I. Introduction

The purpose of Chapter 11 bankruptcy is to protect the assets of financially distressed firms from seizure by creditors while the restructuring options available to the firm can be considered. As pointed out by Hart (2000), one of the main goals of an efficient bankruptcy procedure is to reorganize distressed firms only when their value as a going concern exceeds their liquidation value. Bankruptcy, then, has an important impact on the allocation of capital in an economy, as it acts as a filter that separates distressed firms that are still economically viable from those whose assets should be redeployed via liquidation. Prior research, reviewed below, has focused on how the design of bankruptcy procedures might affect the allocation of capital by altering the outcome of the case or causing frictions that diminish the overall value of the distressed firm. This paper builds on these previous studies by showing that the efficiency of the court itself (not just the laws that govern the court) has an important impact on the costs of financial distress and on the ultimate outcome of the bankruptcy.

In particular, I focus on the total caseload that bankruptcy judges must deal with. Judge workload fluctuates widely as economic conditions change. For example, total bankruptcy filings rise nationwide on average by 32% during economic recessions. Large differences in workload are also common cross-sectionally, as local economic deteriorations lead to increasing caseload for judges in those areas.[1] Because total judge workload is counter-cyclical, judges are busiest exactly when financial distress is worst. As Judge David S. Kennedy stated, "Actually, there are times and days when I feel like the bankruptcy court today is more a de facto emergency room for financially distressed consumer and commercial debtors…as judges, I note that sometimes we can just get too busy." (Bankruptcy Judgeship Needs, 2009)[2]

[1] For example, the collapse in house prices in 2007 and 2008 hit Arizona much more severely than Texas. As a result, in 2009 there were 5,000 bankruptcy filings per judge in Arizona, as compared to roughly half as many cases per judge in Texas.

[2] Legal researchers have long been concerned about the effect of heavy caseloads on federal judges' decision-making. See, for example, Friendly (1973) and Ginsburg (1983).

The bankruptcy judge plays an integral role in Chapter 11 restructuring. As Gilson (1999) states, "the Bankruptcy Code effectively requires judges to set corporate operating policies…judges have broad powers to influence how the firm's assets are managed." The bankruptcy judge is ultimately responsible for determining whether a debtor firm should be liquidated or reorganized, and for ensuring that reorganized firms have a reasonable chance at avoiding financial distress in the future. A large body of research has focused on whether judges tend to be more friendly towards debtors or creditors during this process (Chang & Schoar, 2007; Hotchkiss, 1995; LoPucki, 1983; Morrison, 2005). Judges who allow the continuation of the firm are typically viewed as pro-debtor, as continuation can benefit equity holders who prefer riskier outcomes due to limited liability (Jensen & Meckling, 1976) or provide private benefits to the debtor's management (Aghion, Hart, & Moore, 1992). Failing to liquidate non-viable firms harms creditors, who do not participate in the upside potential of the firm and may receive higher recovery rates under liquidation.[3] In this paper, I examine variations in time constraints that judges face and test whether busy judges are more or less likely to allow firms to emerge from Chapter 11.

It is natural to expect that time constraints will affect judge decision-making. Not only will time-pressured judges find it costly to gather and consider information about each case, but psychological research shows that when individuals are stressed or fatigued they are unable to think through complex problems, and hence tend to "kick the can down the road" by putting off final decisions or deferring to others whenever possible (Huang, 2011; Karau & Kelly, 1992; Pocheptsova, Amir, Dhar, & Baumeister, 2009). Individuals with strict time constraints tend to focus only on finding a quick solution to the task at hand, often exhibiting less scrutiny of the merits of that solution and ignoring other important issues that seem less pressing, even when this behavior is quite costly to the individual (Perlow, 1999; Shah, Mullainathan, & Shafir, 2012).[4] Applying this logic to bankruptcy, a time-pressured bankruptcy judge will likely be reluctant to make the final decision of liquidating a marginal firm, and will instead defer to

[3] Considering that liquidations typically are much shorter than reorganizations, in present-value terms the recovery under liquidation may be significantly larger than recoveries under reorganization.

[4] Kahneman (2011) provides a review of psychological research on intuitive decision-making, including a discussion of decision-making under fatigue.

the debtor's management since by default the debtor retains control of the firm after filing (Franks, Nyborg, & Torous, 1996).[5]

To empirically test the impact of busy courts on financially distressed firms, I use a natural experiment that exogenously impacted the caseload of bankruptcy courts. In 2005, Congress passed the Bankruptcy Abuse Protection and Consumer Protection Act (BAPCPA), which made it substantially more difficult for households to file for bankruptcy protection. After the October 17th, 2005 deadline imposed by BAPCPA, non-business bankruptcy filings dropped dramatically, and stayed at extremely low levels until the onset of the financial crisis (Figure 1, Panel A). Since bankruptcy judges rule on *both* business and non-business cases (i.e., there is no specialization among bankruptcy judges), BAPCPA created a large shock to the workload of bankruptcy judges across the nation, cutting average caseloads in half. BAPCPA did not impact all districts equally, however. In particular, courts that handled a relatively higher share of personal bankruptcy cases saw caseloads drop by larger amounts after BAPCPA took effect. For example, prior to BAPCPA, a judge in the District of Oregon spent about 78% of her time on non-business bankruptcy cases, and BAPCPA reduced her caseload by 62%. Just south of Oregon, in the Northern District of California, judges spent about 71% of their time on non-business cases, and the corresponding drop in caseload was only 39%. Using difference-in-differences specifications, I exploit this exogenous variation to estimate the *causal* effect of total judge caseload on a variety of firm outcomes.

[FIGURE 1]

Using information on 3,327 Chapter 11 bankruptcies filed between 2004 and 2007, I find evidence that busy bankruptcy judges that were exogenously busier due to BAPCPA are more likely to

[5] An alternative hypothesis is that busy judges might seek to do whatever necessary to clear their dockets as quickly as possible. Because liquidations and dismissals take less court time than reorganizations, under this hypothesis it would be expected that busy judges would liquidate and dismiss more cases and reorganize fewer cases. Cross-sectionally, this hypothesis would also predict that busy judges would seek particularly to liquidate the largest and most complex firms, as these are the most costly for overburdened judges to deal with. The empirical evidence presented in Section V is exactly contrary to this idea, suggesting that judges' reactions to heavy caseloads are more nuanced.

allow debtor firms to restructure and emerge from bankruptcy, rather than being liquidated via conversion of the case to Chapter 7 or dismissed from court altogether. This is especially true for larger, more complex firms, which would be most likely to tax already overburdened judges. As a result, marginal bankrupt companies that might have been liquidated in a less-busy court are allowed to reorganize and emerge from bankruptcy. This suggests that as judges become busier, they become more pro-debtor as well.

Chapter 11 is specifically designed to only allow firms to emerge from bankruptcy if they have a reasonable chance at avoiding financial distress in the future. As more firms are allowed to reorganize in busy courts, this has important implications for the ability of courts to achieve this goal. Following previous literature[6], I use the recidivism rate – the probability that a firm re-enters bankruptcy within 3 years of its original filing – as an indicator of unviable firms which are allowed to emerge from bankruptcy.[7] I find that firms which pass through busy bankruptcy courts have substantially higher recidivism rates. Assuming that recidivism is a proxy for ineffective restructuring, this suggests that busy bankruptcy courts are less able to perform their duties to successfully restructure viable firms and liquidate unviable ones, leading to higher costs of financial distress as firms are not truly rehabilitated the first time through court.

Because the equity value of the bankrupt firm is negative or close to zero, additional costs of financial distress must be principally borne by the creditors of the firm. Use regulatory data reported by commercial banks, I indirectly measure the default costs passed on to creditors by examining the net charge-off rate of commercial and industrial (C&I) loans reported by banks that were particularly exposed to the BAPCPA caseload shock. Because local banks are the predominant source of funding for small

[6] Chang & Schoar (2007) state that "re-filing, even more than firm dissolution, can be seen as the ultimate failure of the bankruptcy process." Gilson (1997) and Hotchkiss (1995) use recidivism as a measure of inefficient restructuring as well. Recidivism is also commonly used to assess the efficiency of mortgage loan modifications (see, for example, TransUnion, 2012).

[7] A firm might be unviable for one of two reasons. First, it might be *economically* unviable if, regardless of its capital structure, it cannot be profitable. Second, it could be *financially* unviable if it exits bankruptcy with elevated leverage, leaving it overly exposed to temporary shocks going forward.

businesses (Petersen & Rajan, 1994), they should bear the brunt of higher bankruptcy costs when these firms default. Consistent with this intuition, I find that banks that are located in exogenously busier bankruptcy districts report higher C&I loan charge-off rates.

The economic impact of judge caseload is large. Using the estimates from the BAPCPA natural experiment as guide, I estimate that a 32% rise in filings (the average rise during economic recessions) increases the probability that a bankrupt firm will be reorganized by 8.2 percentage points, a 27% increase from the unconditional probability of 30%. This same shock to bankruptcy caseloads doubles the recidivism rate and increases the net charge-off rate on C&I loans by 24 basis points, a 47% rise relative to the mean rate of 51 basis points.

In addition to these main findings, I find that crowded bankruptcy courts impose other costs on financially distressed firms, including increased time spent in bankruptcy. As one might expect, bankruptcy stays – the length of time between the filing and resolution of the case – are longer in busy courts, particularly for firms that eventually reorganize. I estimate that a 32% increase in court workload lengthens the stay in bankruptcy by six months for a reorganizing debtor. Longer stays in bankruptcy require debtor firms to have more cash on hand in order to continue operations while in court. As a result, I find that larger firms are more likely to obtain debtor-in-possession financing when filing in busy courts, while small firms are more likely to sell assets in order to raise cash.

These results are robust to a battery of checks that verify that the estimates are not driven by alternative channels, i.e. the exclusion restriction is satisfied. In particular, controlling for differential effects over time by industry, size, or geographic region does not affect the results. I also confirm that the results are not affected by sample composition effects by using a matched sample before and after BAPCPA. In all cases the impact of caseload on bankruptcy outcomes remains largely unchanged.

Taken together, my results show that overall costs of financial distress are higher in busy bankruptcy courts, and that busy bankruptcy judges make different decisions regarding the allocation of assets of bankrupt firms by liquidating fewer firms. These findings relate to a large literature on the costs of financial distress (Andrade & Kaplan, 1998; Bris, Welch, & Zhu, 2006; Elkamhi, Parsons, & Ericsson,

2012; Warner, 1977) as well as investigations into the design of bankruptcy systems and their impact on debt contracts (Aghion et al., 1992; Bolton & Scharfstein, 1996; Gennaioli & Rossi, 2010; Gertner & Scharfstein, 1991; Strömberg, 2000). In addition, this paper also broadly relates to the literature on complexity costs and bounded rationality (Cohen & Lou, 2012; Hirshleifer & Teoh, 2003; Hong & Stein, 1999). In this vein, research that examines job performance and decision-making under time constraints is particularly relevant to my research.[8] Fich & Shivdasani (2006) show that busy boards are associated with weak corporate governance. Coviello, Ichino, & Persico (2010) show that judges who juggle too many cases at once have worse job performance. Huang (2011), using an empirical methodology similar to mine, finds that busy appellate court judges exhibit lightened scrutiny over district court decisions.

The rest of the paper proceeds as follows. Section II gives more background about the role of the judge in Chapter 11 bankruptcy and measures of judge caseload. Section III describes the impact of BAPCPA on court caseload and develops my empirical strategy. Section IV describes the data in my sample. Section V analyses the impact of caseload shocks on restructuring firms. Section VI concludes.

II. Bankruptcy process

A. The role of the bankruptcy judge

When a corporation files for Chapter 11 bankruptcy protection, it is randomly assigned to one of the bankruptcy judges in the district in which it files.[9] From the first-day motions until the end of the bankruptcy case, the judge's main role is to review motions that are brought before the court and to determine whether to grant those motions. Typically, each motion is accompanied with a brief which lays out the argument for granting the petition. It is estimated that bankruptcy judges on average read well

[8] See (Jex, 1998) for an overview of the psychological research in this area.

[9] Debtors can file for bankruptcy in any court containing the debtor's "domicile, residence, principal place of business…or principal assets in the United States." The debtor may also file in a court "in which there is a pending case…containing such person's affiliate, general partner, or partnership." (28 USC § 1408) In the case of corporations, this is typically interpreted to mean that a firm can file either (1) where they are incorporated, (2) where they are headquartered, or (3) where they do the bulk of their business. This gives the largest, nationwide firms substantial leeway in the choice of bankruptcy venue, but for most corporations these three locations are one and the same and therefore they are not able to "shop" for a more suitable bankruptcy venue. In my sample, 295 firms (8.9%) filed in bankruptcy districts different from the address they reported on their petitions. Excluding these firms from the sample does not change any of my conclusions.

over 100 pages of legal briefs a day, and at least one judge admits that "eye fatigue and irritability set in well before page 50" (Keane, 2010). After reviewing the motion, a hearing is held in which oral arguments can also be presented on either side, and the judge will make a ruling either immediately (so-called "ruling from the bench") or in writing afterwards.

Among the most important motions brought before the judge are petitions to dismiss a bankruptcy case or convert it to Chapter 7 liquidation. While conversion to Chapter 7 almost certainly means the death of the firm, motions for dismissal are less clear. Dismissal from court essentially means that the firm remains as if no bankruptcy had ever been filed. Negotiations can continue between debtors and creditors, but creditors are given power to seize assets or seek legal action against the debtor. Overall, dismissal is a close equivalent to conversion in many cases; the firm is dismissed from court but will still be liquidated because it has not been restructuring in any way. Morrison (2005) confirms that most dismissed firms cease operations shortly after exiting bankruptcy.[10] This is particularly true for smaller firms, which have less ability to fight lawsuits in court or negotiate with creditors outside of court.

Because it is the bankruptcy judge who gives the final decision on the motion to dismiss or convert, he acts as an important filter in determining which firms are economically viable and which should be liquidated. Indeed, Morrison (2005) states that, "Neither debtors (managers or equity-holders) nor creditors dominate the bankruptcy process. Instead, bankruptcy judges play a major role in filtering failing firms from viable ones." The judge's ability to correctly determine where capital can most effectively be allocated largely determines the efficiency of the Chapter 11 process itself.

Another key role of the bankruptcy judge is to rule on the feasibility of a Chapter 11 plan of reorganization. Once a Chapter 11 filing has taken place, the debtor has a 120-day exclusivity period within which it has the sole right to file a plan of reorganization.[11] The plan of reorganization outlines

[10] In the online appendix I provide more detail about why firms are dismissed from court and what happens to them after they leave court.

