

Corporate Bankruptcy and Bank Competition

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Abstract

Bankruptcy procedures around the world involve long delays that erode firm value and raise the cost of capital. These inefficiencies are likely to be greater in a banking sector where creditors lack the incentive to undertake the costly effort required to recover assets from defaulting borrowers. Using a unique dataset on corporate bankruptcy filings in India, we analyze whether entry deregulation in the banking sector that increased competition affects creditors' incentives to pursue delinquent firms. Exploiting regional variation in the entry of new banks we find that private bank entry in a region is associated with an increase in filings by firms seeking a stay on assets to escape increased pressure from creditors. This increase in filings is more pronounced in regions with stronger creditor rights. Bank entry is also associated with more a significant decline in the duration of bankruptcy proceedings, and an increase in workouts. The results are consistent with creditors exerting greater effort to pursue delinquent firms and resolve bankruptcies more quickly following deregulation.

Keywords: Bankruptcy, creditor rights, bank competition, managerial incentives

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Bankruptcy procedures are a way of enforcing debt contracts, and the efficiency of this process can affect the cost and allocation of capital (Hart, 2000; Stiglitz, 2001). The bankruptcy process, however, can be highly inefficient, especially in emerging markets. For example, the average duration of bankruptcies ranges from three to seven years in Brazil, India, Indonesia, and Russia (The World Bank, 2010), and insolvency practitioners estimate that on average nearly 50% of firm value is lost because of delays and other inefficiencies (Djankov, Hart, McLiesh, and Shleifer, 2008). The existing literature focuses on how differences in bankruptcy laws may explain many of these inefficiencies (see Hotchkiss, John, Mooradian and Thorburn (2008), for an extensive survey). Laws however are difficult to change. For example, India is yet to implement a law passed in 2002 that was intended to improve its woefully inefficient bankruptcy courts, due to opposition from the judiciary. But the efficiency of the bankruptcy process may also depend on the incentives and actions of creditors. In this paper, we focus on this unexamined question: Does banking sector competition affects corporate bankruptcy outcomes?

We propose a simple argument as to why bankruptcy outcomes are likely to depend on banking sector competition: Absence of competition allows banks to enjoy the “quiet life” and avoid the effort required to pursue defaulting borrowers. Pursuing delinquent firms is costly for bank managers (and loan officers) because it involves effort and time; particularly when the local bankruptcy process is inefficient and creditor rights are weak. Absent strong incentives, bank managers will not undergo such costly effort and will prefer to live the quiet life (Hicks, 1935; Bertrand and Mullainathan, 2003). In this case, the bankruptcy process may be characterized by inefficient outcomes and long delays because creditors lack the incentive to undertake the effort necessary to push firms

to repay their loans, come up with a restructuring plan, or recover assets more quickly by reducing delays in the bankruptcy process. Competition, however, decreases managers' ability to live a quiet life (Berger and Hannan, 1998; Giroud and Mueller, 2009), and can increase creditors' incentives to exert greater effort in the bankruptcy process.

Improved creditor incentives due to an increase in competition among banks may affect bankruptcy outcomes once a firm is in the bankruptcy process, as well as the type of firms filing for bankruptcy. If creditors become more aggressive in trying to recover assets, more firms may file for bankruptcy to get an automatic stay on assets. The amount of time firms spend in the bankruptcy process may also decline if creditors exert more effort to push cases through the legal process, by agreeing to an asset restructuring plan, for example. The type of firms filing for bankruptcy may also change. If banks pursue borrowers more quickly following an initial delinquency, the average health of a firm that files for bankruptcy protection may increase. There may also be an increase in filings among firms where recovering assets is likely to be more difficult for a creditor -such as firms with fewer tangible assets. The outcome of bankruptcy, workouts versus liquidation, may also shift. For example, liquidations in India can take 10 years or longer and are subject to litigation and management delay tactics that erode firm value, making workouts more preferable to banks seeking quicker recovery of assets.

To investigate the role of creditors' incentives in the bankruptcy process, we examine how banking sector competition is related to corporate bankruptcy outcomes in India. Using India as the empirical context has several advantages. First, and most importantly, we are able to observe detailed data on over 4,000 corporate bankruptcy filings along with the outcome of each filing. These data constitute the population of bankruptcy filings between 1991 and 2004 that are filed with the federal bankruptcy

court, the Board for Industrial and Financial Restructuring (BIFR). Second, we exploit the deregulation of the Indian banking sector in the 1990s, which led to the entry of privately-owned banks into a sector dominated by monopolistic, government-owned banks. The geographic variation in private bank entry following deregulation allows us to identify local increases in banking sector competition. While the bankruptcy process is centralized in the single federal court, geographic variation of bank entry following deregulation helps us identify the potential sources for any observed correlation between bank entry and bankruptcy outcomes. Exogenous variation in local creditor rights also facilitates our ability to identify the exact channels through which this bank entry affects bankruptcy outcomes. Third, since India's banking system and bankruptcy process is comparable to those of other countries, for example, the market share of Indian government banks is similar to other developing countries (La Porta, Lopez-de-Silanes, and Shleifer, 2002), as are the delays in bankruptcy (The World Bank, 2010), our study can shed light on the relationship between banking sector competition, creditor incentives, and bankruptcy outcomes more broadly.

