Bargaining Around Bankruptcy: Small Business Distress and State Law

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Abstract

Discussions of small-business bankruptcy typically focus on the United States Bankruptcy Code. But few failing small businesses—around twenty percent—use federal law to reorganize or liquidate. Most use *state insolvency laws* for these purposes. State laws include foreclosures, bulk sales, and assignments for the benefit of creditors. Relative to federal law, these procedures are often faster, more private, and less costly to the debtor and its senior creditors. The procedures vary substantially by state in the protection offered to creditors. This paper documents the interplay between state and federal bankruptcy law and how this dynamic varies by state. Drawing on two data sets—state-level data from public records and firm-level data from Dun & Bradstreet records—I show that failing small business corporations and their senior creditors bargain around federal law. Because a debtor needs senior creditor consent to invoke many state procedures, a bankruptcy filing occurs only when the senior creditor distrusts the debtor and withholds consent. I show that a small business corporation is more likely to use bankruptcy law if it is encumbered by secured debt or tax liens and if it has defaulted or otherwise impaired its relationship with senior creditors. State procedures are more common in states with regulations that promote the transparency of the insolvency process and give senior lenders leverage to attack insider self-dealing. These findings suggest that any reform of federal bankruptcy law will have two effects—it will impact outcomes in federal courts (*intensive margin*) and the debtor's choice between state and federal procedures (*extensive margin*). Variation along the extensive margin can neutralize reforms in federal law, as when a reform designed to protect unsecured creditors induces businesses to use less-protective state procedures instead. The findings in this paper also raise questions about the appropriate balance between state and federal law. The primary function of the Code is to serve as a backstop when bargaining fails, but state law could better serve the same function. The optimal balance between state and federal law, then, may be one that gives states greater authority to regulate small business bankruptcy.

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Most small businesses fail. Over fifty percent disappear within their first five years.[1] With over 24 million small businesses in the United States,[2] one might expect a massive number of business bankruptcy filings every year. But we don't see this. About 540,000 small businesses closed their doors during 2003, but only 34,000 (six percent) filed petitions under the U.S. Bankruptcy Code.[3] Many businesses, to be sure, close for reasons unrelated to financial distress and so are unlikely to be candidates for a bankruptcy filing. But the story changes little when we focus on businesses in financial distress. For every 100 that shut down, fewer than twenty file for bankruptcy.[4] The other eighty are, of course, still using legal mechanisms to resolve distress. Instead of the Bankruptcy Code, however, they are using state codes and common law. Antiquated but still popular procedures—friendly foreclosures, bulk sales, and assignments for the benefit of creditors—offer ready substitutes for federal law, whether the business plans to liquidate or reorganize. And these procedures are often cheaper than a federal bankruptcy proceeding—they are quicker and less public, and generate less administrative expense. Little wonder, then, that federal bankruptcy filings are rare. Indeed, the real puzzle is why federal filings are as high as they are. Why do so many small businesses file petitions under the Bankruptcy Code?

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[1] Amy Knaup, *Survival and Longevity in the Business Employment Dynamics Data*, Monthly Labor Rev. 50-52 (May 2005).

[2] In 2003, the Small Business Administration identified about 18.6 million businesses with no employees and another 5.7 million businesses with at least one but less than 100 employees. *See* Small Business Administration, "Private Firms, Establishments, Employment, Annual Payroll and Receipts by Firm Size, 1988-2004, available at <http://www.sba.gov/advo/research/dyn_b_d8903.pdf>.

[3] Among businesses with one to ninety-nine employees, nearly 540,000 shut down between 2002 and 2003. In 2003, about 35,000 businesses (of any size) filed bankruptcy petitions. Data on shutdowns is taken from Small Business Administration, "Establishment and Employment Changes from Births and Deaths by Firm Size and Major Industry, 2002-2003," available at <http://www.sba. gov/advo/research/dyn_us03.pdf>. Data on bankruptcy filings is taken from Administrative Office of the U.S. Courts, "Bankruptcy Statistics, 2003 Calendar Year by Chapter," available at <http://www.uscourts.gov/Press_Releases/1203f2.xls>.

[4] *See* Section III *infra*.

The scholarly literature offers little help.[5] A business liquidates under Chapter 7, it is argued,[6] in order to signal credibly that it has failed and to commence a process that winds down the firm and distributes its assets in an orderly fashion. Outside bankruptcy, under state law, the business would like to commence the same process, but it has no way to convince creditors both that they should suspend collection efforts and that they should participate in a collective winding-down process. Chapter 7 of the Bankruptcy Code, in other words, provides a low-cost (relative to state law) mechanism for verifying financial distress, selling assets, and distributing the proceeds. A similar story is told about Chapter 11—it offers a relatively low cost mechanism for verifying

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[5] With one exception. In a study of high-tech firms from the software, biopharmaceutical, and communications industries, Mann shows that most of these firms liquidate under state law and argues that the likelihood of a bankruptcy filing depends heavily on the parameters of state laws regulating assignments for the benefit of creditors. *See* Ronald J. Mann, *An Empirical Investigation of Liquidation Choices of Failed High-Tech Firms*, 82 Wash. U. L. Q. 1375 (2004). Many other scholars have studied the choice between in-bankruptcy reorganization and out-of-court workouts. These papers, however, do not consider the interaction between state and federal law. They are concerned instead with the economic conditions that prevent or promote out-of-court workouts. *See, e.g.,* Stuart C. Gilson, *Transaction Costs and Capital Structure Choice: Evidence from Financially Distressed Firms*, 52 J. Fin. 161 (1997); Paul Asquith, Robert Gertner, and David Scharfstein, *Anatomy of Financial Distress: An Examination of Junk-Bond Issuers*, 109 Quart. J. Econ. 625 (1994); Sris Chatterjee, Upinder S. Dhillon, and Gabriel G. Ramirez, *Resolution of Financial Distress: Debt Restructurings via Chapter 11, Prepackaged Bankruptcies and Workouts*, 25 Fin. Mgt. 5 (1996). Dawson and Ausubel study the same issue among consumer debtors, many of whom obtain an "informal" discharge when creditors write-off outstanding debts. *See* Amanda E. Dawsey and Lawrence M. Ausubel, *Informal Bankruptcy*, working paper (2002), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=332161.

Prior to Mann's 2004 article, the interaction between state and federal law had gone largely unstudied. The most recent, significant article on the subject predates the Bankruptcy Code. *See* Melvin Shimm, *The Impact of State Law on Bankruptcy*, 1971 Duke L. J. 879 (1971). Prior to Shimm's work, the subject was a popular topic. *See, e.g.*, John E. Mulder and Charles M. Solomon, *Effect of the Chandler Act Upon General Assignments and Compositions*, 87 U. Penn. L. Rev. 763 (1939); Samuel Williston, *The Effect of a National Bankruptcy Law upon State Laws*, 22 Harv. L. Rev. 547 (1909).

[6] *See, e.g.*, Douglas G. Baird, *The Initiation Problem in Bankruptcy*, 11 Int'l. Rev. L. & Econ. 223, 225-27 (1991). A similar characterization of bankruptcy—as a mechanism for verifying distress—is presented in Patrick Bolton and Mathias Dewatripont, *Contract Theory* 190 (2005).

financial distress, restructuring a troubled corporation, and distributing claims against the newly reorganized entity.[7] Outside bankruptcy, the troubled business faces a horde of creditors, rushing to obtain judgment liens and force a piecemeal sale of the business. The business lacks an effective mechanism both for signaling credibly that it is unable to satisfy its debts and for inducing creditors to participate in a collective reorganization process.

These accounts capture the gist of the Bankruptcy Code, but their characterization of state law is incomplete. Chapter 7 may offer a lower-cost mechanism for liquidating some businesses, but certainly not all. Think of the small corporation with secured bank debt far in excess of the value of its assets. The cheapest way to liquidate the business is an uncontested ("friendly") foreclosure; the debtor agrees not to contest the bank's foreclosure action. The assets will be sold, the proceeds distributed to the bank; the corporation will disappear. Similarly, Chapter 11 may offer a low-cost mechanism for reorganizing distressed businesses in some cases, but not all. Think again of the small corporation, burdened by excessive secured bank debt and unsecured claims. Instead of a reorganization under Chapter 11, which can devour five percent of firm assets, the business can instead reorganize using an assignment for the benefit of creditors (ABC). The business is assigned to a trustee, who auctions off the firm as a going concern. The corporation's old owners, working in concert with the bank, will buy back the firm, *sans* the unsecured debt.

We are left with a puzzle. Under what—apparently rare—conditions will small businesses choose federal law to liquidate or reorganize? The primary condition, I argue in this paper, is a breakdown in bargaining between the debtor and senior creditors. I

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[7] *See, e.g.*, Barry Adler, *A Re-Examination of Near-Bankruptcy Investment Incentives*, 62 U. Chi. L. Rev. 575 (1995); Douglas G. Baird and Thomas H. Jackson, *Corporate Reorganizations and the Treatment of Diverse Ownership Interests: A Comment on Adequate Protection of Secured Creditors in Bankruptcy*, 51 U. Chi. L. Rev. 97, 108 n.40 (1984).

am not referring to the "collective action" problem commonly discussed in the bankruptcy literature. The failure here is much more basic.

State law procedures are attractive to an owner-manager if they offer a greater payoff or more limited liability than a federal bankruptcy case. For example, through an ABC, an important state procedure discussed in Section II, the owner-manager may be able to reorganize a corporation without complying strictly with the Bankruptcy Code's absolute priority rule. That is, she may be able to retain ownership of the business without paying anything to unsecured creditors. Or, through a friendly foreclosure, the owner-manager may be able to liquidate a business without undergoing the scrutiny of a bankruptcy trustee, who would sue the owner for self-dealing or sue creditors that received preferential treatment prior to the bankruptcy filing.[8] Unsecured creditors rarely object—and rarely join forces to file an involuntary bankruptcy petitions[9]—because they will typically receive nothing in a bankruptcy case.

But state law procedures do require the consent of senior creditors. Unlike a federal bankruptcy case, commencement of a state law procedure does not suspend the collection efforts of creditors with security interests in or liens on the business assets.[10] These creditors will consent to state procedures if they have reason to think—based on the credibility of the debtor and the protections afforded by the procedures—that their payoffs are greater outside bankruptcy court. The credibility of the debtor and the pro-

[8] Some state procedures, such as ABCs, have long been seen as devices to shield insider self-dealing, preferential payments to favored creditors, or other pre-petition conduct that would not withstand scrutiny in a federal bankruptcy court. Several (anonymous) practitioners described ABCs in precisely these terms. *See also* Benjamin Weintraub, Harris Levin, and Eugene Sosnoff, *Assignments for the Benefit of Creditors and Competitive Systems for Liquidation of Insolvent Estates*, 39 Cornell L. Q. 3, 4 (1953) ("The general weakness of the out-of-court proceeding . . . is its susceptibility to abuse.").

[9] Creditors can file an involuntary bankruptcy petition against a business debtor, but the creditors must

[10] Senior creditor consent matters, but junior creditor consent doesn't. State procedures generally halt collection efforts by any unsecured creditor that has not commenced suit against the business.

tections afforded under state law matter because senior creditors must estimate the value of the business assets. The federal bankruptcy process offers a strong mechanism for verifying asset value, including the value of potential claims against insiders and third parties. State law typically offers a much weaker verification mechanism. ABCs, for example, are heavily regulated in some states (such as New York), but not others (such as Illinois). In states without significant regulation, the creditor must rely upon financial records submitted by the debtor. The bank's view of those records will depend on its relationship with the debtor. The worse the debtor's credit history, the less likely the bank is to trust the records (or to credit the entrepreneur's ability to continue managing a business, should she want to reorganize it). Credit history matters because many owner-entrepreneurs are serial entrepreneurs,[11] most small businesses rely heavily on bank loans for capital,[12] and the price of credit depends heavily on a bank's relationship with the owner-manager.[13] A business will file a federal bankruptcy petition, then, when senior lenders are unconvinced that debtor-preferred state law procedures (such as ABC) offer a sufficient mechanism for verifying the value of business assets and providing a payoff as great as that expected in federal court.

Seen this way, the Bankruptcy Code serves two primary functions when a small corporation encounters distress. First, it is a costly *audit* that senior creditors invoke when there is a serious risk that the debtor has mismanaged, distributed, or hidden assets of significant value. Second, it functions as a *threat point* in negotiations between the debtor and senior creditors. In most bankruptcies, the owner-manager risks losing her business and, potentially, incurring personal liability; the senior creditors risk delay in payment and bear some of the administrative costs. Assuming the risk of loss is greater

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[11] *See* Douglas G. Baird and Edward R. Morrison, *Serial Entrepreneurs and Small Business Bankruptcy*, 105 Colum. L. Rev. 2310 (2005).
[12] *See* Mitchell A. Petersen and Raghuram G. Rajan, *The Benefits of Lending Relationships: Evidence from Small Business Data*, 49 J. Fin. 3 (1994).
[13] *Id.*

for the owner-manager, the senior creditor can use the threat of bankruptcy as leverage in negotiations. Even if the creditor distrusts the owner, it may consent to state procedures if the owner agrees to make a sufficiently large payment. Federal bankruptcy law, then, has little to do with the rehabilitation of businesses and protection of unsecured creditors, as is commonly thought. It is instead largely an instrument of senior creditor control.

This conclusion casts doubt on common justifications for federal bankruptcy law. It also raises questions about current U.S. policy regarding small business failure. At least with respect to small business bankruptcy, federal policy is incoherent. Keep in mind that small businesses with fewer than 100 employees account for over 36 percent of employment and 30 percent of annual revenue generated by all businesses in the U.S. economy.[14] Every year, failing small businesses account for two percent of total employment. (Two percent may sound small, but failing large businesses account for an even smaller percentage—less than one percent—of total employment.) The federal government maintains a variety of policies designed to help these businesses get started and to regulate their failure. These policies assume, implicitly, that the Bankruptcy Code can be used to regulate failure. Recent amendments to the Code, for example, impose reporting obligations, deadlines, and other burdens on Chapter 11 debtors in order to improve payoffs to unsecured creditors.[15] These amendments ignore the decision-making process of businesses choosing between state and federal procedures. Any regulation that increases the burdens of federal law will make state law more attractive and increase the bargaining power of senior creditors. The recent amendments, then, may yield precisely the opposite effect for a large number of firms: instead of increasing

[14] Annual employment statistic reflects 2003 data; the revenue statistic reflects 2002 data. See Small Business Administration, "Private Firms, Establishments, Employment, Annual Payroll and Receipts by Firm Size, 1988-2004, <http://www.sba.gov/advo/research/dyn_b_d8903.pdf>.
[15] See Section V *infra*.

payoffs to unsecured creditors, the amendments may only reduce aggregate payoffs as small businesses substitute toward state law.

I develop these arguments as follows. Section I documents the rarity of federal bankruptcy filings. Section II describes the contours of state and federal law and the trade-offs facing a distressed small business. Sections III and IV test the hypothesis that federal bankruptcy filings result from a breakdown in bargaining between the debtor and senior lenders. I present state-level data on trends in bankruptcy filings (in Section III) and firm-level data on the decisionmaking of distressed businesses in Cook County, Illinois (Section IV). Drawing on these data, Section V discusses the optimal design of small business bankruptcy law.

I. The Rarity of Bankruptcy

Every year hundreds of thousands of businesses close their doors, but only tens of thousands file petitions under the Bankruptcy Code. In 1998, for example, the Small Business Administration (SBA)[16] reported about 650,000 business failures. The same year, the Administrative Office of the U.S. Courts (AO)[17] reported roughly 45,000 business bankruptcy filings. Federal bankruptcy has become ever rarer over time. Business failures have hovered around 650,000 since 1989, but the number of business bankruptcy filings has fallen dramatically from about 60,000 in 1989 to 35,000 in 2003, a 42 percent drop. These patterns, set out graphically in Figure 1, are based on the federal government's case filings database (PACER[18]).

