discretion to debtors and judges involved in a Chapter 11 reorganization. When firms have a different place of business or assets than their place of incorporation, or when there is a bankruptcy case pending against their affiliate, firms can shop for the court that is most advantageous to them. According to LoPucki (1983), this leads to a race to the bottom in which judges supply pro-debtor bias leading to decisions that distort the balance of debtor and creditor interests in favor of the debtor. This prediction also follows from the pro-debtor bias demand-and-supply model by Gennaioli and Rossi (2010).

In this study, we present the first systematic analysis of the determinants and effects of pro-debtor bias for large case Chapter 11 bankruptcies. We propose pro-debtor bias indicators based on debtor, creditor, and judge actions observed within the first 120 days after filing by 399 large and public Chapter 11 voluntary cases between January 2004 and December 2020. The indicators quantify pro-debtor bias using three pillars: frequency of granting debtor motions, frequency of denying creditor motions, and frequency to grant creditor motions. We find that pro-debtor bias is especially prevalent among bootstrap shoppers who acquire venue through the bankruptcy of an affiliate.

We find that pro-debtor bias matters to explaining the popularity of a district. Districts with a more positive pro-debtor reputation tend to be more successful in terms of attracting shoppers. Pro-debtor bias matters also for business continuity and efficient allocation of resources. We find that pro-debtor bias is partly futile since, once emerged, the cases with a higher pro-debtor bias tend to have a higher refiling rate. This is consistent with the analysis of Chang and Schoar (2013) that a misalignment of incentives between managers and shareholders may result in negative outcomes of pro-debtor bias for shareholders.

The presented analysis has direct policy implications. The recent Bankruptcy Venue Reform Act by Lofgren and Buck (2023) requires firms to file only in districts where the debtor has its main place of business or main assets. From a retroactive viewpoint, the bill would mean a change in district for over 70% of the large bankruptcy cases that we study

over the period 2004–2020. Our analysis indicates that the effect of court shopping on pro-debtor bias is heterogeneous. A general ban on court shopping ignores this heterogeneity and is therefore too comprehensive. As a more piecemeal solution, policymakers could consider only banning the cases for which the pro-debtor bias is most prevalent — namely, the large case bankruptcies that engage in bootstrap shopping.
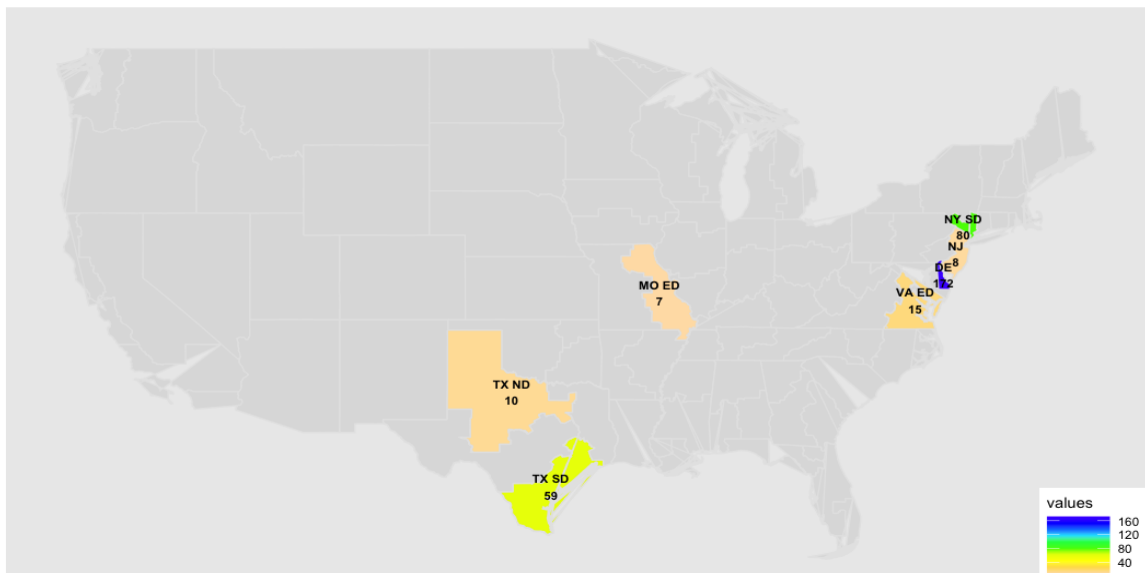
VII. Tables and Figures

Figure 1: Yearly number of filings of large public Chapter 11 cases

(a) District in which principal business is located
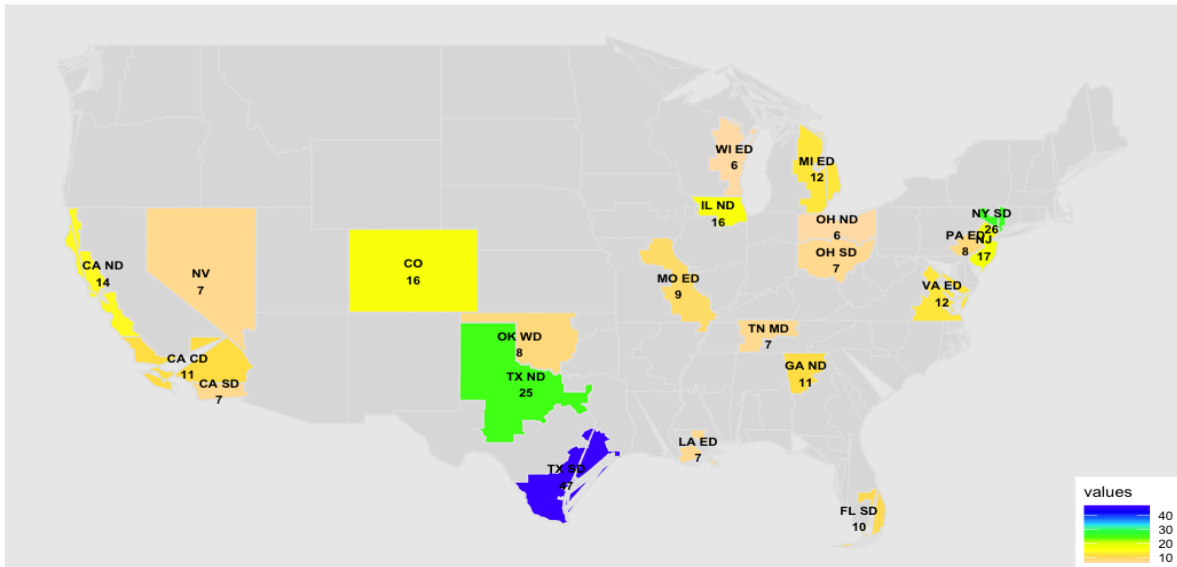
(b) District in which Chapter 11 is filed

Note: Only districts with more than five observations are highlighted.

Figure 2: Yearly number of filings of large Chapter 11 cases

(a) Distribution across districts
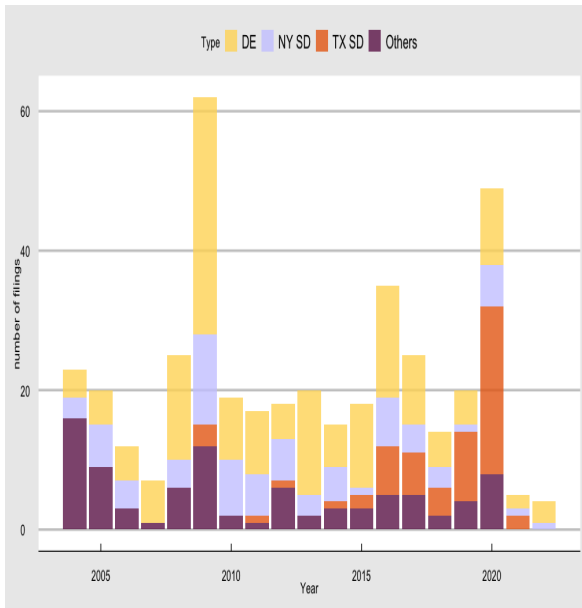
(b) Distribution of cases across shopper types
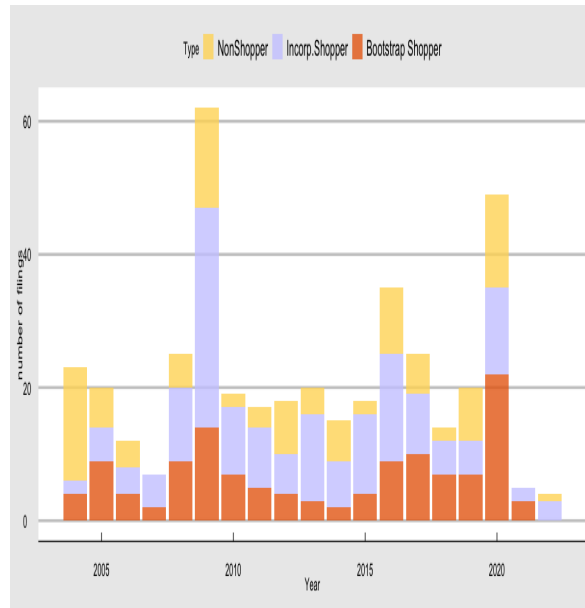
(c) Distribution of number of bootstrap shoppers across districts
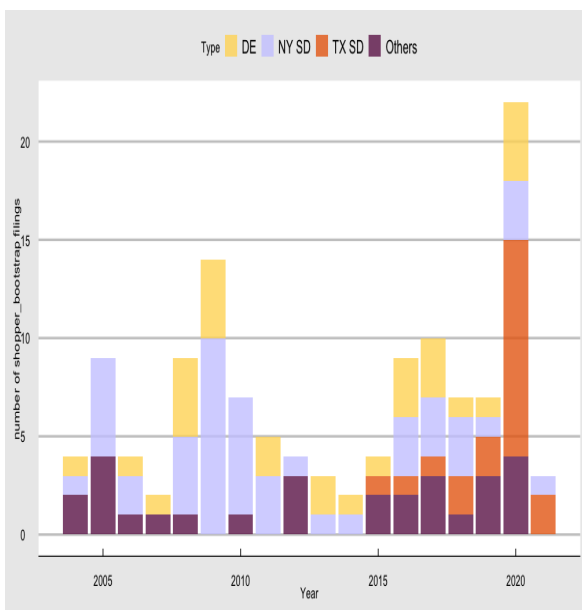
(d) Distribution of number of incorporation shoppers across districts
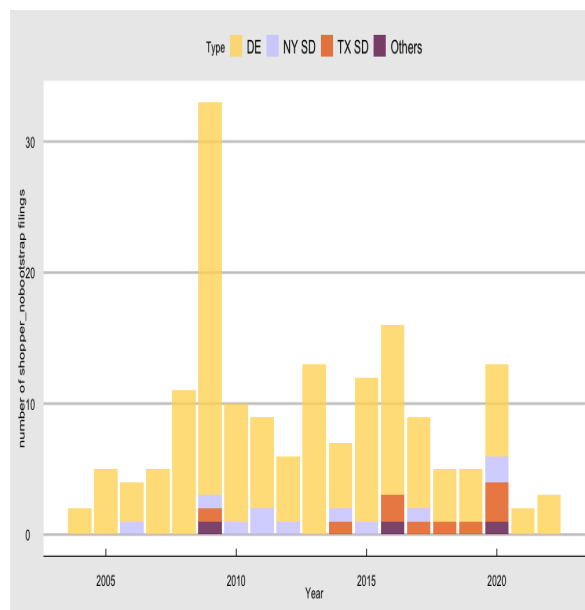
Note: DE, NY SD, and TX SD stand for Delaware, New York South District, and Texas South District, respectively. Our analysis covers Chapter 11 cases filed between 2004 and 2020. For completeness, we also present the evolution in 2021 and 2022.