Making use of variation in both the timing and extent of bank entry across India's more than 500 districts, we find that private bank entry is associated with a significant increase in the number of corporate bankruptcy filings. The magnitude is economically large. A standard deviation increase in the share of deposits controlled by private banks in a district is associated with an increase of 0.53 filings per million people in that district, relative to an average of 0.16 filings per million people. The increase in filings occurs between one to two years after bank entry, and there is no observable pre-existing differential trend in the number of bankruptcy filings prior to private bank entry.

The increase in bankruptcy filings is driven by non-distressed firms seeking a stay

on creditor claims, rather than by an increase in the number of truly distressed firms. Private bank entry is positively associated with an increase in filings that are eventually dismissed by the bankruptcy court as frivolous, but the number of filings that are accepted by the court as legitimate does not change. It is widely acknowledged that the automatic stay on all creditor claims once a firm files for bankruptcy in India creates an incentive to file in order to avoid creditors, and has been “grossly misused by unscrupulous firms” (Government of India, 2002). Given this automatic stay on assets, the increase in filings by firms that are not actually distressed suggests that firms sought to avoid increased creditor scrutiny following private bank entry.

Bank entry is also associated with a change in both the duration and outcomes of bankruptcy. Despite the increase in filings, which may increase the burden on the bankruptcy court, private bank entry is associated with an economically significant decrease in the amount of time taken by the BIFR to render a final decision for filings that are not dismissed as frivolous. A standard deviation increase in the share of deposits held by private banks in a district is associated with an average decline in the amount of time until a filing is resolved of 481 days (1.3 years), about a third of the average time of 1,488 days (4.1 years). The entry of private banks in a region is also positively associated with a shift away from liquidation orders in favor of more restructuring decisions. The shift to restructurings, which require costly negotiations between lenders and firms, and the significant decrease in the time spent by firms in bankruptcy, is consistent with an increase in creditors’ incentives to recover assets following deregulation.

Our findings do not appear to be driven by a change in the supply or allocation of credit following bank entry or other time-varying, district-level characteristics that may be related to both bank entry choices and bankruptcy outcomes. For example, the results

are robust to including controls for district-level growth and credit, including total firm-level sales, number of bank branches, and total credit at the district level, state level GDP, and state-year fixed effects. Our findings also do not appear to be driven by an increase in product market competition following bank entry, which may lead to more firm exits.

We also examine whether bank entry is associated with a change in the characteristics of firms filing for bankruptcy, and whether banks choose to enter districts based on firm characteristics in that district. Using another database of Indian firms with more detailed financial characteristics, the Prowess database, we identify firms that have filed for bankruptcy with the BIFR and using firm-level regressions, we do not find that bank entry is associated with a change in the average sales, assets, debt, and interest payments of firms that have filed for bankruptcy. Using data on all firms and not just bankrupt firms, we show that the financial characteristics of firms do not vary significantly with bank entry in a district. Hence the evidence suggests that banks do not appear to selectively enter districts based on the characteristics of firms located in that district. Lastly, we show that our results are robust to controlling for the characteristics of firms filing for bankruptcy.

Overall, the evidence suggests that bank entry is related to bankruptcy outcomes through its effect on the incentives of creditors to pursue repayment of loans. The increase in frivolous filings by firms seeking the protection of the bankruptcy court is consistent with lenders more aggressively pursuing delinquent firms following private bank entry, and the reduced duration before resolution and shift to restructurings over liquidations suggests that entry also improves creditors' incentives to recover assets more quickly.

An association between bank entry, the number of bankruptcies, and differences

in local creditor rights, which are likely to facilitate lenders' ability to influence the bankruptcy process, provides additional evidence that creditors' incentives may affect bankruptcy outcomes. Starting in 1993, the Indian government introduced specialized courts known as debt recovery tribunals (DRTs), to speed up the resolution of debt recovery claims. Using the staggered introduction of these courts to capture exogenous changes in local creditor rights across regions and years, we find that the positive association between private bank entry and the number of bankruptcy filings is greater in states with stronger creditor rights, as captured by the presence of a DRT.

An important implication of these findings is that less competitive banking sectors may contribute to the inefficiency of some bankruptcy systems by reducing creditor incentives to exert costly effort to pursue delinquent borrowers. These findings complement the existing literatures that analyze how differences in the legal system affect the bankruptcy process (see Hotchkiss, John, Mooradian, and Thorburn (2008) for a survey) and how differences in bankruptcy law affect lending practices (Qian and Strahan (2007), Davydenko and Franks (2008)), firms' capital structure choice (Acharya, Sundaram, and Kose (2011)), and innovation (Acharya and Subramanian (2009)). To the best of our knowledge, ours is the first paper to look at the relationship between banking sector competition and bankruptcy outcomes.