Most discussions of small business distress assume that federal bankruptcy law is the primary mechanism for resolving distress. These statistics throw that assumption

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[16] Small Business Administration, Office of Advocacy, *Dynamic Data—Births, Deaths, Growth, and Decline—State Major Industry Data*, 1989-1998, 1998-2003, http://www.sba.gov/advo/research/data.html.

[17] *PACER Bankruptcy Statistics*, Statistical Reports, Table F-2, http://pacer.uspci.uscourts.gov/.

[18] *Id*.

into doubt. A large number of failing businesses appear to use alternative, state law methods for resolving distress.

The rarity of small business bankruptcy has been labeled a "myth" by some,[19] who claim the annual number of federal business filings is dramatically understated, thanks largely to poor record keeping by the AO, which assembles the PACER database. Instead of assessing whether a debtor's liabilities are primarily business debts, the AO relies on self-reporting. But most debtors submit their federal bankruptcy filings using software in which the default setting is to treat all debt as consumer debt. Because the classification of liabilities—business or consumer—matters little to most debtors (and their lawyers), few alter the default setting. Put differently, even when an individual debtor has significant business debt, her lawyer will typically use software designed for debtors with primarily consumer debt. The result is that many cases involving business debts are classified, for AO purposes, as consumer cases.

The under-reporting problem is surely important, but it is not a complete explanation for the rarity of federal business bankruptcy filings. Bankruptcy lawyers began using consumer-oriented software in the early 1990s, which could explain why business bankruptcy filings suddenly dropped from about 70,000 in 1992 to 62,000 in 1993 (an 11 percent drop). But the use of such software does not seem a persuasive explanation for the continuous decline in business filings to the present day.

This is made clear by Figure 1, which documents the rarity of bankruptcy during the 1990s and early 2000s. Expressed as a percentage of total business failures, business bankruptcy and Chapter 11 filings declined sharply over the period. Business filings fell from 10.5 percent of business deaths in 1990 to 5.2 percent in 2003; Chapter 11 filings fell from 3.4 percent to 1.3 percent. When we focus on corporate Chapter 11s, as the final

[19] Elizabeth Warren and Robert Lawless, *The Myth of the Disappearing Business Bankruptcy*, Calif. L. Rev. (2006).

line in Figure 1 does, we see the same story.[20] The AO may be undercounting business bankruptcy filings generally, but it is surely not undercounting Chapter 11 cases. Bankruptcy is rare and becoming rarer over time.

Table 1 offers further proof that these aggregate patterns, drawn from government records, coincide with actual experience. Every Monday and Wednesday, the Business Section of the *Chicago Tribune* publishes announcements of business auctions. The announcements—collected under the heading "Auction Mart"— typically identify the name of the business, its location, the nature of the assets, and the date of the auction. The announcement may also indicate whether the auction is pursuant to bankruptcy court order. Figure 2 reproduces a typical Auction Mart. I collected data from every Auction Mart published during calendar year 1998. Table 1 summarizes the results. About 300 auctions were announced, but a business name was identified in only 254 cases. Nearly every case involved a corporation. For each business, I determined whether it had filed a federal bankruptcy petition during the preceding 5 years. This was true in only thirty-five cases, implying that federal bankruptcy law was used by only 13.5 percent of businesses being auctioned. In another thirty-four cases, the auction announcement indicated that the business was being sold off in conjunction with an ABC. This state procedure, then, was as common as federal bankruptcy cases, again suggesting that a significant fraction of distressed businesses resolve distress without resorting to federal law. Indeed, it is highly likely that far more than thirty-four of the 254 businesses were auctioned off pursuant to an ABC. As the next section explains, an ABC auction must be announced publicly, usually in a newspaper, but there is no requirement that the announcement indicate that the auction is part of an ABC.

[20] The Chapter 11 data are drawn from a different database—the Federal Judicial Center (FJC) data on closed federal bankruptcy cases. *Federal Court Cases: Integrated Data Base Bankruptcy Petitions, 1994-2003*, Study Nos. 4303-4306, 4086, 4088, 4249-4252, http://www.icpsr.umich.edu/.

II. State versus Federal Law

It is well understood that the Bankruptcy Code gives businesses two options—liquidation (often under Chapter 7) or reorganization (Chapter 11). It is also well known that the first option, liquidation, is possible under state law as well. Modern bankruptcy theory typically begins with the claim that, absent the Bankruptcy Code, a business will suffer piecemeal liquidation under state law, as creditors foreclose on property or enforce judgment liens. It is less commonly recognized that the *reorganization* option is also available under state law. There are many ways to exercise this option—a foreclosure, bulk sale, or ABC can be structured to accomplish a reorganization.[21]

To illustrate, consider a distressed small business corporation located in Illinois. Suppose the owner would like to reorganize via an ABC. To do this, she will assign the business to an assignee and, at the same time, enter an operating agreement with the assignee in which he agrees to employ the owner-manager to run the business while he prepares to auction it off. At the auction, the owner-manager will bid on the assets. If she offers the high bid (and she frequently is the only bidder), she will regain control of her firm. Importantly, the firm's capital structure will have changed radically. Security interests and liens will remain; they travel with the assets. But unsecured debt will have been washed away.

This is a reorganization, albeit one that yields payoffs to creditors that differ from the payoffs in federal bankruptcy court. Secured creditors are at least as well off as they

[21] Malanie Rovner Cohen and Joanna L. Challacombe, *Assignment for the Benefit of Creditors—Contemporary Alternatives for Corporations*, 2 DePaul Bus. L. J. 269, 271 (1990). *See also* Rally Capital Services, LLC, *Assignment for the Benefit of Creditors* (2006) (marketing materials distributed by assignee located in Cook County, Illinois) ("for debtors who are not insolvent, but merely troubled, ABCs may also be employed to effect reorganization"); David S. Kupetz, *Assignment for the Benefit of Creditors: Advantageous Vehicle for Selling and Acquiring Distressed Enterprises*, 6 J. Private Equity 16, 18 (2003) ("An assignment for the benefit of creditors can serve as a very useful and efficient means of … facilitating a buyer's acquisition of a troubled business or assets from an entity burdened with unsecured debt (and, with the cooperation of secured creditors, secured debt).").

would be under the Code; owners are probably better off. Unsecured creditors could be unaffected or made worse off. In most bankruptcies, unsecured creditors receive nothing. Senior debt exhausts most of the assets; administrative consume the rest. In these cases, unsecured creditors suffer no meaningful harm when debtors choose state procedures over the Bankruptcy Code. The debtor and its senior lender are better off, but only because they are sharing the costs avoided by not invoking the federal law.

There could also be cases in which unsecured creditors are made worse off. This will occur when the debtor's assets are sufficient to generate a payoff to unsecured creditors in bankruptcy, but the debtor is able to keep these gains by using state procedures. This scenario is possible only if the potential gains to unsecured creditors are less than the transaction costs these creditors must incur to identify businesses with assets sufficiently large to make payments to creditors. Thus, the expected payoffs in bankruptcy must be significant before an unsecured creditor will object to state procedures. This makes the state procedures attractive to debtors, who can capture value that would either be consumed by administrative expense or paid to unsecured creditors in bankruptcy.

State law, then, offers the same choices—liquidation and reorganization—as the Bankruptcy Code, but the state process differs significantly from that applied in federal court. The differences fall into five categories: creditor consent, information production, creditor priorities, corporations versus non-corporations, and administrative cost.

A. Creditor Consent

The filing of a federal bankruptcy case initiates an "automatic stay," that is, an injunction prohibiting any creditor collection efforts.[22] This injunction issues automatically (upon case commencement) and gives the debtor time to liquidate assets (often under Chapter 7) or commence a bargaining process that may allow the debtor to read-

[22] 11 U.S.C. 362.

just its capital structure (Chapter 11). Creditor consent is unnecessary. Indeed, the very purpose of the automatic stay is to force non-consenting creditors to participate in a collective proceeding.

Non-consenting senior creditors can stymie state law procedures. Consider, for example, an ABC. Typically, the debtor will assign its assets to an assignee, who is charged with responsibility for conducting an auction and distributing the proceeds to creditors in order of priority.[23] As a formal matter, creditor consent is not required. Consent is instead presumed because the assignment creates a trust that will divide assets equitably among the creditors. Once the assets are auctioned off, they are sold free and clear of existing unsecured debt. If the proceeds are insufficient to pay the debtor's creditors in full, they may file suit against the debtor personally. If the debtor is a flesh-and-blood person, the suit may yield some recovery. If the debtor is a corporation, the suit will be fruitless. The assignment effectively terminates the corporation's existence.

Although creditor consent is presumed, a secured creditor can easily unwind the ABC. The assignment process conveys the debtor's assets *subject to* existing liens. Thus, nothing stops a bank or other secured creditor from exercising its ordinary foreclosure rights. Most loan agreements, for example, declare that default occurs automatically when the debtor files a federal bankruptcy petition or conducts an ABC. The assignment process triggers this covenant, allowing the creditor to commence collection efforts. Relative to ABC, a foreclosure is unattractive to a debtor because she exercises less control over the asset sale. The foreclosing creditor or a government official will auction the assets. Additionally, the owner-manager will be unable to continue running the business after foreclosure. Even if she is able to repurchase the business at auction, the

[23] For a summary of state laws regulating the ABCs, *see* Garrard Glenn, *The Law Governing Liquidation* 172-213 (1935); John Hanna, *Contemporary Utility of General Assignments*, 35 Va. L. Rev. 539 (1949).

delay between foreclosure and repurchase may be long enough to cause serious harm to the business.

Secured creditors, then, exert significant control over state procedures. In general, a debtor will be unable to pursue an ABC or other procedure without consent of the lending bank, IRS, and other secured creditors and lienholders.[24] These creditors will consent to state procedures, such as ABC, if their payoffs are greater than what they would receive in a federal bankruptcy case or from a simple foreclosure. This will be true in many cases. Relative to federal bankruptcy cases, as discussed below, the administrative costs of state procedures are generally lower. Additionally, a procedure such as ABC may allow senior creditors and owner-managers to divert value from unsecured creditors. Because ABC auctions are given little publicity, the owner-manager (with the support of senior creditors) may be the sole bidder and be able to buy back her business at a price below its going-concern value. Relative to a simple foreclosure, ABC is attractive to a senior creditor because the auction is conducted by an assignee, not the creditor, which insulates the creditor from potential lender liability.[25]

Creditor consent can take time. If a firm's capital structure is relatively complex or if the firm has suffered a recent financial shock, resulting in rush of creditors bringing collection efforts, it may be unable to obtain quick consent from key creditors.[26] It may feel compelled to file a federal bankruptcy petition in order to protect its assets via the automatic stay.[27] A rush of creditors is likely, for example, when a business has suf-

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[24] The IRS will frequently impose a lien on business assets for overdue taxes. *See* Baird and Morrison, *supra* note 11.

[25] Geoffrey L. Berman, *Common Law Assignments for the Benefit of Creditors: The Reemergence of the Nonbankruptcy Alternative*, 21 Cal. Bankr. J. 357, 359 (1993).

[26] Mann, *supra* note 5, at 1409, makes a similar point.

[27] When a debtor files a federal bankruptcy petition, an injunction issues, enjoining all creditor collection efforts. The injunction applies equally to creditors who have obtained liens but not levied upon property, those who have suits pending, and those preparing to bring suit or assert self-help remedies. The automatic stay gives the debtor time to conduct an orderly liquidation or negotiate a plan of reorganization.

fered a fire or burglary, or when it has experienced an unexpected financial shortfall following unsuccessful expansion or other change of business.

These observations suggest several hypotheses regarding the choice between state and federal law. First, a distressed business with secured debt or tax liabilities is more likely to choose federal law than one without such debt. Once a firm has such debt, it must obtain creditor consent to use state law procedures, and consent may be difficult to obtain. Second, a business is more likely to file a federal bankruptcy petition if its relationship with senior lenders has soured, as evidenced by defaults on loans and by pending suits, liens, or judgments. When these relationships have been damaged, it is highly unlikely that creditors will consent to state law procedures. Finally, because it takes time to secure creditor consent, a federal bankruptcy filing is more likely among businesses that have recently suffered a shock, such as a fire or burglary. It is also more likely among businesses that have recently moved, changed management, or otherwise changed operations. If these businesses fail soon after moving or changing operations, it is probably because they suffered unexpected setbacks. The surprise may reduce the time available to secure creditor consent. These hypotheses are summarized in Table 3.

B. Information Production

After commencing a federal bankruptcy case, the debtor or its trustee must file various reports, which lay bare the business's financial position and operating history (a trustee manages the debtor's assets in a Chapter 7 case).[28] In addition, the debtor or trustee is also empowered to search for and attack insider self-dealing and eve-of-

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State bankruptcy procedures offer significantly less protection to a debtor harassed by creditors. A bulk sale does nothing to stop a creditor from bringing suit against the debtor and perhaps even the buyer. When a business conducts an ABC, the assets are protected from most collection efforts, but creditors with liens may assert them. Additionally, creditors are free to bring suit against the debtor personally. Of course, if the debtor is a corporation, the assignment typically involves dissolution of the business, mooting any suits against the debtor itself.

[28] § 521.

bankruptcy payments to favored creditors.[29] Both actions protect the rights of creditors to receive payment before equityholders and to receive equal treatment among creditors of equal contractual priority. They also provide a mechanism that protects senior creditors from self-dealing by insiders and preferential treatment of junior creditors. In many bankruptcy cases, the claims of secured creditors and tax authorities exceed the value of the business assets; unsecured creditors will receive nothing.[30] Rules governing preferential transfers provide a mechanism for recovering property from insiders and preferred junior creditors.

The protections afforded by the bankruptcy process are often missing from state procedures. Consider, again, the ABC. The process is available in every state, but the rules vary significantly, as Table 2 illustrates. Many states have adopted comprehensive statutory frameworks that, like the Bankruptcy Code, protect the interests of unsecured creditors.[31] The statutes often require the debtor to give public notice of the assignment and obligate the assignee to post a performance bond, file financial schedules with the relevant state court, and sue creditors or insiders who received preferential payments. In some states, state courts oversee the process, the debtor's property must be appraised, and the price at the auction must exceed the appraised value. In these states, which include Iowa, New York, and Texas, state law obligates the debtor and its assignee to take steps to protect the rights of creditors, particularly unsecured creditors.[32]

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[29] §§ 544, 547, 548.

[30] *See, e.g.*, Douglas Baird, Arturo Bris, and Ning Zhu, *The Dynamics of Large and Small Chapter 11 Cases: An Empirical Study*, Yale ICF Working Paper No. 05-29 (December 2005).

[31] Weintraub, *et al*., provide a detailed comparison of statutory and non-statutory regimes across the United States. They distinguish "comprehensive," "non-comprehensive," and non-statutory regimes. *See* Benjamin Weintraub, Harris Levin, and Eugene Sosnoff, *Assignments for the Benefit of Creditors and Competitive Systems for Liquidation of Insolvent Estates*, 39 Cornell L. Q. 3, 14-25 (1953).

[32] *Id*. at 14 n.56.

States with such detailed ABC statutes stand in marked contrast to a large number of states with little or no statutory regulation whatsoever. In states such as California, Illinois, Nevada, and Virginia, the ABC procedure is governed almost entirely by state common law. Although the trustee may be required to notify creditors, attack payments to insiders, and give public notice of the auction, little else regulates the process. There is generally no court involvement. Nor is there public notice. No documents are filed with a court; no announcements are posted in newspapers. Even credit reporting bureaus, such as Dun & Bradstreet, typically do not know whether a business used a state procedure. All it knows is that the business "faded away."[33]

The privacy of state law procedures is attractive to businesses that hope to reorganize quietly and to serial entrepreneurs who hope to move on to another business without damaging their credit ratings. The privacy is less attractive to unsecured creditors, who have trouble monitoring the process. And even if a creditor believes that the assignee is not exercising its duties appropriately, there is no simple way to complain. The creditor must file suit or commence an involuntary proceeding under the U.S. Bankruptcy Code.