Figure 3: Frequency of debtors' filed orders in the first 120 days after filing Chapter 11

(a) Use of cash collateral order
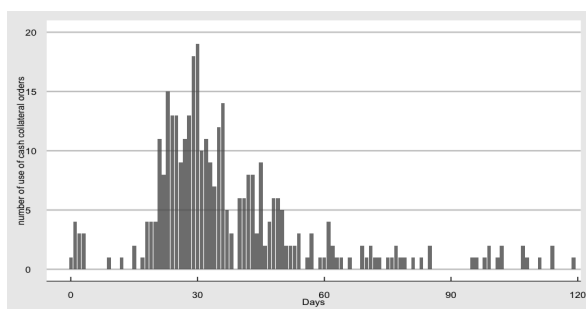
(b) Corresponding use of cash collateral motion
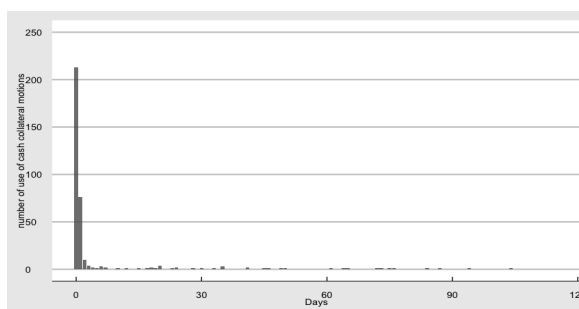
(c) Sale of assets order
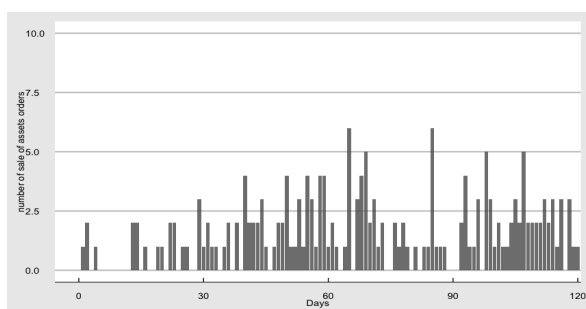
(d) Corresponding sale of assets motion
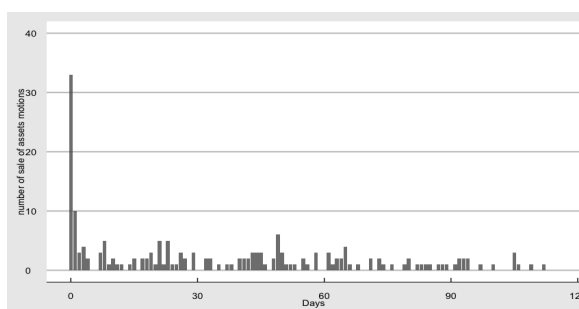
(e) DIP loan order
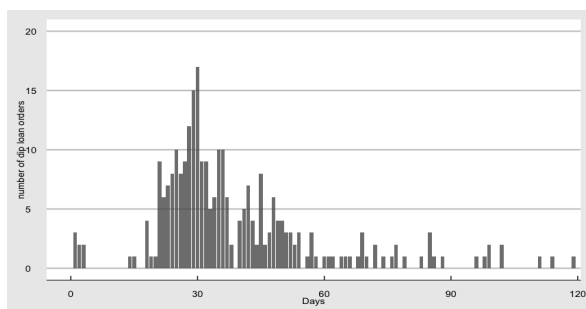
(f) Corresponding DIP loan motion
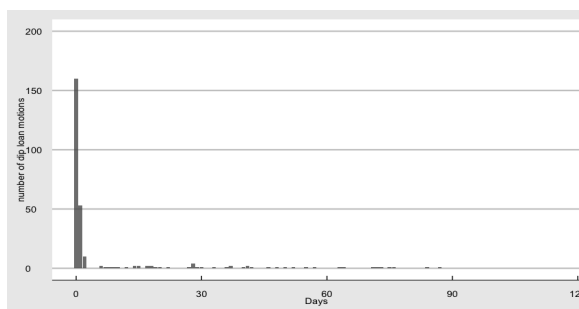
(g) Extend exclusivity period order
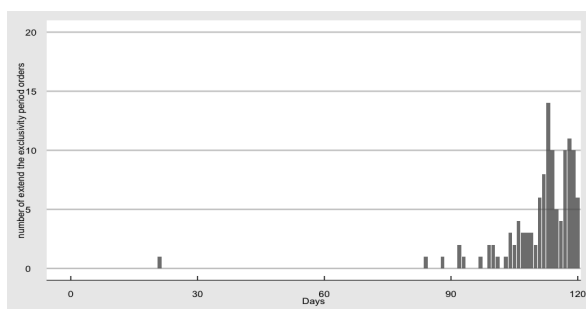
(h) Corresponding extend exclusivity period motion
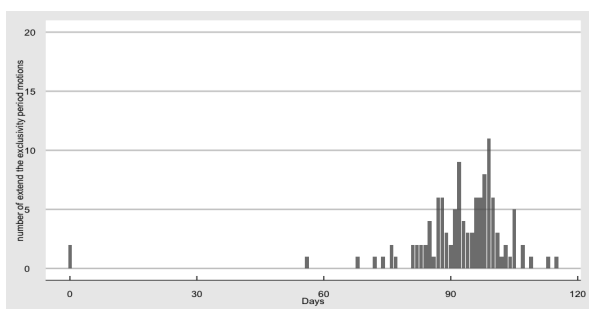
(i) Relief from automatic stay order
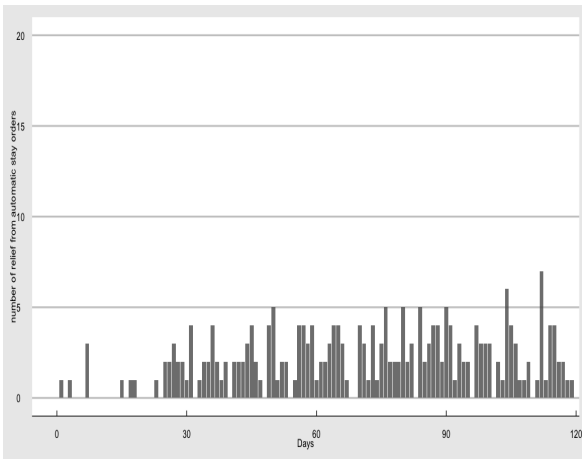
(j) Corresponding relief from automatic stay motion
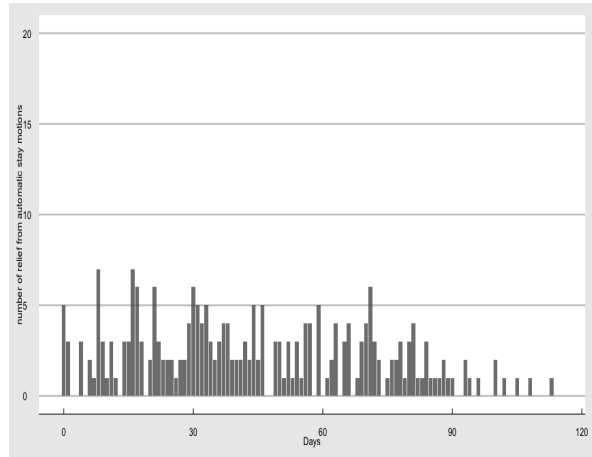
(k) Case dismissal order
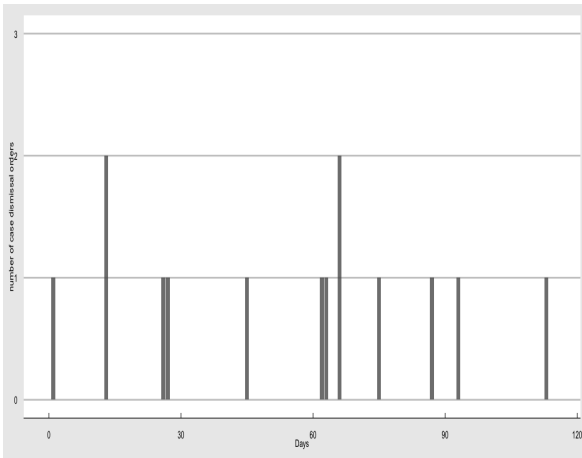
(l) Corresponding case dismissal motion
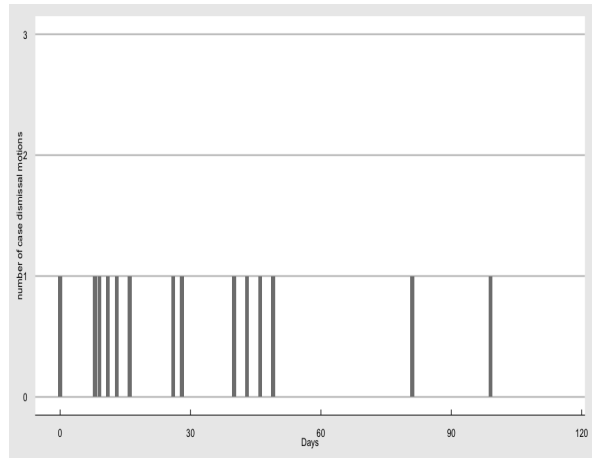
(m) Convert to Chapter 7 order
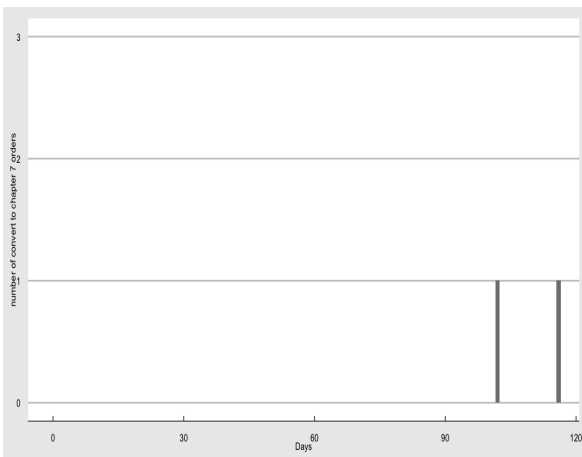
(n) Corresponding convert to Chapter 7 motion
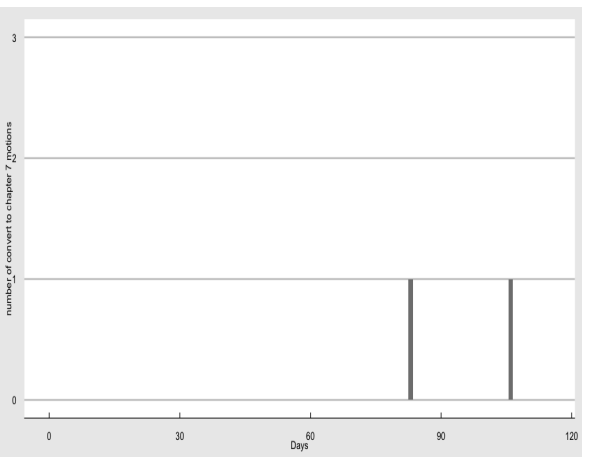
Figure 4: Pearson correlation of standardized orders and the pro-debtor bias indicator
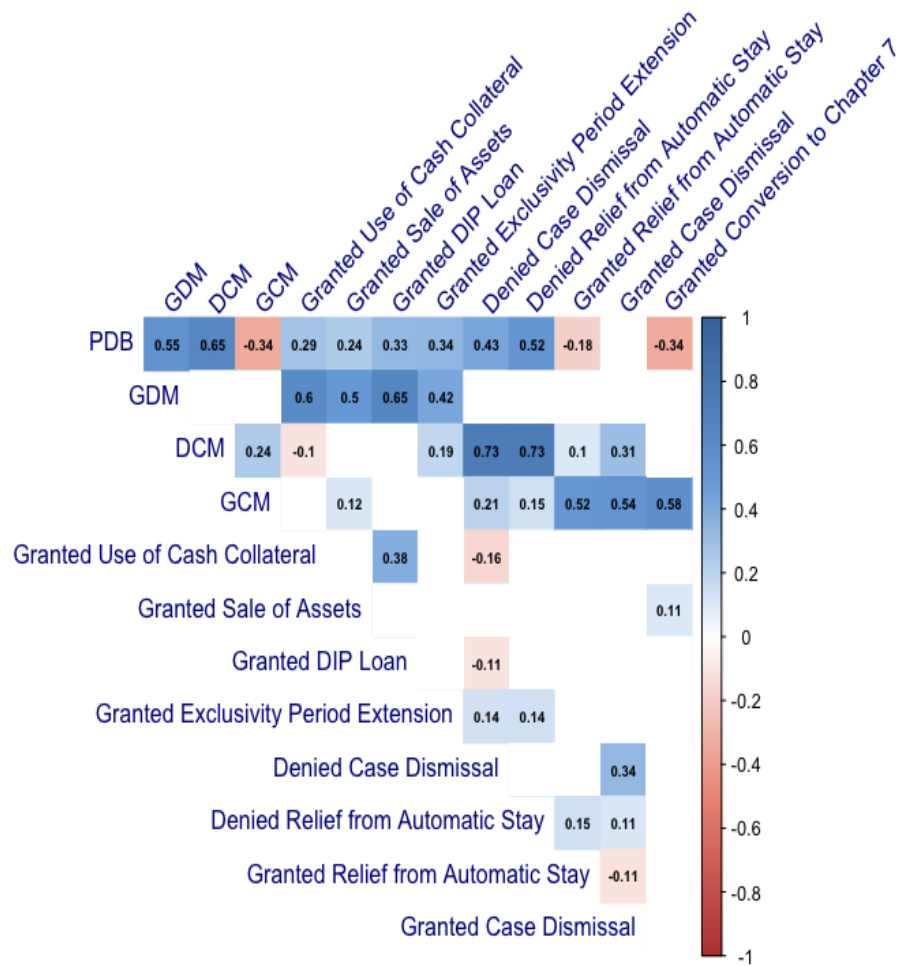
Note: Only correlations that are statistically significant at the 5% level are shown.