Our study also offers insight into why outcomes may vary within a given bankruptcy process. Existing empirical studies have focused on how the complexity of debt arrangements (Gilson, John and Lang (1990), Asquith, Gertner and Scharfstein (1994), industry distress (Acharya, Bharath and Srinivasan (2007)), managerial incentives (Eckbo and Thorburn (2003)), and differences across bankruptcy judges (Chang and Schoar (2007)) may affect bankruptcy outcomes within a given legal framework. We provide evidence that banking sector competition may also affect outcomes within a

given bankruptcy process.

Our study also contributes to the law and finance literature by showing that stronger creditor rights combined with an increase in creditor incentives to monitor borrowers affects the use and outcome of bankruptcy. Visaria (2008) finds that bankruptcy reforms can reduce borrower delinquency and affect credit market outcomes, and Claessens and Klapper (2005) find that creditor rights may affect the both the use of bankruptcy and resolution of financial distress. Our results suggest that the effect of creditor rights and bankruptcy reforms may also depend on the competitive characteristics of the financial sector.

Finally, our study is related to the large literature on the effects of banking sector competition. Recent evidence suggests that banking sector competition and bank entry may affect firms' access to credit (Petersen and Rajan (1995), Beck, Demirguc-Kunt, and Maksimovic (2004), Zarutskie (2006)), small business credit (Berger, Goldberg, and White (2001)), economic growth (Jayaratne and Strahan (1996), Cetorelli and Gambera (2001)), entrepreneurship (Black and Strahan (2002)), firm size and market structure (Cetorelli and Strahan (2006)), product market competition (Bertrand, Schoar, and Thesmar (2007)), the proportion of bad loans (Guiso, Sapienza, and Zingales (2007)), financial stability (Berger, Klapper, and Turk-Ariss (2009)), and firm sales and investment (Giannetti and Ongena (2009)). There is also evidence to suggest that government ownership of banks is associated with less developed financial markets and slower economic growth (La Porta, Lopez-de-Silanes, and Shleifer (2002)), politically motivated lending (Sapienza (2004)), and inefficient capital allocation (Morck, Yavuz, and Yeung (2008)). Our study suggests that banking sector entry may also affect the ex-post monitoring of borrowers and bankruptcy outcomes, which has potentially important

implications for firms' financing and investment choices.

Our paper is organized as follows: Section I describes the Indian bankruptcy process and banking sector; Section II describes the data; Section III describes the main results; Section IV analyzes creditor rights; Section V provides robustness checks; and Section VI concludes.

I. The Bankruptcy Process and Banking Sector in India

In this section, we discuss the bankruptcy process in India and the banking sector reforms we make use of in our empirical analysis. We also discuss how banking sector competition may affect creditor incentives in the bankruptcy process.

A. Bankruptcy in India

Our analysis of bankruptcy outcomes and bank entry makes use of two regulatory acts in India: the Sick Industrial Company Act (SICA) and the Recovery of Debts due to Banks and Financial Institutions Act (RDDBFI). The SICA governs bankruptcy procedures in India, while the RDDBFI Act provides regional variation in creditor rights.

A.1 Sick Industrial Company Act of 1985

SICA governs the vast majority of cases and is the most commonly used process for corporate bankruptcy filings in India (Panagariya (2008)).³ SICA applies to all industrial firms that employ more than 50 workers and have been in operation for over 5 years. SICA provides a platform for both the renegotiation of loans and the liquidation of firms. When a company files under the jurisdiction of SICA, it files with the federal

³ Other regulatory acts that govern bankruptcies in India include the Companies Act of 2002 and the Securitization and Reconstruction of Financial Assets and Enforcement of Security Interests Act of 2002 (SARFAESI). The Companies Act has not been implemented because of legal challenges. SARFAESI allows secured creditors to recover assets without court intervention, but has also been challenged in court.

bankruptcy court, the Board for Industrial and Financial Reconstruction (BIFR). The BIFR is located in the nation's capital New Delhi and oversees all SICA bankruptcy cases in India, providing a uniform treatment of all bankruptcy cases.

Pursuing delinquent firms through the Indian bankruptcy process requires creditors to exert a considerable amount of effort and time. Once a firm files for bankruptcy, there is an automatic stay on assets until the BIFR determines whether the firm is financially distressed and truly unable to repay its debts. The automatic stay of assets prevents creditors from taking any legal action against the firm until the filing is resolved. Creditors must remain actively involved during this determination, and it takes a year, on average, for the BIFR to determine whether the firm is actually financially distressed and to be admitted for the restructuring/liquidation process.⁴ The combination of long delays and the automatic stay on creditor claims creates an incentive for firms to file for bankruptcy to postpone paying creditors (Government of India, 2002), and about 30% of the filings made to the BIFR are eventually dismissed because the firms are not truly bankrupt. It is widely acknowledged in Indian policy and business circles that the bankruptcy system has been abused by firms seeking to avoid their creditors.⁵

Once the BIFR validates that a filing firm is distressed, an attempt to organize a workout for the firm is initiated. Similar to Chapter 11, the board of directors remains in control during this process. The management may propose the initial plan to reorganize

⁴ The initial enquiry to decide whether the firm is sick is made in consultation with representatives from the company, labor unions, financial institutions, and the state and federal governments (Goswami (1996), p. 51). The commonly cited reasons for delays include the BIFR's high workload (and small staff) and delaying tactics used by the firm, such as not providing financial records.