We see comparable variation—in transparency and creditor protection—in other procedures for liquidating or reorganizing troubled businesses. A "bulk sale," for example, is a sale of business assets to a creditor or other purchaser.[34] Until recently, most bulk sales were governed by Article 6 of the UCC, which was meant to protect creditors against fraudulent sales. The typical example is the small business that acquires goods on credit, sells them in bulk, and then disappears with the proceeds. Beginning in the early 1990s, many states repealed Article 6 or adopted a revised version. The statute was thought to impose undue burdens on legitimate bulk sales, especially when other

[33] [cite D&B internal report]

[34] *See generally* Peter A. Alces, *The Confluence of Bulk Transfer and Fraudulent Disposition Law*, 41 Ala. L. Rev. 821 (1990).

statutory provisions—such as Article 9 and the Uniform Fraudulent Transfer Act (UFTA)—offer protection against fraudulent sales. Today, in many states, bulk sales offer a lightly-regulated method for selling a troubled business.

As a matter of theory, it is unclear whether state procedures are more or less attractive relative to the Bankruptcy Code when state law extends significant protection to creditors. As creditor protection increases, so does the owner-manager's cost of using state law. Self-dealing or other bad behavior by managers is more likely to be uncovered; a greater share of firm value will be shared with unsecured creditors. Additionally, laws that protect creditors—such as rules requiring court oversight—will reduce the speed and increase the administrative cost of state procedures.[35]

On the other hand, as creditor protection increases, senior creditors may be more likely to consent to state procedures. The more protective the procedures, the more senior creditors can rely on them to lay bare the debtor's finances and to provide avenues for unwinding self-dealing. These creditors could, of course, use contractual provisions to achieve some of the same transparency. Loan documents, for example, could include provisions declaring default in the event the debtor incurs excess indebtedness, transfers assets to insiders, or violates other covenants. But these provisions give senior creditors little leverage with respect to the insiders or third parties that received payments from the debtor. Creditors could demand personal guarantees from these individuals, especially the insiders, but guarantees are—for various reasons—not demanded in many small business loans. Only about 60% of small business corporations

[35] *See* Mann, *supra* note 5, at 1398 ("the professionals [interviewed for this study] emphasized that ABCs in California can be accomplished under a common-law process that does not involve any judicial filing of any kind. This allows the process to move rapidly and at relatively low cost. Other states, by contrast, often require judicial filings and other onerous conditions that make the process less practical.").

obtain loans with guarantees from insiders.[36] State law, then, is useful to senior creditors *ex post* when they did not obtain guarantees from insiders and related parties *ex ante*.

Although we cannot say generally whether creditor protections increase or decrease the attractiveness of state law relative to the Bankruptcy Code, we can make the weaker claim that creditor protections will *increase* the attractiveness of state law if they are highly valuable to senior lenders. On the other hand, rules that are valuable only to unsecured creditors could *decrease* the attractiveness of state law. Rules in the former category probably include regulations that police insider self-dealing. Secured creditors probably worry little about the possibility that a business will favor particular unsecured creditors. The owner of a distressed business is much more likely to favor herself, especially because a large fraction of small business debt—about 25% among businesses with fewer than 20 employees—is typically owed to insiders or other individuals who are likely related to insiders.[37] Thus, fraudulent conveyance law may be particularly valuable to senior lenders as it allows creditors to sue insiders who received payments when the business was insolvent. This suggests that state procedures will tend to be more popular in states with strong fraudulent conveyance laws. These laws are largely the same across the fifty states, with one important exception: only 38 states have adopted § 5(b) of the UFTA, which gives creditors power to sue any insider who receives payment on account of antecedent debt while the business is insolvent.[38] If § 5(b) is an important device for senior creditors, state procedures will be more commonly

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[36] Robert B. Avery, Raphael W. Bostic, and Katherine A. Samolyk, *The Role of Personal Wealth in Small Business Finance*, 22 J. Bankr. & fin. 1019, 1032-33 (1998) (using the 1993 National Survey of Small Business Finance). See also Baird and Morrison, *supra* note 11, at 2362 (finding that the owner-manager had personally guaranteed non-tax debt in 56% of corporate Chapter 11 cases filed in the Northern District of Illinois during 1998).

[37] Allen N. Berger and Gregory F. Udell, *Small Business Credit Availability and Relationship Lending: The Importance of Bank Organisational Structure*, 112 Econ. J. F32, F35-F36 (2002).

[38] See Table 2 *infra*.

used in states that have adopted this provision of the UFTA than in those that have not adopted it.

In contrast, laws that regulate preferential transfers generally may reduce the popularity of state procedures. If a business favors certain creditors, the favoritism is unlikely to harm senior lenders; the debtor needs their consent. Favoritism is more likely to harm unsecured creditors. The debtor will favor some unsecured claims over others; the most likely candidate for favoritism is a bank's unsecured deficiency claim (the value of bank debt in excess of the value of collateral). Thus, any regulation of preferential transfers will have little value to senior lenders. It may only increase the complexity of state procedures, making them less attractive relative to federal law.

C. Priorities

Generally, the Bankruptcy Code distributes value (proceeds from liquidation or interests in the newly reorganized business) according to the priorities that creditors bargained for in their original contracts with the debtor. Secured creditors receive the value of their collateral; unsecured creditors share pro-rata in the remaining value of the firm—unless sufficient assets exist to pay unsecured claims in full, in which case equityholders share pro rata in the remainder. This is the general priority scheme (often described as the "absolute priority rule"[39]). There are important complications, however. Among unsecured creditors, sections 507 and 726 of the Code establish an additional priority scheme. Tax claims, for example, receive *eighth* priority, meaning that tax collectors receive payment only if sufficient assets exist to pay higher priority unsecured claims first (such as administrative costs and certain employee wage and benefit claims). If sufficient assets do exist, tax claims will be paid in full before any value is shared with general trade creditors.

[39] 11 U.S.C. 1129(b).

Outside bankruptcy, creditors' priorities deviate from the priority scheme set out in bankruptcy. A notable example is tax claims. If a business liquidates under an ABC, these claims enjoy *first* priority among unsecured creditors, not eighth.[40] This can be an important factor in a business's decision to use state or federal law.[41] Many owner-managers are personally liable for business tax debts because they failed to ensure that the business delivered payroll withholding taxes to the federal government. Because the IRS receives greater priority under state law than in bankruptcy court, the owner-manager may prefer a state proceeding in order to minimize her personal liability.

Creditor rights in and outside bankruptcy differ along other margins as well. In bankruptcy, the debtor can enforce lease contracts even if it has committed a material breach that would, under state law, entitle the lessor to terminate the contract.[42] Additionally, in bankruptcy a debtor can breach a lease contract and cap the damages otherwise payable to the landlord under state law.[43]

These observations suggest that a distressed small business is (a) *more* likely to favor state procedures over federal law when tax debts are significant but (b) *less* likely to favor state law when the business leases real estate or other assets.[44] Notice that prediction (a) is at odds with the hypothesis in Section II.A ("Creditor Consent"), which predicted that, because a debtor needs senior creditor consent before invoking state

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[40] 11 U.S.C. 3713; *People v. United States*, 328 U.S. 8 (1946).

[41] Cohen and Challacombe, *supra* note 21, at 277.

[42] § 365(b), (f). Some states, such as California, permit an ABC assignee to continue using leased premises for a short period (90 days in California) even though the debtor has committed a material breach and even if the lease agreement treats an ABC as an event of default. See Cal. Civ. Code § 1954.1.

[43] § 502(b)(6).

[44] *See* Berman, *supra* note 25, at 361 ("[W]here the debtor has a leasehold interest in real property, the execution of a general assignment typically causes the underlying lease to become void, by reason of the ipso facto clause in the lease. State law does not help whereas the bankruptcy code has specific language invalidating that clause.").

procedures, a debtor with significant tax debt is *more* likely to file a federal bankruptcy petition.

D. Corporations versus Non-Corporations

The choice between state and federal law will involve a very different calculus for corporations than for non-corporate entities. If a corporation is liquidated or reorganized under state procedures, the original legal entity is typically dissolved. The assets will be acquired by a new entity. When the original corporation dies, so do its unsecured debts. In effect, then, a corporation can "discharge" its debts under state law. This is not possible for partnerships or proprietorships. The owner-manager is personally liable for the business debts; this personal liability continues even if the business is liquidated or reorganized under state law. The only way to wipe away personal debt is to obtain a discharge under the Bankruptcy Code. For these reasons, state procedures seem more attractive to corporations than to non-corporate entities.

E. Administrative Costs

The administrative costs of a federal bankruptcy case, which include court fees and the professional fees of attorneys, consume about ten percent of firm value.[45] In a study of cases filed in the District of Arizona and Southern District of New York between 1995 and 2001, most of which were small business cases, Bris, *et al*. found that the administrative costs of a Chapter 7 case averaged about $12,000 and those of a Chapter 11 case about $30,000.[46] State law procedures are generally thought to be cheaper.

In print, many practitioners have stated that state procedures are cheaper—they are faster and generate less administrative cost than a federal bankruptcy case.[47] The

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[45] Arturo Bris, Ivo Welch, and Ning Zhu, *The Costs of Bankruptcy: Chapter 7 Liquidation versus Chapter 11 Reorganization*, 61 J. Fin. 1253, 1287 (2006).

[46] *Id*. at 1281-1282.

[47] *See, e.g.*, Mann, *supra* note 5, at 1392-93 (concluding, based on interviews with practitioners, that "the net cost of the process seems to be less than a bankruptcy proceeding"); Cohen and Challacombe, *supra*, at 270 ("In contrast to a Chapter 7 liquidation under the Bankruptcy Code,

cost savings come from several sources. First, because state procedures are often managed by professional assignees, not courts, there are few procedural roadblocks that slow down the process. Additionally, the procedural hurdles in bankruptcy court—formal notice to creditors, oversight by the U.S. Trustee—generate administrative costs that are avoided in many state procedures.[48]

F. Other Factors

The foregoing discussion is, of course, not complete. There may be many other reasons why businesses choose state over federal law. Blanchflower, *et al*.,[49] for example, find evidence that minority-owned small businesses face discrimination in credit markets. If lenders are unwilling to refinance distressed minority-owned firms, these firms may find Chapter 11 attractive, because it offers a court-supervised opportunity to reorient business operations and bargain with pre-petition creditors. To be sure, credit-market discrimination may reduce opportunities for minority-owned firms to grow in size. And if minority-owned businesses are relatively small, they may be less able to afford the federal bankruptcy process. Conditional on size, however, the existence of credit-market discrimination could increase the probability that a minority-owned dis-

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an assignment is generally more efficient, less costly, of shorter duration, more successful in terms of the value received for the assts and amounts paid to creditors and more tailored to the needs of debtors and their creditors."); Bruce C. Scalambrino, *Representing a Creditor in an Assignment for the Benefit of Creditors*, 92 Ill. Bar J. 263 (2004) (describing Illinois law, the author explains that "ABCs take less time than bankruptcy and require less in the way of court intervention and approval, which can mean lower professional fees for debtors."); Kupetz, *supra*, at 18 ("Compared to bankruptcy liquidation, assignments may involve a faster and more flexible liquidation process.").

[48] *See* Mann, *supra* note 5, at 1392-93. Additionally, the owner-manager often waits to commence state procedures until she has found a buyer for the business (the buyer may be a new corporation organized by the owner-manager). *Id*.

[49] David G. Blanchflower, Phillip B. Levine, and David J. Zimmerman, *Discrimination in the Small-Business Credit Market*, 85 Rev. Econ. & Stat. 930 (2003).

tressed business will file a federal bankruptcy petition.[50] The same dynamics might be present in women-owned small businesses, although empirical studies find no evidence of capital market discrimination.[51]

Geography too may play a role in explaining the popularity of the Bankruptcy Code relative to state law procedures. In urban areas, the extent of the market permits specialization by attorneys. If bankruptcy attorneys are more common and their services less expensive in urban areas, we may see federal bankruptcy filings at higher rates in urban than rural areas. Then again, as Hanna argued over a half century ago,[52] the same phenomenon—greater specialization in urban environments—could make state law procedures more popular as well.

Another geographic pattern may be important. Personal bankruptcy filing rates (usually under Chapter 7) vary considerably by state, perhaps reflecting unobservable heterogeneity in the preferences or opportunities of citizens. These preferences or opportunities could influence the popularity of federal bankruptcy law among small businesses.

* * *

Four of these hypotheses—Creditor Consent, Information Production, Priorities, and Corporations versus Non-Corporations—are the focus of this paper. Table 3 summarizes the hypotheses and their predicted effects on the attractiveness of federal bank-

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[50] Dawsey and Ausubel, however, find the opposite pattern in their study of distressed consumers, who can discharge debt by filing a federal bankruptcy filing or by forcing creditors to pursue collection under state law. See Amanda E. Dawsey and Lawrence M. Ausubel, "Informal Bankruptcy," SSRN working paper (Feb. 2002). Because many creditors will "charge off" a debt instead of pursuing collection, Dawsey and Ausubel argue that distressed consumers face a choice between "formal bankruptcy" (a federal filing) and "informal bankruptcy" (placing the burden on creditors to assert state law remedies). The authors find that members of minority groups are more likely than other borrowers to choose "informal bankruptcy." The authors do not, however, offer a theory that might explain this pattern.

[51] Arne L. Kalleberg and Kevin T. Leicht, *Gender and Organization Performance: Determinants of Small Business Survival and Success*, 34 Acad. Mgmt. J. 136 (1991).

[52] John Hanna, *Contemporary Utility of General Assignments*, 35 Va. L. Rev. 539 (1949).

ruptcy law relative to state law procedures. The sections that follow—III and IV—draw on several data sets to test these hypotheses. Section III tests some of these hypotheses using data on overall trends across the various states ("state-level data"). Section IV addresses other hypotheses using micro-data on distressed businesses that closed their doors ("firm-level data"); I will compare businesses that closed their doors after filing federal bankruptcy petitions to those that shut down without filing petitions.

III. State versus Federal Law: State-Level Variation

Federal bankruptcy cases are significantly more common in some states than others. Table 2 sorts the states by the frequency of federal filings per 1000 business deaths (the frequencies here equal the annual average over the period 1990 to 2004). Delaware is an extreme outlier, with over 270 filings per 1000 deaths. The state with the next highest incidence is Nevada, with 47 filings. At the low end is North Dakota, with almost 6 filings per 1000 deaths. Focusing on the top five and bottom five states (excluding Delaware), the incidences are strikingly different, ranging from 37 to 47 among the top five and from about 6 to 8 at the bottom end. The mid-point of the bottom range (7) is 83 percent lower than the mid-point of the top range (42).[53] Some of this inter-state variation may be explained by the hypotheses in Table 3.

A. Methodology and Data Sources

To test these hypotheses, I estimate a simple regression model using state-level data:

$$BankruptcyRate_{st} = \beta' Hypotheses_{st} + \delta' Controls_{st} + \varepsilon_{st} \quad (1)$$

"$BankruptcyRate_{st}$" measures the number of business bankruptcy cases (filed under the Bankruptcy Code) per 1,000 business deaths in state *s* during year *t*. Similarly, for state *s*

[53] Similar variation emerges if we sort the states by the number of corporate bankruptcy filings per 1000 deaths (see the first column of Table 2). Among the top five states, the incidence ranges from about 21 to 30; among the bottom five, it ranges from about 4 to 7. The midpoint of the bottom range (5.5) is 78 percent lower than the midpoint of the top range (25.5).

during year *t*, "Hypotheses$_{st}$" is a vector of proxies for the hypotheses in Table 3 and "Controls$_{st}$" is a vector of variables that account for other possible determinants of the variation in BankruptcyRate (e.g., region dummies). Because the proxies for "Hypotheses" are generally time-invariant, this model will be identified primarily by variation across the states. Because observations for a particular state will be highly correlated over time, I estimate standard errors that are clustered by state.