[11] The debtor can petition the judge to extend this period of time, up to a maximum of 18 months. Once the exclusivity period has expired, a creditor, group of creditors, or a case trustee are allowed to file competing plans.

how the debt of the firm will be restructured and the creditors of the firm will be repaid. The plan must also estimate the enterprise value of the firm under Chapter 11 continuation, and show that this value is greater than the expected value if the firm were to be liquidated under Chapter 7. With a plan formulated, the proponents of the plan create a disclosure statement which, once approved by the judge, is sent out to all creditors so that they can vote on whether to accept it or not.[12]

Even after a plan has been accepted by the creditors, however, the judge has the final say.[13] Specifically, the judge must find that the plan is filed in good faith, gives a superior recovery to creditors than if the firm had been liquidated in Chapter 7, and is feasible. To find that the plan is feasible, the judge must "find that confirmation of the plan is not likely to be followed by liquidation or the need for further financial reorganization" (United States Courts, 2011). In short, the judge must agree that the plan does enough to ensure that the firm will be viable going forward. While this objective is specifically laid out for the judge in the Bankruptcy Code, there are no direct monetary consequences for a judge who allows an unviable firm to reorganize, since in practice it is nearly impossible to determine when this occurs. However, there are reputational concerns for bankruptcy judges.[14] In particular, all of a judge's decisions are part of the public record, and any ruling can be appealed before a higher court.

Aside from direct decisions that determine whether a firm is allowed to reorganize, judges also rule on motions which alter other important aspects of the bankruptcy process. One of the most important of these is the motion to sell assets. The sale of an asset in bankruptcy can ease negotiations between debtors and creditors because it replaces the asset, which creditors typically do not want to own, with cash that creditors are happy to take. Assets sold in these so-called "Section 363" sales (named after the section of the Bankruptcy Code that governs the sales) are sold free and clear of any liens, giving

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In practice the vast majority of plans are created and filed by the debtor, after negotiating with creditors (Weiss, 1990).

[12] A plan is approved if at least one half in number and two thirds in value of all creditors in each voting class (seniority level) votes in favor of the plan.

[13] In fact, the judge can even force creditors to accept a plan they have voted against in a so-called "cram-down" if she feels that the plan is the best overall options available to the firm.

[14] For example, Weidlich & Kary (2008) reported specifically on Judge James Peck's reputation when he was assigned Lehman Brothers bankruptcy case.

protection to potential buyers from further legal action (Gilson, 2010). However, Pulvino (1999) shows that assets sold in Chapter 11 restructuring are typically sold at deeply discounted prices, indicating that these sales could hurt recovery rates for creditors. Pulvino (1999) argues that in general asset sales benefit the debtor, because the proceeds of the sale bring much-needed cash into the firm, allowing it to continue operating during bankruptcy or to pay off creditors that the debtor does not want voting on the plan of reorganization.[15] It is up to the judge to determine whether these sales should be allowed to take place and to ensure that the auction process is fair.

Other motions that judges consider include petitions to lift the automatic stay and allow creditors to seize certain assets, to extend the exclusivity period, or to allow the use of cash collateral. Each of these decisions can tip the balance of power between debtors and creditors, indirectly affecting the ability of a firm to successfully reorganize.

B. Measuring bankruptcy court caseload

The number of bankruptcy judgeships in the United States is determined by Congress, and the creation of new judgeships requires the passage of a bill by both the House of Representatives and the Senate. Every other year, the Judicial Conference of the United States conducts a study of the caseload of bankruptcy judges and recommends to Congress the number of new judgeships that are needed for each bankruptcy district. Despite consistent pleas for more judges from the Judicial Conference, the last time Congress approved new permanent judgeships was in 1992.[16] As a result, judge workloads have increased dramatically. From 1980 to 2010, total bankruptcy filings rose by 381% while the total number of bankruptcy judges only increased by 53%. Put differently, the average bankruptcy judge in 2010 handled 3.1 times more cases than the average judge in 1980.

But each bankruptcy case does not demand an equal amount of the judge's time. Personal Chapter 7 cases rarely even go before a judge, while a complex Chapter 11 filing will take many hours of

[15] Only creditors that are deemed "impaired"—meaning they do not receive 100% recovery—are allowed to vote on the plan. By paying off some creditors with cash proceeds, they can be blocked from voting on the plan.
[16] In 2005, 28 new temporary judgeships were created in conjunction with BAPCPA, although the Judicial Conference had requested 47 permanent positions. Section III discusses BAPCPA in more detail.

court time. Because of these differences, the Judicial Conference uses a weighting system to calculate the caseload for each bankruptcy district. The weights come from a judge time study conducted in 1989 (Bermant, Lombard, & Wiggins, 1991), and indicate the number of hours a judge spends on each of six types of bankruptcy cases (Table I): non-business Chapter 7, business Chapter 7, Chapter 11, Chapter 12, Chapter 13, and other. While non-business Chapter 7 cases on average take only 6 minutes of a judge's time, the average Chapter 11 case uses up nearly 8 hours.[17] Following the Judicial Conference, I measure caseload as the weighted number of cases filed per judge in each bankruptcy district. Because the weights are expressed in the number of hours the judge is expected to spend on the case, weighted caseload can be interpreted as the number of hours (per year) the judge would spend administering the particular mix of six bankruptcy case types filed in his bankruptcy district.

[TABLE I]

On a weighted basis, judges in 1980 had, on average, a total caseload of 503 hours per year. By 2010, that workload had more than doubled to 1,141 hours per year. However, much of that increase came in the first few years of the 1980s, when business bankruptcy filings rose quickly in the aftermath of two closely-spaced economic recessions. Although the number of business bankruptcy filings has fallen since that time, increased numbers of personal bankruptcies have left the overall caseload relatively unchanged. As shown in Figure 2, since 1983 total weighted caseload has fluctuated around 1,000 hours per year. In general, total bankruptcy caseload rises during or shortly after economic recessions, and often these increases can be substantial. The average peak-to-trough change in caseload since 1983 is 264 hours, or 25% of the mean caseload per year.

[FIGURE 2]

[17] This is an average across all Chapter 11 cases filed in 1989. Since the average size of Chapter 11 firms has increased since this time, it is likely that this underestimates the true total time that Chapter 11 cases consume. Further, it does not account for "mega" Chapter 11 cases such as Lehman Brothers or Enron, whose complexity and public nature costs judges significantly more time.

Moreover, there is wide variation in caseload across the 89 bankruptcy districts in the U.S.[18] Taking the average weighted caseload for each district from 1983 – 2011, I find that the standard deviation across districts is 311 hours, or 7.8 40-hour work weeks. At the extremes, the bankruptcy judge in Vermont had an average total workload of 305 hours per year, while the judges of the Western District of Tennessee averaged 1,664 hours per year. More recently, areas that have experienced particularly difficult economic recessions have seen dramatic increases in the caseload required of each judge. For example, since 2009, bankruptcy districts in Nevada (2,161 hours), Middle District of Florida (2,041 hours), Eastern Michigan (1,865 hours), Northern Mississippi (1,833 hours) and Northern Georgia (1,771 hours) have been particularly stressed.

III. Identification strategy

Bankruptcy filings typically rise when economic conditions deteriorate, leaving judges with the heaviest workloads during economic recessions. Because of this, a simple comparison of the bankruptcy outcomes of firms that file in busy courts versus those that file in non-busy courts would be confounded by multiple other factors. In particular, during recessions firms have worse outside options for dealing with financial distress. Raising new capital is difficult because credit is tight, asset sales would likely yield lower proceeds due to fire sale pricing, and negotiations with creditors might be more difficult as creditors are potentially facing their own financial issues during recessions. Further, there are potentially selection biases as high-beta firms are more likely to go bankruptcy in recessions. For these reasons, I cannot simply compare firms that file during busy times to those that file when judges have more time available.

In order to identify the causal effect of caseloads on restructuring, I use difference-in-difference specifications that exploit an exogenous shock to caseloads that affected some bankruptcy districts more than others. On April 20, 2005, the Bankruptcy Abuse Prevention and Consumer Protection Act was

[18] There are a total of 94 bankruptcy districts in the U.S. Courts system, but I exclude the Northern Marianas Islands, the Virgin Islands, Guam, and Puerto Rico from my study. In addition, the Western and Eastern Districts of Arkansas share bankruptcy judges, and so I treat them as a single district for this study.

signed into law by President George W. Bush, although most of the provisions of the Act only applied to bankruptcy cases that were filed on or after October 17 of that same year. BAPCPA was focused mainly on non-business bankruptcies, and, as its name suggests, its primary aim was to prevent abuse of the bankruptcy system by individual filers.

Prior to BAPCPA, individual filers could choose the chapter of bankruptcy under which they filed. BAPCPA instituted a "means test" which forces high-income filers to file for Chapter 13 bankruptcy, where less debt is discharged and future income must be pledged towards paying back creditors, instead of Chapter 7. In addition to the means test, BAPCPA increased the costs of filing for bankruptcy by between 50-70% because of increases in filing fees, lawyer fees, and required debt counseling (United States Government Accountability Office, 2008). Finally, BAPCPA also capped the amount of homestead exemptions at $125,000, which impacted filers in states that traditionally allowed home owners to protect large amounts of home equity.

Because the law was passed in April but not effective until October, there was a window within which individuals could still file under the old law, and this explains the large spike in filings in mid-2005 as individuals rushed to file before the October 17th effective date (Figure 1, Panel A). More importantly, though, once the law took effect personal bankruptcy filings dropped to the lowest levels on record, and remained depressed for some time, leaving judges with substantially fewer cases on their dockets that they had to deal with.[19] Bankruptcy judges do not specialize in a particular type of bankruptcy. Because of this, *all* judges were affected by the rush to file and subsequent dearth of consumer bankruptcy filings. In effect, BAPCPA created a natural shock to bankruptcy caseloads faced by courts across the nation.[20]

The drop in personal bankruptcy filings was both large and long-lasting. In 2004-2005, before BAPCPA took effect, the average caseload for bankruptcy judges was 1,059 hours, while in the two years

[19] Other research has shown that after BAPCPA individuals found other ways to deal with financial distress besides bankrtupcy, such as defaulting on mortgages (Li, White, & Zhu, 2011; Morgan, Iverson, & Botsch, 2012).

[20] Importantly, bankruptcy law firms typically *do* specialize, and therefore the rush of filings would affect personal bankruptcy law firms but not corporate bankruptcy law firms. Figure A.I in the online appendix lays out how the various parties involved in bankruptcy interact, and shows how the BAPCPA shock feeds through to the judge via household bankruptcy filings only.

after BAPCPA average caseload was only 566 hours (Table II). In essence, BAPCPA halved the caseloads faced by bankruptcy courts, and filings stayed low well into 2008 (Figure 1, Panel A).[21] To put this shock in perspective, the average peak-to-trough change in nationwide caseload prior to BAPCPA was about 265 hours.

[TABLE II]

Although BAPCPA was focused on personal bankruptcy, it did include three main provisions that affected Chapter 11 restructuring as well. First, the law capped extensions of the exclusivity period – the amount of time that the debtor has the exclusive right to file a plan of reorganization – at 18 months total, while previously extensions were unlimited. It also limited the window within which the debtor has to decide whether it will assume or reject leases on commercial property. Second, BAPCPA imposed penalties on repeat filers. Firms that re-file for bankruptcy within one year after reorganizing have the automatic stay lifted after 30 days unless the court grants an extension. Third, BAPCPA made "pre-packaged" bankruptcy filings more attractive by allowing the solicitation of votes on the prearranged plan to continue while the firm formally files for bankruptcy.[22]

These alterations to the law did induce a few firms to file for Chapter 11 just before the effective date of October 17th, 2005. In the week before BAPCPA took effect 343 firms filed for Chapter 11, compared with only 45 in the week after. However, it does not appear that BAPCPA altered the Chapter 11 filing rate in an economically significant way (see Figure 1, Panel B). By the first quarter of 2006 the number of filings was nearly identical to the number in the third quarter of 2005. Further, this mini "rush to file" is driven completely by the smallest firms that file for Chapter 11. These firms are excluded from my sample (see Section IV). In my sample, there is no observable change in the business Chapter 11 bankruptcy filing rate around the passage of BAPCPA.

[21] When the financial crisis hit in 2008, caseloads began rising quickly, reaching pre-BAPCPA levels in early 2009.
[22] See Chapter 2 of Gilson (2010) for a full overview of how BAPCPA affected Chapter 11 bankruptcy.

Because BAPCPA affected some aspects of the Chapter 11 process, and to avoid possible impacts of time effects[23], I do not simply compare cases that were filed before and after the law to test the impact of caseload on bankruptcy outcomes. Instead, I employ a difference-in-differences framework that focuses on bankruptcy districts that were disproportionately affected by the law. Because of BAPCPA's focus on consumer bankruptcies, its passage caused a disproportionately larger drop in caseload in those districts that spend more of their time on non-business bankruptcy filings. I use the share of caseload that stems from non-business filings in 2003 as a measure of how consumer-oriented each court is. A bankruptcy district that spends the majority of its time on personal bankruptcies saw its workload drop by more because of BAPCPA.

For example, Figure 3, Panel A shows the differential impact of BAPCPA in two bordering bankruptcy districts, the Western and Middle Districts of Pennsylvania. Because Western Pennsylvania takes in Pittsburgh, its bankruptcy court is more business-oriented. In 2003, non-business bankruptcies accounted for 67% of total caseload in Western Pennsylvania, while the non-business share of caseload in the Middle District was 83%. Because of this, when BAPCPA passed and the non-business filing rate dropped, caseload dropped by more in the consumer-centric Middle District than in the Western district. Specifically, caseload in the Middle District dropped by about 800 hours after BAPCPA, as compared to a drop of only 485 hours in the Western District.

[FIGURE 3]

This pattern holds across for the full sample. Panel B of Figure 3 plots the average caseload of consumer-centric bankruptcy districts – defined as those districts that had an above-median non-business share of caseload in 2003 – versus the caseload of the more business-centric courts. Importantly, the two sets have parallel trends before and after BAPCPA, but the consumer-centric courts experienced a larger drop in caseload when BAPCPA took effect. This can be seen even more clearly in Figure 4, which

[23] Baird & Rasmussen (2002) and Bharath, Panchapegesan, & Werner (2010) explore how Chapter 11 is changing over time. My empirical strategy nets out any time effects by comparing firms that filed in the same quarter to each other.

shows a scatter plot comparing the drop in caseload from before BAPCPA (2004-2005) to after BAPCPA (2006-2007) against the non-business share of 2003 bankruptcy caseload in each district. The positive relationship between non-business caseload and the impact of BAPCPA is quite robust.[24] This is formally tested in a regression setting in Table III. Without accounting for any other variables, a one standard deviation increase in the non-business share of caseload (increase of 11.5 percentage points) results in an additional caseload decrease of 64 hours following BAPCPA, a drop of 12%. This effect persists after controlling for other factors that impacted caseloads. Aside from affecting filing rates for personal bankruptcy, BAPCPA also created 28 new judgeships, which resulted in decreased caseloads per judge in 20 affected districts. Including a control for the number of new judges appointed following BAPCPA strengthens the relationship between non-business caseload share and the decrease in workload. In this specification, a bankruptcy district with a one standard deviation higher share of non-business caseload experienced an additional caseload drop of 90 hours following BAPCPA, or more than 2 full work weeks. Controlling for changes unemployment, house prices, per capita income, and population in each bankruptcy district does not affect the relationship between non-business caseload and the BAPCPA shock. This is important, as it shows that, although caseload is affected by changes in economic conditions (e.g. changes in house prices), the variable that I use to identify the effect of BAPCPA is orthogonal to these factors.