⁵ A news article noted, "The best way for Indian corporates to avoid repayment of loans to financial institutions seems to be the BIFR route," ("Cos take BIFR cover to avoid loan repayment," *The Indian Express*, June 27, 1999). In the case of Richimen Silks, the BIFR dismissed the filing noting in its ruling, "The sole motive of filing a reference...was to deny the secured creditors the opportunity to recover their dues" ("Richimen Silks BIFR reference dismissed," *The Hindu*, March 18, 2001).

the firm, and if this plan is acceptable to all creditors, it is sanctioned. If creditors do not agree with the management's plan, and if the BIFR believes that it is in the public interest to reorganize the firm, it appoints an Operating Agency (OA), typically the lead lender, to examine the turnaround possibility.

Successfully completing a workout and quicker recovery of assets requires a coordinated effort among a firm's creditors. The OA must consult with other creditors to prepare a reorganization proposal that is acceptable to all parties making concessions. Restructuring decisions are typically delayed because of a lack of cooperation from creditors when asked to make concessions (Kang and Nayar (2003-04)). There are no provisions under SICA to divide creditors into classes or to force them to accept a plan, even if the majority of creditors agree upon a plan. Therefore, restructuring can involve significant delays and the average time taken for the BIFR to render a restructuring decision is about 4 years. Hence, an increase in competition might give creditors the incentive to make concessions and agree to a restructuring plan more quickly.

While subject to even lengthier delays, liquidations can be a relatively less costly route, in terms of effort, for creditors to pursue. In the absence of a restructuring proposal agreeable to all creditors, the BIFR may recommend liquidation. For liquidations, the BIFR will either forward its opinion to the civil courts or proceed with the sale of assets and remit the proceeds to the High Court for distribution. The average time taken for the BIFR to render a liquidation decision is also about 4 years. Liquidations, however, involve especially long delays., but a firm's ability to appeal the decision in the civil courts can add even more time to the process. Panagariya (2008) notes that 48% of liquidation cases take more than 10 years to complete, and 10 percent take about 25 years (page 293).

A.2 Recovery of Debts due to Banks and Financial Institutions Act, 1993

The RDDBFI Act was passed in 1993 to strengthen creditor rights by introducing new rules for the recovery of large debts. Under this law, banks can initiate proceedings to recover outstanding debts greater than Rs. 1 million (approximately \$22,000) by filing a petition before a specialized court known as a Debt Recovery Tribunal (DRT), rather than with a civil court, as was previously done. Using a streamlined procedure, the DRTs are intended to reduce the effort and time lenders must spend seeking an initial court ruling against a delinquent firm. However, this Act does not supersede SICA. Even if the DRT rules against a firm, firms can still seek bankruptcy protection at the BIFR if they meet the criteria for financial distress.

Because of legal challenges, the DRTs were introduced in a staggered way across the different Indian states after 1993, allowing us to make use of exogenous regional and time variation in our analysis. In order to provide broad access to the DRTs, the federal government set up five tribunals over an 8-month period in 1994. The establishment of DRTs in the remaining states was delayed because of a ruling on their constitutionality. Following a decision by the Supreme Court in 1996, the remaining DRTs were quickly established, covering all states by 1999. It is unlikely that state-level objections to the DRTs would affect the specific timing of the Supreme Court ruling, or that the date of the temporary pause in establishing DRTs would be correlated with both bank entry and the number of bankruptcies across the different Indian states.⁶

⁶ See Visaria (2008) for a more detailed description of the debt recovery tribunals, and the timing of their establishment across various Indian states.

B. Banking Sector Reforms and Creditor Incentives

Our analysis of bankruptcy outcomes and creditor incentives makes use of India's banking sector deregulation in 1991. We now describe this deregulation and how it might affect creditors' incentive to pursue delinquent borrowers.

B.1 Banking Sector Deregulation

Prior to 1991, India's financial markets were heavily regulated. A highly restrictive regulatory regime, known as the "License Raj", required firms to obtain licenses for most economic activities, and many industries were reserved for government-owned firms, including much of the financial system. Bank nationalizations in 1969 and 1980 increased the share of deposits held in monopolistic, government-owned banks to over 80%, and branch licensing was rigidly controlled. Shielded from competition, Indian government-owned banks lacked proper lending incentives and exhibited a high number of non-performing loans. According to the Reserve Bank of India, around the time of banking sector deregulation in 1994, the ratio of non-performing loans to total loans of government-owned banks was 24.8% (Mohan, 2006).