Figure 5: Relationship between judge pro-debtor bias (PDB) reputation and district PDB reputation
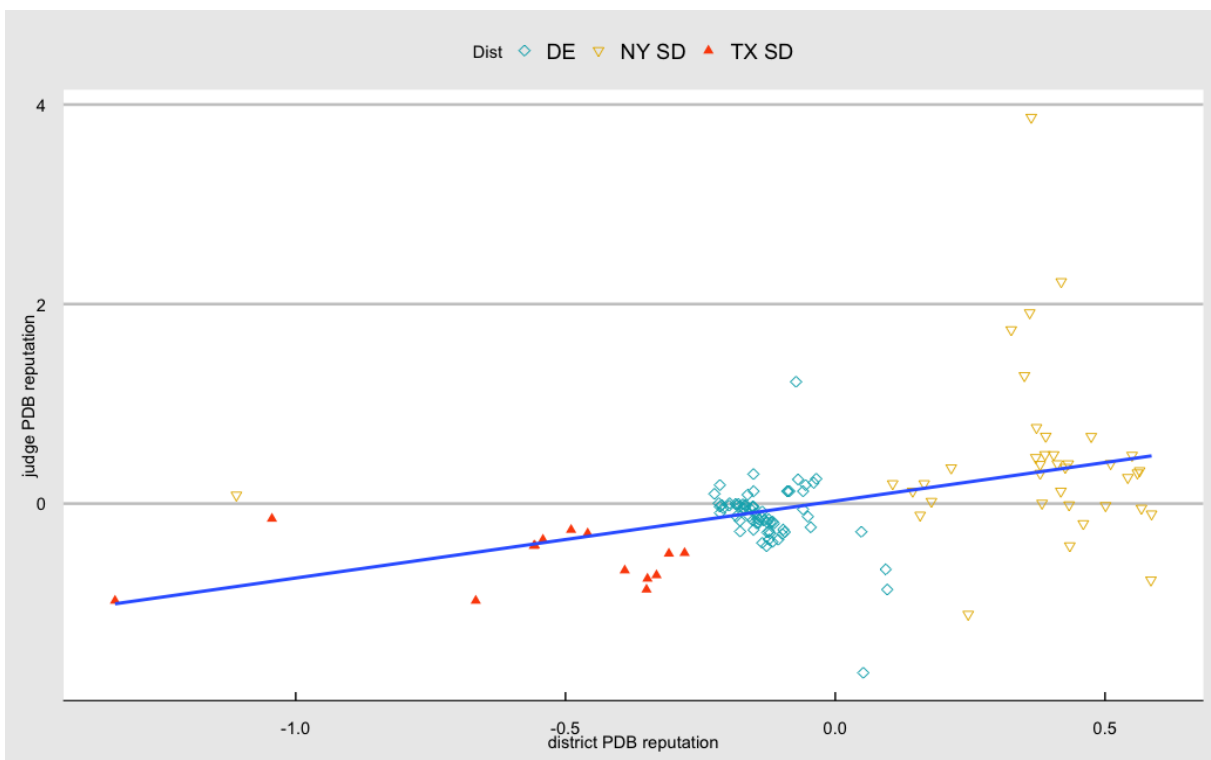
Table I: Court shopping, case characteristics, and the emergence of the case from Chapter 11

	Nonshopper	Shopper	*P*-value NS vs S	Bootstrap shopper	*P*-value BS vs NS	Incorporation shopper	*P*-value IS vs NS	*P*-value BS vs IS
No. of cases	112	287		122		165		
Panel A: Choice of district to file								
DE	2 (1.79%)	170 (59.23%)	0.000***	29 (23.77%)	0.000***	141 (85.45%)	0.000***	0.000***
NY SD	22 (19.64%)	58 (20.21%)	0.899	47 (38.52%)	0.001***	11 (6.67%)	0.003***	0.000***
TX SD	31 (27.68%)	28 (9.76%)	0.000***	18 (14.75%)	0.016**	10 (6.06%)	0.000***	0.021**
Panel B: Prenegotiation and intention to sell								
Free fall	60 (53.57%)	147 (51.22%)	0.674	65 (53.27%)	0.964	82 (49.70%)	0.528	0.550
Pre-negotiated	30 (26.79%)	90 (31.36%)	0.363	45 (36.89%)	0.098*	45 (27.27%)	0.929	0.087*
Pre-packaged	22 (19.64%)	50 (17.42%)	0.613	12 (9.84%)	0.036**	38 (23.03%)	0.499	0.002***
Sale intended	21 (18.75%)	64 (22.30%)	0.426	21 (17.21%)	0.761	43 (26.06%)	0.149	0.069*
Panel C: Outcome in terms of emerging from Chapter 11 bankruptcy								
Emerge	82 (73.21%)	220 (76.66%)	0.483	95 (77.87%)	0.411	125 (75.76%)	0.636	0.676
Emerge after 120 days	52 (63.41%)	133 (60.45%)	0.639	67 (70.53%)	0.320	66 (52.8%)	0.130	0.007***

Note: *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively, based on a standard *t*-test for the equality of mean with unequal variances. NS, BS, and IS stand for nonshopper, bootstrap shopper, and incorporation shopper, respectively. DE, NY SD, and TX SD stand for Delaware, New York Southern District, and Texas Southern District, respectively.