[FIGURE 4 & TABLE III]

To better visualize which districts were most affected by BAPCPA, Figure 5 shows a map that color-codes each bankruptcy district according to the 2003 non-business share of total caseload. Yellow districts are those that are the most consumer-centric and thus saw caseload drop by the most after BAPCPA, while red districts are business-centric and experienced smaller declines in caseload. While it is clear that there is some clustering (e.g. southern states tend to be the most consumer-centric), this is significant variation even across nearby districts, especially in the Northeast and Midwest. In Section

[24] Delaware and the Southern District of New York show up as clear outliers in Figure 4. In Section V.F, I check to make sure that these two districts are not skewing my results.

V.G, I describe robustness checks that verify that geographic clustering of consumer-centric districts has no effect on my empirical results.

[FIGURE 5]

The identification of particular bankruptcy districts that were disproportionately affected by BAPCPA allows me to estimate difference-in-differences regressions of the form:

$$Y_i = \beta(PostBAPCPA_t \times NonBusCaseload_d)_t + \gamma X_i + \tau_d + \mu_t + \varepsilon_i,$$

where Y_i is the outcome of interest for bankruptcy filing *i*, in bankruptcy district *d*, in quarter *t*, and $X_i$is a vector of firm characteristics, τ_d is a bankruptcy district fixed effect, and μ_t is a time fixed effect. The coefficient of interest is β, which captures the impact of filing in the post-BAPCPA period when bankruptcy caseloads were low, in districts which experienced the largest declines in bankruptcy caseload. Because it is more natural to think of an increase in caseload (e.g. when a recession hits) rather than a decrease, in the results presented in Section V I multiply $PostBAPCPA_t \times NonBusCaseload_d$ by negative one and call this variable "*busy court*". This adjustment does not change the significance or magnitude of β; it is simply easier to interpret in the context of caseload increases due to recessions.[25] I include in my sample firms that filed for Ch. 11 between January 1, 2004 and December 31, 2007, a time period centered on the passage of BAPCPA that ends before main increase in caseload due to the onset of the financial crisis in 2008. Following Bertrand, Duflo, & Mullainathan (2004), in all specifications I cluster standard errors by bankruptcy district in order to account for serial correlation within bankruptcy courts.

While the above specification captures the overall effect of BAPCPA, one would expect that the impact of a drop in caseload varies depending on the complexity and relative bargaining power of the bankrupt firm. Large firms in particular are more complex (often with hundreds or even thousands of

[25] Indeed, this is equivalent to estimating the interaction term $PostBAPCPA * BusCaseload$, which identifies business-centric bankruptcy districts instead of consumer-centric districts, since $PostBAPCPA * BusCaseload = PostBAPCPA * (1 - NonBusCaseload) = PostBAPCPA + PostBAPCPA * (-NonBusCaseload) = PostBAPCPA * (-NonBusCaseload) + \mu_t$.

creditors and intricate seniority issues that the judge must deal with) and have a stronger presence in court because they are better-able to hire top-notch lawyers, demand more of their creditors and suppliers, and are also more likely to get press coverage should they go belly up. The smallest firms are much more straight-forward, and in these cases creditors or the trustee may have as much ability to sway the judge as the firm itself. To empirically test whether caseload fluctuations differ by the size of the firm, I add another interaction term to the regression equation:

$$Y_i = \beta_0(PostBAPCPA_t \times NonBusCaseload_d) + \beta_1(PostBAPCPA_t \times NonBusCaseload_d \times \ln(Size_i)) + \gamma X_i + \tau_d + \mu_t + \varepsilon_i,$$

where $Size_i$ is the assets or liabilities of the firm (whichever is largest) at filing. Here, the coefficient β_1 captures the differential effect that the law had on large firms, while β_0 captures the estimated impact of BAPCPA on a firm of $Size_i = \$1M$. Once again, regression results are reported with the two interaction terms multiplied by -1 in order to put β_0 and β_1 in terms of increases in caseload, rather than decreases.

The difference-in-differences estimator shows the causal impact of caseload on bankruptcy outcomes only if the exclusion restriction holds. The confound that one worries about is whether firms that file in consumer-centric bankruptcy districts all changed in a particular way after BAPCPA, and that this change was unrelated to judge caseload. For example, larger firms tend to be located in more urban areas, which also tend to have fewer non-business bankruptcies. If larger firms also became more likely to be reorganized after BAPCPA for reasons unrelated to judge caseload, this would confound the difference-in-difference estimators in the equations above. In Section V.G I test for these alternate channels by including size-by-time fixed effects and industry-by-time fixed effects. These additional controls allow for there to be varying trends over time for different firm sizes or industries, thus ruling out alternative stories that relate to the composition of firms filing in particular bankruptcy districts. In all cases including these controls do not affect my estimates.

A second possible confound in difference-in-differences estimates is changes in the composition of the sample before and after BAPCPA. If different kinds of firms file for bankruptcy after BAPCPA,

then it is possible that my estimated effects are due to changes in the types of bankrupt firms rather than changes in caseload. The fact that the filing rate of Chapter 11 debtors did not change with the passage of BAPCPA suggests that there was a not a significant shift in the propensity of a firm to file for bankruptcy around that time. The composition issue can be further address by creating a paired sample that matches firms that filed for bankruptcy before BAPCPA to firms with similar characteristics that filed afterwards. Matching in this way holds the composition of debtors constant before and after BAPCPA. Using the covariates in the vector X_i, I create such a matched sample using a propensity score matching model and find that all results continue to hold when the regressions are run on this limited sample.

A final concern relates to forum shopping. Some firms do have discretion in choosing the bankruptcy district where they file, and therefore they could move to a different venue if low or high caseloads in a particular court will adversely affect their outcome. This selection effect could potentially bias my estimates. As described in Section IV below, my sample consists mostly of mid-size firms that do not have a choice in venue. Regardless, I can use the address of the firm to identify debtors that file in non-local bankruptcy districts, and take that as an indicator of firms that picked an alternate venue. I find that 8.7% of the filings in my sample occurred in states other than the home state of the debtor. Omitting these firms from the sample does not alter my results.

IV. Data

I gather information on Chapter 11 bankruptcy filings from LexisNexis Law, which obtains bankruptcy filing data from the U.S. Courts system. I focus on a four-year period surrounding the passage of BAPCPA, from 2004-2007. I end the sample in 2007 to avoid the sharp uptick in caseload that resulted from the financial crisis in 2008 and 2009, and also to have a 3-year period (2008-2010) in which I can examine recidivism into bankruptcy for firms that file near the end of my sample. During this period, LexisNexis has legal information on 14,825 separate business Chapter 11 bankruptcy filings in the 50 states and the District of Columbia. Because LexisNexis' data comes directly from the U.S. Courts, there is essentially 100% coverage of Chapter 11 cases in my data. The benefit of using data from LexisNexis is that it is more easily obtained for the entire, nationwide set of bankruptcies. While several

previous bankruptcy studies have used court records to compile data on bankruptcies, due to the difficulty of obtaining this data directly from the U.S. Courts these studies have typically been limited in scope, typically focusing only on a subset of bankruptcy districts or only on public firms, which have more information readily available. To my knowledge, this is the first study to make use of LexisNexis' universal coverage.

The LexisNexis data contains legal information from the U.S. Courts system, including the date the case was filed, the court in which it was filed, the judge assigned to the case, an indicator of whether the filing was voluntary[26] or not, a flag indicating whether the debtor has distributable assets, and status updates on the case. From the status updates, I can determine the outcome of the case: whether it was dismissed from court, converted to Chapter 7, transferred to another court, or reorganized.

I augment this legal information with financial data obtained from Capital IQ and The Deal Pipeline. From these two sources, I obtain the full list of firms that filed for Chapter 11 bankruptcy in their databases, and match them to LexisNexis using bankruptcy case number, filing date, company name, and address. Using this information, I am able to match over 99% of Chapter 11 cases in Capital IQ and The Deal Pipeline during my sample period. From Capital IQ and The Deal Pipeline, I obtain the assets and liabilities reported by the firm at the time of the bankruptcy filing, the industry of the firm, and a flag indicating whether the firm obtained debtor-in-possession (DIP) financing. I also use the text in the description of the bankruptcy to determine whether the firm filed with a pre-arranged or "pre-packaged" bankruptcy plan.

Between Capital IQ and The Deal Pipeline, I match a total of 7,223 firms to LexisNexis, which makes up 49% of the 14,825 total bankruptcy filings between 2004 and 2007. To get the final sample, I remove firms which are transferred to other courts or for which there is no exit information in LexisNexis (651 firms). Finally, about half of the filings recorded in Capital IQ or The Deal Pipeline are missing

[26] A "voluntary" filing is one in which the debtor filed the petition, while "involuntary" filings are instigated by a creditor or creditors.

information on industry, assets, or liabilities, reducing my final sample to 3,327 firms, or 22% of all firms that filed for bankruptcy during the sample period.

Because I rely on financial information in Capital IQ and The Deal Pipeline, which do not have information on the smallest firms, the sample used in this study is composed of larger, more complex firms than the overall sample of Chapter 11 filers. For example, 14.1% of the firms in my sample filed jointly with related entities, while only 6.9% of the out-of-sample firms did so. The larger firms in my sample are precisely the cases in which judges are needed to mediate complex negotiations, determine just outcomes, and discern when liquidation is the optimal path for a firm.

Although my sample is limited only to those firms that are in Capital IQ or The Deal Pipeline, it still contains a significant number of smaller firms. Table IV provides summary statistics on the bankrupt firms in my sample. The median firm reports $2.06 million in assets and $3.5 million in liabilities at filing, while roughly 10% of my sample has either assets or liabilities of less than $1 million. On the other extreme the firm at the 90th percentile had assets or liabilities of about $50 million. Sample firms reported being underwater (liabilities > assets) in 61% of the cases at the time of filing, and the median liabilities to assets ratio is 1.31.

[TABLE IV]

Firms may try to under-report the true value of their assets in order to appear more in need of bankruptcy protection than they really are. Because of this, for many debtor firms total liabilities is likely a better measure of the size of the firm than total assets. To overcome this issue, I define a new variable *size*, equal to the maximum of either assets or liabilities at filing, to capture the true scale of the firm. The median firm has a *size* of $4.4 million, but the distribution contains a few outliers (e.g. Delta Airlines) that skew the average *size* to a much larger $156.7 million. In all regressions I use the natural log of size to decrease the influence of these outliers, and in Section V.F I describe robustness checks that verify that these outliers are not driving my results.

Based on the description of the bankruptcy in Capital IQ or The Deal Pipeline, I only find that 47 (1.4%) of the firms in my sample filed pre-packaged plans. When a firm has a pre-packaged plan, the

judge has very little to do in the case, and so in most of my empirical results I omit these firms from the sample.[27] Unconditionally, debtors are a bit more likely to be liquidated (36.1%) or dismissed (34.1%) than reorganized (29.8%). Liquidation can come in three different forms, however: conversion to Chapter 7 (28.1%), liquidation directly from Chapter 11 via a "liquidating plan"[28] (4.4%), or the sale of substantially all assets of the firm via a section 363 sale (6.9%). These are not necessarily mutually exclusive; a firm that sells all of its assets in a section 363 sale is often subsequently liquidated via Chapter 7 or a Chapter 11 liquidating plan.

I measure recidivism rates as the propensity to file for either Chapter 7 or Chapter 11 bankruptcy within three years of the original filing date of the bankruptcy. To identify repeat filers, I use information on all business bankruptcy filings (either Chapter 7 or Chapter 11) from LexisNexis from 2004-2010, and match the original Chapter 11 filings to future Chapter 7 or 11 filings using tax ids, firm names and aliases, and addresses of the bankrupt firms. Limiting to a 3-year window avoids time effects; firms that file for bankruptcy in 2004 have a much longer time period in which to re-file that those that file in 2007, and will thus naturally have a higher recidivism rate if the whole time period is examined. Also, I do not count firms that re-file within 3 months of their original filing as having re-filed, since these can hardly be considered "separate" bankruptcies; these firms likely exited court due to unusual circumstances (e.g. they were dismissed for failing to file the proper paperwork) and quickly re-filed once the issue was resolved. The 3-month cutoff is somewhat arbitrary; my results are identical if I use a 2-month or 4-month cutoff instead. On average, 5.7% of firms that are either reorganized or dismissed re-file for bankruptcy within 3 years of their original filing in my sample.[29]

[27] When a debtor files with a pre-packaged plan of reorganization, the judge must still determine that the plan is fair and that it provides higher recovery rates for creditors than if the firm were liquidated under Chapter 7, but this approval is nearly always given. In my sample, all but one of the firms that filed with pre-packaged plans successfully reorganized; the other firm was dismissed from court.

[28] Liquidating plans in Chapter 11 function just like reorganizing plans: they are proposed, voted on, and approved in the same manner. The only difference is that there is no expectation that the debtor will continue operations after exiting.

[29] I do not consider firms that are liquidated in my analyses of recidivism, since by and large these firms cease to exist after their original bankruptcy and cannot re-file. Exceptions to this would include firms that are converted to

The sample firms are well-dispersed both geographically and across industries. All 89 bankruptcy districts are represented in the sample, with the median district having 22 bankruptcies and the largest bankruptcy district (Southern District of New York) only composing 6% of the sample. I use reported SIC codes or written industry descriptions from Capital IQ and The Deal Pipeline to classify each firm according to the Fama-French 30 industry classification, and have coverage across all 30 industries.

Both Capital IQ and The Deal Pipeline maintain databases of bankruptcy sales transactions. I use these databases to identify firms which sell assets during the course of bankruptcy, and find that 13% of the firms in my sample have an asset sale recorded. In many cases it is difficult to determine exactly which assets were sold in the auction; the transaction might list a particular piece of property or a division of the company, or it might just list the name of the company. In 53% of the sales (228 cases), however, the phrase "substantially all assets" is used in the description of the asset, signifying that in these cases the entire firm was sold. I mark these firms have having been liquidated completely.

Because recovery rates are not available for private companies, I cannot measure the impact of caseload on creditors directly for each bankruptcy filing. Instead, I turn to regulatory data reported by U.S. commercial banks in the Consolidated Report of Condition and Income (commonly known as the Call Reports). From the end-of-year Call Reports from 2004-2007, I obtain information on the net charge-offs reported by each bank on its commercial and industrial (C&I) lending. Net charge-offs are calculated as the total amount written off during the year less any recoveries received on C&I loans and hence represent the aggregate loss on C&I lending sustained by the bank. For each year, I scale total net charge-offs by the average outstanding amount of C&I loans held by the bank over the course of the year.[30] In addition to this main dependent variable, I also collect information on asset growth and the net

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Chapter 7 but later re-instated to Chapter 11 or dismissed from court, or firms which are sold as going concerns to a single buyer and continue to operate as separate entities.