Following a balance of payments crisis in 1991, a number of structural reforms were implemented that dramatically deregulated economic activities in India. In November 1991, a broad financial reform agenda was established in India by the Committee on the Financial System (CFS). A key recommendation of the CFS was to introduce greater competition into the banking sector by deregulating entry. It was argued that the entry of additional banks would improve competitive efficiency of the Indian banking system. The reforms also deregulated deposit rates, reduced requirements that banks invest in government securities, and eliminated regulatory barriers protecting government banks from competition in the market for long-term loans.

Our analysis makes use of the recommendation to allow entry by private domestic and foreign banks. New private bank entry guidelines were established in 1993, and in April 1994, the Indian government allowed foreign bank entry under the WTO General Agreement on Trades in Services. While there were no restrictions on where foreign banks could establish new branches, their expansion was by *de novo* branches only as foreign banks were not allowed to own controlling stakes in domestic banks.

Banking sector deregulation led to a significant increase in domestic private and foreign bank entry. One the eve of the reforms on March 31, 1994, there were 24 foreign banks with 156 branches in India. In the eight years following the acceptance of GATS, the total number of foreign banks increased to 41 with 212 branches as of March 2002. Private domestic banking exhibited an even larger increase. Twelve new private banks and 1,700 new branches were added between 1993 and 2004.

B.2 Impact on Creditor Incentives

An increase in banking sector competition, as captured by local private bank entry following deregulation, likely affects creditor incentives to pursue delinquent firms. Pursuing delinquent firms is costly for bank managers (and their loan officers) because it involves substantial effort and time. In India, a significant amount of time and effort is involved to pushing firms through the bankruptcy process. Even obtaining a dismissal of frivolous bankruptcy filings, where firms file for bankruptcy despite an ability to repay their debts, can take a year to resolve. Recovering assets from truly bankrupt firms, as through a renegotiation, also involves significant effort by lenders to reach an agreement that acceptable to all parties. Absent competition, banks may choose to enjoy the “quiet life” and avoid these costly activities (Hicks, 1935; Bertrand and Mullainathan, 2003). Competition, however, eliminates managers’ ability to live such a quiet life by

eliminating the rents that managers implicitly use to fund this quiet life (Berger and Hannan, 1998; Giroud and Mueller, 2009).

Improved creditor incentives to pursue delinquent borrowers and recover assets may increase the number of corporate bankruptcy filings. Rather than allow delinquent borrowers and their loans to languish on a banks' books, banks may undertake the necessary legal efforts required to pursue firms upon an initial failure to make a payment.⁷ If firms seek to avoid this increased creditor scrutiny by seeking a stay on assets at the BIFR, there may be an increase in the number of filings.

A shift in creditor incentives may also affect the type of firms filing for bankruptcy. If banks pursue borrowers more quickly following an initial delinquency, the average health of a firm that files for bankruptcy protection may increase. There may also be an increase in filings among firms where recovering assets is likely to be more difficult for a creditor—such as firms with fewer tangible assets—or among firms where the bank has relatively less to gain from the process—such as smaller firms. Competitive pressure may induce lenders to undertake the necessary efforts to pursue these cases.

The outcomes and duration of bankruptcy may also change. If the average health of firms filing for bankruptcy improves, there may be an increase in the number of filings that are eventually dismissed as frivolous because the firm is not truly bankrupt. There may also be more workouts rather than liquidations as it becomes more feasible to renegotiate loans for firms. The number of workouts may also increase if they represent

⁷ Anecdotal evidence supports the idea that the monopolistic, government-owned banks responded to increased competition by more aggressively pursuing delinquent loans. An editorial noted: "Financial sector reforms...forced banks to confront the quality of their loans and wake up to the reality of huge and rapidly growing NPAs [non-performing assets]," (EPW Editorial, July 13, 2002), and there was a decline in the proportion of non-performing loans to total loans in government-owned banks from 24.8% to 7.8%, between 1994 and 2004 (Mohan, 2006)

a more costly route (in terms of effort) relative to liquidations. While workouts allow lenders to avoid the lengthy delays in obtaining liquidation proceeds, they also require creditors to exert effort to formulate a renegotiation of a firm's debts that is acceptable to all parties involved. The amount of time firms spend in the bankruptcy process may decline if creditors exert more effort to push cases through the legal process rather than allow them to languish indefinitely in court.

The relationship between banking sector competition and bankruptcy outcomes may also be stronger in regions with better creditor rights. By reducing the number of delinquencies that are unprofitable to pursue, better creditor rights can increase the number of firms creditors are willing to pursue when no longer able to live the quiet life.⁸

II. Data

To analyze the relationship between banking sector characteristics and bankruptcy in India, we make use of two datasets. The first is a detailed dataset on the population of corporate bankruptcy filings filed annually with the BIFR, and the second is a comprehensive dataset on banks' locations, deposits, and loans across all Indian districts, from 1991 to 2004.