BankruptcyRate. The dependent variable is the ratio of (a) the number of business bankruptcy filings to (b) the number of business failures (per state, per year). Data on (b)—business failures—are available from the Small Business Administration (SBA). A "business failure" is defined as the closure of any business that employed one or more workers. This definition is overly broad for purposes of this study; it captures businesses that closed in distress as well as those that closed for reasons unrelated to distress (e.g., a merger or acquisition). Because of this, BankruptcyRate measures the ratio of bankruptcy filings to total business closures, not closures of distressed businesses. Assuming no systematic variation across states in the composition of business closures (distressed versus non-distressed closures), the overly broad definition of business failure will not bias the analysis below.

Data on (a)—the number of business bankruptcy filings—are available from two sources with differing coverage. The Federal Judiciary publishes annual statistics on bankruptcy filings by chapter and debtor type (business or non-business). These "PACER"[54] data capture the universe of filings, but provide little information about the underlying business. The data only reveal whether the debtor believed that most of its debts were business-related (if so, the case is deemed a business filing). But even this information is noisy. As noted earlier, it appears that many debtors—especially sole

[54] The data are available on-line through PACER ("Public Access to Court Electronic Records"), a website maintained by the Federal Judiciary. See *PACER Bankruptcy Statistics*, Statistical Reports, Table F-2, http://pacer.uspci.uscourts.gov/.

proprietors—are unsure whether to treat their debts as "primarily" business-related and defer to the default setting in bankruptcy filing software, which answer the question in the negative and treat all debt as consumer debt. Thus, PACER data are comprehensive but offer limited information about business filings.

More detailed but less comprehensive data are available from the Federal Judicial Center's closed-claim database,[55] which contains information about case outcomes. From these "FJC" data we can determine whether the debtor was a corporation. The data are less comprehensive because they capture any case filed after October 1993 but *closed* before 2003. Long-lived cases, which have not closed by the end of 2003, will be undercounted by these data. This censoring problem matters most for corporate bankruptcies, which can extend for many years.

I use these data sources—PACER and FJC—to compute alternative measures of BankruptcyRate, including the ratio of total business bankruptcy filings ("All Bus. Filing Rate"), business Chapter 11 filings ("Bus. Ch. 11 Filing Rate"), and corporate filings ("Corp. Filing Rate") to business failures. The first measure, derived from PACER, is comprehensive but noisy. The second, also from PACER, is consistently coded and therefore less noisy, but mixes corporate and non-corporate cases (individuals often file Chapter 11 petitions). The final measure offers a precise measure of corporate bankruptcy filings, but is drawn from the FJC database, which suffers the censoring problem described above.

Hypotheses. State-level data are suitable for testing three kinds of hypotheses about a firm's choice between state and federal law—(1) Information Production, (2) Priorities, and (3) Corporations versus Non-Corporations. First, laws regulating state procedures will make those procedures more attractive than federal law if the laws protect the interests of senior creditors. As discussed in Section II.B, laws of this sort proba-

[55] *Federal Court Cases: Integrated Data Base Bankruptcy Petitions, 1994-2003*, Study Nos. 4303-4306, 4086, 4088, 4249-4252, http://www.icpsr.umich.edu/.

bly include fraudulent conveyance law and Section 5 of the UFTA, both of which protect senior lenders against malfeasance by insiders (this paper will focus on Section 5 because there is no obvious state variation in fraudulent conveyance law). Senior lenders may also value laws that increase the transparency of state procedures. An example might be a law giving local courts authority to oversee state procedures. Second, distressed businesses are more likely to favor state law when it gives higher priority to debts—such as tax debts—for which the owner-manager may be personally liable (although the presence of tax debt could also push firms toward federal law, because the IRS may not consent to state procedures). Finally, the hypothesized effects should be more pronounced for corporations than non-corporations.

These hypotheses can be tested using state-level data on the popularity of federal bankruptcy law among failing businesses, as measured by BankruptcyRate. If these hypotheses are correct, the popularity of bankruptcy should be lower in states that have adopted Section 5 of the UFTA. In these states, insolvency procedures offer a relatively high degree of protection to senior lenders, who will be more likely to consent to state procedures. Additionally, the popularity of bankruptcy could be higher (under the Creditor Consent hypothesis) or lower (under the Priorities hypothesis) in states in which a large fraction of businesses have incurred tax debts. Finally, federal law should also be higher in states that permit the debtor (or an assignee in an assignment for the benefit of creditors) to favor particular creditors, even if they would not receive such favorable treatment in federal court.

Data on state laws are available from state codes and case law. In this paper, I focus on Section 5(b) of the UFTA and on laws regulating ABC, a popular type of state procedure. Table 2 summarizes the data. With respect to the UFTA, nearly 40 percent of states have adopted Section 5(b) ("Insider Preferences"). With respect to ABC regulations, Table 2 identifies five categories of rules. The first protects creditors generally by giving the ABC assignee power to sue creditors who received preferential treatment be-

fore the debtor executed the assignment process ("General Preferences"). The next three categories promote the transparency of the state process: these rules mandate court oversight ("Court Oversight"), allow creditors to appoint trustees or assert other formal powers during the proceedings ("Creditor Oversight"), or require an ABC assignee to post bond, file financial schedules with a court, obtain an appraisal of the assets, or perform other duties ("Other Regulations").

The final category ("Preferential Assignments OK") identifies states that allow an assignee to favor some creditors over others during the assignment process. This rule, as noted, may make state law attractive to businesses seeking to favor creditors to whom the owner-manager has offered a personal guarantee. These creditors often include the IRS. To measure the extent of tax indebtedness, I gathered data on the annual number of tax liens. This variable proxies for state-level variation in the aggressiveness with which the IRS pursues tax liens. After dividing this number by annual state population, I divided the states into two groups—high tax lien states and low tax lien states. During a given year, high tax lien states are those in which tax-liens-per-capita exceeds the national median for that year.

Controls. These variables include the proportion of state population living in urban areas ("Urban Population"), the number of consumer bankruptcy filings per capita ("Consumer Filing Rate"), and alternative measures of local economic conditions ("Firm Growth Rate" and "Employment Growth Rate"). Another possible control variable is the average duration of Chapter 11 cases filed in the state ("Average Case Length"). Case duration could be correlated with case complexity as well as the inefficiency of local bankruptcy courts.

B. Summary Statistics

Table 4 summarizes the variables and data sources. Table 5 presents summary statistics (all continuous variables are logged). Two patterns are noteworthy here. First, "Insider Preferences" and "Court Oversight" are significantly negatively correlated

with BankruptcyRate, as measured by the number of corporate and business Chapter 11 filings per 1,000 business deaths (see columns II and III).[56] This is consistent with the hypothesis that federal bankruptcy filings are less common in states with laws that promote the transparency of state procedures and in those that protect senior lenders. The correlation becomes small and insignificant when we use a broader measure of BankruptcyRate ("All Bus. Filing Rate"), suggesting that state laws are indeed most important to corporations.

The second noticeable pattern is the negative correlation between the first two measures of BankruptcyRate and laws permitting assignees to favor particular creditors ("Pref. Assignments OK"). This too is consistent with the hypothesis that state laws are attractive when they permit deviations from the Bankruptcy Code's absolute priority rule. Interestingly, however, the opposite (positive) correlation is observed when BankruptcyRate is measured as total business filings per 1,000 business deaths (Column IV).

Finally, it is unclear whether the BankruptcyRate is higher or lower in states with relatively high tax liens per capita. Recall that, in theory, we cannot predict the direction of the effect: state law may be more attractive in these states (because the IRS enjoys higher priority outside bankruptcy) or less attractive (because debtors must seek IRS consent to state procedures).

C. Results

Tables 6 and 7 report estimates of equation (1). The tables differ primarily in terms of the data used to compute BankruptcyRate: Table 6 uses the PACER bankruptcy filings data; Table 7 uses the FJC closed case database. All continuous variables, including BankruptcyRate, are logged.

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[56] Although both "Insider Preferences" and "Court Oversight" are negatively correlated with BankruptcyRate in columns I and II, it is possible that only one will be significant in multivariate statistical analysis. As the continuation of Table 5 shows, the various measures of state laws are significantly correlated.

Across both tables one consistent pattern emerges: corporate bankruptcy filings are significantly lower in states with laws that promote information production and creditor protection. When BankruptcyRate is measured as the number of Chapter 11 filings per 1,000 business deaths, the coefficient on "Insider Preferences" is consistently negative and ranges between 0.190 and 0.258, implying that Chapter 11 filings are nearly ten percent lower in states that have adopted Section 5. Outside Chapter 11 cases, "Insider Preferences" loses its significance. When BankruptcyRate is measured as the number of corporate filings (Chapter 11 or Chapter 7) per 1,000 business deaths, "Court Oversight" becomes a significant explanatory variable, as Table 7 shows. Indeed, its magnitude (ranging from 0.158 to 0.195) is nearly identical to that of "Insider Preferences" in corporate Chapter 11 cases. "Court Oversight" may or may not matter outside corporate cases. It loses its significance in Column (3) of Table 6, which focuses on business Chapter 7 cases. It retains its significance in Column (6) of Table 7, which focuses on all business filings. These inconsistent results reflect the different data sources employed in these tables. The results for "High Tax Liens" are similarly inconclusive.

Together, Tables 6 and 7 offer suggestive evidence that state law matters. Federal bankruptcy filings are less common in states that offer greater protection to creditors—in the form of laws promoting the transparency of a debtor's operations or laws limiting preferential payments to insiders. Transparency matters when a business is planning to liquidate (and the federal alternative is Chapter 7). Laws limiting payments to insiders matter when a reorganization is planned (Chapter 11 is the federal alternative).

IV. State versus Federal Law: Firm-Level Variation

State-level data are too coarse to permit tests of most hypotheses discussed in Section II and set out in Table 3. Ideal data would permit a comparison of two groups of distressed businesses: (i) distressed businesses that filed federal bankruptcy petitions prior to shutting down or restructuring ("bankruptcy exits") and (ii) distressed businesses that used state law procedures, such as ABC, to accomplish the same purposes ("state exits"). With such data in hand, the following discrete-choice model could be used to identify factors that make a federal bankruptcy filing more or less likely:

$$E[\text{BankruptcyExit}_i] = F(\text{Hypotheses}_i, \text{Controls}_i) \qquad (2)$$

Here, $F(\cdot)$ is the cumulative density function for a particular distribution, usually normal (for a probit) or logistic (logit). "BankruptcyExit_i" is a dummy variable equal to one if firm i is a member of the bankruptcy exit group and zero otherwise. "Hypotheses_i" is a vector of proxies for the hypotheses in Table 3 and "Controls_i" is a vector of variables that account for other possible determinants of a firm's decision to file for federal bankruptcy.

Model (2) requires data on two groups, bankruptcy exits and state exits. Ideal data do not exist, but we can get close to the ideal using records assembled by Dun & Bradstreet (D&B), a credit reporting bureau.

A. Data

D&B records financial and operational information about the majority of businesses located in the United States. The SBA estimates that about 24.7 million firms were active in the U.S. economy during 2004. D&B's records for roughly the same period included about 18 million firms, 73 percent of the SBA total. Missing from D&B's database are businesses with no debt. D&B's mission is to offer reliable information about the creditworthiness of potential borrowers. A business usually does not enter D&B's database until a bank or trade creditor seeks (or reports) information about the

business. This selection bias is unimportant for the analysis here, which evaluates the choice between state and federal law among distressed businesses. That choice will be meaningful only for indebted businesses. A business without debt generally will not consider a bankruptcy filing.

D&B's records document the credit history, annual sales, employment, location, and other characteristics of businesses. D&B also tracks the financial condition of every business using a proprietary index, the Financial Stress Score (FSS), which ranges from 1 to 5. Scores above 3 are indicative of distress; an FSS of 5 represents severe distress. The index is strongly correlated with the likelihood of suspending operations. Among firms with an FSS equal to 1, the probability of closing within one year is 0.5 percent. Among firms with an FSS equal to 4 or 5, the probability is 8 percent and 36 percent respectively.

D&B records depart from the ideal in several respects. They indicate whether a business shut down and whether it filed for bankruptcy. But if a business shut down without filing a bankruptcy petition, the records do not indicate whether the business used a particular state law procedure to liquidate or reorganize, merged with another firm, or shut down because the owner decided to move out of state or on to new projects. Thus, the population of "business shut downs" will include distressed businesses that shut down or reorganized using state bankruptcy law (state exits) as well as healthy businesses that shut down because there were better uses for the physical assets or the owner's human capital (call these "healthy exits"). For this study, only state exits are relevant. I isolate this group, as explained below, by focusing on businesses with high Financial Stress Scores. In general, I assume that a shutdown is a "state exit" if the business (i) exited without filing a bankruptcy petition during the preceding three years and (ii) exited at a time when its FSS equaled 4 or 5 (in some tests, I focus only on highly distressed firms with an FSS equal to 5).

Another shortcoming of the D&B data is the limited information about a business's capital structure. The records indicate whether, when, how often, and on what terms a business has borrowed from a bank or purchased goods on credit. They also indicate whether the business is late in making payments. But the records do not tell us the total value of the business's assets or liabilities. Thus, we do not know how leverage varies across businesses in the database. We can only infer this from various proxies, such as the FSS, the size of the firm (measured in terms of sales or employment), and whether the business took on secured debt.

Finally, the D&B data are noisy and often incomplete. Data on a firm's annual sales are available for some years but not others. When these data are available, the same sales volume may be reported for multiple years, suggesting that D&B reproduced data from past years when it was unable to contact a business in the current year. Along the same lines, important variables, such as the gender of the owner and whether the business rents or owns real estate, are missing for a large number of businesses. Some of these problems, such as missing or duplicate sales data, can be minimized by computing annual averages for each business. The averages will moderate the noisiness. Other problems, such as underreporting of gender and real-estate ownership, can be ignored if I assume that reporting biases do not differ across the two groups that are the focus of this paper: bankruptcy exits and state exits.

B. Sample Selection

Because D&B data are expensive, I limited my analysis to a sample of small, privately-held businesses located in Cook County, Illinois. I define a "small business" as one with 500 or fewer employees. In 1998, D&B maintained records on nearly 160,000 privately-held businesses in Cook County, about 99 percent of which had 500 or fewer employees.

As a preliminary step, I drew a sample of 2,000 businesses that were operating as of January 1, 1998. As Panel A of Table 8 illustrates, the sample was stratified. A third of the sample consisted of businesses in high distress (FSS equal to 5), another third of businesses in moderate distress (FSS equal to 4), and a final third of businesses in low or no distress (FSS below 4). Within each third, the sample was split evenly between corporations and non-corporations (partnerships and proprietorships). For each business, D&B provided annual financial and operational information for every year from 1998 through 2004, or until the business terminated operations, whichever occurred earlier.