[30] Taking the average across all four quarters helps account for timing issues in the recognition of charge-offs by the bank. Specifically, some of the charge-offs reported at the end of the year will be related to loans that went bad

charge-off rate on all other lending at the bank. To avoid undue influence of outliers, I winsorize each of these variables at the 1st and 99th percentiles.

The exposure of each bank to the BAPCPA shock depends on its location; banks in consumer-centric districts saw caseloads drop by more after BAPCPA than those located in business-centric districts. Using the FDIC's Summary of Deposits data from 2003, I first determine the share of a bank's deposits that were located in each bankruptcy district in that year. I then calculate the weighted average non-business share of caseload across all bankruptcy districts in which a bank has deposits, using the share of deposits in each district as a weight. This weighted average of non-business caseload then acts as a proxy for the size of the caseload shock experienced by the bank following BAPCPA.[31]

V. The effect of heavy caseload on Chapter 11 restructuring

A. Bankruptcy outcomes: reorganization, liquidation, or dismissal

In this section, I first focus on estimating the effect that decreased caseloads following BAPCPA had on the outcome for firms in Chapter 11. In general, a firm that files for Chapter 11 bankruptcy can have one of three outcomes:

1. *Reorganization*: a restructuring plan is formed and accepted, previous debtors are paid according to the plan, a new capital structure is put in place, and the debtor emerges from bankruptcy
2. *Liquidation*: the debtor's case is converted to Chapter 7, the debtor is liquidated directly from Chapter 11, or the debtor's assets are sold as part of a Chapter 11 bankruptcy auction
3. *Dismissal*: the case is dismissed and the debtor remains as if no bankruptcy filing had occurred.

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earlier in the year. The online appendix gives more information on loan loss accounting, as well as tests using alternative measures of loan losses. Results using alternative measures give similar results.

[31] The online appendix contains more detail on LexisNexis' coverage of bankruptcy filings and the variables derived from the data, and the dispersion of cases by industry and bankruptcy district.

Having established in Section III that bankruptcy districts with fewer business cases were disproportionately affected by BAPCPA, I use the non-business share of caseload as a proxy for the size of the caseload drop and estimate its effect on bankruptcy outcomes using the difference-in-differences methodology outlined in Section III. I exclude from these regressions firms that filed with pre-packaged bankruptcy plans, since the court has little to do in such cases. In these models, I control for:

- The natural log of the *size* of the firm, where *size* is defined as $\max(assets, liabilities)$ at the time of the bankruptcy filing.
- A dummy variable equal to one if liabilities are greater than assets, indicating firms that are more financially distressed. I use a dummy variable rather than the actual liabilities to assets ratio because some firms report very low assets, resulting in extremely high ratios. However, my results are unchanged if I use the liabilities to assets ratio instead of this indicator variable.
- A dummy variable equal to one if the firm had subsidiaries or related entities that filed at the same time.
- A dummy variable equal to one if the firm had non-exempt assets available for distribution to creditors, according to a flag recorded in LexisNexis.
- An indicator of whether the filing was voluntary (filed by the firm) or involuntary (filed by creditors). Only 1.2% of the sample filings were involuntary, but these cases are typically much more likely to be dismissed from court.
- An indicator variable equal to one if the firm obtained DIP financing. Obtaining a DIP loan is important for firms that need cash to continue to operate during bankruptcy proceedings, and is typically associated with a higher likelihood of reorganization (Dahiya, John, Puri, & Ramírez, 2003).
- Fixed effects for 30 Fama-French industries, fixed effects for the quarter in which the firm filed for bankruptcy (there are a total of 16 quarters in my sample period), and fixed effects for the bankruptcy district in which the firm filed (89 districts).

In the results presented in Table V, there are two main coefficients of interest. First, the variable *busy court*, defined as -1 times the interaction of a post-BAPCPA dummy and the non-business share of caseload in the bankruptcy district, captures the effect of filing in districts which experienced the smallest decreases in caseload following BAPCPA. Because my estimates include both industry and quarter fixed effects, the coefficient on *busy court* effectively compares two firms from the same industry that filed for bankruptcy in the same quarter but in districts that had exogenously different caseload due to BAPCPA. The estimates show that Chapter 11 debtors that filed in districts with the heaviest caseloads were significantly more likely to emerge from bankruptcy via reorganization, and instead are less likely to be dismissed from court. As explain in Section II.A above, dismissal favors creditors by allowing them to seize assets and in most cases is akin to liquidation, especially for small firms. My results show that busy judges are more willing to allow firms to reorganize and emerge from bankruptcy while less-busy judges dismiss more cases from court.

[TABLE V]

The second coefficient of interest in Table V is the impact of the interaction term *busy court*ln(size),* which tests whether these effects differ by the size of the firm. I find that while all firms are more likely to be reorganized in busy courts, this is particularly true for larger firms. Busy judges will have the hardest time determining the viability of the largest, most complex bankrupt firms, and so it is unsurprising that higher caseloads have the biggest impact on the largest firms. In addition, larger firms are likely better able to lobby a busy judge to allow reorganization: they can better afford high quality lawyers, and the (likely negative) publicity for the judge will be much larger if a large firm is liquidated.[32] The differential impact of caseload on large firms comes through increased liquidations rather than dismissals, which relates to the fact that large firms in general are less likely to be dismissed. While dismissal likely means the death of the firm for small firms, a large firm that is dismissed may be more

[32] Judge career concerns have received a fair amount of attention in the academic literature as a possible reason why judges are reluctant to liquidate large firms. Recent examples include LoPucki (2005) and Gennaioli & Rossi (2010).

likely to re-file, file in another district, or find a way to negotiate with its creditors. As can be seen in the coefficients on *ln(Size)* in Table V, large firms are substantially less likely to be dismissed from court, but more likely to be liquidated. When a judge determines that a large firm should not be reorganized, he is likely to choose to liquidate the firm directly. Less-busy judges in particular are more likely to liquidate a firm. All of this effect comes through liquidations via conversion to Chapter 7, rather than liquidating plans in Chapter 11 or 363 sales of all the firm's assets.

There are several ways to quantify the economic magnitude of these estimates. As described in Section III, a one standard deviation increase in the non-business share of caseload (11.5%) is associated with an additional 64.1 hour drop in caseload following BAPCPA.[33] Thus, I estimate that on average, a 64-hour increase in caseload increases the probability of reorganization by $11.5\% * 14.9\% = 1.7\%$, a modest increase from the unconditional mean of 29.8%. However, a 64-hour shock is relatively small compared to many of the caseload changes that occur in bankruptcy courts. The true economic impact of changes in caseload can be better understood in the context of typical observed changes in caseload. Nationwide, weighted caseload per judge has on average risen by 305.6 hours in the two years following the mid-point of an economic recession (as defined by the National Bureau of Economic Research), which is 4.77 times larger than the 64.1 hour increase mentioned above. Thus, a rough estimate of the impact of increased filings following economic recessions is that they increase the probability of reorganization by $1.7\% * 4.77 = 8.2\%$, a much more substantial amount.

A caseload shock of 306 hours is on the same order of magnitude of many other standard changes in bankruptcy caseload. Since 1983, the average nationwide peak-to-trough change in caseload has been 264 hours. The standard deviation of nationwide caseload over time (since 1980) is 188 hours. Variation across bankruptcy districts tends to be more substantial. If one ranks the 89 districts by their average caseload since 1980, moving from the district at the 25th percentile (Hawaii) to the 75th percentile (Utah)

[33] Because the diff-in-diff regressions do not control for other factors that affect the caseload drop, I use the estimates from the specification which simply regresses business caseload share on the decrease in caseload with no other controls.

results in an increased caseload of 457 hours. The standard deviation across all 89 districts is 361 hours. In order to give a sense of the economic magnitude of my estimates, I will continue to use the typical increase in caseload following recessions of 306 hours in the rest of the paper, following the logic laid out in the paragraph above.[34]

Returning to the impact of caseloads on the outcome of the bankruptcy, I now provide estimates of the size of the impact depending on the size of the firm. The firm at the 10th percentile in my sample has *size* equal to $1 million, the median firm has *size* of $4.42 million, and the firm at the 90th percentile has *size* of $48.9 million. Using this as a guideline, I'll use firms of *size* $1 million, $5 million, and $50 million to give an idea of how the change in caseloads affects firms of varying sizes. Based on the coefficients in Table V, a 306-hour increase in bankruptcy caseloads would have the following impact on the probability of each bankruptcy outcome:

	Firm *size*		
Change in probability of:	$1 million	$5 million	$50 million
Reorganization	5.8	8.4**	14.6***
Liquidation	1.8	-1.2	-8.3
Dismissal	-7.6**	-7.2**	-6.4*

In this and future tables that display the estimated impact of a recessionary rise in caseload, ***, **, and * are used to indicate whether the estimate is statistically different from zero at the 1%, 5%, and 10% level, respectively. These tests are performed using a Wald test of the linear combination $\beta_0 + \beta_1 * \ln(size)$, where β_0 is the coefficient on *busy court* and β_1 is the coefficient on *busy court*ln(size)*. Note that it is possible that the effect on large firms is statistically different from the effect on small firms even while neither is statistically different from zero. This is the case with the impact of caseload on the probability of liquidation, for example. Large firms are significantly less likely than small firms to be liquidated in busy courts, but the overall effect does not differ statistically from zero.

[34] It is important to note that using a shock of 306 hours makes the assumption that my difference-in-differences estimates are externally valid, i.e. can be applied outside of the difference-in-differences context. One should keep in mind that typical increases in caseload occur when economic conditions deteriorate, when outside factors other than caseload will also affect the outcome variables. The concluding section discusses this further.

B. Time in bankruptcy

Several previous studies have used the time in bankruptcy as an indirect measure of total bankruptcy costs, including Bris et al. (2006), Franks & Torous (1989) and Thorburn (2000). To the extent that increases in caseload force courts to stretch out the proceedings for each bankruptcy case, filings in busier courts could be substantially more costly than those in less-busy courts. Importantly, Bris et al. (2006) find that judges are particularly important determinants of the speed of the bankruptcy case, suggesting that judges have large amounts of leeway in determining the speed at which cases resolve.[35] In Panel A of Table VI, I test whether busy bankruptcy courts clog the system and force Chapter 11 debtors to spend a longer amount of time in bankruptcy. For these regressions, I define time in bankruptcy as the number of months between the filing date of the case and the date that a resolution was reached. For reorganizations and dismissals, the resolution date corresponds to the date on which the case was discharged from court. For liquidations, the resolution date is the date on which the case is converted to Chapter 7. Converted cases will remain in court for several months after this date while the trustee oversees the liquidation of the assets, but at this point the judge has little left to do on the case, as the decision to liquidate has already been made.

[TABLE VI]

I find that there is no average effect of caseload on time in bankruptcy. This is remarkable, as it suggests that judges who are exogenously busier than others spend less time per case (or longer hours in court each day), rather than extending the total amount of time a firm is in court. But this isn't necessarily true for all firms. Indeed, busy judges could optimize their time by spending more time on larger cases while spending less time on small firms. Table VI shows that this is indeed the case: large firms exit bankruptcy more quickly in less-busy courts, but small firms do not.

[35] In one conversation I had with a bankruptcy judge, another judge was singled out as running a "rocket docket" court, in which everything was streamlined in order to minimize the amount of time a case was in court. I indeed find that this is the case in my data: the "rocket docket" judge moved Chapter 11 cases through court almost 5 months faster than his counterparts in the same court.

Does the pattern of slower bankruptcies for large firms but faster for small firms hold across each bankruptcy outcome? In Panel B of Table VI I report regressions that repeat the time in bankruptcy regression for the subsets of firms that were reorganized, liquidated, or dismissed. I find that the time-in-bankruptcy effect is concentrated in liquidations and reorganizations. In particular, small firms that are eventually liquidated are liquidated much more quickly in busy courts, while this effect is reversed for large firms. This suggests that busy judges are quite careful about liquidating large firms, but make up for this by liquidating small firms faster. This is consistent with the idea that overburdened individuals are reluctant to make final decisions when faced with complex choices (Vohs et al., 2008). Overloaded judges will find it difficult to evaluate the viability of large, complex firms and will thus be reluctant to convert these cases to Chapter 7. Simpler cases present much less of a challenge to a taxed judge, so she can deal with these cases more quickly. Meanwhile, firms that successfully reorganize in busy bankruptcy courts spend significantly more time in court, and this effect does not differ much by firm size. Time to dismissal appears to be unaffected by court caseload.

In terms of economic magnitude, the 306-hour average rise in caseload following a recession would be expected to have the following impact on bankrupt firms:

Increase in # of months in bankruptcy	Firm *size*		
	$1 million	$5 million	$50 million
All cases	-0.26	1.24	4.88
Reorganizations	6.54**	6.10*	5.01
Liquidations	-6.25***	-2.02	8.25
Dismissals	-2.63	-2.77	-3.10

Given that the median reorganization in my sample takes 23.1 months, the above table estimates a 26% increase in reorganization times with a 306-hour increase in caseload. For reference, the median liquidation lasts just 10.6 months and the median dismissal is in court for 7.9 months. Taken together, these results suggest that, although busy judges allow firms to reorganize more often, these

reorganizations typically take significantly longer and are thus more costly overall. Meanwhile, busy judges are quicker to liquidate small firms, but slower to liquidate large ones.

C. Recidivism

In this section I turn to the question of whether increases in caseload affect the efficiency of the bankruptcy court. Ideally, an efficient bankruptcy court would separate those firms that are economically viable from those that are not in the least possible time, and then ensure that the firms that leave court have a good chance of not falling back into bankruptcy. I have already shown that large firms that file in busy courts take longer to exit, suggesting that efficiency is reduced at least for these firms. Section V.A also shows that busy judges are more likely to allow firms to reorganize, but it is unclear ex ante whether this improves or reduces efficiency. If judges exhibit a "continuation bias"—i.e. are reluctant to liquidate firms—then increases in caseload could exacerbate this bias. On the other hand, if judges typically liquidate too many firms, then busier judges that allow more reorganizations could be more efficient.

I test whether the drop in caseload following BAPCPA affected the probability that a firm re-files for bankruptcy (either Chapter 11 or Chapter 7) within 3 years of (but more than 3 months after) its original filing date.[36] Results are presented in Table VII. I find that busier courts see significantly higher recidivism, implying that firms that pass through busy courts are less able to avoid repeated financial distress. However, this effect does not vary much by size. An increase in bankruptcy caseloads of 306 hours would have the following impact on the recidivism rates for firms of various sizes:

	Firm *size*		
	$1 million	$5 million	$50 million
Increase in probability of re-filings within 3 years	6.99**	6.28**	4.56*

[36] As mentioned previously, I do not count a firm as having re-filed if it files again within three months of its original filing date, as such filings are likely due to cases in which the firm was dismissed on a technicality and then subsequently re-filed once the problem was rectified.