A. Bankruptcy Data

The bankruptcy data is hand-collected from the Board for Industrial and Financial Reconstruction and includes the population of bankruptcies filed at the BIFR from 1991 to 2004. A total of 4,185 firms filed for bankruptcy during this period. At the time this data was collected, 1,327 firms did not meet the criteria for financial distress and were

⁸ Beyond just affecting creditor incentives, banking sector competition may also affect bankruptcy outcomes through other channels. For example, banking sector competition may affect the supply and allocation of credit, which may in turn affect the type of firms filing for bankruptcy. We also discuss and explore these possibilities in our empirical analysis.

dismissed; 1,707 firms were determined to be “sick” and were admitted into the bankruptcy process; and 814 firms were still “pending” an initial decision about whether they met the criteria of financial distress.⁹ Of the 1,707 firms admitted, 992 firms were approved for liquidation, and the remaining 715 were either approved for restructuring or were still undergoing negotiations with lenders for restructuring.

We use the year that a firm files for bankruptcy and the district-level location of its head office to construct a number of bankruptcy outcome variables for each district and year. Our primary measure is total corporate filings for bankruptcy in a given district and year per million persons (*Total Filings/Population*). Table I reports the descriptive statistics for the bankruptcy measures. On average, a district has 0.16 bankruptcy filings per million people in a year.

We also disaggregate the filings into a number of categories: filings that are dismissed by the BIFR for not meeting the criteria of financial distress (*Dismissed Filings/Population*); filings where the firm has been validated as financially distressed and accepted into bankruptcy by the BIFR (*Sick Filings/Population*); and filings pending determination of financial distress (*Pending Filings/Population*). Of the firms that file for bankruptcy in an average district-year, about half are determined to be financially distressed and are admitted to the BIFR, about a third are dismissed for not meeting the criteria for financial distress (i.e. sick with negative or zero book value), and the remaining are still awaiting a decision from BIFR about whether they meet the criteria for financial distress.

⁹ A large number of the pending filings were filed in 2003 and 2004, towards the end of our sample period, and there are 337 filings whose status we are unable to classify.

The “sick” filings are further disaggregated into those where the firm and lenders are negotiating or have negotiated a restructuring agreement (*Workouts/Population*); and firms that are ordered to be liquidated by the bankruptcy court (*Liquidations/Population*). Among firms that meet the criteria of financial distress and are admitted into the BIFR for bankruptcy proceedings, about one-half are ordered by the court to be restructured and the rest to be liquidated.

To examine bankruptcy delays, we construct the average number of days taken for a successful restructuring decision (*Average Duration of Workouts*); average number of days taken for a liquidation order (*Average Duration of Liquidations*); and, the average number of days taken for either a workout or liquidation decision to be rendered by the BIFR (*Average Duration of Workouts and Liquidations*). As reported in Table I, on average, it takes 1,488 days (i.e. more than 4 years) to obtain a restructuring or liquidation decision once a firm files with the BIFR. Following the BIFR’s decision, liquidations are carried out in the civil court system, which can take ten years or more (Panagariya (2008)). The additional time spent in the civil courts to finalize the liquidation would not be captured by our data.

B. Bank Entry and Ownership Data

The data on bank entry and ownership is published by India’s central bank, the Reserve Bank of India. These quarterly data provide the deposits, loans, and number of branches in each district by bank ownership group between the years 1991 and 2004. Bank ownership categories include state, nationalized, and regional rural banks (government), and private domestic, and foreign banks.

Using data from the fourth quarter of each year, we construct several measures of banking sector characteristics at the district and year level. First, *Total Banks/Population*

is the ratio of the number of bank branches in that district and year to district-level population (in millions), which is obtained from India's 2001 census. To distinguish the relative presence of the different types of banks, we use *Private % of Deposits*, which measures the share of total deposits in that district held by domestic private banks; *Foreign Bank % of Deposits*, which is the share of deposits held by foreign banks in each district and year; and *State Bank % of Deposits*, which is the share of deposits held by state, nationalized and rural banks. The results described below are robust to using loans and branches instead of deposit shares.

In Table II we compare banking sector characteristics for all of India from the start of the reforms in 1991, to the end of our data in 2004. Bank entry deregulation led to a substantial increase in the market share of private domestic banks in India. The total deposit share of private domestic banks rises from 4% in 1991 to 18% in 2004, while the share of government banks decreases from 88% to 77% over the same period. While the overall geographical presence of foreign banks increased following deregulation, their relative market share did not because their entry was limited to fewer branches.¹⁰

Summary statistics describing bank ownership shares at the district-year level during our sample period are reported in Table III. On average, there are 67 bank branches per million people in an average district-year during our sample period. Government banks dominate the banking sector, accounting for 94% of all deposits in the average district-year in our sample. Domestic privately-owned banks account for about 6% in an average district-year, and foreign banks account for 0.15% of total deposits. The foreign bank share of ownership in an average district-year is lower than the total share of

¹⁰ Because of limits on the number of new foreign bank branches allowed under India's agreement with the WTO, foreign banks entered just 8 new districts between 1991 and 2002, and 9 additional districts between 2002 and 2004. Another 33 foreign bank branches closed during this time period, largely because of closures initiated by ANZ Grindlays Bank Ltd. and Standard Chartered Bank.

ownership reported in Table II since foreign banks are concentrated in a smaller number of districts.