This exploratory analysis confirmed the rarity of federal bankruptcy filings. Table 8 shows that, among corporations in high distress (FSS=5) on January 1, 1998, nearly 50 percent ceased operations within seven years. Among those that shut down, only 15.6 percent filed a federal petition. The bankruptcy rate is a bit higher (16.9 percent) among non-corporations. These percentages measure the bankruptcy rate among all exiting businesses, regardless of whether they were distressed at the time of exit. Limiting the sample to businesses that exited in distress, as the final columns of Panel A do, the percentages rise slightly. It may seem odd that some bankruptcies are not "distressed bankruptcies" in Panel A. Among high-distress corporations, the number of bankruptcies is 25, but the number of distressed bankruptcies is 20. Because it is unlikely that a healthy business would file for bankruptcy, the disparity most likely reflects measurement error. In particular, D&B obtains business information from two sources: from its own data-colleting efforts and from public records. It is not uncommon that D&B will know that a business filed for bankruptcy but have little additional information about it. Such a business may have a low FSS. To avoid this measurement problem, the analy-

sis below will generally focus on bankruptcy filings by businesses that, based on D&B records, were distressed at the time of filing.[57]

Given the rarity of bankruptcy exits, a simple random sample will not yield enough bankruptcy exits and state exits to implement model (2). Table 8 illustrates the point: a simple random sample of 332 highly distressed corporations (FSS=5) yielded only 25 bankruptcy exits. There are two solutions to this problem. One is to increase the overall sample size to, say, 20,000 businesses. This would yield a large number of bankruptcy and state exits, but would be prohibitively costly. An alternative solution is choice-based sampling. Instead of drawing a random sample from the population of all small businesses, I could draw random samples from the following sub-populations: (i) distressed businesses that filed a federal bankruptcy petition between January 1998 and January 2005 and (ii) distressed businesses that shut down during the same period without filing a bankruptcy petition. This sampling methodology has the advantage of cost-effectiveness. The downside is that it distorts the representativeness of the overall sample. For any given business in the choice-based sample, the probability of selection differs from the probability of selecting the same businesses from the general population. By artificially restricting the population to groups (i) and (ii), I have inflated the probability of selection for businesses in both groups. I have also altered the relative probability of selection between the two groups. This complication, however, has a simple fix: the data can be weighted by the probability of selection.

Applying this methodology, I narrowed the sampling population to all businesses that suffered distress between 1998 and 2000 and shut down at some date prior to 2005. From this population of businesses, I drew two samples: 927 state exits and 364 bankruptcy exits. As Panel B of Table 8 shows, the state exits sample represents about

[57] This restriction has little effect on the analysis, however. In general, the patterns reported below do not change when the analysis is broadened to include all bankruptcies, regardless of the level of distress.

66 percent of all such exits in the population; the bankruptcy exits sample accounts for 100 percent of these exits in the population. Within each group, the samples are divided between businesses in high distress (FSS=5) and moderate distress (FSS=4) and between corporations and non-corporations. For each business, the data include annual financial and operational data from 1994 through 2004.

Together, the samples in Panels A and B of Table 8 represent the primary data for the tabular and multivariate analysis that follows. I will compare state exits to bankruptcy exits among the subset of distressed businesses. This is a valid way to test theories regarding the choice between state insolvency procedures and federal bankruptcy law *if* my measure of distress is accurate. It is probably safe to assume that all bankruptcy exits involve distressed businesses; rarely will a healthy business file a bankruptcy petition. Among state exits, however, it is possible that some of these exits involve businesses that appear distressed but are in fact solvent. I treat a business as "distressed" if its financial stress score (FSS) exceeds 3, but Panel A of Table 8 shows that many distressed firms never shut down. Among corporations with an FSS equal to 5 in January 1998, for example, only 48 percent exited within the following seven years; the percentage is only 29 for corporations with an FSS equal to 4. Thus there is a risk that, in comparing state exits to bankruptcy exits, I am making two comparisons simultaneously: (1) state exits versus bankruptcy exits, among *distressed* businesses, and (2) state exits by *healthy* businesses versus bankruptcy exits by *distressed* businesses. I am interested in comparison (1), not (2).

I evaluate this potential problem two ways in the analysis below. First, I run the analysis separately for two samples: a sample consisting of both moderately and highly distressed businesses (FSS equal to 4 or 5) and a sample limited to businesses with an FSS equal to 5. State exits involving healthy businesses will be more common in the former group than the latter. If some patterns are important in the first sample, but not the second, they probably tell us little about the choice between state and federal law

among *distressed* businesses (comparison (1)). They instead tell us something about the difference between healthy and distressed businesses (2).

Another way to evaluate this problem is to identify the patterns that distinguish healthy and distressed businesses and compare these to the patterns that distinguish state exits from bankruptcy exits. To make this comparison, I gathered data on apparently healthy (FSS below 4) and distressed businesses (FSS equal to 4 or 5) that shut down during the period 1998-2000. As Table 9 illustrates, the sample includes about 1,000 exits by distressed businesses and over 850 by healthy businesses.

C. Variables

Three sets of hypotheses are testable with these data—(1) Creditor Consent, (2) Priorities, and (3) Corporations versus Non-Corporations. The Creditor Consent hypothesis implies that a distressed business is less likely to select state procedures if it is encumbered by secured debt or tax debt. A good proxy for secured indebtedness is whether state records list UCC filings; a secured creditor will generally file a UCC-1 financing statement with the Illinois Secretary of State. As Table 10 explains, the D&B data indicate whether any UCC filings appeared in the public record prior to the business's exit (see "Any UCC Filings"). Along the same lines, a proxy for tax debt is whether state records list liens on business assets (measured by "Any liens imposed" in Table 10).[58] For the typical small business bankruptcy, most liens are tax liens.[59]

The Creditor Consent hypothesis also implies that a business's relationship with its senior lenders matters: a distressed business will invoke state procedures if it can obtain the consent of senior lenders, and consent is more likely to be forthcoming if the debtor has not defaulted or otherwise impaired its relationship with these lenders. On the other hand, relationships with trade creditors may not matter; their consent is un-

[58] Data on UCC filings, liens, and suits and judgments are contained in the D&B database. D&B collects this information from public records.

[59] [Cite ND IL study]

necessary. The D&B data provide proxies for the quality of a debtor's relationship with its bank (the primary senior lender) and with trade creditors: "Poor Banking History" and "Poor Trade Credit History." These variables indicate whether a bank or trade creditor reported to D&B that the business defaulted or had longstanding unpaid liabilities. Additional implications of the Creditor Consent hypothesis include: a federal filing is more likely when a distressed business has suffered a recent shock ("Fire, burglary, indictment") or unexpected business setback (as proxied by "Changed owner, location, name") and when it is beleaguered by lawsuits because it has waited too long to commence state or federal procedures ("Any suits/judgments").

The Priorities hypothesis implies that a distressed business is less likely to file a federal petition when it has incurred tax debts (as proxied by "Any liens imposed") and more likely when it leases real estate (proxied, inversely, by "Owns real estate"). The Corporations v. Non-Corporations hypothesis implies that these effects should be more pronounced for corporations than proprietorships and partnerships.

Table 10 describes several other variables that may play an important role in a debtor's choice between state and federal law. These include whether the business ever filed a bankruptcy petition before ("Business with prior failures"), which may increase the likelihood that a distressed business will choose federal law. The business already has a poor track record and probably a poor relationship with creditors.

Another important variable, especially for a proprietorship, is whether the owner-manager has made tangible, personal investments in the business. The business, for example, might be operated from the owner's home ("Run from owner's home"). In the event of distress, a federal bankruptcy filing may be attractive to the owner because it shields "exempt" assets from creditor collection efforts. These "exempt" assets are, to be sure, usually protected from collection under state law as well, but it will be very difficult for the owner to sell the assets. Once sold, the proceeds are subject to creditor col-

lection efforts. A federal bankruptcy filing "washes" the exempt assets of potential claims by unsecured creditors.

D. Summary Statistics

Tables 11 and 12 provide summary statistics for all businesses in the sample (Table 11) and for corporations (12). Although D&B data are panel data, with annual observations on every business, I was unable to exploit this time variation. As noted above, the data are noisy; in many cases, for example, variables such as sales or employment are the same for several years. Because of problems like these, I treated the data as cross-sectional. For each business, I computed averages for each of the variables in the database. In most cases, the average is based on data for the three years preceding the date of business shut down. Thus, Tables 11 and 12 compare state exits to bankruptcy exits *during the three years preceding exit*.

Overall, the sample businesses are quite small. The average business has about 14 years of experience, 15 employees, and annual sales of $1.45 million. Over half of the businesses operate in the services and retail sectors; another 25 percent operate in construction and wholesale. The corporations in the sample are slightly larger (around 19 employees and annual sales of about $2 million) and have greater representation in the manufacturing sector. Tables 11 and 12 present data on the gender and race of the owner-manager, but the data are puzzling. These tables show that women-owned businesses account for only about five percent of businesses; minority-owned businesses account for about nine percent. In data collected by the Federal Reserve,[60] these percentages are much larger: 24 percent for women-owned businesses and 15 percent for minority-owned. The differences could reflect flawed data collection by D&B.

[60] Marianne P. Bitler, Alicia M. Robb, and John D. Wolken, *Financial Services Used by Small Businesses: Evidence from the 1998 Survey of Small business Finances*, Federal Reserve Bulletin 183, 186 (April 2001).

Comparing state exits and bankruptcy exits, the background characteristics of the businesses do not vary much. The only notable differences are that businesses in bankruptcy are more likely to have filed a bankruptcy petition in the past ("Business with prior failures"), to be run—surprisingly—by managers with greater experience ("Management tenure"), and to be more heavily concentrated in Construction but less concentrated in Finance and Services.

Aside from these differences in background characteristics, Tables 11 and 12 point to two regularities. First, many differences between state exits and bankruptcy exits are consistent with the Creditor Consent hypothesis. Businesses in bankruptcy are more likely to be encumbered by secured debt and liens, and suits and judgments (although, among corporations, the difference with respect to liens is not significant). They are also much more likely to have developed poor relationships with their banks. About 72 percent of bankruptcy exits involve businesses with "poor banking history;" this is true for only 50 percent of state exits. Poor relationships with trade creditors may also matter; over 52 percent of businesses in bankruptcy have defaulted on trade debt; this is true for only 40 percent of state exits. Other variables are largely uninformative: bankruptcy exits are not more likely to involve firms that have undergone a recent change in operations. They are more likely to have suffered a shock such as a fire or burglary, but the baseline probabilities are exceedingly small (0.2 percent versus 0.4 percent). Second, there is suggestive evidence consistent with the Priorities hypothesis. Over 50 percent of businesses in bankruptcy operated from leased premises; this was only true for 41 percent of state exits.

E. Results

Table 13 reports estimates of model (2), assuming $F(\cdot)$ follows a logistic distribution. The data are limited to distressed businesses (with an FSS equal to 4 or 5). The dependent variable, BankruptcyExit, equals one if a business filed a bankruptcy petition

within three years of shutting down; it equals zero otherwise. Standard errors are robust, all continuous variables are logged, and the data are weighted by (the inverse of) their sampling probabilities. Coefficients are reported as odds ratios, with *p*-values shown in brackets. Thus, a ratio above (below) 1 implies that the covariate is positively (negatively) correlated with the probability of a bankruptcy filing.

Column (1) presents the primary regression. The results are largely consistent with the tabular comparisons in Tables 11 and 12. Among distressed corporations, the probability of filing a bankruptcy petition rises significantly for businesses with secured debt (Any UCC filings), liens (Any liens), or sour relationships with senior lenders (Poor banking history)—all consistent with the Creditor Consent hypothesis. The Priorities hypothesis, however, seems to find little support: although the coefficient on "Rents real estate" is positive, it is at best marginally significant. The lack of significance, however, is a product of strong multicollinearity between this variable and two others – "Any suits and judgments" (correlation equal to 0.23) and "Poor trade credit history" (0.20). This multicollinearity explains why all three variables are significant in Tables 11 and 12 but insignificant here. When only one of these variables is included in the analysis, that variable becomes significant, as Column (2) illustrates.

The odds ratios in Columns (1) and (2) are difficult to interpret. Table 14 therefore reports the "average marginal effects" of each covariate. The "average marginal effect" is, roughly speaking, equal to the effect of an increase in a covariate on the magnitude of the dependent variable. Column (1), for example, reports that the average marginal effect of "Any UCC filings" is 0.106. This means that, among distressed corporations that are going out of business, the probability of a bankruptcy filing rises by 0.106 when a business has incurred secured debt. Given that the unconditional probability of a bankruptcy filing is 0.172 (see Table 12), the presence of secured debt raises the probability of a bankruptcy filing to about 0.278, a 62 percent increase. The average marginal effects for "Any liens," "Any suits/judgments," and "Rents real estate" are around half

the size. The effect of poor banking history is much larger: it raises the probability of a federal filing by 0.142, an 83 percent increase relative to the unconditional probability. Clearly, then, these variables have large economic effects.

These patterns largely disappear when the sample is limited to partnerships and proprietorships. See Column (3) in Tables 13 and 14. Only the debtor's relationship with its bank remains important (and retains the same magnitude, with an average marginal effect of 0.148). Two variables, however, are notable here. First, "Runs from owner's home" is significant statistically and economically (average marginal effect equal to 0.156), consistent with the notion that sole proprietors find federal law especially attractive when they have made large personal investments in their businesses. Additionally, the coefficient for women-owned businesses is large and highly significant, suggesting that female entrepreneurs favor federal over state law. This could be seen as evidence of some form of credit market discrimination, but the data are too weak to support this conclusion. There is no evidence of discrimination against minority-owned businesses, the type of business shown to suffer discrimination in other studies. Further, as noted earlier, the proportion of woman-owned businesses in these data is much lower than the national average, suggesting a measurement problem.

Column (4) in Table 13 addresses another possible measurement problem. In Columns (1) through (3), the data include any business with an FSS equal to 4 or 5. If some of these businesses were actually healthy firms—because the FSS variable is not perfectly correlated with distress—the patterns in Columns (1) through (3) may reflect differences between healthy and distressed businesses that exited during the sample period, not differences between *distressed* business that filed for bankruptcy and *distressed* businesses that used state law procedures. In order to isolate the latter comparison, Column (4) re-estimates model (2) using the subsample of corporations with the highest FSS (equal to 5). The overall results do not change. Indeed, in most cases, the estimates become larger and more precise. This suggests that the patterns observed here

are not driven by the presence of healthy exits among the businesses that chose state over federal law.

To explore this issue further, Column (5) redefines the dependent variable to equal one when a distressed business exits and zero when a *non-distressed* business exits. This model, then, compares distressed exits to healthy exits. About 44 percent of exits are distressed exits. The estimates reported in Column (5) are very large but qualitatively the same as those in the other columns of Table 13: relative to healthy exits, distressed exits are much more likely to involve firms with significant secured debt, liens, suits and judgments, poor relationships with creditors, and prior bankruptcy filings. Healthy exits, then, differ from distressed exits along largely the same margins that distressed exits differ from bankruptcy exits. This suggests that firms in bankruptcy tend to be more distressed than firms (distressed or healthy) that opt for state procedures. This conclusion is somewhat unsurprising, given that a major determinant of a distressed business's choice between state and federal law—its relationship with senior lenders—is undoubtedly a major factor used by D&B in assessing the business's distress level.

V. Discussion

The results in Sections III and IV confirm the general hypothesis that, among small businesses, federal bankruptcy filings are the result of bargaining failure between the business and its senior lenders. A distressed business is significantly more likely to file for bankruptcy if it needs the consent of a bank, the IRS, or a landlord to pursue state procedures. And it is unlikely to obtain consent if these procedures offer little protection against insider self-dealing, if the business has previously defaulted or otherwise allowed its relationship with the lenders to deteriorate, or if the business faces pending suits or judgments and has run out of time to negotiate with senior lenders. The choice

between state and federal law, these data suggest, is a choice made by a firm's senior lenders.

The control exercised by senior lenders can have two important effects on the resolution of distress in small businesses. First, it can reduce the ex post costs of financial distress. Relative to federal law, state procedures are generally faster, generate lower administrative costs, and impose fewer burdens on senior lenders (such as the federal rule denying interest payments to undersecured creditors). They also offer a simpler alternative to Chapter 11, which is frequently criticized as an overly cumbersome reorganization mechanism for small businesses. Senior lenders effectively sort businesses between cheaper, less transparent state procedures and more expensive federal procedures that offer a more rigorous audit of the business. Assuming senior debt exceeds the value of the business assets—which is typically the case in bankruptcy—these lenders are effectively the owners of the assets and therefore have appropriate incentives to sort businesses in a way that maximizes the return. Business owners consent to this process because they will receive nothing in bankruptcy but could receive a payoff in a state proceeding. They can demand a payoff because they are always free to file a bankruptcy petition, which will impose costs on senior lenders.