These estimated impacts are quite large; the unconditional probability of re-filing for bankruptcy within 3 years is only 5.1%, suggesting that the 306-hour shock to caseload more than doubles the recidivism rate.

[TABLE VII]

The high bankruptcy recidivism in busy courts shows that busy judges exhibit more of a continuation bias. As judges become more time constrained, they are less able to efficiently sort out which firms are no longer viable, and instead allow more marginal firms to reorganize. These marginal firms then end up back in bankruptcy court much more often, and within a relatively short amount of time. For these firms, the overall costs of financial distress are significantly increased by busy courts. However, this fact alone does not necessarily mean that busy courts reduce overall social welfare. For example, if a busy judge allows ten extra firms to reorganize, and one of these firms ends up re-filing for bankruptcy, it could be that the social welfare generated by the other nine outweighs the costs associated with a repeat filing. I note, however, that previous studies have found that many firms continue to experience poor performance and high rates of financial distress post-bankruptcy, even if they do not file for bankruptcy again (Chang & Schoar, 2007; Gilson, 1997; Hotchkiss, 1995; Morrison, 2005).

Given that I find that busy judges are particularly more likely to allow large firms to survive, it is somewhat surprising that large firms don't also have higher recidivism rates. The literature that focuses on judge career concerns has postulated that judges have an incentive to allow large, public firms to reorganize in order to attract more "mega" cases to their courts (Gennaioli & Rossi, 2010; LoPucki, 2005). However, my findings show that an exogenous shock (BAPCPA) that allowed more large firms to survive did not disproportionately increase their recidivism rate relative to smaller firms. This suggests that less-busy judges are tougher on large firms than on small firms, liquidating some large firms that would have been able to avoid bankruptcy in the future. If anything, my findings point towards the hypothesis that judges exhibit more of a continuation bias towards small firms than large ones.

Not all of the increase in recidivism is necessarily attributable to judges failing to liquidate marginal firms. On a more intensive margin, busy judges may also allow firms to emerge with over-leveraged capital structures. In this sense, the busy judge did not fail to filter necessarily, but instead

failed to restructure the debt of the firm "enough." Previous work by Gilson (1997) has shown that firms that restructure in Chapter 11 maintain elevated leverage for extended periods after bankruptcy. In general, it is in the interest of the debtor's management for this to be the case: when leverage is high, the ownership of the firm is concentrated in a smaller amount of equity, of which management usually has at least some ownership. Management typically presents reorganization plans to the judge that contain overly optimistic projections of future performance (Hotchkiss, 1995), and, if the judge signs off on the plan, these rosy forecasts allow firms to exit bankruptcy with elevated leverage. If busy judges are more willing to take management at their word, this would be another explanation of why there are more repeat filers in crowded bankruptcy courts. Relatedly, Chang & Schoar (2007) show that firms that are randomly assigned to pro-debtor judges have poorer post-bankruptcy performance and higher re-filing rates. Because my data does not contain information on post-bankruptcy leverage (or any other measures of post-bankruptcy performance), it is not possible for me to determine how much of the increase in re-filings is due to a failure to filter unviable firms and how much is due to judges allowing viable firms to exit with too much debt. The evidence presented in Section V.A certainly suggests that reduced filtering is occurring, but it is possible that failure to reduce leverage is also at play. In general, however, my findings correspond closely with the finding in Chang & Schoar (2007) that pro-debtor biases lead to more recidivism.

D. Bank charge-offs

If busy courts impose higher costs on restructuring firms, these costs will be largely passed on to creditors, since these firms have little or no equity. I use net charge-offs on commercial and industrial (C&I) loans reported by commercial banks as a measure of the total default costs borne by banks. Banks are the main creditors for many small and mid-sized businesses (Petersen & Rajan, 1994), and since the majority of C&I loans are unsecured one would expect losses to be concentrated in this lending.[37]

[37] According to the Survey of Terms of Business Lending, produced by the Federal Reserve Board of Governors, about 60% of C&I lending is unsecured. Commercial Real Estate (CRE) loans, the other major category of business

As described in Section IV, I use a bank's exposure to bankruptcy districts with lower non-business caseload as a proxy for banks that experienced exogenously busier bankruptcy courts post-BAPCPA. Essentially, banks whose branches are located in more consumer-centric bankruptcy districts are likely to lend to businesses that are also located in those districts, and thus these banks would have seen caseloads drop by the largest amount after BAPCPA. In Table VIII, I report panel regressions that contain annual data for 7,741 commercial banks from 2004-2007. In these regressions, the dependent variable is total net charge-offs on C&I loans reported by the bank in a particular year, scaled by the average total outstanding C&I lending reported across the four quarterly reports during the year. I use the average of C&I lending over the year to give a better measure of the total amount of C&I lending typically done by the bank, and to help account for the fact that credit losses can be reported with a lag. However, my results are unchanged if I scale by C&I lending reported at the end of the year, or averages over longer periods of time.[38] In all specifications I include both bank and year fixed effects, and cluster the standard errors by bank in order to account for serial correlation within each bank. I also control for the asset growth at each bank and the net charge off rate on all other loans. These variables control for the overall growth of the bank and its overall loan performance during the year. I winsorize all bank-level variables at the 1st and 99th percentiles to prevent undue influence from outliers.

[TABLE VIII]

Consistent with the idea that busy bankruptcy courts impose higher restructuring costs, I find that banks that were located in exogenously busier bankruptcy courts saw higher business loan charge-offs relative to banks in less-busy courts. This effect is unchanged if I add controls for the general economic conditions where each bank was located, showing that this effect is orthogonal to any effects of the

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lending, are typically secured and thus more insulated from default costs. Consistent with this, in unreported regressions, I find that increases in caseload are not significantly related to charge-offs on CRE loans.

[38] Scaling charge-offs by total C&I lending makes this measure an estimate of the probability of default multiplied by the loss given default on C&I loans, i.e. total expected losses. Because busy bankruptcy courts likely affect just the loss given default (not the probability of default), ideally I would use credit losses scaled by the total amount of defaulted loans as the dependent variable in these regressions. However, getting a clean measure of loss given default is not possible from the Call Reports. The online appendix gives more detail on this issue, and shows that two alternative proxies for loss given default produce nearly identical results.

general economy on loan defaults.[39] The impact of caseload on charge-offs does not appear to vary with the size of the bank. In terms of economic magnitude, a 306-hour increase in caseload is estimated to increase net C&I loan charge offs by 24 basis points, which is a 48% increase from the mean of 51 basis points, or 0.17 standard deviations.

E. Bankruptcy Sales

Asset sales are an important feature of the bankruptcy process. Through Section 363 of the Bankruptcy Code, the debtor firm is able to sell some or all of its assets to a third party without the need of creating a plan of reorganization and going through the voting process, although these sales must still be approved by the court. In general, the judge must verify that there is a "good business reason" for the sale (Wolf, Charles & Lees, 2010).

One of the main benefits of 363 sales is that they bring cash to the firm much more quickly than a traditional reorganization plan. Because of this, 363 sales occur more often under emergency circumstances when firms need cash quickly and cannot bring in outside capital through DIP lending.[40] Thus, when the bankruptcy process is expected to be drawn out, such as when bankruptcy caseloads are high, more asset sales should be expected. Further, busy judges are also more likely to approve asset sales, since they typically speed up the bankruptcy process by removing the need for complex debtor-creditor negotiations and detailed reorganization plans.

Table IX, which returns to the bankruptcy filings data, shows that this is the case. After BAPCPA, the courts that experienced the largest drop in caseload also had the largest decrease in the share of cases that had 363 sales. My estimates suggest that the rise in caseload after a recession would increase asset sales by 4.7 percentage points, a 36% increase over the unconditional mean of 13%. The impact does not vary much depending on the size of the firm, although it appears to be greatest for small

[39] These economic indicators are all first calculated for each bankruptcy district using county-level data weighted by the population of each county. Then for each bank, I take the weighted average across all bankruptcy districts in which the bank had deposits, using the amount of deposits in each district as the weight.

[40] Lehman Brothers, Chrysler and General Motors are good examples of this motive. In each case the judge approved a quick asset sale because the firms' value as a going concern was diminishing like a "melting ice cube," and they had little access to outside funding at the time.

firms (though the difference between large and small firms is statistically insignificant). This makes sense, since small firms have a harder time accessing outside capital and therefore would more likely have to resort to asset sales in cases when the bankruptcy filing drags on for a long period of time.

[TABLE IX]

Firms that are forced to sell assets should also be expected to have to sell at lower prices (Shleifer & Vishny, 1992, 2011). While data from Capital IQ and The Deal Pipeline does contain prices on the bankruptcy transactions, it is difficult to measure whether these prices are discounted from full value because I cannot observe exactly which assets are sold. As a proxy, I scale the selling price by the total assets of the firm, and test whether 363 sales that take place in busy courts have lower price-to-asset ratios than those that are in less-busy courts. This is a very rough proxy, as it is driven not only by "fire sale" prices but also by the amount of assets the firm is selling. For example, a firm that is selling substantially all of its assets will have a higher price-to-asset ratio than a firm that is selling only a small piece of the business, regardless of whether either firm is selling at discounted prices. I control for this to the extent possible by including a dummy variable indicating whether the transaction noted that the firm is selling substantially all assets.[41] In Table IX I test whether the sale price-to-asset ratio is affected by bankruptcy caseload for the 422 sales in my sample. I find a weak relationship between sale prices and court caseload. Across all firms there is almost no estimated effect at all. If I allow the effect to differ by firm size, I find that larger firms sell at less of a discount than smaller firms when courts are busy, although the effect is only significant at the 10% level.[42] These estimates are in the anticipated direction: small firms, which sell more often when courts are busy, also sell at lower prices when courts are busy. Large firms appear to be able to either find buyers willing to pay higher prices, or can find enough cash to wait through longer bankruptcy periods without selling assets.

[41] If I restrict the regression to the subsample of sales in which substantially all assets are sold I find similar coefficient estimates.

[42] In some of the robustness checks in Section V.F, the significance actually increases to clear the 5% hurdle.

A summary of the impact of a 306-hour increase in bankruptcy caseloads on the propensity to sell assets and on the sale price / asset ratio is as follows:

	Firm *size*		
	$1 million	$5 million	$50 million
Increase in probability of having asset sale	6.99***	6.28**	4.56
Change in price / asset ratio	-1.66	-0.71	1.60*

Unconditionally, 13% of all firms sold assets in bankruptcy, so these estimates suggest that the probability of an asset sale rises by about 50% when caseloads rise by 306 hours.

F. Debtor reaction to busy courts

Do firms preparing to enter bankruptcy behave differently when courts are busy? While the managers of a bankrupt firm may not know how busy a bankruptcy court is, the lawyers they hire certainly will because they work with the courts on a regular basis. The lawyers might be expected to advise their clients to take measures to prepare for crowded bankruptcy courts, and in this way firms might be able to make adjustments to deal with busy courts.

I examine two decisions that Chapter 11 filers can make either before or early in the bankruptcy case which mitigate the effects of busy bankruptcy judges: filing with pre-packaged plans, and obtaining DIP financing. I find weak evidence that large firms entering busier courts are more likely to file with pre-arranged bankruptcy plans (Table X). Large firms who anticipate longer stays in bankruptcy can expedite the bankruptcy process and, in many ways, sidestep the court completely by negotiating a plan beforehand with their creditors. On the other hand, large firms are also more likely to be allowed to reorganize in busy bankruptcy courts, making a pre-packaged plan less necessary for them, as long as they have the ability to absorb the costs of passing through bankruptcy court. These two effects work against each other, and perhaps temper the overall effect. Also, it should be remembered that I only identify pre-packaged bankruptcies when that fact is mentioned in the description of the bankruptcy in Capital IQ and The Deal Pipeline (1.4% of the sample), and so my identification of the effect surely misses several pre-arranged cases, leading to noisy estimates.

[TABLE X]

The evidence is stronger for DIP financing. Large firms that file in busy courts are considerably more likely to obtain DIP financing. Given that large firms are also more likely to spend longer in bankruptcy when courts are busy, this is exactly the response one would expect. DIP financing provides the working capital necessary to continue operations while a firm restructures in court, and the longer the stay in bankruptcy the greater the need for additional funds. Further, Dahiya et al. (2003) show that debtors that obtain DIP financing have a shorter reorganization period. In this way, a firm that is filing in a busy court might be able to counteract longer stays in bankruptcy due to heavy caseloads by obtaining DIP financing.

To put the size of these effects into perspective, recall that 16% of my sample obtained DIP financing. I estimate that a 306-hour increase in caseload would have the following impact on the propensity to file with a pre-packaged plan or obtain DIP financing:

	Firm *size*		
	$1 million	$5 million	$50 million
Increase in probability of pre-packaged bankruptcy	-2.42	-1.36	1.23
Increase in probability of DIP financing	3.63	6.20*	12.45**

It is important to keep in mind that my sample period is 2004-2007, a time when it was relatively easy to obtain credit. Using BAPCPA for identification is nice because it allows me to focus directly on an exogenous shock to judge time constraints. However, typically courts become crowded during economic recessions, when credit is tight. In my sample, I find that large firms are able to compensate for longer bankruptcy stays by obtaining DIP financing, but in recessionary periods they may not be able to find a willing lender. If this is the case, then the impact of heavy caseloads in recessions is likely larger than I have estimated. Rather than obtaining DIP financing, firms could well be forced to sell assets in 363 sales (as Chrysler and General Motors did in 2009) or simply liquidate completely. Further, asset

sales in recessions are also sub-optimal due to deeply discounted "fire sale" prices and a lack of buyers who can best use the assets (Shleifer & Vishny, 1992). In this way, difficult credit and M&A environments during recessions likely exacerbate the costs of busy bankruptcy courts.

G. Robustness

As Table IV shows, there are a few very large firms in my sample, including several large airlines such as Delta, US Airways, and Northwest Airlines, as well as large auto parts manufacturers like Dana, Collins & Aikman, and Dura Automotive. Although my specifications always use the natural log of *size*, which diminishes the outsize impact of these outliers, some concern could remain that these "mega" bankruptcies weigh too heavily in my results. To account for this, I first winsorize *size* at the 99th percentile ($744.8 million) before taking the natural log, and re-run my specifications. Winsorizing in this way reduces the mean *size* from $156.7 million to $28.5 million, but only changes the average ln(*size*) from 1.67 to 1.65. This slight change does not affect my results in any significant way.