Table II: Debtor and creditor motions used in the pro-debtor bias indicator

Panel A: Debtor motions	
1. Use of cash collateral	11 U.S.C. § 363. Ask for permission to use the money from the lender and use the cash that has been generated from the company's operations to continue to finance the business during the Chapter 11 bankruptcy process.
2. Sale of assets	11 U.S.C. § 363. Ask for permission to sell assets to an identified buyer before a plan of reorganization is approved or as part of the reorganization plan.
3. Obtain DIP loan	11 U.S.C. § 364. Ask for permission to obtain DIP loan that allows a company to secure additional financing for the on-going operations of the business throughout its Chapter 11 bankruptcy.
4. Extend exclusivity period	11 U.S.C. § 1121(d). Ask for permission to extend the exclusivity period, which is 120 days in which only the debtor might file a plan. An extension may be asked in case it is not longer than 18 months after the order for relief date.
Panel B: Creditor motions	
1. Relief from automatic stay	11 U.S.C. § 362(d). Ask for permission to be relieved from automatic stay, which is an order that suspends all judgments, collection activities, foreclosures, as well as property repossessions by creditors that have arisen before the petition. Once the petition is filed, the stay against creditors is set in place immediately. This gives the debtor a chance to resolve the financial distress while holding negotiations in a bid.
2. Case dismissal	11 U.S.C. § 1112. Ask for permission to dismiss the case when delays in formulating filing and obtaining confirmation of a plan.
3. Convert to Chapter 7	11 U.S.C. § 1112. Ask for permission to convert the case to Chapter 7 when delays in formulating filing and obtaining confirmation of a plan.

Table III: Orders and pro-debtor bias versus shopper status

	Non shopper (1)	Shopper (2)	P-value NS vs S (3)	Bootstrap shopper (4)	P-value BS vs NS (5)	Incorporation Shopper (6)	P-value IS vs NS (7)	P-value BS vs IS (8)
No. of cases	112	287		122		165		
Panel A: No. of cases with at least one granting order per motion type								
Use of cash collateral	77 (68.75%)	227 (79.09%)	0.040**	102 (83.61%)	0.011**	125 (75.76%)	0.250	0.142
Sale of assets	26 (23.21%)	92 (32.06%)	0.106	42 (34.43%)	0.081*	50 (30.30%)	0.246	0.541
DIP loan	64 (57.14%)	178 (62.02%)	0.434	82 (67.21%)	0.146	96 (58.18%)	0.962	0.151
Extend excl. period	32 (28.57%)	84 (29.27%)	0.988	53 (43.44%)	0.026**	31 (18.79%)	0.078*	0.000***
Automatic stay	39 (34.82%)	83 (28.92%)	0.304	31 (25.41%)	0.153	52 (31.52%)	0.657	0.319
Case dismissal	1 (0.89%)	10 (3.48%)	0.280	6 (4.92%)	0.155	4 (2.42%)	0.631	0.416
Convert to Chapter 7	1 (0.89%)	1 (0.35%)	1.000	0 (0.00%)	0.966	1 (0.61%)	1.000	1.000
Panel B: No. of cases with at least one denying order per motion type								
Automatic stay	10 (8.93%)	24 (8.36%)	1.000	20 (16.39%)	0.131	4 (2.42%)	0.032**	0.000***
Case dismissal	0 (0.00%)	3 (1.05%)	0.659	3 (2.46%)	0.276	0 (0.00%)	–	0.151
Panel C: Standardized scores on GDM								
Use of cash collateral	−0.174	0.068	0.041**	0.174	0.008***	−0.010	0.206	0.099*
Sale of assets	−0.139	0.054	0.071*	0.106	0.058*	0.016	0.189	0.464
Extend excl. period	−0.011	0.004	0.891	0.316	0.018**	−0.226	0.064*	0.000***
DIP loan	−0.072	0.028	0.377	0.134	0.114	−0.050	0.864	0.117
GDM	−0.099	0.039	0.020**	0.183	0.000***	−0.068	0.634	0.000***
Panel D: Standardized scores on DCM								
Automatic stay	0.015	−0.006	0.858	0.282	0.085*	−0.218	0.030**	0.000***
Case dismissal	−0.087	0.034	0.083*	0.197	0.083*	—	—	—
DCM	−0.036	0.014	0.459	0.239	0.018**	−0.153	0.030**	0.000***
Panel E: Standardized scores on GCM								
Automatic stay	0.092	−0.036	0.263	−0.112	0.119	0.020	0.569	0.257
Case dismissal	−0.114	0.044	0.066*	0.132	0.064*	−0.020	0.307	0.280
Convert to Chapter 7	0.055	−0.022	0.571	−0.071	0.320	0.015	0.791	0.319
GCM	0.011	−0.004	0.802	−0.017	0.690	0.005	0.928	0.728
Panel F: Total PDB score								
PDB	−0.147	0.057	0.049**	0.439	0.000***	−0.225	0.454	0.000***

Note: *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively, based on a standard t-test for the equality of mean with unequal variances. NS, BS, and IS stands for nonshopper, bootstrap shopper and incorporation shopper, respectively.

Table IV: Summary statistics of pro-debtor bias reputation of top three districts versus other districts

	Others	DE	*P*-value Others vs DE	NY SD	*P*-value Others vs NYSD	TX SD	*P*-value Others vs TX SD
No. of cases	88	172		80		59	
Panel A: General characteristics							
Shopper	31 (35.23%)	170 (98.84%)	0.000***	58 (72.5%)	0.000***	28 (47.46%)	0.190
Bootstrap shopper	28 (31.82%)	29 (16.86%)	0.009***	47 (58.75%)	0.001***	18 (30.51%)	1.000
Panel B: Drivers of competitive advantage for attracting shoppers							
repPDB	0.017	−0.120	0.002***	0.298	0.001***	−0.676	0.000***
repGDM	0.000	−0.049	0.103	0.129	0.002***	−0.572	0.000***
repGCM	0.128	−0.056	0.000***	−0.026	0.000***	−0.091	0.000***
repDCM	0.145	−0.127	0.000***	0.143	0.971	−0.196	0.000***
IncorpShare	0.48%	76.89%	0.000***	0.33%	0.653	1.34%	0.259

Note: Per district, we show the number of Chapter 11 filings, the percentage that are (bootstrap) shoppers, the average pro-debtor bias reputation at the time of filing, and the percentage of cases that are incorporated in the district.

Table V: Variable definitions

Variable	Reference	Definition
Panel A: Case characteristics		
PDB	n/a	Index to measure the degree of judicial pro-debtor bias per case
Shopper	(Lofgren and Buck 2023)	A dummy variable = 1 for court shoppers according to the definition of Lofgren and Buck (2023)
Bootstrap Shopper	(Levitin 2023)	A dummy variable = 1 for court shoppers that are not filing in the district of incorporation; they thus filed in the district where their affiliate is located
Prepackaged*	(Ellias 2018; LoPucki and Doherty 2015)	A dummy variable = 1 for a prepackaged case
Prenegotiated*	(Ellias 2018; LoPucki and Doherty 2015)	A dummy variable = 1 for a prenegotiated case
SaleIntended*	(Ayotte and Ellias 2022; LoPucki and Doherty 2015)	A dummy variable = 1 if the debtor intends at the time of filing to sell or liquidate all or a substantial part of its assets
Log JudgeExp	(Iverson et al. 2017)	Log of the number of days from a judge's appointment date to the filing date of a case
MaleJudge	(Iverson et al. 2017)	A dummy variable = 1 when a male judge disposes the case
RepublicanJudge	(Guthrie et al. 2007; Taha 2009; Iverson et al. 2017)	A dummy variable = 1 when the judge disposing of the case was appointed at the time the U.S. president in power belonged to the Republican Party
Emerge*	(LoPucki and Doherty 2015)	A dummy variable = 1 for cases in which the agreed and executed plan contemplates that the debtor continues in business indefinitely after disposition of the bankruptcy case whether by plan confirmation, 363 sale, or otherwise
Refile*	(Chang and Schoar 2013; Iverson et al. 2017)	A dummy variable = 1 for cases in which the debtor refiles bankruptcy after the debtor emerged from Chapter 11
Panel B: District characteristics		
RepPDB	n/a	PDB reputation of the district computed as the average PDB for all cases in the district between 2004 and the most recent year-end before filing
StandingOrder	(Levitin 2023)	A dummy variable = 1 for the districts that issued standing order to direct all the big and complex cases to certain specific judges
IncorporationShare	n/a	The percentage of cases whose incorporations are located in the district d
Panel C: Accounting and financial characteristics		
HHI	n/a	The Herfindahl-Hirschman index to measure the concentration of unsecured claims

Variable	Reference	Definition
Empl, logEmpl*	(Chang and Schoar 2013)	(Log of) total number of employees in the last 10-K before the Chapter 11 filing
Assets, logAssets*	(LoPucki and Doherty 2015)	(Log of) total assets in current dollars in the last 10-K before the Chapter 11 filing (in millions)
Debtratio	(LoPucki and Doherty 2015)	Debt-to-asset ratio in the last 10-K before the Chapter 11 filing
ROA	(Iverson et al. 2017)	Return on assets ratio in the last 10-K before the Chapter 11 filing
Ebit, logEbit*	(Ellias 2018)	(Log of) EBIT in the last 10-K before the Chapter 11 filing (in millions)
EBITDA to Debt	(Ellias 2018)	EBITDA-to-debt ratio in the last 10-K before the Chapter 11 filing
PPE, logPPE	(Aivazian and Zhou 2012)	(Log of) gross property, plant, and equipment value in the last 10-K before the Chapter 11 filing (in millions)
Equity, logEquity*	(LoPucki and Doherty 2015)	(Log of) equity in the last 10-K before the Chapter 11 filing (in millions)
Industry*	(Ayotte and Ellias 2022; Iverson et al. 2017)	Industry fixed effect is Fama-French five industries matching with Standard Industrial Classification four-digits codes: Consumer, Manufacture, High-Technology, Health, and Other

Note: All variables with ∗ are available in the Florida-UCLA-LoPucki Bankruptcy Research Database.