This points to a second effect of senior lender control: senior lenders and business owners may collude to divert value from junior creditors. With senior lender assistance, a business may use state procedures that make it difficult to uncover prior fraud or to determine whether the value of business assets exceeds the secured claims. The business may be sold off at an auction with few, if any, bidders other than the previous owner, whose bid may be financed by senior lenders and whose bid will yield no payoff to anyone other than the senior lenders. Junior, unsecured creditors will rarely object to

this process. Their claims are too small to warrant monitoring the proceeding.[61] The potential for this dynamic—collusion among senior lenders and business owners—is a longstanding problem in state procedures.[62] Indeed, precisely the same dynamic characterized equity receiverships around the turn of the 20th century[63] and led to the Supreme Court's decision announcing the absolute priority rule.[64] Ex ante, of course, this dynamic will induce junior creditors to restrict or raise the price of credit.

These observations suggest several possible directions for U.S. bankruptcy policy. At the very least, they suggest that current policy regarding small business bankruptcy is often self-defeating. Because federal bankruptcy law competes with state procedures, any reform to or interpretation of federal law will have two effects: it will alter payoffs to creditors and shareholders in bankruptcy (*intensive margin*) and the bargaining between entrepreneurs and senior lenders over the choice between state and federal procedures (*extensive margin*). Reforms that try to improve payoffs to junior creditors in bankruptcy, at the expense of shareholders, will tend to make state procedures more attractive to the debtor. The dynamic along the extensive margin (inducing businesses to choose state law) will undercut the intended effect along the intensive margin (improving payoffs to junior creditors).

The 2005 Amendments to the Bankruptcy Code are a case in point. These reforms raised the costs of small business bankruptcy by imposing heavier reporting require-

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[61] Several lawyers reported that, if a junior creditor does object, the dispute will often be settled by means of a payment that convinces the creditor to withdraw the objection.

[62] Several (anonymous) practitioners described this dynamic. *See also* Benjamin Weintraub, Harris Levin, and Eugene Sosnoff, *Assignments for the Benefit of Creditors and Competitive Systems for Liquidation of Insolvent Estates*, 39 Cornell L. Q. 3, 4 (1953) ("The general weakness of the out-of-court proceeding… is its susceptibility to abuse.").

[63] *See* David Skeel, *Debt's Dominion* (Princeton).

[64] *See* Douglas G. Baird and Robert K. Rasmussen, Boyd*'s Legacy and Blackstone's Ghost*, 1999 Sup. Ct. L. Rev. 393.

ments,[65] time constraints,[66] and other burdens[67] on distressed small businesses. The goal of the reforms was, it seems, to offer greater protection to junior creditors. The effect may be just the opposite in many cases: by raising the cost of federal law, the reforms seem to have increased the attractiveness of state procedures, which typically offer less protection for junior creditors.

Federal preemption rules push in the opposite direction. Federal law generally preempts conflicting state law dealing with the same subject matter. In deciding whether conflict exists, courts assess whether the law "stands as an obstacle to the accomplishment and execution of the full purposes and objectives of Congress."[68] In making this assessment, the Ninth Circuit recently held that state law regulating California's ABC procedure is in conflict with the federal Bankruptcy Code.[69] California law, like the Code, permits the assignee to bring suit against creditors, including insiders, who received "preferential payment" during the firm's descent into insolvency.[70] A "preferen-

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[65] *See* 11 U.S.C. 308 (requiring periodic reports on profitability and projected cash flow, comparisons of actual and projected receipts and disbursements, and a statement indicating whether the debtor is in compliance with bankruptcy and tax laws) and 1116 (obligating the debtor or trustee to submit a balance sheet and other financial reports within seven days of filing a Chapter 11 petition). *See also* 28 U.S.C. 586(a)(7) (authorizing the U.S. Trustee to visit the business premise of the debtor and inspect its records).

[66] *See* 11 U.S.C. 1121(e)(2) (declaring that a reorganization plan must be submitted within 300 days), 1129(e) (requiring confirmation of the plan within 45 days after submission)

[67] *See* 11 U.S.C. 362(n) (eliminating the automatic stay in cases involving small businesses that exited a prior bankruptcy case, via dismissal or a confirmed reorganization plan, within two years of the current bankruptcy case). *See generally*, James B. Haines, Jr. and Philip J. Hendel, *No Easy Answers: Small Business Bankruptcies After BAPCPA*, 47 Boston Coll. L. Rev. 71, 72 (2005) (arguing that the bankruptcy amendments place "potentially debilitating burdens on small business debtors that embark on statutory reorganization in financial extremis.").

[68] *Hines v. Davidowitz*, 312 U.S. 52, 67 (1941).

[69] *Sherwood Partners, Inc. v. Lycos, Inc.*, 394 F.3d 1198 (9th Cir. 2005). Since that decision, two California Courts of Appeals have reached the opposite conclusion, thereby creating a split between state and federal appellate courts. *See* Credit Managers Ass'n v. Countrywide Home Loans, Inc., 144 Cal. App. 4th 590 (2006); *Haberbush v. Charles and Dorothy Cummins Family Ltd. Partnership*, 139 Cal. App. 4th 1630 (2006).

[70] Cal. Civ. Proc. Code. § 1800(b).

tial payment" is one that would allow the creditor to receive a greater payoff than other creditors with the same priority in distribution.[71] Suit can be brought against any insider who received payments within one year of the date of the ABC; other creditors can be sued if they were paid within 90 days of the assignment. This California law was, at the time of the case, identical to the Code's rules regulating preferential payments.[72] Nonetheless, the Ninth Circuit held that the law is preempted because it conflicts with one of the Code's basic goals—"equitably distributing a debtor's assets among competing creditors."[73] Under the Code, a debtor or trustee may recover preferential payments, subject to federal court oversight. The same oversight does not exist under state law.

Assuming its decision is followed in California state courts,[74] the Ninth Circuit has eliminated an important protection for senior creditors—the power to attack insider self-dealing. The empirical analysis in Section III suggests that, without this power, senior creditors will be less willing to permit ABCs. Debtors will opt for federal bankruptcy law instead. Preemption doctrine, then, is reducing the attractiveness of state law at the same time that Congress is increasing it.

Coherent bankruptcy policy, it seems clear, must account for the interaction between state and federal law. It is less clear, however, whether the current state-federal balance is suboptimal. State law offers a menu of alternatives for distressed small businesses—foreclosures, bulk sales, ABCs, compositions, receiverships, and other procedures. Businesses can sort themselves across these options, choosing the procedure that maximizes the return to creditors and insiders. In this context, federal bankruptcy law serves only one function: a law of last resort when bargaining between debtors and sen-

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[71] *Id.*

[72] 11 U.S.C. 547. *See also* Mette H. Kurth and Theodore A. Coehn, *Bankruptcy Practitioners, Get Your Guns*, 25 Am. Bankr. Inst. J. 32 (July/August 2006).

[73] *Sherwood Partners*, 394 F.3d at 1203.

[74] As noted in note 69, *supra*, two California appellate courts have rejected the Ninth Circuit's decision.

ior creditors fails. There is no obvious reason why federal law is needed or well-suited to perform this function. If state laws offered a richer set of alternatives, including one that offers a strong mechanism for auditing the affairs of distressed businesses, there would be little use for federal law. And it is possible that a state mechanism would be superior to federal law: it would be the product of local political pressure, not lobbying at the national level, and so might be more sensitive to the conditions of local businesses. Indeed, current federal law has long been criticized as overly cumbersome and expensive for small businesses.[75] Largely the same procedures are used in cases involving small businesses as in those involving multi-national corporations. Perhaps, then, policymakers should consider relaxing federal preemption doctrine in this area. Freed from the doctrine's constraints, states could better regulate their insolvency procedures and develop stronger mechanisms for auditing distressed businesses.

VI. Conclusion

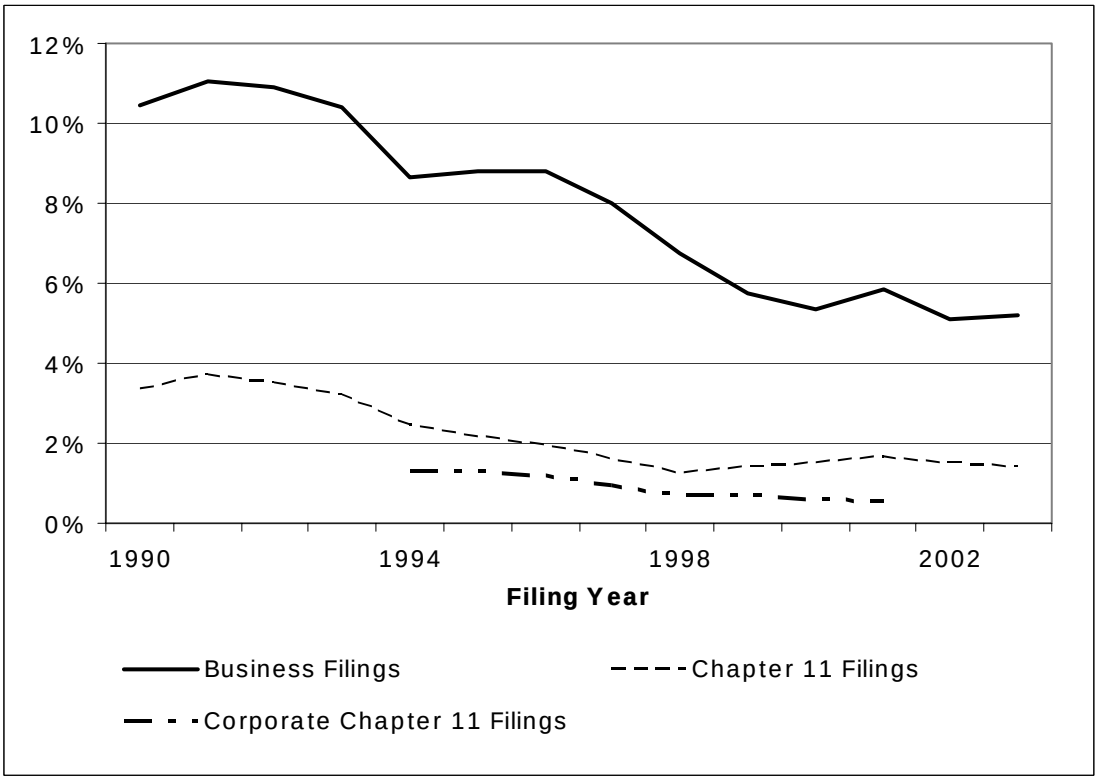
Current discussions of small business distress focus on federal bankruptcy law. These discussions should focus on state law, which is used by around eighty percent of failing businesses. The remaining twenty percent tends to include businesses that are highly distressed, encumbered by secured debt and tax liens, and unable to obtain senior creditor consent to use state procedures. Creditors withhold consent because the debtors have mismanaged their relationships with the creditors and because state procedures offer little protection against insider misbehavior. Federal bankruptcy filings, in other words, reflect bargaining failure: they occur only when debtors and senior lenders cannot reach agreement. The remaining, unanswered question is why federal law is needed to serve this function. State law could easily provide a procedure that the parties would use only as a last resort. Federal law appears to serve this function only be-

[75] *See, e.g.*, Haines and Hendel, *supra* note 67, at 73-74; National Bankruptcy Commission, *Bankruptcy: The Next Twenty Years* 614 (1997).

cause states have been discouraged—by preemption doctrine—from doing so. If states were given freedom to regulate more actively in this area, federal bankruptcy law would become largely irrelevant.

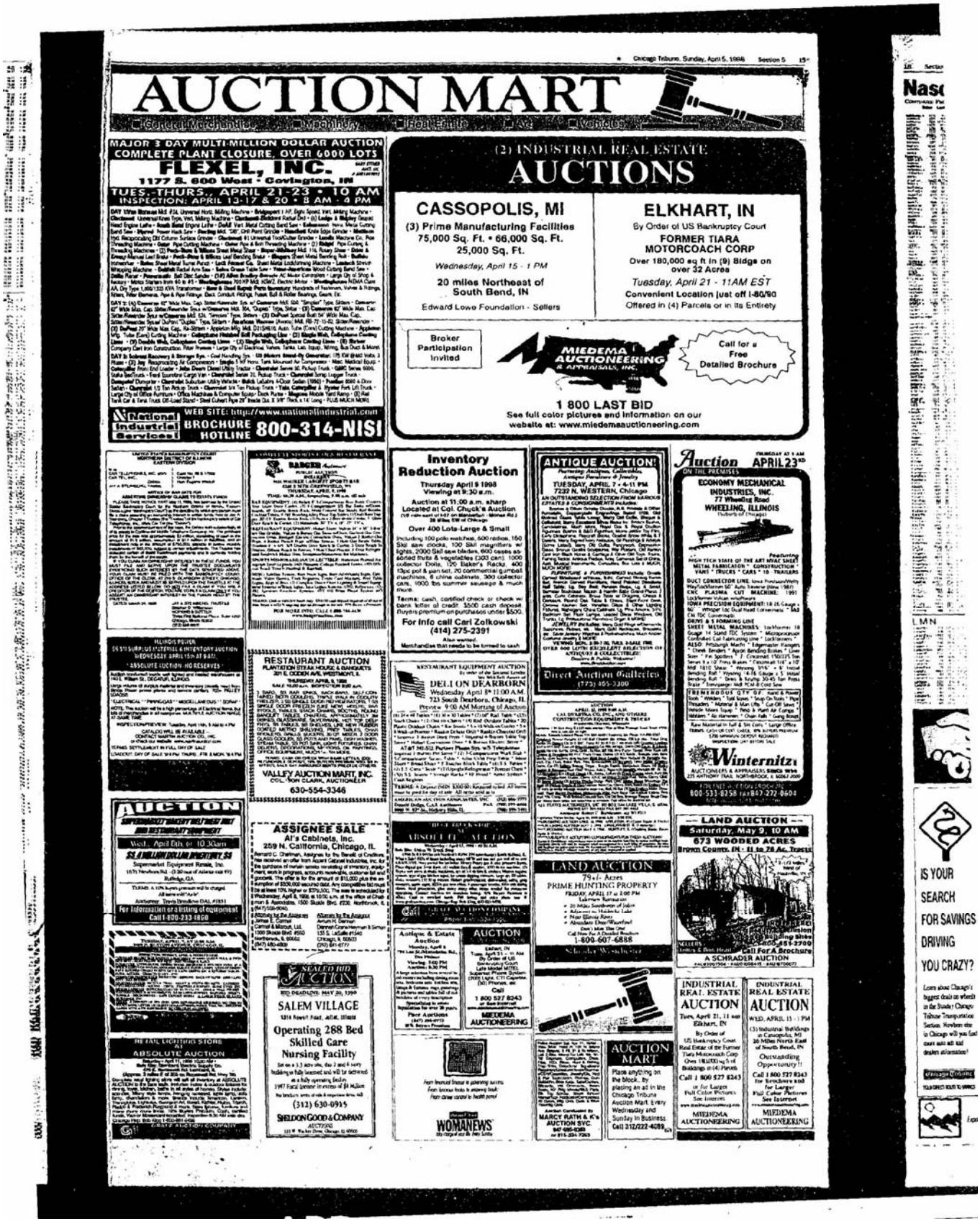
Figures

**Figure 1: Business Bankruptcy Filings,
Expressed as a Percentage of Business Failures, 1990-2003**



Sources: Federal Judicial Center; Administrative Office of the U.S. Courts; Public Access to Court Records (PACER)