A second concern is that two bankruptcy districts, Delaware and the Southern District of New York (SDNY), might be altering my results. Delaware and SDNY are well-known as major bankruptcy centers, attracting a disproportionate share of the largest bankruptcy cases (LoPucki, 2005). Because of their focus on Chapter 11 cases, these two districts have extremely low non-business caseloads. In 2003, Delaware's non-business share of caseload was 19%, while SDNY's was 30%. The next lowest was Alaska, with 54% (see Figure 4). While my main results include district fixed effects, the concern is that these two districts' exceptionally low non-business caseload share might alter the coefficient estimates of *busy court*, defined as *Post-BAPCPA*-Non-Business Share of Caseload*. The district fixed effect takes care of any constant effect that might be present in these two districts, but any changes that occurred in these two districts after BAPCPA would be magnified by their exceptionally low non-business share of caseload. To account for this, I "winsorize" these two districts by setting their 2003 non-business share of caseload to Alaska's figure of 54%. This affects 321 firms in my sample, or 9.6%. When I alter the non-business share of caseload for Delaware and SDNY in this way, I continue to find that firms that restructure in busy courts are significantly more likely to reorganize, and that large firms are less likely to

be converted to Chapter 7 liquidation. Coefficient estimates on the impact of caseload on dismissal are nearly identical in magnitude, but no longer statistically significant. All other results are unchanged or even stronger after adjusting Delaware's and SDNY's non-business caseload share. Also, results that commercial banks located in busier courts experience higher charge-off rates are robust to this altered specification.

Aside from possible issues relating to outliers, an additional concern regarding my results relates to the exclusion restriction: did bankruptcies in consumer-centric districts change in some systematic way after 2005 that is unrelated to court caseload? I address this concern by allowing the time fixed effects to vary across industries, firm sizes, and geographic regions. These more flexible specifications allow me to rule out alternate channels that could be biasing my estimates. For example, if firms of a particular industry tend to be located in bankruptcy districts with high non-business caseload and there was a shift in bankruptcy outcomes for that industry after BAPCPA that is unrelated to the workload of judges, this could bias my estimates of the impact of caseload. Including separate time fixed effects for each industry accounts for these trends, but at the cost of estimating far more coefficients in each model. I find that including industry-by-time fixed effects in this way does not affect my results. Similarly, I also allow the coefficient on ln(*size*) to vary in each quarter and find no difference in the estimates. Lastly, I test whether regional time effects might be driving my results by including separate time fixed effects for each of the four main census regions: Northeast, Midwest, South, and West. These specifications control for the fact that the most consumer-centric bankruptcy districts are concentrated in the South, while the western U.S. tends to be more business-centric (see Figure 5). Again, I find the same results in this more flexible specification. For the bank charge-off regressions in Table VIII, I also run the analysis with separate time fixed effects by bank size and bank region. The results are actually stronger with the inclusion of these additional controls.[43]

[43] The results of the robustness checks are available in the online appendix.

VI. Conclusions

This paper has shown that time constraints on bankruptcy judges alter the outcomes of firms that restructure in busy courts. Busy bankruptcy judges are more likely to allow distressed firms to reorganize and this increase in reorganizations results in significantly higher recidivism rates. These results are especially true for larger firms, which are both more complex and better able to lobby bankruptcy judges. I interpret these findings as suggesting that busy judges tend to be more pro-debtor in their decision-making. In addition, busy courts impose additional costs on restructuring firms by lengthening bankruptcy stays and increasing the need to sell assets via section 363 auctions. Larger firms are able to respond to these effects to some extent by filing with more pre-packaged bankruptcy plans and by obtaining debtor-in-possession financing. I show that these higher costs of financial distress are borne principally by the creditors of the firm.

While my evidence shows that the costs of financial distress are higher in busy bankruptcy courts, the overall welfare implications are less clear. In particular, it is unclear whether more social value would be created if the marginal firms that are reorganized in busy courts were liquidated instead. In theory, somewhere between the extremes of liquidating all firms or none of them, there is some optimal level of "pro-debtor-ness" for a bankruptcy judge (Aghion et al., 1992; Bernhardt & Nosal, 2004; Gennaioli & Rossi, 2010; Hart, 2000). The location of Chapter 11 on this spectrum remains an open question due to difficulties in finding clean empirical identification, thus making it impossible to determine whether pro-debtor shifts are welfare-reducing or not. However, two recent papers suggest that pro-creditor shifts may enhance firm values. Chang & Schoar (2007) show that Chapter 11 debtors that were randomly assigned to more pro-debtor judges have lower sales and fail at higher rates post-bankruptcy. This suggests that pro-creditor judges enhance the value of firms that survive bankruptcy relative to pro-debtor judges, but it still leaves open the possibility that pro-creditor judges liquidate some firms that would have had more value as going concerns. Becker & Strömberg (2012) examine a Delaware bankruptcy court ruling that shifted corporate directors' fiduciary duties towards creditors. They find that this pro-creditor ruling increased equity values of Delaware firms relative to non-Delaware firms. Taken together, these two

papers provide evidence that pro-creditor shifts can enhance firm value. If this is the case, busy bankruptcy courts, which tend to be more pro-debtor, are likely to reduce overall firm value.[44]

This paper uses the passage of BAPCPA as an exogenous shock to bankruptcy caseloads. While this identification allows me to make causal estimates of the impact of changes in court caseload, it ignores knock-on effects that might occur when caseloads change due to general economic conditions. In particular, bankruptcy filings spike during economic recessions, increasing the average annual workload of bankruptcy judges by 32%. Thus, the bankruptcy system is busiest exactly when many firms are trying to restructure. Further, during recessions financially distressed firms have less ability to obtain DIP financing or sell assets at reasonable (not fire sale) prices—actions which would help these firms to handle longer stays in bankruptcy. As these costs are passed on to banks and other creditors, it could also further constrict the credit supply. If bankruptcy is an insurance system that allows firms to work out financial distress in a formal and equitable forum, my results indicate that the insurance system functions worst exactly when financial disasters strike.

This is true both nationwide and on a more local level. It is important to note that court caseloads vary more cross-sectionally than they do over time. While I have couched most of my results in terms of nationwide economic recessions, it is also true that local economic conditions can be quite different across the United States. Localized economic malaise will have the same impact on caseloads in affected bankruptcy districts as nation-wide recessions will. The effects of busy bankruptcy courts matter for not only *when* but also *where* a case is filed.

Overall, my results matter the most for high-beta firms, which are most likely to need bankruptcy protection when courts are busy. Because the legal infrastructure does not adjust to aggregate economic shocks, firms that are most sensitive to those shocks experience higher costs of financial distress, a fact that should be reflected in the costs and structure of their debt.

[44] The efficiency of liquidation is an area that remains largely unexplored, however. While Becker & Strömberg (2012) and Chang & Schoar (2007) examine the value of firms that either have not filed for bankruptcy or firms that survive bankruptcy, the question of how efficiently assets are used following liquidation remains open.

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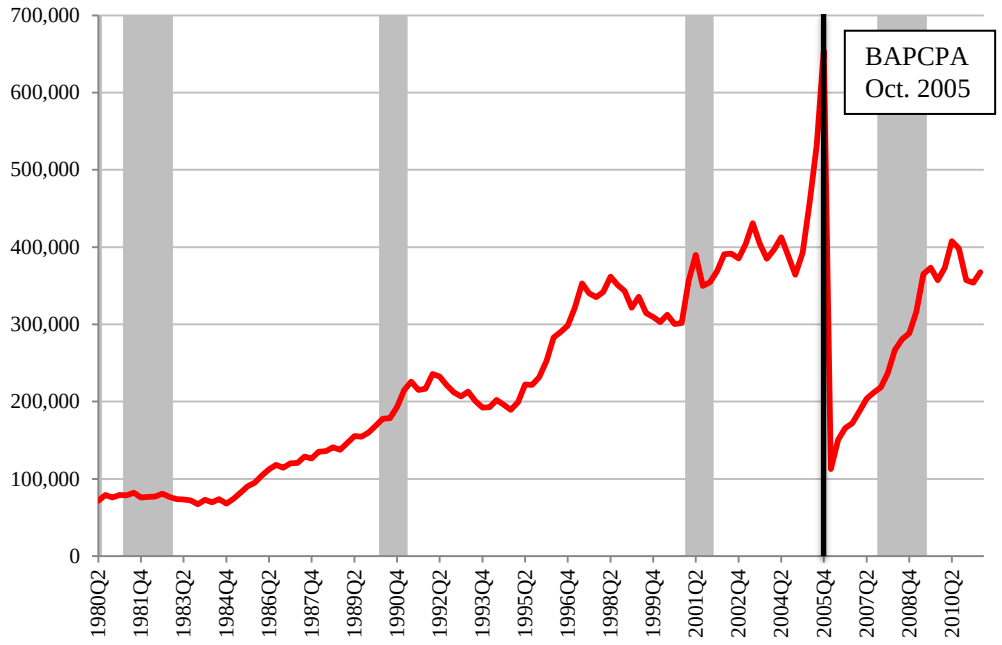
FIGURE 1

BANKRUPTCY CASES FILED PER QUARTER – NON-BUSINESS AND CH. 11

Panel A shows the total number of non-business bankruptcy filings per quarter in the U.S. Courts system from 1980Q2 – 2011Q2, while Panel B shows the total number of Business Chapter 11 cases filed. In both charts, the vertical line identifies the passage of BAPCPA in October 2005, while light-gray shading indicates NBER recessions.

Panel A: Non-business case filings (number of filings)



Panel B: Business Chapter 11 case filings

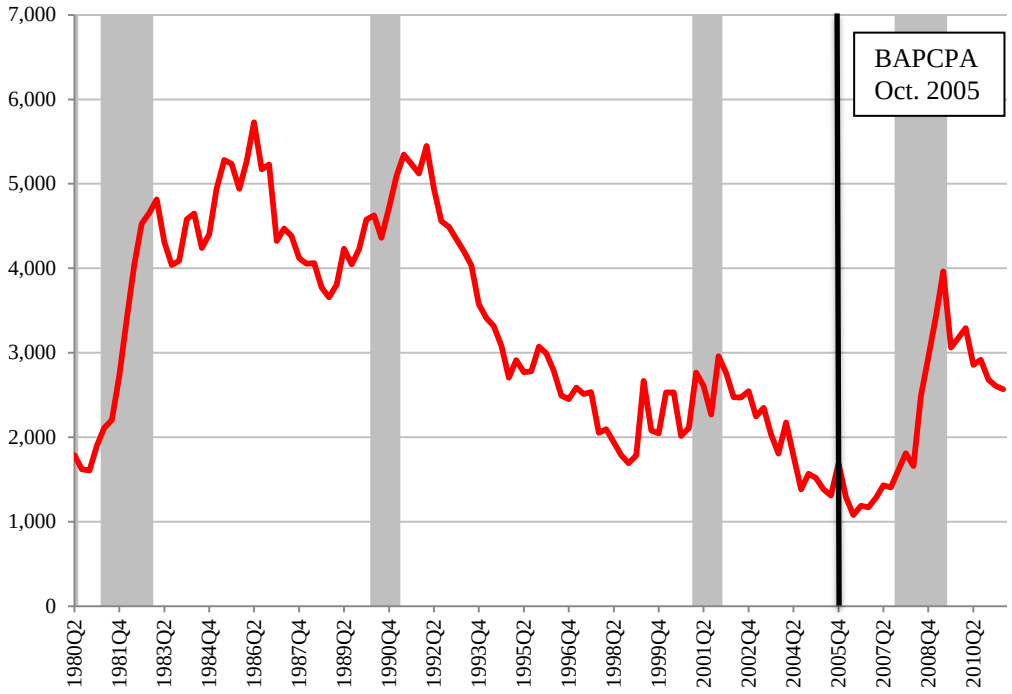


FIGURE 2
CASELOAD PER JUDGE

This figure displays the total weighted caseload per judge across the U.S. courts system from 1980Q2 – 2011Q2. The y-axis can be interpreted as the total expected hours a judge will spend on case-work annually. The vertical line identifies the passage of BAPCPA in October 2005, while light-gray shading indicates NBER recessions.

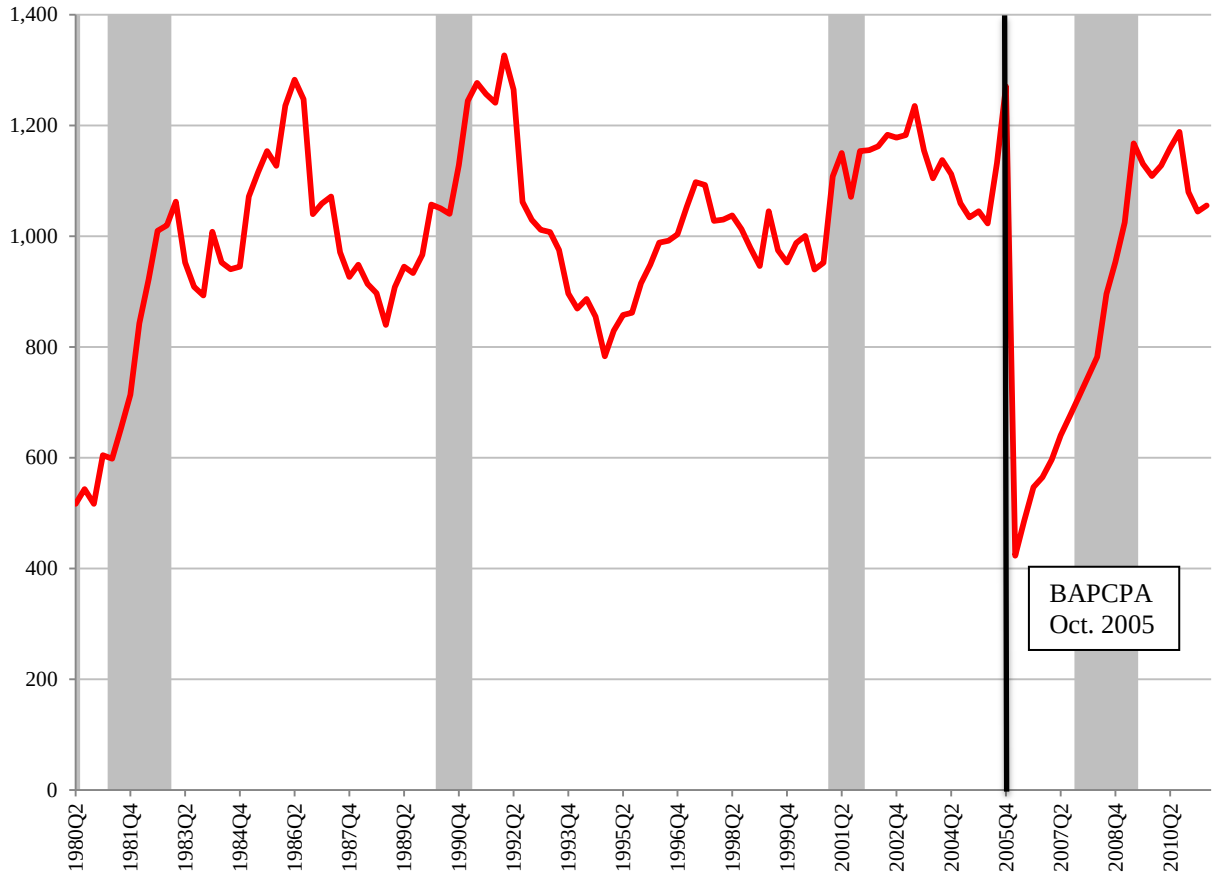
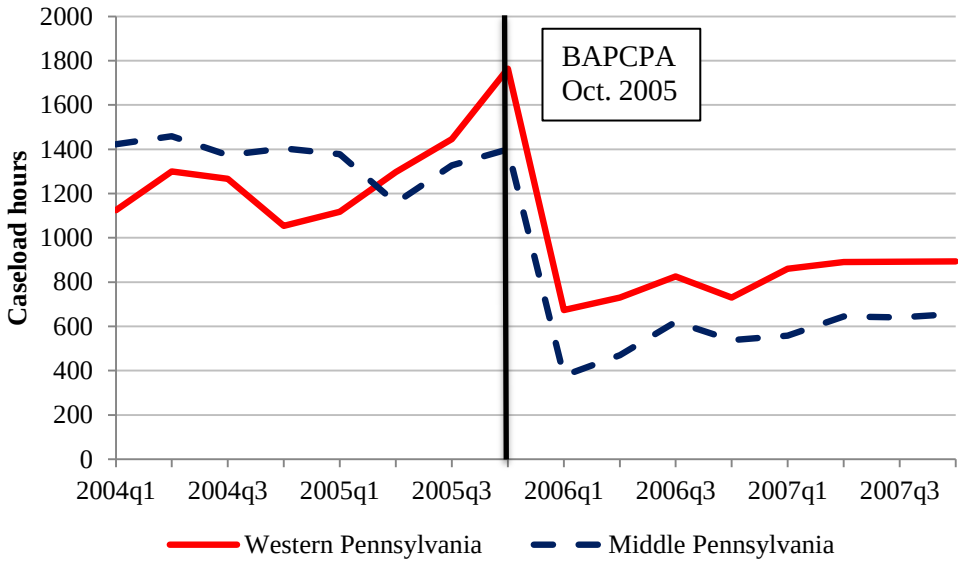