Table VI: Descriptive statistics of case-level variables

	Mean	St. Dev.	Min	Median	Max
Panel A: Case characteristics					
Shopper	0.72	0.45	0	1	1
Bootstrap shopper	0.31	0.46	0	0	1
Prepackaged	0.18	0.39	0	0	1
Prenegotiated	0.30	0.46	0	0	1
SaleIntended	0.21	0.41	0	0	1
JudgeExp	3,842.11	2,552.88	1	3,352	14,519
MaleJudge	0.82	0.39	0	1	1
RepublicanJudge	0.57	0.50	0	1	1
Emerge	0.76	0.43	0	1	1
Refile	0.10	0.30	0	0	1
Panel B: Accounting and financial characteristics					
HHI	0.42	0.31	0.05	0.33	1
Empl	7,229.57	13,894.19	55	2,500	107,000
Assets	2,727.67	6,097.30	269	982	79,675
Debtratio	1.07	0.55	0.25	0.95	5.68
ROA	−0.23	0.39	−3.30	−0.12	0.53
Ebit	−103.70	580.33	−5,119.26	−3.93	2,705.00
EBITDA_to_Debt	0.01	0.22	−1.15	0.06	0.67
PPE	2,355.05	5,960.49	1.17	555.71	83,270.00
Equity	−94.82	1,581.01	−13,255.00	39.00	12,903.00

Table VII: Court shopping and district reputation

	Share of shoppers		Share of bootstrap shoppers		Share of incorporation shoppers	
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: Test for overdispersion						
Test statistics	2.831	2.876	2.494	2.553	0.872	0.774
P-value	0.002***	0.002***	0.006***	0.005***	0.192	0.219
Panel B: Estimation results						
repPDB	0.563***		0.545***		0.192	
	(0.218)		(0.200)		(0.286)	
repGDM		0.578*		0.589*		−0.097
		(0.339)		(0.318)		(0.375)
repGCM		−1.194**		−1.109**		−1.707***
		(0.513)		(0.447)		(0.589)
repDCM		0.340		0.306		0.342
		(0.330)		(0.305)		(0.326)
StandingOrder	2.737***	2.620***	2.455***	2.350***	3.294***	3.453***
	(0.766)	(0.758)	(0.783)	(0.764)	(0.674)	(0.510)
IncorporationShare	5.383***	5.239***	3.361***	3.215***	7.070***	7.070***
	(0.657)	(0.649)	(0.639)	(0.615)	(0.585)	(0.540)
Log Likelihood	−267.090	−265.722	−213.825	−212.743	−103.785	−101.192
Akaike Inf. Crit.	572.179	573.444	465.650	467.486	245.569	244.383

Note: We estimate the share of shoppers in each district using a negative binomial regression. All regressions are estimated by maximum likelihood and include year fixed effects. The sample consists of 418 observations. The significance of the coefficients is evaluated using Newey-West standard errors, which are reported in parentheses. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively, based on a two-sided t-test.

Table VIII: Predictors of pro-debtor bias

	Dependent variable: PDB					
	(1)	(2)	(3)	(4)	(5)	(6)
Shopper	0.171*	0.125	0.102			
	(0.103)	(0.104)	(0.108)			
Bootstrap shopper				0.524***	0.471***	0.432***
				(0.123)	(0.125)	(0.124)
Incorporation shopper				−0.117	−0.149	−0.149
				(0.112)	(0.115)	(0.120)
Prenegotiated		−0.099	−0.097		−0.116	−0.115
		(0.110)	(0.111)		(0.105)	(0.105)
Prepackaged		−0.267**	−0.217*		−0.150	−0.122
		(0.133)	(0.130)		(0.126)	(0.126)
SaleIntended		−0.180	−0.075		−0.116	−0.065
		(0.146)	(0.157)		(0.143)	(0.154)
logJudgeExp	−0.021	−0.020	−0.030	−0.030	−0.030	−0.035
	(0.048)	(0.047)	(0.048)	(0.046)	(0.045)	(0.046)
MaleJudge	0.291**	0.341**	0.321**	0.233*	0.282**	0.274**
	(0.133)	(0.138)	(0.139)	(0.129)	(0.134)	(0.135)
RepublicanJudge	−0.283***	−0.305***	−0.295***	−0.194*	−0.222**	−0.216**
	(0.107)	(0.107)	(0.105)	(0.104)	(0.104)	(0.104)
StandingOrder		−0.362**	−0.339**		−0.353**	−0.320*
		(0.162)	(0.166)		(0.155)	(0.162)
HHI		−0.101	−0.032		−0.100	−0.060
		(0.147)	(0.142)		(0.139)	(0.137)
logEmpl			0.053			0.059
			(0.039)			(0.039)
logAssets			0.017			−0.011
			(0.079)			(0.073)
Debtratio			0.077			0.065
			(0.083)			(0.077)
ROA			0.060			0.012
			(0.139)			(0.123)
logEbit			−0.056			−0.058
			(0.043)			(0.044)

EBITDA_to_Debt			0.322			0.245
			(0.242)			(0.230)
logPPE			0.025			0.006
			(0.045)			(0.043)
logEquity			−0.052			−0.020
			(0.091)			(0.085)
Constant	−0.249	−0.179	0.052	−0.204	−0.141	0.029
	(0.551)	(0.560)	(1.250)	(0.542)	(0.555)	(1.180)
R^2	0.072	0.095	0.119	0.142	0.159	0.171
Adjusted R^2	0.012	0.024	0.029	0.085	0.090	0.084

Note: We estimate the association between shopping and pro-debtor bias controlling for case characteristics. All regression models include industry and year fixed effects. For all regressions, we have 399 cases. The significance of the coefficients is evaluated using Newey-West standard errors, which are reported in parentheses. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively, based on a two-sided t-test.

Table IX: Predictors of pro-debtor bias subindicators

	GDM	GDM	GCM	GCM	DCM	DCM
Shopper	0.112*		−0.013		−0.023	
	(0.063)		(0.057)		(0.070)	
Bootstrap shopper		0.229***		−0.037		0.166*
		(0.071)		(0.063)		(0.100)
Incorporation shopper		0.023		0.005		−0.167**
		(0.072)		(0.067)		(0.073)
Prenegotiated	−0.088	−0.094	−0.087	−0.085	−0.095	−0.106
	(0.067)	(0.066)	(0.059)	(0.059)	(0.096)	(0.095)
Prepackaged	−0.265***	−0.231***	−0.141**	−0.147**	−0.093	−0.039
	(0.075)	(0.076)	(0.065)	(0.066)	(0.078)	(0.078)
SaleIntended	0.101	0.104	0.203**	0.202**	0.027	0.033
	(0.076)	(0.075)	(0.100)	(0.100)	(0.089)	(0.089)
logJudgeExp	−0.009	−0.010	−0.016	−0.016	−0.038	−0.041
	(0.023)	(0.022)	(0.030)	(0.030)	(0.040)	(0.039)
MaleJudge	0.077	0.060	−0.224***	−0.220**	0.021	−0.006
	(0.073)	(0.072)	(0.085)	(0.086)	(0.083)	(0.081)
RepublicanJudge	−0.180***	−0.152***	0.189***	0.183***	0.073	0.119
	(0.057)	(0.057)	(0.063)	(0.064)	(0.084)	(0.085)
StandingOrder	−0.227**	−0.220**	0.110	0.108	−0.002	0.009
	(0.102)	(0.101)	(0.110)	(0.110)	(0.141)	(0.139)
HHI	0.053	0.043	−0.165**	−0.163**	−0.249***	−0.266***
	(0.089)	(0.090)	(0.083)	(0.083)	(0.093)	(0.096)
logEmpl	0.048**	0.050**	0.040*	0.040*	0.045	0.048
	(0.025)	(0.024)	(0.023)	(0.023)	(0.031)	(0.031)
logAssets	−0.038	−0.048	0.079**	0.081**	0.133**	0.117**
	(0.041)	(0.039)	(0.037)	(0.037)	(0.059)	(0.055)
Debtratio	−0.029	−0.033	−0.041	−0.040	0.065	0.059
	(0.061)	(0.062)	(0.051)	(0.051)	(0.074)	(0.070)
ROA	−0.020	−0.037	−0.058	−0.054	0.022	−0.005
	(0.080)	(0.078)	(0.093)	(0.092)	(0.115)	(0.111)
logEbit	−0.077**	−0.077**	0.040	0.040	0.061	0.059
	(0.036)	(0.032)	(0.026)	(0.026)	(0.038)	(0.040)
EBITDA_to_Debt	0.263*	0.236	−0.087	−0.081	−0.028	−0.072

	(0.149)	(0.149)	(0.159)	(0.161)	(0.157)	(0.163)
logPPE	−0.001	−0.008	−0.011	−0.010	0.015	0.004
	(0.024)	(0.023)	(0.018)	(0.019)	(0.036)	(0.034)
logEquity	−0.085***	−0.074***	−0.012	−0.015	0.021	0.039
	(0.029)	(0.028)	(0.031)	(0.031)	(0.055)	(0.052)
Constant	1.434**	1.426**	−0.477	−0.475	−1.859**	−1.872**
	(0.581)	(0.551)	(0.539)	(0.540)	(0.905)	(0.878)
R^2	0.172	0.192	0.158	0.158	0.145	0.174
Adjusted R^2	0.087	0.107	0.071	0.070	0.058	0.087

Note: We estimate the association between shopping and the pro-debtor bias subindicators (Granted Debtor Motions, Granted Creditor Motions, and Denied Creditor Motions) controlling for case characteristics. All regression models include industry and year fixed effects. For all regressions, we have 399 cases. The significance of the coefficients is evaluated using Newey-West standard errors, which are reported in parentheses. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively, based on a two-sided t-test.