Figure 2: Sample of *Chicago Tribune* "Auction Mart" (April 5, 1998)



Tables

Table 1
Auctions listed in the *Chicago Tribune*, "Auction Mart," during 1998

Total auctions	302
Auctions mentioning company name	254
Bankruptcy filings	35 (13.8%)
Listings mentioning ABC	34 (13.4%)

Table 2
State Laws and Bankruptcy Filing Rates

	Filings per 1000 Deaths		UFTA		ABC Regulations				
State	Corporate 1994-2001	Chapter 11 1990-2003	Adopted Section 5(b)	UFTA date	General preferences	Court Oversight	Creditor oversight	Other regulations	Preferential assignments ok
Delaware	124.06	274.67	1	1996	0	0	0	1	0
Nevada	27.90	47.14	1	1987	0	0	0	0	0
Arizona	15.84	44.46	0	1990	0	1	0	1	0
DC	21.24	37.05	1	1996	0	0	0	1	0
New York	20.20	33.17	0		1	1	0	1	0
Massachusetts	22.89	32.19	1	1996	0	0	0	0	0
New Jersey	29.69	30.34	1	1989	1	0	0	1	0
Maryland	20.37	30.11	0		1	1	0	1	0
Tennessee	12.46	26.53	1	2003	1	0	0	1	0
California	20.30	25.37	0	1986	1	0	0	0	0
Virginia	16.62	24.08	0		0	0	0	0	0
Pennsylvania	20.66	24.01	0	1993	1	0	0	1	0
Texas	18.10	22.47	1	1988	1	0	0	1	0
Connecticut	13.23	20.51	1	1991	0	0	0	0	0
Washington	14.50	20.23	1	1988	1	1	0	1	0
Utah	13.76	20.20	1	1988	0	1	0	1	1
Louisiana	17.95	19.44	1	2003	0	0	0	0	0
Alaska	8.52	19.42	0		0	0	0	0	0
Rhode Island	21.05	19.39	1	1986	0	0	0	1	0
Georgia	15.23	19.09	1	2002	0	0	0	1	0
Florida	17.33	18.82	1	1988	0	1	0	1	0
Alabama	13.43	18.74	1	1990	0	0	0	0	0
Idaho	12.75	18.34	1	1987	0	0	0	0	0
West Virginia	18.61	18.05	1	1986	0	0	1	1	0
Mississippi	12.88	17.86	0	2006	0	0	0	1	0
Indiana	14.59	17.01	0	2002	0	0	0	0	0
New Hampshire	15.69	17.00	1	1988	1	1	0	1	0

Table 2, continued
State Laws and Bankruptcy Filing Rates

State	Filings per 1000 Deaths		UFTA		ABC Regulations				
	Corporate 1994-2001	Chapter 11 1990-2003	Adopted Section 5(b)	UFTA Date	General preferences	Court Oversight	Creditor oversight	Other regulations	Preferential assignments ok
Michigan	15.80	16.15	1	1999	0	0	0	1	0
South Carolina	10.73	15.85	0		1	0	1	0	0
Illinois	18.55	15.53	1	1990	0	0	0	0	0
New Mexico	13.21	15.28	1	1989	0	1	0	1	0
Kentucky	15.50	14.81	0		1	1	0	1	0
Wyoming	9.19	14.73	0	2006	0	0	0	0	0
Oklahoma	13.21	14.48	1	1987	0	0	0	1	0
Hawaii	15.74	14.24	1	1985	0	0	0	0	0
Ohio	9.34	12.20	1	1991	0	1	0	1	0
Kansas	8.33	12.08	1	1999	0	0	0	0	0
Vermont	10.88	11.77	1	1996	0	0	0	1	0
Missouri	8.32	11.39	1	1993	0	1	0	1	0
Arkansas	8.11	11.23	1	1987	0	1	0	1	0
Colorado	8.78	11.19	1	1991	0	1	0	1	0
Montana	7.22	11.19	1	1991	0	0	0	1	0
North Carolina	9.76	10.38	1	1998	1	0	0	1	0
Minnesota	9.31	10.07	1	1987	0	0	0	1	0
Nebraska	7.04	10.03	1	1990	0	0	0	0	0
Wisconsin	8.38	9.67	1	1988	1	1	0	1	0
Maine	11.55	8.49	1	1986	0	0	0	0	0
South Dakota	7.38	7.97	1	1987	1	1	0	1	0
Oregon	8.00	7.56	1	1986	0	0	0	0	0
Iowa	5.52	6.23	1	1995	0	1	0	1	0
North Dakota	3.74	5.59	1	1985	0	1	0	0	1

Note: Data for "Corporate 1994-2001" are obtained from the FJC closed claim database; data for "Chapter 11 1990-2003" are obtained from PACER case filings data. As explained in the main text, the two datasets are not strictly comparable.

Table 3
Summary of Key Hypotheses
Regarding the Attractiveness of Federal Bankruptcy Law Relative to State Law Alternatives

Hypothesis	Predicted effect	Type of Data Used to Test Hypothesis
Creditor Consent		
Business has secured debt	+	Firm-level
Business has tax debt	+	Firm-level/State-Level
Business has poor relationship with secured creditor	+	Firm-level
Business has poor relationship with trade creditors	?	Firm-level
Business faces pending suits, judgments, liens	+	Firm-level
Business recently changed (fire, change of control)	+	Firm-level
Information Production and Creditor Protection		
State laws protecting senior creditors	-	State-level
State laws protecting unsecured creditors	?	State-level
Priorities and Contractual Rights		
Business has tax debt	-	Firm-level/State-Level
State law permits assignee to favor creditors	-	State-Level
Corporations v. Non-Corporations		
The hypotheses listed above will matter more for corporations than for non-corporations		Firm-Level/State-Level

Table 4
State-Level Data Sources

Variable	Source
Bankruptcy Cases, Annual Filings	PACER Bankruptcy Statistics, Statistical Reports, Table F-2, http://pacer.uspci.uscourts.gov/
Bankruptcy Cases, Closed Cases	Federal Court Cases: Integrated Data Base Bankruptcy Petitions, 1994-2003, Study Nos. 4303-4306, 4086, 4088, 4249-4252, http://www.icpsr.umich.edu/
Business Deaths	Small Business Administration, Office of Advocacy, Dynamic Data—Births, Deaths, Growth, and Decline—State Major Industry Data, 1989-1998, 1998-2003, http://www.sba.gov/advo/research/data.html
Number of firms	same
Employment	same
Insolvency laws	Lexis-Nexis; Westlaw
Population	U.S. Census Bureau, Population Estimates, http://www.census.gov/popest/archives/1980s/st8090ts.txt; http://www.census.gov/popest/archives/1990s/ST-99-03.txt; http://www.census.gov/popest/datasets.html
Population Density	U.S. Census Bureau, Census 2000. GCT-PH1. Population, Housing Units, Area, and Density: 2000.
Urban Population	U.S. Census Bureau, State and Metropolitan Area Data Book, Table A-2, http://www.census.gov/compendia/smadb/SMADBstate.html
Tax Liens	Lexis-Nexis, Tax Liens Library (Public Records, Judgments & Liens, Tax Liens) (search term: "federal tax lien" and 1998 and (corporation or corp or inc or incorp or incorporated or llc or pc or limited or ltd or lc) AND NOT release)
Region-4	Census regions (1=Northeast, 2=Midwest, 3=South, 4=West); http://www.census.gov/geo/www/cob/rg_metadata.html
Region-9	Census divisions (1=New England, 2=Middle Atlantic, 3=East North Central, 4=West North Central, 5=South Atlantic, 6=East South Central, 7=West South Central, 8=Mountain, 9=Pacific)

Table 5
Means and Pairwise Correlations
(significance at the 5% level is indicated by a *****)

		Pairwise Correlations		
	I	**II**	**III**	**IV**
Variable (all continuous variables are logged)	**Means**	**Corp. Filing Rate**	**Bus. Ch. 11 Filing Rate**	**All Bus. Filing Rate**
BankruptcyRate				
Corp. Filing Rate	2.35	1.0000		
Bus. Ch. 11 Filing Rate	2.57	0.4946*****	1.0000	
All Bus. Filing Rate	4.24	0.2667*****	0.4837*****	1.0000
Information Production and Creditor Protection				
General Preferences	.28	0.0807	0.0667	-0.0474
Insider Preferences	.38	-0.1345*****	-0.2795*****	-0.0383
Court Oversight	.34	-0.1506*****	-0.1346*****	0.0360
Creditor Oversight	.04	0.0106	-0.0157	-0.1220*****
Other Regulations	.62	0.0380	0.0831*****	0.0861*****
Pref. Assignments OK	.04	-0.1148*****	-0.1332*****	0.0831*****
Information Production and Creditor Protection				
High Tax Liens (=1 if > median)	.73	0.0071	0.1811*****	-0.0656
Controls				
Firm Growth Rate	-4.44	0.1751*****	0.2561*****	0.3127*****
Employment Growth Rate	12.02	-0.1146*****	-0.2698*****	-0.1283*****
Average Case Length	.17	0.6191*****	0.2841*****	0.3530*****
Consumer Filing Rate	.86	-0.0409	-0.1090*****	-0.1325*****
Urban population	4.25	0.2376*****	0.3495*****	-0.0392

Table 5
Means and Pairwise Correlations, continued
(significance at the 5% level is indicated by a *****)

			Pairwise Correlations			
Variable (all continuous variables are logged)	**V General Preferences**	**VI Insider Preferences**	**VII Court Oversight**	**VIII Creditor Oversight**	**IX Other Regulations**	**X Pref. Assignments OK**
Information Production and Creditor Protection						
General Preferences	1.0000					
Insider Preferences	-0.1315*****	1.0000				
Court Oversight	0.2175*****	0.0916*****	1.0000			
Creditor Oversight	0.1021*****	-0.0151	-0.1429*****	1.0000		
Other Regulations	0.2922*****	0.0370	0.4588*****	-0.0533	1.0000	
Pref. Assignments OK	-0.1243*****	0.1303*****	0.2857*****	-0.0408	-0.0533	1.0000
Information Production and Creditor Protection						
High Tax Liens (=1 if > median)	-0.0280	-0.2642*****	-0.1355*****	-0.1143*****	-0.0688*****	-0.0584*****
Controls						
Firm Growth Rate	-0.1089*****	-0.0236	-0.0040	0.0023	-0.0116	0.0309
Employment Growth Rate	0.2282*****	0.0165	0.1348*****	-0.0670	0.1130*****	-0.1128*****
Urban population	0.0453	-0.0232	0.0276	-0.2594*****	-0.0511	-0.0040
Average Case Length	0.0131	-0.1006*****	0.0038	-0.0002	0.0175	0.0137
Consumer Filing Rate	-0.0519	0.3984*****	0.0017	-0.0832*****	-0.0046	-0.0037

Table 6
PACER Case Filings Data: Bankruptcy Filings per 1000 Business Deaths

	(1) Business Chapter 11	(2) Business Chapter 11	(3) Business Chapter 7
General Preference	0.054	0.013	0.060
	[0.535]	[0.894]	[0.644]
Insider Preferences	-0.245***	-0.258***	0.042
	[0.006]	[0.003]	[0.700]
Court Oversight	-0.052	-0.062	0.094
	[0.577]	[0.507]	[0.445]
Creditor Oversight		0.294	
		[0.362]	
Other Regulations		0.100	
		[0.330]	
Pref. Assignments OK		-0.161	
		[0.192]	
Consumer Filing Rate	0.358***	0.379***	0.266*
	[0.002]	[0.003]	[0.082]
Small Firm Growth Rate	-0.007	0.276	-0.256
	[0.998]	[0.933]	[0.947]
High Tax Liens	0.016	0.041	0.032
	[0.773]	[0.430]	[0.718]
Urban Population	0.967***	1.009***	-0.671***
	[0.000]	[0.000]	[0.005]
Year dummies	Yes	Yes	Yes
Region dummies	4 regions	4 regions	4 regions
Observations	582	582	582
R-squared	0.690	0.700	0.315

Note: Robust p values in brackets; * significant at 10%; ** significant at 5%; *** significant at 1%.

Table 7
FJC Closed Case Data: Corporate Bankruptcy Filings per 1000 Business Deaths

	(1) All Corporate	(2) All Corporate	(3) Corporate Chapter 7	(4) Corporate Chapter 11	(6) All Business
General Preference	0.074	0.024	0.125	0.012	0.076*
	[0.297]	[0.746]	[0.147]	[0.909]	[0.093]
Insider Preferences	-0.059	-0.079	0.017	-0.190**	0.026
	[0.440]	[0.279]	[0.862]	[0.024]	[0.522]
Court Oversight	-0.158*	-0.163*	-0.195*	-0.105	-0.084*
	[0.058]	[0.051]	[0.057]	[0.296]	[0.066]
Average Case Length	0.092	0.072	-0.129	0.455**	0.073
	[0.594]	[0.647]	[0.534]	[0.018]	[0.388]
Consumer Filing Rate	0.009	0.025	0.030	-0.043	0.654***
	[0.866]	[0.653]	[0.600]	[0.519]	[0.000]
Small Firm Growth Rate	-0.706	0.079	-0.900	-0.714	0.409
	[0.863]	[0.984]	[0.822]	[0.894]	[0.801]
Creditor Oversight		0.295			
		[0.353]			
Other Regulations		0.111			
		[0.266]			
Pref. Assignments OK		-0.253			
		[0.270]			
High Tax Liens	0.083	0.116**	0.112*	0.056	-0.004
	[0.132]	[0.032]	[0.084]	[0.378]	[0.914]
Urban Population	0.971***	1.032***	0.865***	1.149***	0.350***
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
Year dummies	Yes	Yes	Yes	Yes	Yes
Region dummies	4 regions	4 regions	4 regions	4 regions	4 regions
Observations	367	367	367	367	367
R-squared	0.629	0.652	0.477	0.623	0.917

Note: Robust p values in brackets; * significant at 10%; ** significant at 5%; *** significant at 1%.