FIGURE 3

BAPCPA'S EFFECT ON CONSUMER- AND BUSINESS-CENTRIC BANKRUPTCY DISTRICTS

This figure shows how court caseload evolved in consumer- and business-centric districts from 2004-2007. Panel A uses an example of two neighboring bankruptcy districts: the Western and Middle Districts of Pennsylvania. The Middle District of Pennsylvania spends about 83% of its time on consumer bankruptcy cases, as compared to 67% in the Western District. BAPCPA decreased caseload by substantially more in the consumer-centric Middle District. Panel B shows a similar pattern for all 89 bankruptcy districts. In this chart, districts with an above-median non-business share of caseload are classified as "consumer-centric," while the remaining districts are "business-centric." The average caseload for each group is then plotted in the solid and dotted lines over time. Because BAPCPA disproportionately impacted the consumer-centric groups, the difference between the two lines (indicated by the arrows) shrinks by nearly half after its passage.

Panel A: Western and Middle Districts of Pennsylvania



Panel B: Average across all business- and consumer-centric districts

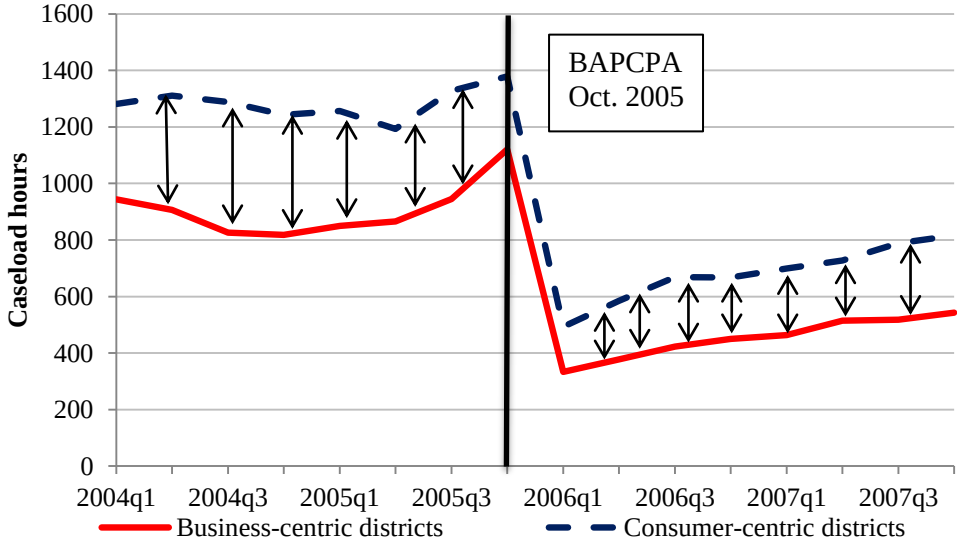


FIGURE 4
BUSINESS CASELOAD AND THE BAPCPA CASELOAD DROP

This figure plots the decrease in caseloads due to BAPCPA against the non-business share of caseload in 2003 for each of the 89 bankruptcy districts in my sample. The drop in caseload is calculated as the average caseload in the district during 2004-2005 less the average caseload in 2006-2007. The non-business share of caseload is the share of weighted caseload in 2003 that is due to non-business bankruptcy filings. Districts shown in red also received new judgeships with the passage of BAPCPA, and consequently had larger drops in caseload than would otherwise be expected.

FIGURE 5
U.S. BANKRUPTCY DISTRICT MAP

This map displays the 89 bankruptcy districts across the United States. Colors correspond to the share of 2003 caseload that was related to non-business bankruptcy filings. Districts in yellow have the highest non-business share of caseload and hence experienced the largest drop in workload following BAPCPA. Red districts are the most business-centric, while orange districts lie in the middle of the distribution.

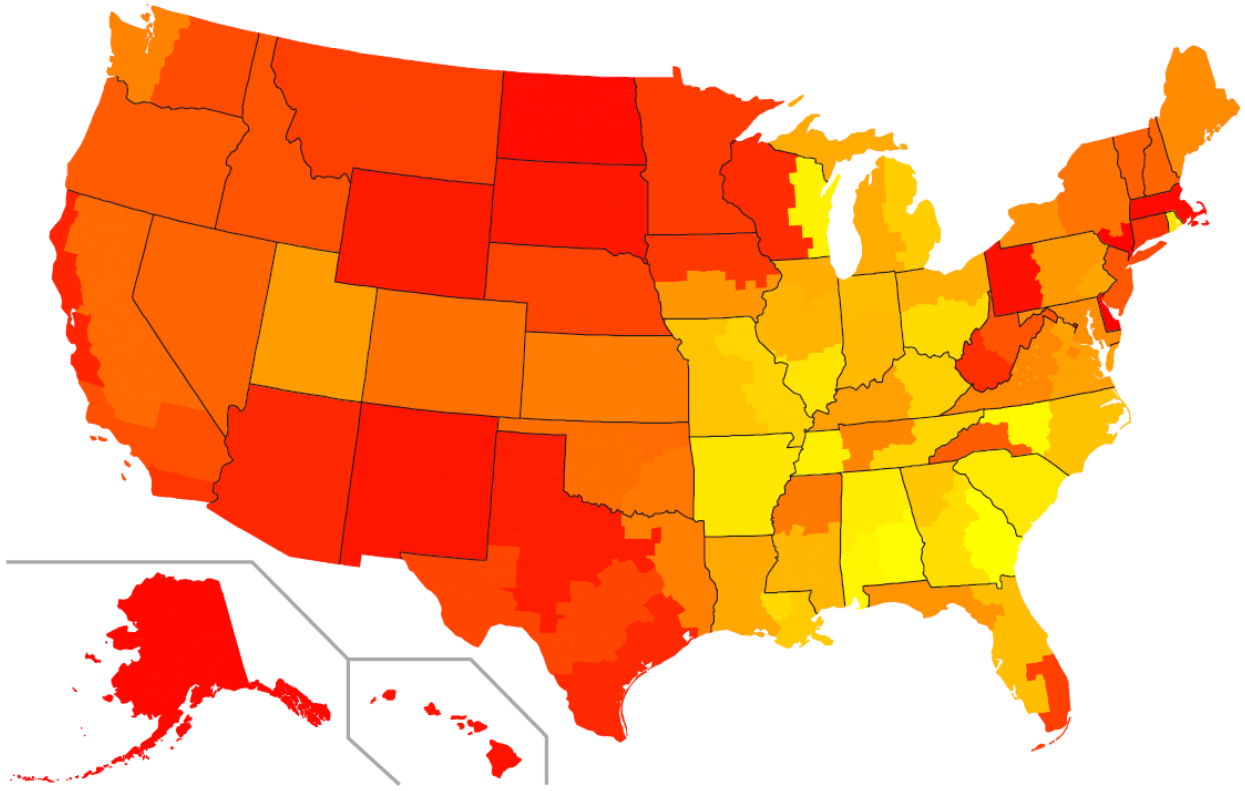


TABLE I
BANKRUPTCY CASE WEIGHTS

This table displays the weights assigned to each of six different bankruptcy types by Bermant et al. (1991) in their bankruptcy court time study. The weights are equal to the expected number of hours a judge will spend on an individual case of that type.

Bankruptcy Type	Expected hours per case
Ch. 11	7.559
Ch. 12	4.04
Business Ch. 7	0.397
Ch. 13	0.381
Other	0.194
Non-business Ch. 7	0.101

TABLE II
CASELOAD SUMMARY STATISTICS

This table reports the distribution of caseload for the eight quarters before and after BAPCPA, as well as the distribution of the non-business share of caseload in 2003 for the 89 bankruptcy districts in my sample. Caseload is measured as the weighted number of filings in each district per quarter per bankruptcy judge, using the weights in Table I. I multiply caseload by four in order to annualize the figures. The weights in Table I represent the number of hours a judge is expected to spend on a bankruptcy case, and therefore the caseload statistics presented in this table can be interpreted as the total number of hours a judge will spend administering cases per year. *BAPCPA Caselod Drop* is defined as the difference in the average caseload from 2004Q1-2005Q4 and the average caseload from 2006Q1-2007Q4 for each district. In the last two lines of the table, the sample is split into those firms that had below- and above-median share of non-business caseload in 2003, to show that the drop was significantly larger in those districts that had fewer business bankruptcy filings.

	Obs.	Mean	Std. Dev.	5^{th} Percentile	Median	95^{th} Percentile
Non-business Share of Caseload (2003)	89	79.4%	11.5%	63.2%	81.6%	92.3%
Avg. caseload 2004-2005 (pre-BAPCPA)	89	1095.05	429.90	425.07	1107.66	1842.90
Avg. caseload 2006-2007 (post-BAPCPA)	89	565.54	267.99	165.76	543.23	1063.19
BAPCPA Caseload Drop	89	529.51	215.27	207.77	528.87	908.77
Below-median non-business caseload	45	456.54	196.30	170.56	484.20	792.15
Above-median non-business caseload	44	604.14	210.08	321.32	566.18	1000.40

TABLE III

DECREASE IN CASELOAD DUE TO BAPCPA IN CONSUMER-CENTRIC DISTRICTS

This table shows that bankruptcy districts that had a higher share of non-business cases in 2003 experienced larger declines in caseload following BAPCPA. In each regression, the dependent variable is the drop in caseload following BAPCPA, defined as the difference in the average caseload from 2004Q1-2005Q4 and the average caseload from 2006Q1-2007Q4 for each bankruptcy district. *Non-Business Caseload (2003)* is the share of weighted caseload in 2003 that was attributable to non-business bankruptcy filings. In the second column, I control for the number of new judgeships that were created by BAPCPA (28 judgeships in 20 districts). In the final column, controls are added for changes in economic conditions and total population from the pre-BAPCPA period (2004-2005) to the post-BAPCPA period (2006-2007). All regressions are estimated by regular OLS, and robust standard errors are reported in parentheses.

Dependent variable:	*BAPCPA Caseload drop*		
Non-Business Caseload (2003)	555.076**	772.055***	714.222***
	(257.969)	(218.711)	(229.337)
# of new judges	--	108.906**	146.058***
		(44.580)	(38.557)
Change in unemployment rate	--	--	4.907
			(51.278)
Change in house price appreciation	--	--	-1,037.417***
			(252.373)
Growth in per capita income	--	--	200.056
			(1,000.379)
Population growth	--	--	1,043.399
			(979.314)
Observations	89	89	89
R-squared	0.089	0.204	0.325

TABLE IV
SUMMARY STATISTICS

This table provides summary statistics of the characteristics of the bankruptcy cases in the sample. Panels A and B pertain to data used on bankruptcy filings. In Panel A, *size* is defined as the maximum of assets or liabilities reported at filing. Panel C provides information on the commercial bank panel data used in Section V.D. All variables in Panel C have been winsorized at the 1st and 99th percentiles.

Panel A: Continuous variables

	Obs.	Mean	Std. Dev.	5th Percentile	Median	95th Percentile	Max
Dependent variables:							
Months in Bankruptcy	3327	18.36	16.70	1.55	13.06	53.19	93.91
Sale Price / Assets	430	0.585	2.588	0	0.226	1.127	42.00
Control variables:							
Size at filing	3327	$156.65	$5,303.69	$0.71	$4.42	$112.00	$301,816.00
Winsorized size at filing	3327	$28.53	$94.97	$0.71	$4.42	$112.00	$744.80
Other descriptive stats:							
Assets at filing	3327	$141.64	$5,284.58	$0.05	$2.06	$75.00	$301,816.00
Liabilities at filing	3327	$61.91	$834.56	$0.50	$3.50	$100.00	$28,270.00
Liabilities / Assets	3291	13.61	94.86	0.33	1.31	35.00	3558.99
Employees (when available)	900	1,079.82	6,656.93	8	120	3,206	146,600
# of entities filing jointly	3327	1.677	3.952	1	1	4	133

Panel B: Binary variables

	Obs.	% Obs.
Dependent variables:		
Outcome:		
Reorganized	3327	29.82%
Liquidated	3327	36.10%
converted to Chapter 7	3327	28.13%
in Chapter 11	3327	4.36%
section 363 sale of all assets	3327	6.85%
Dismissed	3327	34.08%
Has asset sale	3327	13.01%
Re-files for bankruptcy within 3 years	2206	5.08%
Pre-packaged bankruptcy	3327	1.41%
Obtained DIP loan	3327	15.87%
Control variables:		
Liabilities > Assets	3327	61.14%
Has related filings	3327	14.10%
Distributable assets	3327	92.28%
Involuntary filing	3327	1.17%

TABLE IV – *continued*

Panel C: Commercial Banks

	Obs.	Mean	Std. Dev.	5th Percentile	Median	95th Percentile	Max
Dependent variable:							
Net C&I loan charge-offs (% of total C&I loans)	29012	0.51%	1.43%	-0.33%	0.02%	2.92%	9.33%
Control variables:							
Annual asset growth	29012	7.67%	12.00%	-6.32%	5.42%	30.12%	63.27%
Net charge-off rate on all other lending	29012	0.16%	0.34%	-0.43%	0.06%	0.70%	2.44%

TABLE V

THE EFFECT OF CASELOAD ON BANKRUPTCY OUTCOME

This table explores the relation between the change in caseload due to BAPCPA and whether the bankrupt firm was reorganized, liquidated, or dismissed from court. *Busy court* is defined as the interaction of a *post-BAPCPA* dummy, equal to one if the firm filed on or after 17 October 2005, and *-1*non-business caseload*, the share of caseload in 2003 that was derived from non-business filings. *Size* is the maximum of either assets or liabilities reported at the time of filing. For clarity, the key variables identifying the impact of caseload are shaded. The other control variables indicate whether the firm reported liabilities > assets at filing, if the firm had other related entities that filed jointly, if the firm had assets available for distribution to creditors, if the filing was involuntary (filed by a creditor), and if the firm obtained DIP financing. 47 firms that filed with pre-packaged plans are omitted from the sample. All regressions include 89 district fixed effects, 16 quarter fixed effects, and 30 industry fixed effects. All models are estimated using linear least squares. Standard errors are clustered by bankruptcy district and reported in parenthesis. ***, ** and * indicate statistical significance at 1%, 5%, and 10% level, respectively.