Table X: Pro-debtor bias and the probability of refiling

	Dependent variable: Refile			
	(1)	(2)	(3)	(4)
PDB	0.723***	0.822***		
	(0.281)	(0.326)		
GDM			2.071***	2.146***
			(0.759)	(0.813)
GCM			−1.529**	−1.582**
			(0.752)	(0.727)
DCM			−0.488	−0.388
			(0.664)	(0.691)
Shopper	0.886		1.111	
	(0.706)		(0.711)	
Bootstrap shopper		0.589		0.886
		(0.808)		(0.777)
Incorporation shopper		1.137		1.288
		(0.838)		(0.846)
Prepackaged	−0.001	−0.049	−0.009	−0.030
	(0.840)	(0.869)	(0.943)	(0.959)
Prenegotiated	−0.096	−0.140	−0.318	−0.337
	(0.620)	(0.627)	(0.685)	(0.694)
SaleIntended	−0.581	−0.592	−0.403	−0.398
	(1.040)	(1.009)	(1.044)	(1.007)
logJudgeExp	−0.068	−0.052	−0.043	−0.032
	(0.194)	(0.202)	(0.190)	(0.196)
MaleJudge	−1.502*	−1.559**	−2.233**	−2.271**
	(0.771)	(0.790)	(1.015)	(1.043)
RepublicanJudge	0.990	0.995	1.642**	1.631**
	(0.674)	(0.685)	(0.804)	(0.807)
StandingOrder	−69.472**	−70.715**	−68.918**	−70.706**
	(30.898)	(31.505)	(30.436)	(31.265)
HHI	0.157	0.128	0.036	−0.024
	(0.834)	(0.841)	(0.974)	(0.996)
logEmpl	0.405*	0.416*	0.601*	0.599*
	(0.244)	(0.241)	(0.313)	(0.312)

logAssets	−1.492***	−1.496***	−1.119	−1.116
	(0.571)	(0.581)	(0.698)	(0.696)
Debtratio	0.479	0.485	0.991	0.991
	(0.603)	(0.589)	(0.681)	(0.680)
ROA	1.136	1.069	1.753	1.648
	(1.045)	(0.963)	(1.504)	(1.467)
logEbit	−7.008*	−7.156*	−6.900*	−7.110*
	(3.833)	(3.914)	(3.785)	(3.895)
EBITDA_to_Debt	3.132	3.570	2.195	2.630
	(3.076)	(3.176)	(3.910)	(4.033)
logPPE	0.598*	0.644	0.412	0.445
	(0.360)	(0.397)	(0.381)	(0.413)
logEquity	4.652	4.922	6.609	6.887
	(3.121)	(3.245)	(4.594)	(4.909)
Constant	18.268	16.631	−5.066	−6.085
	(35.313)	(35.141)	(44.734)	(44.058)
Log Likelihood	−62.928	−62.609	−58.253	−58.085
Akaike Inf. Crit.	205.855	207.217	200.507	202.170

Note: Logistic regression is used to predict refiling using the pro-debtor bias of the case. All regressions are estimated by maximum likelihood. All models include industry and year fixed effects. The sample consists of 302 cases that have emerged over the period 2004–2020. The dependent variable is one if the case refiles for bankruptcy within three years after emerging from bankruptcy. The significance of the coefficients is tested using Newey-West standard errors, which are reported in parentheses. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively, based on a two-sided t-test.

VIII. Appendix

Appendix A: List of large public Chapter 11 cases studied

Year Company List (SIC5, Shopper, Bootstrap)
SIC5 1 Cnsmr: Consumer Durables, Nondurables, Wholesale, Retail, and Some Services (Laundries, Repair Shops); 2 Manuf: Manufacturing, Energy, and Utilities; 3 HiTec: Business Equipment, Telephone and Television Transmission; 4 Health: Healthcare, Medical Equipment, and Drugs; 5 Other: Mines, Constr, BldMt, Trans, Hotels, Bus Service, Entertainment, Finance
2004 Amcast Industrial Corporation (2,0,0), Applied Extrusion Technologies, Inc. (2,0,0), ATA Holdings Corp. (5,0,0), Avado Brands Inc. (1,1,1), BMC Industries Inc. (2,0,0), Bush Industries, Inc. (1,0,0), Dan River Inc. (1,0,0), Footstar Inc. (1,0,0), Galey & Lord, Inc. (1,0,0), Geo Specialty Chemicals Inc. (2,0,0), High Voltage Engineering Corporation (2,0,0), Huffy Corp. (1,0,0), Intermet Corp. (2,0,0), Interstate Bakeries Corporation (1,0,0), Liberate Technologies (3,1,0), MTS, Incorporated (1,1,1), New World Pasta Co. (1,0,0), Oglebay Norton Company (5,1,0), Pegasus Satellite Communications, Inc. (3,1,1), RCN Corporation (3,1,1), Trico Marine Services, Inc. (5,0,0), Trump Hotels & Casino Resorts Inc. (5,0,0), US Airways Group, Inc. (5,0,0)
2005 aaiPharma Inc. (3,1,0), Allied Holdings, Inc. (5,0,0), Amcast Industrial Corporation (2,1,1), Calpine Corp. (2,1,1), Collins & Aikman Corporation (1,0,0), Delta Air Lines, Inc. (5,1,1), Eagle Picher Holdings, Inc. (1,1,1), Entergy New Orleans, Inc. (2,0,0), Falcon Products, Inc. (1,0,0), FLYi, Inc. (5,1,0), Foamex International, Inc. (2,1,0), Friedman's Inc. (1,0,0), High Voltage Engineering Corporation (2,1,1), IWO Holdings, Inc. (3,1,0), McLeodUSA Incorporated (3,1,1), Northwest Airlines Corporation (5,1,1), Tower Automotive, Inc. (2,1,1), Ultimate Electronics, Inc. (1,1,0), WHX Corporation (2,0,0), Winn-Dixie Stores, Inc. (1,1,1)
2006 Dana Corporation (1,1,1), Dura Automotive Systems, Inc. (1,1,0), Global Power Equipment Group Inc. (2,1,0), Granite Broadcasting Corporation (3,0,0), Integrated Electrical Services, Inc. (5,1,1), OCA, Inc. (4,0,0), Oneida Ltd. (1,1,1), Pliant Corporation (2,1,1), Premier Entertainment Biloxi LLC (5,0,0), Radnor Holdings Corporation (2,1,0), Silicon Graphics, Inc. (3,1,0), Werner Holding Co. (PA), Inc. (2,0,0)
2007 Hancock Fabrics, Inc. (1,1,0), InPhonic, Inc. (3,1,0), InSight Health Services Holdings Corp (4,1,0), Movie Gallery, Inc. (5,1,1), Pope & Talbot, Inc. (2,1,1), Remy International, Inc. (1,1,0), Tweeter Home Entertainment Group, Inc. (1,1,0)
2008 Bally Total Fitness Holding Corporation (5,1,1), Buffets Holdings, Inc. (1,1,0), Chesapeake Corporation (2,0,0), Circuit City Stores, Inc. (1,0,0), Constar International Inc. (2,1,0), Frontier Airlines Holdings, Inc. (5,1,1), Hawaiian Telcom Communications, Inc. (3,1,0), Hines Horticulture, Inc. (1,1,0), Kimball Hill, Inc. (5,0,0), Leiner Health Products, Inc. (4,1,0), Lenox Group, Inc. (1,1,1), Linens Holding Co. (1,1,0), MPC Corporation (3,1,1), Pierre Foods, Inc. (1,1,1), Pilgrims Pride Corporation (1,1,1), Propex, Inc. (1,0,0), Sharper Image Corporation (1,1,0), Syntax-Brillian Corporation (3,1,0), TOUSA, Inc. (5,0,0), Tribune Company (1,1,0), VeraSun Energy Corporation (2,1,1), Vertis, Inc. (5,1,0), ViCorp Restaurants, Inc. (1,1,1), WCI Communities, Inc. (5,1,0), Wellman, Inc. (2,1,1)