III. Empirical Specification and Results

To examine the relationship between banking sector entry and bankruptcy outcomes, we estimate the following OLS district-level panel regression with district and year fixed effects for the period 1991 to 2004:

$$\text{Bankruptcy Outcome}_{dt} = \beta_0 + \beta_1 \text{Private Bank \%}_{dt} + \beta_2 \text{Foreign Bank \%}_{dt} + X_{dt} + \delta_t + \alpha_d + \varepsilon_{dt} \quad (1)$$

where *Bankruptcy Outcome* is the bankruptcy measure of interest for district *d*, in year *t*; *Private Bank %* is the share of deposits owned by private banks; and, *Foreign Bank %* is the share of deposits owned by foreign banks. (The findings are qualitatively similar if we use either bank loans or bank branches at the district level, instead of deposit shares. An example of our later findings when we use share of bank branches instead is provided in Appendix Table I.) We include district fixed effects, α_d , to control for time-invariant district characteristics that may explain the incidence and outcome of bankruptcies in that district, and we include year fixed effects, δ_t , to control for any country-level changes in the bankruptcy process.¹¹ Other time-varying controls are included in X_{dt} , and the standard errors are clustered at the district-level.

Since the regression controls for district-level fixed effects, *Private Bank %* and *Foreign Bank %* will capture the entry of private and foreign banks in a district. Specifically, β_1 and β_2 will show how changes in bankruptcy outcomes are related to

¹¹ Two related reforms undertaken during this period are the RDDBFI Act introducing the debt recovery tribunals beginning in 1993 (which we explore below) and the SARFAESI Act of 2002. Since SARFAESI was implemented at the national level, any effect it might have on overall bankruptcies at the BIFR will be captured by the time dummies. Our findings below are also robust to dropping post-2001 bankruptcies.

changes in private and foreign bank ownership within that district. We do not include government banks' ownership share of deposits in the regression since it is perfectly collinear with the sum of private and foreign ownership shares. Our subsequent findings are also robust to instead running separate regressions for government, private, and foreign bank ownership shares, or to using $1-HHI$, where HHI is the Herfindahl index of bank deposits, as an alternative measure of banking sector competition. An example of the HHI estimates is reported in Appendix Table II.

We use a variety of measures to control for other factors that may also affect the incidence and outcomes of bankruptcy. To control for economic growth, we use the log of state-level GDP in each year and state, $\text{Log}(GDP \text{ of State})$. (District-level GDP data is not available in India). All the results are also robust to using the total amount of loans in a given district and year as an alternative measure of district-level growth. We include the number of bank branches per million people, $\text{Total Banks/Population}$, to control for the size of the banking sector at the district level.

A. Changes in Bankruptcy Outcomes Following Bank Entry

We report the results from specification (1) in Table IV. In column 1, we find that private bank entry into a district is associated with an increase in the total number of bankruptcy filings. Because the estimation includes district-level fixed effects, the positive coefficient on Private Bank \% indicates that an increase in the share of deposits held in private banks in a region is positively associated with changes in the number of bankruptcy filings in a district. This effect is also economically large. A one-standard deviation increase in Private Bank \% , or 12.7 percentage points, is associated with a one-standard deviation increase in bankruptcy filings, about 0.53 per million people (average filings for the sample is 0.16 per million people). The positive relationship between the

number of filings and private bank entry is robust to controlling for economic growth, size of financial markets, and year fixed effects. We do not find a significant relationship between foreign bank entry and the number of bankruptcy filings.

The increase in filings following private bank entry is driven by an increase in filings that are dismissed by the BIFR because they are not financially distressed (Table IV, column 2). The number of financially distressed firms does not significantly change following private bank entry (column 3). The evidence suggests that banking sector entry increases creditor incentives to monitor borrowers more aggressively, leading more firms to seek the protection of bankruptcy so as to escape creditors, rather than due to financial distress. As noted earlier, the automatic stay on assets along with the long delays at the BIFR creates an incentive for firms to file for bankruptcy to avoid paying creditors (Government of India (2002), Panagariya (2008)). There is also an increase in the number of filings still pending determination of financial distress (column 4).

While there is no increase in the number of financially distressed firms following private bank entry, there is a shift in whether these filings are more likely to end up in a restructuring (i.e. 'workouts') versus liquidation. This is seen in Table V. Of the firms that are declared sick and admitted into the bankruptcy process, private bank entry is associated with an increase in the number of restructuring decisions (column 1). A one percentage point increase in the share of deposits held by private banks is associated with an additional 0.006 workouts per million persons (average workouts for the sample are 0.037 per million persons). Since the number of sick firms does not increase with private bank entry, the increase in workouts must come from a decrease in liquidations. This is in fact what we observe in column 2. There is no discernible effect of foreign bank entry on the relative use of workouts and liquidations.