			Liquidated					
Dependent Variable:	*Reorganized*		*All liquidations*		*Conversion to Ch. 7*		*Dismissed*	
Busy court	0.149**	0.106	-0.017	0.032	-0.005	0.049	-0.132**	-0.138**
	(0.061)	(0.064)	(0.054)	(0.056)	(0.039)	(0.040)	(0.058)	(0.061)
Busy court * ln(size)	--	0.029**	--	-0.033**	--	-0.036***	--	0.004
		(0.015)		(0.016)		(0.013)		(0.014)
Ln(size)	0.008	0.023**	0.024***	0.007	-0.000	-0.019**	-0.032***	-0.031***
	(0.006)	(0.009)	(0.008)	(0.010)	(0.006)	(0.009)	(0.006)	(0.009)
Liabilities > assets at filing	-0.015	-0.015	0.070***	0.069***	0.063***	0.063***	-0.054***	-0.054***
	(0.019)	(0.019)	(0.019)	(0.019)	(0.017)	(0.016)	(0.020)	(0.020)
Group filing	0.039	0.034	0.035	0.040	0.017	0.023	-0.074***	-0.074***
	(0.029)	(0.029)	(0.025)	(0.025)	(0.027)	(0.027)	(0.027)	(0.027)
Distributable assets	0.218***	0.218***	-0.517***	-0.518***	-0.555***	-0.555***	0.300***	0.300***
	(0.022)	(0.022)	(0.040)	(0.040)	(0.043)	(0.042)	(0.036)	(0.036)
Involuntary	-0.020	-0.017	0.180*	0.177*	0.123	0.119	-0.160***	-0.160***
	(0.095)	(0.095)	(0.091)	(0.092)	(0.095)	(0.096)	(0.058)	(0.058)
Got DIP loan	0.073***	0.070**	0.058**	0.062**	-0.045*	-0.041*	-0.131***	-0.131***
	(0.027)	(0.027)	(0.024)	(0.024)	(0.024)	(0.024)	(0.018)	(0.019)
Quarter, industry, and district fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3,280	3,280	3,280	3,280	3,280	3,280	3,280	3,280
R-squared	0.064	0.065	0.128	0.129	0.147	0.149	0.127	0.128

TABLE VI
THE EFFECT OF CASELOAD ON TIME IN BANKRUPTCY

This table explores the relation between the change in caseload due to BAPCPA and the duration of the firm's stay in bankruptcy. The dependent variable is the number of months between the bankruptcy filing and the resolution date of the bankruptcy. In Panel A all bankruptcy cases are included, and controls for the outcome of the case. Panel B splits the sample by bankruptcy outcome: reorganized, liquidated, and dismissed. All independent variables are defined as in Table V, with the addition of controls for the outcome of the bankruptcy case in Panel A. For clarity, the key variables that identify the effect of caseload on time in bankruptcy are shaded. All regressions include 89 district fixed effects, 16 quarter fixed effects, and 30 industry fixed effects. All models are estimated using linear least squares. Standard errors are clustered by bankruptcy district and reported in parenthesis. ***, ** and * indicate statistical significance at 1%, 5%, and 10% level, respectively.

Panel A: All Bankruptcy Cases

Dependent variable:	*Months in bankruptcy*	
Busy court	2.034	-0.478
	(3.711)	(3.090)
Busy court * ln(size)	--	1.693**
		(0.680)
Ln(size)	1.644***	2.500***
	(0.261)	(0.525)
Liabilities > assets at filing	-0.296	-0.288
	(0.539)	(0.536)
Group filing	-0.171	-0.434
	(0.874)	(0.837)
Distributable assets	4.569***	4.633***
	(1.009)	(1.002)
Involuntary	2.016	2.159
	(3.919)	(3.975)
Got DIP loan	3.991***	3.818***
	(1.000)	(1.007)
Liquidated	-9.419***	-9.312***
	(0.892)	(0.887)
Dismissed	-13.036***	-12.991***
	(0.735)	(0.721)
Quarter, industry, and district fixed effects	Yes	Yes
Observations	3,280	3,280
R-squared	0.236	0.239

TABLE VI – *continued*

Panel B: Sample split by bankruptcy outcome

Dependent variable:	*Months in bankruptcy*					
Sample:	Reorganized		Liquidated		Dismissed	
Busy court	11.069*	11.887**	-4.189	-11.356***	-4.951	-4.779
	(5.892)	(5.450)	(4.332)	(4.195)	(4.107)	(4.486)
Busy court * ln(size)	--	-0.504	--	4.772***	--	-0.155
		(1.106)		(0.973)		(1.031)
Ln(size)	1.482***	1.276	2.635***	5.046***	0.832**	0.734
	(0.551)	(0.820)	(0.426)	(0.776)	(0.357)	(0.754)
Liabilities > assets at filing	-0.888	-0.870	-1.762*	-1.711*	1.696**	1.694**
	(1.070)	(1.068)	(0.932)	(0.915)	(0.797)	(0.801)
Group filing	-1.464	-1.397	-0.559	-1.274	2.116	2.122
	(1.606)	(1.608)	(1.352)	(1.300)	(1.719)	(1.717)
Distributable assets	-4.592	-4.613	3.451***	3.686***	5.440***	5.443***
	(3.907)	(3.911)	(1.113)	(1.118)	(1.972)	(1.971)
Involuntary	8.790**	8.732*	2.351	2.550	-7.294***	-7.270***
	(4.363)	(4.420)	(5.016)	(5.247)	(2.726)	(2.711)
Got DIP loan	-1.504	-1.460	6.365***	6.342***	8.143***	8.164***
	(1.938)	(1.936)	(1.680)	(1.611)	(2.051)	(2.076)
Quarter, industry, and district fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	953	953	1,194	1,194	1,133	1,133
R-squared	0.131	0.131	0.222	0.244	0.101	0.101

TABLE VII
THE EFFECT OF CASELOAD ON RECIDIVISM

This table explores the relation between the change in caseload due to BAPCPA and the likelihood a firm re-files for bankruptcy. The dependent variable is equal to one if the firm filed for either Chapter 11 or Chapter 7 bankruptcy within three years of its original bankruptcy filing, but more than 3 months after that date. Only firms that were either reorganized or dismissed from court in their original filing are included in the sample. All independent variables are defined as in Table V, with the addition of a dummy variable equal to one if the firm's original filing was dismissed from court. For clarity, the key variables that identify the impact of caseload are shaded. All regressions include 89 district fixed effects, 16 quarter fixed effects, and 30 industry fixed effects. All models are estimated using linear least squares. Standard errors are clustered by bankruptcy district and reported in parenthesis. ***, ** and * indicate statistical significance at 1%, 5%, and 10% level, respectively.

Dependent Variable:	*Re-filed for bankruptcy within 3 years*	
Busy court	0.115**	0.127**
	(0.050)	(0.050)
Busy court * ln(size)	--	-0.008
		(0.007)
Ln(size)	0.001	-0.003
	(0.003)	(0.004)
Liabilities > assets at filing	-0.009	-0.009
	(0.008)	(0.008)
Group filing	-0.005	-0.004
	(0.015)	(0.015)
Distributable assets	-0.024	-0.023
	(0.038)	(0.038)
Involuntary	-0.043**	-0.044**
	(0.019)	(0.018)
Got DIP loan	0.025	0.027
	(0.017)	(0.017)
Dismissed	0.056***	0.056***
	(0.010)	(0.010)
Quarter, industry, and district fixed effects	Yes	Yes
Observations	2,086	2,086
R-squared	0.037	0.037

TABLE VIII
THE EFFECT OF CASELOAD ON C&I LOAN CHARGE-OFFS

This table shows how changes in caseload affected the performance of commercial and industrial (C&I) loans held by commercial banks. These panel regressions use regulatory data reported by commercial banks at year-end from 2004-2007. The dependent variable is defined as the total charge-offs on C&I loans reported by the bank during the calendar year less any recoveries received on C&I loans, as a percentage of the average total outstanding balance of C&I loans held by the bank over the year. *Busy court* is defined as the interaction of a *post-BAPCPA* dummy, equal to one for all 2006 and 2007 observations, and *-1*non-business caseload*. Because some banks have branches in multiple bankruptcy districts, *non-business caseload* in this table is defined as the weighted average non-business share of court caseload across all districts in which the bank had deposits in 2003. The share of deposits held in each bankruptcy district serves as the weight in this average. *Asset growth* is defined as the log difference in assets from the previous year. *Net charge-off rate on all other loans* is defined similarly to the dependent variable. In the second and third columns controls are added for local economic conditions. All regressions include fixed effects for the 7,741 banks included in the sample as well as year fixed effects. All models are estimated by OLS. Standard errors are clustered by bank to account for serial correlation across years, and are reported in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% level, respectively.

Dependent Variable:	*Net charge-offs on C&I loans (% of total C&I loans)*		
Busy court	0.375**	0.437**	0.484**
	(0.188)	(0.194)	(0.213)
Busy court * ln(Assets)	--	--	-0.008
			(0.015)
Asset growth	-0.395***	-0.382***	-0.380***
	(0.096)	(0.097)	(0.097)
Net charge-off rate on all other loans	0.673***	0.664***	0.664***
	(0.067)	(0.068)	(0.068)
Ln(per capita income)	--	-0.822	-0.853
		(0.549)	(0.552)
Ln(population)	--	-2.336***	-2.362***
		(0.756)	(0.756)
Unemployment rate	--	0.067**	0.068**
		(0.030)	(0.030)
House price appreciation	--	-0.194	-0.165
		(0.226)	(0.228)
Fixed effects:			
Bank	Yes	Yes	Yes
Year	Yes	Yes	Yes
Observations	29,012	29,012	29,012
R-squared	0.022	0.023	0.023

TABLE IX

THE EFFECT OF CASELOAD ON ASSET SALES IN BANKRUPTCY

This table explores the relation between the change in caseload due to BAPCPA and asset sales in bankruptcy. In the first two columns, the dependent variable is equal to one if the firm sold any assets in bankruptcy. In the last two columns the dependent variable is the sale price scaled by the assets of the firm, for this firms that had at least one asset sale. All control variables are defined as in Table V, with the addition of a control for whether the asset sale was for substantially all of the assets of the firm. For clarity, the key variables that identify the impact of caseload are shaded. All regressions include 89 district fixed effects, 16 quarter fixed effects, and 30 industry fixed effects. All models are estimated using linear least squares. Standard errors are clustered by bankruptcy district and reported in parenthesis. ***, ** and * indicate statistical significance at 1%, 5%, and 10% level, respectively.

Dependent Variable:	*Has asset sale*		*Sale price / assets*	
Busy court	0.086**	0.111***	-0.191	-3.010
	(0.038)	(0.034)	(0.660)	(1.922)
Busy court * ln(size)	--	-0.017	--	1.070*
		(0.011)		(0.585)
Ln(size)	0.053***	0.045***	-0.525**	-0.182**
	(0.005)	(0.007)	(0.254)	(0.074)
Liabilities > assets at filing	-0.007	-0.007	-0.727*	-0.753*
	(0.012)	(0.012)	(0.434)	(0.428)
Group filing	0.080***	0.083***	0.272	0.215
	(0.020)	(0.021)	(0.236)	(0.216)
Distributable assets	0.031***	0.031***	-0.122	-0.287
	(0.011)	(0.010)	(0.354)	(0.383)
Involuntary	0.086	0.085	0.084	0.239
	(0.068)	(0.068)	(0.292)	(0.271)
Got DIP loan	0.259***	0.260***	0.463	0.582
	(0.028)	(0.027)	(0.455)	(0.484)
Substantially all assets sold	--	--	0.426	0.502*
			(0.281)	(0.297)
Quarter, industry, and district fixed effects	Yes	Yes	Yes	Yes
Observations	3,280	3,280	422	422
R-squared	0.258	0.259	0.193	0.229

TABLE X
DEBTORS' REACTION TO CASELOAD SHOCKS

This table explores whether the caseload of the bankruptcy court affects the debtors' propensity to file with a pre-packaged bankruptcy plan or obtain debtor-in-possession financing. In the first two columns, the dependent variable is equal to one if the firm filed with a pre-packaged plan. In the last two columns the dependent variable is equal to one if the firm obtained DIP financing. In both regressions, the 47 firms that filed with pre-packaged plans are included in to the sample. All independent variables are defined as in Table V, with the addition of a control for pre-packaged bankruptcy cases in the last two columns. For clarity, the key variables that identify the impact of caseload are shaded. All regressions include 89 district fixed effects, 16 quarter fixed effects, and 30 industry fixed effects. All models are estimated using linear least squares. Standard errors are clustered by bankruptcy district and reported in parenthesis. ***, ** and * indicate statistical significance at 1%, 5%, and 10% level, respectively.

Dependent Variable:	*Filed with pre-packaged plan*		*Obtained DIP Loan*	
Busy court	-0.026	-0.044	0.110	0.066
	(0.030)	(0.029)	(0.067)	(0.056)
Busy court * ln(size)	--	0.012*	--	0.029**
		(0.007)		(0.011)
Ln(size)	0.012***	0.017***	0.090***	0.104***
	(0.003)	(0.005)	(0.005)	(0.007)
Liabilities > assets at filing	0.013**	0.013**	0.021*	0.022*
	(0.005)	(0.005)	(0.012)	(0.012)
Group filing	0.032***	0.030***	0.105***	0.101***
	(0.009)	(0.009)	(0.019)	(0.019)
Distributable assets	0.002	0.002	0.016	0.016
	(0.004)	(0.004)	(0.014)	(0.014)
Involuntary	-0.003	-0.002	-0.006	-0.004
	(0.023)	(0.024)	(0.090)	(0.090)
Pre-packaged bankruptcy	--	--	0.162**	0.154**
			(0.069)	(0.067)
Quarter, industry, and district fixed effects	Yes	Yes	Yes	Yes
Observations	3,327	3,327	3,327	3,327
R-squared	0.082	0.085	0.262	0.264