2009	Accuride Corporation (1,1,0), Aleris International, Inc. (2,1,0), Asyst Technologies, Inc. (2,0,0), Aventine Renewable Energy Holdings, Inc. (2,1,0), Barzel Industries Inc. (2,1,0), BearingPoint, Inc. (5,1,1), Building Materials Holding Corporation (1,1,0), Caraustar Industries, Inc. (2,0,0), Champion Enterprises, Inc. (5,1,1), Charter Communications, Inc. (3,1,1), Chemtura Corporation (2,1,1), Citadel Broadcasting Corporation (3,1,1), Cooper-Standard Holdings, Inc. (1,1,1), Dayton Superior Corporation (2,1,0), Eddie Bauer Holdings, Inc. (1,1,0), Edge Petroleum Corporation (2,0,0), Energy Partners, Ltd. (2,1,0), Fairchild Corporation (1,1,0), FairPoint Communications, Inc. (3,1,1), Finlay Enterprises, Inc. (1,0,0), Fleetwood Enterprises, Inc. (1,0,0), Foamex International, Inc. (2,1,0), Gottschalks Inc. (1,1,0), GSI Group, Inc. (3,1,0), Hartmarx Corporation (1,0,0), Hayes Lemmerz International, Inc. (1,1,0), Herbst Gaming, Inc. (5,0,0), Idearc Inc. (1,0,0), Indalex Holdings Finance, Inc. (2,1,0), ION Media Networks, Inc. (3,1,1), Journal Register Company (1,1,0), Lazy Days R.V. Center, Inc. (1,1,1), Lear Corporation (1,1,1), Lyondell Chemical Company (2,1,1), Majestic Star Casino, LLC (5,1,1), Merisant Worldwide, Inc. (2,1,0), Milacron Inc. (2,0,0), Monaco Coach Corporation (1,1,0), Muzak Holdings LLC (5,1,0), Noble International, Ltd. (1,0,0), Nortel Networks Corp. (Nortel Networks, Inc. only) (3,1,0), NTK Holdings, Inc. (1,1,0), Panolam Industries International, Inc. (1,1,0), Pliant Corporation (2,1,0), Primus Telecommunications Group, Inc. (3,1,0), R.H. Donnelley Corporation (5,1,0), RathGibson, Inc. (2,1,0), Silicon Graphics, Inc. (3,1,1), Simmons Company (1,1,0), Six Flags, Inc. (5,1,0), Smurfit-Stone Container Corporation (2,1,0), Source Interlink Companies, Inc. (5,1,0), Spansion Inc. (3,1,0), Spectrum Brands, Inc. (3,1,0), Station Casinos, Inc. (5,0,0), Sun-Times Media Group, Inc. (1,1,0), Transmeridian Exploration Incorporated (2,0,0), Tronox Incorporated (2,1,1), Trump Entertainment Resorts, Inc. (5,0,0), TXCO Resources Inc. (2,0,0), Visteon Corporation (1,1,0), Young Broadcasting, Inc. (3,0,0)
2010	American Media Operations, Inc. (1,1,0), Blockbuster Inc. (5,1,1), Great Atlantic & Pacific Tea Company, Inc. (1,1,1), Local Insight Regatta Holdings, Inc. (1,1,0), MediaNews Group, Inc. (Affiliated Media, Inc. only) (1,1,0), Mesa Air Group, Inc. (5,1,1), Movie Gallery, Inc. (5,1,1), Neenah Enterprises, Inc. (2,1,0), Neff Corp. (5,1,1), Newark Group, Inc. (2,0,0), Orleans Homebuilders, Inc. (5,1,0), Palm Harbor Homes, Inc. (5,1,0), RHI Entertainment, Inc. (5,0,0), Spheris Inc. (5,1,0), TerreStar Corporation (TerreStar Networks Inc. only) (3,1,1), Trico Marine Services, Inc. (5,1,0), U.S. Concrete, Inc. (2,1,0), Vertis, Inc. (5,1,1), Xerium Technologies, Inc. (1,1,0)
2011	Ahern Rentals, Inc. (5,0,0), AMR Corporation (5,1,1), Borders Group, Inc. (1,1,0), Constar International Inc. (2,1,0), Dynegy Holdings, LLC (2,1,1), General Maritime Corporation (5,0,0), Jackson Hewitt Tax Service Inc. (1,1,0), Lee Enterprises, Incorporated (1,1,0), Nebraska Book Company, Inc. (1,1,1), NewPage Corporation (2,1,0), Perkins & Marie Callenders Inc. (1,1,0), Real Mex Restaurants, Inc. (1,1,0), Sbarro, Inc. (1,1,0), Seahawk Drilling, Inc. (2,0,0), Syms Corp. (1,1,1), TerreStar Corporation (3,1,1), William Lyon Homes (5,1,0)
2012	A123 Systems, Inc. (3,1,0), ATP Oil & Gas Corporation (2,0,0), Broadview Networks Holdings, Inc. (3,0,0), Circus and Eldorado Joint Venture (5,0,0), Eastman Kodak Company (2,1,1), Edison Mission Energy (2,1,1), Ener1, Inc. (3,0,0), Energy Conversion Devices, Inc. (3,0,0), FiberTower Corporation (3,1,1), Global Aviation Holdings Inc. (5,1,1), Hawker Beechcraft Acquisition Company, LLC (2,1,0), LifeCare Holdings, Inc. (4,1,0), Overseas Shipholding Group, Inc. (5,1,0), Patriot Coal Corporation (2,0,0), Pinnacle Airlines Corp. (5,0,0), Reddy Ice Holdings, Inc. (1,0,0), THQ Inc. (3,1,0), Trident Microsystems, Inc. (3,1,0)

2013	Central European Distribution Corporation (1,1,0), Conexant Systems, Inc. (3,1,0), Dex One Corporation (5,1,0), Exide Technologies (3,1,0), FriendFinder Networks Inc. (3,1,1), Furniture Brands International, Inc. (1,1,0), GateHouse Media, Inc. (1,1,0), Geokinetics Inc. (2,1,0), Global Aviation Holdings Inc. (5,1,0), GMX Resources Inc. (2,0,0), KIT digital, Inc. (5,0,0), LodgeNet Interactive Corporation (3,1,1), OnCure Holdings, Inc. (4,1,0), Orchard Supply Hardware Stores Corporation (1,1,0), Powerwave Technologies, Inc. (3,1,0), RDA Holding Co. (1,0,0), Revel AC, Inc. (5,0,0), Rotech Healthcare Inc. (4,1,0), School Specialty, Inc. (1,1,1), SuperMedia, Inc. (5,1,0)
2014	Coldwater Creek Inc. (1,1,0), Dendreon Corporation (4,1,0), Dolan Company (5,1,0), Eagle Bulk Shipping Inc. (5,0,0), Energy Future Holdings Corp. (2,1,1), Genco Shipping & Trading Limited (5,0,0), Global Geophysical Services, Inc. (2,1,0), GT Advanced Technologies Inc. (3,0,0), James River Coal Company (2,0,0), MModal Inc. (3,1,1), Momentive Performance Materials Inc. (2,1,0), NII Holdings, Inc. (3,0,0), Revel AC, Inc. (5,0,0), Trump Entertainment Resorts, Inc. (5,1,0), USEC Inc. (5,1,0)
2015	Allied Nevada Gold Corp. (5,1,0), Alpha Natural Resources, Inc. (2,1,1), BPZ Resources, Inc. (2,0,0), Cal Dive International, Inc. (2,1,0), Corinthian Colleges, Inc. (5,1,0), Hercules Offshore, Inc. (2,1,0), Magnum Hunter Resources Corporation (2,1,0), Milagro Oil & Gas, Inc. (2,1,0), Molycorp, Inc. (5,1,0), Patriot Coal Corporation (2,1,1), Quicksilver Resources Inc. (2,1,0), Quiksilver, Inc. (1,1,0), RAAM Global Energy Company (2,1,1), RadioShack Corporation (1,1,0), Sabine Oil & Gas Corporation (2,1,0), Samson Resources Corporation (2,1,0), Swift Energy Company (2,1,1), Walter Energy, Inc. (2,0,0)
2016	Aeropostale, Inc. (1,0,0), Arch Coal, Inc. (2,0,0), Aspect Software Parent Inc. (3,1,0), Atlas Resource Partners, L.P. (2,0,0), Basic Energy Services, Inc. (2,1,0), Breitburn Energy Partners LP (2,1,1), Chaparral Energy, Inc. (2,1,0), Dex Media, Inc. (5,1,0), Erickson Incorporated (2,1,1), Fairway Group Holdings Corp. (1,0,0), Global Geophysical Services, Inc. (2,0,0), Halcon Resources Corporation (2,1,0), Hercules Offshore, Inc. (2,1,0), Horsehead Holding Corp. (2,1,0), Illinois Power Generating Company (2,0,0), International Shipholding Corporation (5,1,1), Key Energy Services, Inc. (2,1,1), Linn Energy, LLC (2,0,0), LRI Holdings, Inc. (1,1,0), Midstates Petroleum Company, Inc. (2,1,0), Noranda Aluminum Holding Corporation (2,1,1), Paragon Offshore plc (2,1,1), Peabody Energy Corporation (2,0,0), Penn Virginia Corporation (2,1,0), Performance Sports Group Ltd. (1,1,0), Republic Airways Holdings Inc. (5,0,0), SandRidge Energy, Inc. (2,1,1), Seventy Seven Energy Inc. (2,1,0), SFX Entertainment, Inc. (5,1,0), Stone Energy Corporation (2,1,0), SunEdison, Inc. (3,1,1), Triangle Petroleum Corp. (Triangle USA Petroleum Corp. only) (2,1,1), Ultra Petroleum Corp. (2,0,0), Venoco, Inc. (Denver Parent Corp.) (2,1,0), Verso Corporation (2,1,0)
2017	21st Century Oncology Holdings, Inc. (4,1,1), A. M. Castle & Co. (1,1,1), Adeptus Health Inc. (4,1,1), Armstrong Energy, Inc. (2,0,0), Avaya Inc. (3,1,1), Azure Midstream Partners, LP (2,1,0), Bonanza Creek Energy, Inc. (2,1,0), Ciber, Inc. (3,1,0), Cobalt International Energy, Inc. (2,0,0), Cumulus Media Inc. (3,1,1), Forbes Energy Services Ltd. (2,0,0), GenOn Energy, Inc. (2,1,1), GulfMark Offshore, Inc. (2,1,0), Gymboree Corporation (1,1,1), hhgregg, Inc. (1,0,0), Memorial Production Partners LP (2,0,0), Nuverra Environmental Solutions, Inc. (2,1,0), Paperweight Development Corp. (2,1,0), Perfumania Holdings, Inc. (1,1,1), Real Industry, Inc. (1,1,0), Rentech, Inc. (2,1,1), SquareTwo Financial Corporation (5,1,0), Tidewater Inc. (5,1,0), Toys R Us, Inc. (1,1,1), Vanguard Natural Resources, LLC (2,0,0)
2018	Bon Ton Stores, Inc. (1,1,0), Cenveo, Inc. (2,1,1), Claires Stores, Inc. (1,1,1), EV Energy Partners, L.P. (2,1,0), EXCO Resources, Inc. (2,1,0), FirstEnergy Solutions Corp. (2,0,0), iHeartMedia, Inc. (3,1,1), Mattress Firm Holding Corp. (1,1,0), Orexigen Therapeutics, Inc. (4,1,0), Parker Drilling Company (2,0,0), Rex Energy Corporation (2,1,1), Sears Holdings Corporation (1,1,1), Tops Holding II Corporation (1,1,1), Westmoreland Coal Company (2,1,1)

2019 Aceto Corporation (1,1,1), Alta Mesa Resources, Inc. (Alta Mesa Holdings, LP) (2,0,0), Approach Resources Inc. (2,1,1), Bristow Group Inc. (5,0,0), Cloud Peak Energy Inc. (2,1,0), Dean Foods Company (1,0,0), EP Energy Corporation (EP Energy LLC) (2,0,0), FTD Companies, Inc. (1,1,0), Gymboree Corporation (1,1,1), Halcon Resources Corporation (2,0,0), Hexion Inc. (2,1,1), Jones Energy, Inc. (2,0,0), Legacy Reserves Inc. (2,1,1), Melinta Therapeutics, Inc. (4,1,0), Monitronics International, Inc. (5,1,0), Orchids Paper Products Company (2,1,0), PG&E Corp. (Pacific Gas and Electric Co.) (2,0,0), PHI, Inc. (5,1,1), Sanchez Energy Corporation (2,0,0), Windstream Holdings, Inc. (Windstream Services, LLC) (3,1,1)