Table 8
D&B Sample 1: Businesses Active on Jan. 1, 1998, Followed Through 2004

Panel A: Random Sample, Stratified by Initial Distress Level

	(1) Sample	(2) Population	(3) Exits (% Sample)	(4) Bankruptcies (%Exits)	(5) Distressed Exits (% Sample)	(6) Distressed Bankruptcies (% Distressed Exits)
High Distress (FSS=5)						
Corporations	332	702	159	25	126	20
			(47.8%)	(15.6%)	(38.0%)	(15.9%)
Non-corporations	329	407	82	14	65	13
			(24.9%)	(16.9%)	(19.8%)	(20.0%)
Moderate Distress (FSS=4)						
Corporations	329	1,820	98	14	71	11
			(29.8%)	(14.3%)	(21.6%)	(15.4%)
Non-corporations	329	1,235	78	12	51	9
			(23.7%)	(15.4%)	(15.5%)	(17.6%)
Not Distressed (FSS<4)						
Corporations	329	49,903	61	2	5	1
			(18.5%)	(3.2%)	(1.5%)	(20.0%)
Non-corporations	333	25,178	54	1	3	0
			(16.2%)	(1.9%)	(.1%)	(0.0%)

Panel B: Choice-Based Sample, Stratified by Initial Distress Level

	State Exits		Bankruptcy Exits	
	Sample	Population	Sample	Population
High Distress (FSS=5)				
Corporations	250	272	77	77
Non-corporations	177	177	40	40
Moderate Distress (FSS=4)				
Corporations	250	533	157	157
Non-corporations	250	417	90	90

Table 9
D&B Sample 2: Businesses That Closed During 1998-2000

	State Exits		Bankruptcy Exits	
	Sample	**Population**	**Sample**	**Population**
Distressed (FSS=4 or 5)				
Corporations	250	569	295	295
Non-corporations	250	459	256	256
Not Distressed (FSS<4)				
Corporations	427	1041		
Non-corporations	423	565		

Table 10
Variable Definitions

Label	Definition
Any UCC filings	=1 if any UCC filings during preceding 4 years
Any liens imposed	=1 if any liens imposed during preceding 2 years
Any suits/judgments	=1 if any suits or judgments during preceding 2 years
Poor banking history	=1 if bank reported slow or delinquent payments during preceding 2 years
Poor trade credit history	=1 if trade creditors reported slow or delinquent payments during preceding 2 years
Manager with prior business failures	=1 if manager owned previous businesses that filed for bankruptcy or failed without fully paying creditors
Business with prior failures	=1 if business underwent prior bankruptcy or receivership
Years in distress	Number of years business was in distress
Changed owner, location, name	=1 if business moved, changed owners or name during preceding 2 years
Fire, burglary, indictment	=1 if business suffered fire, burglary, indictment during preceding 2 years
Age	Firm age in years
Management tenure	Management tenure in years
Annual sales (normalized)	Average annual sales divided by average industry sales
Employment	Average employment during preceding 2 years
Run from owner's home	=1 if business is run out of owner’s home
Owns real estate	=1 if business owns real estate
Woman-owned	=1 if owner is female
Minority-owned	=1 if owner is member of a minority group
Multiple business lines	=1 if firm runs multiple lines of business
Construction	=1 if primary business line is construction
Finance	=1 if primary business line is finance
Manufacturing	=1 if primary business line is manufacturing
Retail	=1 if primary business line is retail
Services	=1 if primary business line is services
Transportation	=1 if primary business line is transportation
Wholesale	=1 if primary business line is wholesale

Table 11
Summary Statistics: All Businesses
Mean (Standard Error)

	Full Sample	State Exits	Bankruptcy Exits
Bankruptcy Exits	0.158		
	(0.003)		
Creditor Consent			
Any UCC filings	0.593	0.572	0.707***
	(0.015)	(0.017)	(0.025)
Any liens	0.440	0.426	0.517***
	(0.015)	(0.016)	(0.028)
Any suits/judgments	0.668	0.652	0.757***
	(0.014)	(0.016)	(0.023)
Poor banking history	0.537	0.502	0.720***
	(0.012)	(0.013)	(0.023)
Poor trade credit history	0.420	0.401	0.523***
	(0.015)	(0.017)	(0.028)
Changed owner, location, name	0.196	0.198	0.187
	(0.013)	(0.015)	(0.023)
Fire, burglary, indictment	0.003	0.002	0.004
	(0.002)	(0.002)	(0.004)
Priorities			
Rents real estate	0.424	0.408	0.508***
	(0.015)	(0.017)	(0.027)
Other Controls			
Business with prior failures	0.037	0.026	0.094***
	(0.005)	(0.005)	(0.017)
Years in distress	2.186	2.189	2.174
	(0.052)	(0.059)	(0.080)
Age[†]	14.449	14.180	15.469
	(0.505)	(0.599)	(0.829)
Management tenure[†]	10.314	9.849	12.071***
	(0.301)	(0.349)	(0.576)
Annual sales	1,452,860.781	1,442,714.412	1,506,905.524
	(182,311.589)	(213,464.428)	(193,577.502)
Employment	14.737	14.819	14.301
	(1.578)	(1.854)	(1.462)
Multiple business lines	0.208	0.205	0.227
	(0.013)	(0.015)	(0.024)
Run from owner's home	0.062	0.059	0.080
	(0.008)	(0.009)	(0.016)
Woman-owned	0.045	0.040	0.070
	(0.008)	(0.009)	(0.017)
Minority-owned	0.085	0.085	0.087
	(0.010)	(0.011)	(0.018)
Industry			
Construction	0.128	0.116	0.197***
	(0.010)	(0.011)	(0.024)
Finance	0.036	0.040	0.010***
	(0.007)	(0.008)	(0.006)

Manufacturing	0.098	0.096	0.107
	(0.009)	(0.010)	(0.017)
Retail	0.279	0.279	0.281
	(0.015)	(0.017)	(0.027)
Services	0.257	0.266	0.208**
	(0.014)	(0.016)	(0.024)
Transportation	0.077	0.078	0.070
	(0.008)	(0.009)	(0.016)
Wholesale	0.125	0.125	0.127
	(0.011)	(0.013)	(0.020)
Observations	1223	931	292

Notes: Standard errors in parentheses. The symbol † indicates that the means and statistical tests for these variables are based on a subset of the data in which these variables have non-missing values. The symbol ******* indicates that the bankruptcy-exit coefficient is different from the corresponding state-exit coefficient at the 1% level, applying the Wald test; ****** indicates difference at the 5% level; ***** indicates difference at the 10% level.

Table 12
Summary Statistics: Corporations
Mean (Standard Error)

	Full Sample	State Exits	Bankruptcy Exits
Bankruptcy Exits	0.172		
	(0.004)	(0.000)	(0.000)
Creditor Consent			
Any UCC filings	0.716	0.695	0.818***
	(0.018)	(0.022)	(0.026)
Any liens	0.554	0.546	0.589
	(0.019)	(0.023)	(0.033)
Any suits/judgments	0.780	0.767	0.841*
	(0.017)	(0.020)	(0.025)
Poor banking history	0.562	0.522	0.756***
	(0.014)	(0.016)	(0.025)
Poor trade credit history	0.536	0.517	0.630**
	(0.021)	(0.024)	(0.034)
Changed owner, location, name	0.221	0.226	0.201
	(0.017)	(0.020)	(0.028)
Fire, burglary, indictment	0.003	0.002	0.006
	(0.002)	(0.002)	(0.006)
Priorities			
Rents real estate	0.549	0.532	0.633***
	(0.021)	(0.024)	(0.034)
Other Controls			
Business with prior failures	0.045	0.030	0.117***
	(0.007)	(0.007)	(0.023)
Years in distress	2.312	2.320	2.271
	(0.069)	(0.081)	(0.094)
Age	15.737	15.591	16.296
	(0.624)	(0.748)	(0.971)
Management tenure	10.925	10.508	12.453
	(0.361)	(0.425)	(0.634)
Annual sales[†]	2,009,877.635	2,016,562.531	1,987,802.692
	(276,702.212)	(329,932.372)	(270,427.451)
Employment[†]	19.502	19.762	18.346
	(2.372)	(2.838)	(2.040)
Multiple business lines	0.258	0.252	0.281
	(0.019)	(0.022)	(0.032)
Run from owner's home	0.056	0.056	0.056
	(0.011)	(0.013)	(0.016)
Woman-owned	0.025	0.023	0.033
	(0.007)	(0.008)	(0.014)
Minority-owned	0.090	0.087	0.099
	(0.013)	(0.015)	(0.022)
Industry			
Construction	0.142	0.127	0.206**
	(0.013)	(0.015)	(0.029)

Finance	0.039	0.046	0.005**
	(0.010)	(0.012)	(0.005)
Manufacturing	0.124	0.121	0.135
	(0.012)	(0.014)	(0.023)
Retail	0.234	0.235	0.230
	(0.018)	(0.021)	(0.031)
Services	0.217	0.225	0.180
	(0.018)	(0.020)	(0.027)
Transportation	0.091	0.094	0.080
	(0.011)	(0.013)	(0.020)
Wholesale	0.154	0.152	0.164
	(0.016)	(0.018)	(0.026)
Observations	765	558	206

Notes: Standard errors in parentheses. The symbol † indicates that the means and statistical tests for these variables are based on a subset of the data in which these variables have non-missing values. The symbol ******* indicates that the bankruptcy-exit coefficient is different from the corresponding state-exit coefficient at the 1% level, applying the Wald test; ****** indicates difference at the 5% level; ***** indicates difference at the 10% level.

Table 13
Odds of Exit

	(1) Bankruptcy Exits v. Distressed Exits Distressed Corporations	(2) Bankruptcy Exits v. Distressed Exits Distressed Corporations	(3) Bankruptcy Exits v. Distressed Exits Distressed Non-Corporations	(4) Bankruptcy Exits v. Distressed Exits Highly Distressed Corporations	(5) Distressed Exits v. Non-Distressed Exits Corporations
Creditor Consent					
Any UCC filings	2.241***	2.236***	1.803	3.614***	4.671***
	[0.002]	[0.002]	[0.175]	[0.003]	[0.000]
Any liens	1.581**	1.595**	1.786	2.733***	10.255***
	[0.037]	[0.033]	[0.225]	[0.001]	[0.000]
Any suits/judgments	1.572		1.372	1.026	3.134**
	[0.126]		[0.479]	[0.966]	[0.013]
Poor banking history	2.880***	2.980***	3.177***	2.182**	++
	[0.000]	[0.000]	[0.004]	[0.031]	++
Poor trade credit history	1.263		0.946	1.800	4.265***
	[0.280]		[0.898]	[0.113]	[0.000]
Changed owner, location, name	0.632*	0.649*	1.040	0.394***	0.583
	[0.055]	[0.066]	[0.939]	[0.003]	[0.245]
Priorities					
Rents real estate	1.400	1.509*	0.957	1.237	1.338
	[0.121]	[0.073]	[0.924]	[0.512]	[0.411]
Controls					
Year of exit	1.210***	1.197***	0.815	1.366***	58.476***
	[0.005]	[0.008]	[0.214]	[0.007]	[0.000]
Business with prior failures	3.914***	3.619***	0.402	4.092***	
	[0.001]	[0.001]	[0.478]	[0.007]	
Years in distress	0.705**	0.768	0.849	0.460***	
	[0.043]	[0.121]	[0.433]	[0.004]	
Age	0.694**	.695**	1.232	0.694*	0.531**
	[0.043]	[.047]	[0.662]	[0.086]	[0.037]
Management tenure	1.084	1.137	1.274	1.260	0.353***
	[0.681]	[.420]	[0.680]	[0.428]	[0.000]
Annual sales	0.936	0.966	1.357	1.017	0.804

	[0.631]	[0.802]	[0.375]	[0.931]	[0.246]
Employment	0.997	0.982	0.799	0.995	1.182
	[0.985]	[0.907]	[0.578]	[0.983]	[0.465]
Multiple business lines	0.854	0.869	0.514	1.131	0.854
	[0.472]	[0.517]	[0.176]	[0.683]	[0.625]
Run from owner's home	1.413	1.379	2.794*	2.132	0.409
	[0.374]	[0.420]	[0.058]	[0.235]	[0.276]
Woman-owned	3.473*	3.285	3.031**	1.659	6.784*
	[0.097]	[0.100]	[0.020]	[0.645]	[0.086]
Minority-owned	1.267	1.237	0.436	1.315	0.672
	[0.473]	[0.516]	[0.191]	[0.542]	[0.439]
Industry					
Construction	7.515**	7.857**	1.647	2.009	4.169**
	[0.049]	[0.047]	[0.609]	[0.175]	[0.049]
Finance			0.950		
			[0.963]		
Manufacturing	4.284	4.409	0.776		2.402
	[0.157]	[0.154]	[0.826]		[0.293]
Retail	4.656	4.446	2.434	1.150	3.174*
	[0.134]	[0.153]	[0.318]	[0.780]	[0.094]
Services	3.345	3.587	0.734	1.118	1.812
	[0.239]	[0.220]	[0.733]	[0.831]	[0.396]
Transportation	2.922	3.002		0.588	3.328
	[0.312]	[.306]		[0.336]	[0.238]
Wholesale	4.534	4.835	0.726	1.129	3.899*
	[0.141]	[0.128]	[0.766]	[0.804]	[0.064]
Observations	682	682	235	358	543

Notes: The symbols ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively. The symbols ++ and -- indicate that the variable was dropped from the analysis because it was perfectly positively (++) or negatively (--) correlated with the dependant variable.

Table 14
Odds of Exit—Average Marginal Effects

	(1) Bankruptcy Exits v. Distressed Exits Distressed Corporations	(2) Bankruptcy Exits v. Distressed Exits Distressed Corporations	(3) Bankruptcy Exits v. Distressed Exits Distressed Non-Corporations	(4) Bankruptcy Exits v. Distressed Exits Highly Distressed Corporations	(1) Distressed Exits v. Healthy Exits Corporations
Creditor Consent					
Any UCC filings	0.106***	0.105***	0.076	0.155***	0.140***
	[0.000]	[0.000]	[0.176]	[0.000]	[0.000]
Any liens	0.066**	0.067**	0.078	0.139***	0.267***
	[0.034]	[0.031]	[0.248]	[0.001]	[0.000]
Any suits/judgments	0.061*		0.040	0.004	0.113**
	[0.097]		[0.470]	[0.965]	[0.026]
Poor banking history	0.142***	0.146***	0.148***	0.107**	++
	[0.000]	[0.000]	[0.003]	[0.024]	++
Poor trade credit history	0.034		-0.007	0.079*	0.144***
	[0.273]		[0.898]	[0.086]	[0.000]
Changed owner, location, name	-0.063**	-0.059*	0.005	-0.122***	-0.045
	[0.040]	[0.050]	[0.939]	[0.001]	[0.236]
Priorities					
Rents real estate	0.048	0.055*	-0.006	0.030	0.025
	[0.114]	[0.067]	[0.924]	[0.508]	[0.416]
Controls					
Year of exit	0.028***	0.026***	-0.026	0.044***	0.434***
	[0.005]	[0.008]	[0.208]	[0.005]	[0.000]
Business with prior failures	0.250***	0.235***	-0.094	0.246**	
	[0.002]	[0.004]	[0.358]	[0.014]	
Years in distress	-0.051**	-0.038	-0.021	-0.110***	
	[0.041]	[0.119]	[0.429]	[0.002]	
Age	-0.053**	-0.053**	0.027	-0.052*	-0.054**
	[0.044]	[0.048]	[0.662]	[0.094]	[0.031]
Management tenure	0.012	0.019	0.031	0.033	-0.089***
	[0.681]	[0.520]	[0.680]	[0.431]	[0.000]
Annual sales	-0.010	-0.005	0.039	0.002	-0.019

	[0.631]	[0.802]	[0.373]	[0.931]	[0.239]
Employment	-0.000	-0.003	-0.029	-0.001	0.014
	[0.985]	[0.907]	[0.578]	[0.983]	[0.464]
Multiple business lines	-0.023	-0.020	-0.077	0.018	-0.013
	[0.465]	[0.511]	[0.132]	[0.686]	[0.623]
Run from owner's home	0.054	0.050	0.156*	0.122	-0.073
	[0.402]	[0.447]	[0.092]	[0.278]	[0.246]
Woman-owned	0.181*	0.173*	0.142**	0.072	0.164*
	[0.095]	[0.098]	[0.017]	[0.646]	[0.082]
Minority-owned	0.036	0.032	-0.090	0.041	-0.033
	[0.491]	[0.532]	[0.119]	[0.559]	[0.421]
Industry					
Construction	0.361*	0.370*	0.069	0.109	0.133*
	[0.056]	[0.052]	[0.635]	[0.207]	[0.068]
Finance			-0.006		
			[0.962]		
Manufacturing	0.252	0.258	-0.031		0.078
	[0.196]	[0.193]	[0.816]		[0.311]
Retail	0.255	0.248	0.120	0.020	0.105
	[0.155]	[0.178]	[0.339]	[0.783]	[0.110]
Services	0.200	0.213	-0.038	0.016	0.051
	[0.278]	[0.258]	[0.723]	[0.833]	[0.403]
Transportation	0.183	0.189		-0.069	0.110
	[0.366]	[0.361]		[0.291]	[0.268]
Wholesale	0.261	0.274	-0.038	0.018	0.123*
	[0.175]	[0.159]	[0.749]	[0.807]	[0.070]
Observations	682	682	235	358	543

Notes: The symbols ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively. The symbols ++ and -- indicate that the variable was dropped from the analysis because it was perfectly positively (++) or negatively (--) correlated with the dependant variable.