2020 AAC Holdings, Inc. (4,1,1), Akorn, Inc. (4,1,1), Ascena Retail Group, Inc. (1,1,1), Briggs & Stratton Corporation (2,1,1), California Resources Corporation (2,1,1), CARBO Ceramics, Inc. (2,0,0), CEC Entertainment, Inc. (1,1,0), Centric Brands Inc. (1,0,0), Chaparral Energy, Inc. (2,1,0), Chesapeake Energy Corporation (2,1,1), Covia Holdings Corporation (5,1,1), Denbury Resources Inc. (2,1,1), Diamond Offshore Drilling, Inc. (2,0,0), Extraction Oil & Gas, Inc. (2,1,0), Foresight Energy LP (2,0,0), Frontier Communications Corporation (3,1,1), FTS International, Inc. (2,1,0), Global Eagle Entertainment Inc. (3,1,0), GNC Holdings, Inc. (1,1,0), Gulfport Energy Corporation (2,1,1), Hertz Global Holdings, Inc. (Hertz Corporation) (5,1,0), Hi-Crush Inc. (5,0,0), Hornbeck Offshore Services, Inc. (5,1,1), Internap Corporation (3,1,0), J. C. Penney Company, Inc. (1,1,1), J. Crew Group, Inc. (1,1,1), Jason Industries, Inc. (1,1,0), Libbey Inc. (2,1,0), Lonestar Resources US Inc. (2,1,1), LSC Communications, Inc. (2,1,1), McClatchy Company (1,1,1), McDermott International, Inc. (2,0,0), Neiman Marcus Group LTD LLC (1,1,1), Oasis Petroleum Inc. (2,0,0), Pier 1 Imports, Inc. (1,1,1), Pioneer Energy Services Corp. (2,0,0), Pyxus International, Inc. (1,1,1), Quorum Health Corporation (4,1,0), Rosehill Resources Inc. (2,0,0), RTW Retailwinds, Inc. (1,1,0), Stage Stores, Inc. (1,0,0), Stein Mart, Inc. (1,0,0), Superior Energy Services, Inc. (2,0,0), Tailored Brands, Inc. (1,1,0), Town Sports International Holdings, Inc. (TSI, LLC only) (5,1,1), Tuesday Morning Corporation (1,0,0), Ultra Petroleum Corp. (2,0,0), Unit Corporation (2,1,1), Whiting Petroleum Corporation (2,1,1)

2021*Basic Energy Services, Inc. (5,1,1), Ferrellgas Partners, L.P. (Ferrellgas Partners Finance Corp.) (1,1,0), GTT Communications, Inc. (3,1,1), HighPoint Resources Corporation (5,1,0), Sundance Energy Inc. (5,1,1)

2022*Armstrong Flooring, Inc. (2,1,0), Clovis Oncology, Inc. (Ferrellgas Partners Finance Corp.) (4,1,0), NewAge, Inc. (1,1,0), Revlon, Inc. (Revlon Consumer Products Corporation) (2,0,0)

Note: The sample results from merging PACER with the Florida-UCLA-LoPucki Bankruptcy Research Database for the period 2004–2020 and excludes financial institutions. Cases need to have at least 50 employees. For each case, we report the year of filing, their SIC5 industry code, their status as shopper (1) or not (0), their status of bootstrap shopper (1) or not (0), and the company name. Because of refiling, some companies appear multiple times. The cases with a * indicate that these are only included for Figure 2.

Appendix B: List of Chapter 11 motions

Rule	Motion list (PD/ PC)
Rule	A: Motions considered by Chang and Schoar (2013), B: Motions about time extend/limit, C: Procedures, D: Sanctions, E: Objections, F: Extremely rare, G: Filing condition is so specific, H: Motion not clear if it is pro-debtor or creditor, I: Added
A	motion for conditional use of cash collateral (PD), motion to use cash collateral (PD), motion for sale of property (PD), motion to sell property free and clear (PD), motion to dismiss case (PC), motion to dismiss case for abuse (PC), motion to dismiss case for failure to file documents (PC),motion to dismiss case for failure to make plan payments (PC), motion to extend exclusivity period (PD), motion to relief the automatic stay (PC), motion to reopen Chapter 7/13 case (PC)
B	motion for extension of time regarding transcript, motion to extend plan payments, motion to extend time, motion to extend time to appeal, motion to extend time to file credit counseling certificate
C	motion to remove debtor as debtor in possession, motion for abstention, motion for access to tax documents, motion for adequate protection, motion for appointment of ombudsman, motion for contempt, motion for continuation of utility service, motion for damages for creditor misconduct, motion for default judgement, motion for entry of default, motion for examination, motion for exemption from credit counselling, motion for exemption from financial management course, motion for exemption from means test, motion for hardship discharge, motion for intra-district transfer, motion for joint administration, motion for jury trial, motion for leave to appeal, motion to reinstate case, motion for moratorium, motion for more definite statement, motion for order to show cause, motion for preliminary injunction, motion for production of documents, motion for protective order, motion for summary judgment/adjudication, motion for temporary restraining order, motion for turnover of property, motion for withdrawal of reference, motion miscellaneous relief, motion setting property value, motion to abandon, motion to abstain and remand, motion to allow claims, motion to appear nunc pro tunc, motion to appoint examiner, motion to avoid lien on household goods, motion to cancel meeting of creditors, motion to change venue/inter-district transfer, motion to confirm termination or absence of stay, motion to consolidate, motion to consolidate for trail, motion to de-consolidate case association, motion to delay discharge, motion to deposit funds into court registry, motion to determine final cure and mortgage payment, motion to determine mortgage fees and expenses, motion to determine tax liability, motion to disallow claims, motion to dismiss adversary proceeding, motion to dismiss party ,motion to dismiss single debtor, motion to file amended proof of claim, motion to file claim after claims bar date, motion to intervene, motion to limit notice, motion to modify plan, motion to pay, motion to reconsider, motion to recuse judge, motion to redeem, motion to reinstate retiree benefits, motion to remove trustee, motion to reopen adversary proceeding, motion to reopen Chapter 11 case, motion to reopen Chapter 12 case, motion to reopen Chapter 15 case, motion to restrict public access, motion to set laws day to file proofs of claim, motion to substitute attorney, motion to waive appearance at 341 meeting, motion to withdraw as attorney
D	motion for sanctions
E	motion objecting to discharge, motion to reject lease or executory contract, motion to vacate, motion to vacate discharge
F	motion to allow payment arrearages, motion to bar debtor, motion to limit exclusivity period, motion to impose automatic stay, motion to prohibit cash collateral, motion to incur debt, motion to obtain credit

G	motion to extend exclusivity period (the motion can be filed only if when you file the second bankruptcy case and previous one is dismissed)
H	motion to release funds
I	DIP loan (PD)

Note: This list covers all general Chapter 11 motions and is available at `https://www.canb.uscourts.gov/ecf/manuals/chapter-11-motions`.

Appendix C: Retrieval of motions from PACER

The starting point of the analysis is the docket list of the case, which corresponds to the judicial decisions on motions. We download each company's docket list from PACER including the line-by-line account of the whole court and judicial activities and cross-check against the docket searcher, which is available as a companion to the BRD dataset.[8] We consider the order by the judge recorded on the PACER docket list that are relevant for measuring pro-debtor bias and are considered to be timely.

We calibrate our algorithm based on the PACER docket list to search the orders judges issued and find their corresponding motions. First, we manually download the docket list corresponding to 1,027,413 docket entries from PACER for the cases. The docket is the log containing the complete history of each case in the form of brief chronological entries summarizing the court proceedings. We use regular expression conditions to separate orders and motions by looking at each entry on the docket list: the docket list records always use the initial words (e.g., "Motion..." and "Order...") to distinguish each other. For example, we use ^\\s*[0-9]*\\s*(\\([^\\)]+\\))*\\s*order to take orders out.

Table XIII shows the keywords, expressed as regular expression (regex), used to detect the seven different motions; for example, we use the regex expression "sale. *asset— sale. *property— sell. *assets— sell. *property" for the "sale of assets" motion to search for the orders judges granted or denied on "sale of assets" motions in the first 120 days after Chapter 11 opens. If the order text does not include the word "deny" (or variants of it), we treat it as a granting order. After we extract the order, which is a text sentence including a bracket, the content in the brackets tells us the docket number of the corresponding motion of this order to collect the durations between the time the motions filed and the time the orders are granted or denied.

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[8]See https://www.pacerdocketsearcher.com/. The reasons we do not only use Pacerdocketsearcher are as follows. We can obtain a list that includes only the motions and orders from Pacerdocketsearcher. But after that, we still need to filter out exactly which orders we want. For example, when we filter the "sale of assets" motion, we can use regex in a searching algorithm, but through Pacerdocketsearcher, we can fill in only one phrase at a time —for example, for sale of assets motion, sometimes debtors will use the "sell of assets" or "sale of property" as a substitution to "sale of assets." Therefore, to increase precision, we prefer the algorithm as the main tool and use Pacerdocketsearcher to recheck. The use of computer-assisted content analysis has advantages in terms of efficiency and consistency.

Table XIII: Regular expression for retrieving orders from the docket list

Actions	Regex
1. Use of Cash Collateral	use of cash collateral — cash collateral
2. Sale of Assets	sale.*asset—sale.*property—sell.*asset—sell.*property
3. Obtain DIP Loan	post-petition.*financing— post petition.*financing— postpetition.*financing— dip financing— debtor in possession financing— debtor-in-possession financing— debtors in possession financing— debtors-in-possession financing
4. Extend Exclusivity Periods	exclusivity period—exclusive period
5. Relief from Automatic Stay	lift— relief from the automatic stay— relief from stay— relief from automatic stay
6. Case Dismissal	dismiss case— dismissing case— dismissing Chapter 11— dismiss— dismiss Chapter 11 case— dismissing— dismissing the Chapter 11 case— dismiss the Chapter 11
7. Convert to Chapter 7	to Chapter 7—convert case—converting case

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