B. Change in Bankruptcy Duration

Bank entry may improve the incentives of creditors to speed up the recovery of assets from defaulting borrowers. To investigate, we consider the average number of days taken for the bankruptcy court to sanction a restructuring scheme or a liquidation proposal. The results reported in Table VI show that private bank entry is significantly negatively related to the average duration of bankruptcy (column 1). A one standard deviation increase in the share of deposits held by private banks in a district is associated with an average duration that is 481 days (1.3 years) shorter, which is about a third of the average total duration of 1,488 days (4.1 years). Foreign bank entry is also associated with a drop in average duration, but the coefficient is not statistically significant at conventional levels (Table VI, column 1).

The drop in the average duration of a workout or liquidation decision is not just driven by a shift away from liquidations. This can be seen in columns 2 and 3 of Table VI where we consider average duration for workouts and liquidations separately. While the decline in duration for workouts is not statistically significant, there is a similar and economically large negative correlation between private bank entry and duration for both workouts and liquidations. A one standard deviation increase in the deposit shares of private banks is associated with an average decrease of 330 days (11 months) in the duration of workouts and a decrease of 542 days (18 months) for liquidations, where the average duration is about 4 years for both decisions. Foreign bank ownership is also associated with a significant decline in the average duration of liquidations.

C. Bank Entry, Firm Ownership, and Bankruptcy Outcomes

Bankruptcy outcomes also appear to vary based on the ownership of filing firms. As

reported in Table VII, we find that private bank entry is associated with an increase in bankruptcy filings by private firms (column 1), but is negatively related to the number of filings by government firms (column 2). This finding suggests that the impact of private bank entry may vary based on the political connections of bankrupt firms, and private banks may be less willing or able to pursue delinquent, government-owned firms. In unreported results, we find that the shift away from liquidations towards more workouts is driven by the filings of private firms and not government firms. Restricting the sample to bankruptcy filings by government firms, we also find that both workouts and liquidations decline with private bank entry.

IV. Interpretation of Evidence

In this section, we provide an initial interpretation of the findings. We then make use of the variation in local creditor rights to further test the role of creditors.

A. The Role of Creditors

The observed relationship between banking sector entry and bankruptcy outcomes suggests that creditors' incentives affect the bankruptcy process. Private banks may be more motivated to monitor borrowers relative to government-owned banks, while government-owned banks, facing a more competitive environment, may have improved incentives to monitor loans and pursue delinquent firms.¹² The evidence appears consistent with both possibilities. The increase in filings, particularly dismissed filings, is suggestive that lenders are more aggressively pursuing delinquent firms when there is

¹² A Reserve Bank of India study notes that the entry of private domestic and foreign banks resulted in a decline in the market share of government-owned banks, but the latter group responded to the "challenges of competition" and significantly improved their profitability (Mohan (2006)).

more private bank entry.¹³

The shift away from liquidations towards restructurings, and the decrease in delays in bankruptcy are consistent with the argument that creditors' incentives affect bankruptcy outcomes. Since liquidation decisions are highly contested and appealed over several years in the courts, more competition among banks may create an incentive for creditors to make additional concessions in restructuring negotiations so as to avoid lengthy liquidations. Similarly, the drop in average duration of bankruptcy is consistent with lenders trying to recover assets more quickly, since delays further erode firm value. One of the commonly cited reasons for the long delays at the BIFR is that creditors are slow to respond to requests for making concessions in workouts (Kang and Nayar (2003-04)). The large decrease in duration suggests that making concessions may be one way in which banks attempt to recover assets more quickly.

The decline in government-owned firms' bankruptcy filings after private bank entry suggests that there may be limitations to lenders' ability to affect bankruptcy outcomes. The differential impact of private bank entry on government firms indicates that private banks may be limited in their ability to pursue politically connected government-owned firms. Similarly, the absence of a significant association between foreign bank entry and bankruptcy outcomes suggests that foreign banks may be relatively disadvantaged in navigating the bankruptcy process.

¹³ Since we do not observe the lead lender of bankrupt firms, we cannot determine the fraction of increased filings where the firm's primary lender is a government-owned bank. But since private banks account for a small fraction of loans and deposits overall, our results are highly likely to include filings by firms who owe money to government-owned banks.

B. Changes in Creditor Rights

To further investigate whether lenders' incentives affect bankruptcy outcomes, we make use of local variation in creditor rights caused by the RDDBFI Act. Through this law, the Indian government introduced specialized courts known as Debt Recovery Tribunals (DRTs) to speed up the debt recovery process for lenders. As noted earlier, the staggered introduction of DRTs over time and across the different states is exogenous to district-level bankruptcy characteristics. We define a variable *DRT in State* to be equal to one if the government has set up a debt recovery tribunal in that state by that year, and equal to zero otherwise.¹⁴ We consider the interaction between creditor rights, as measured by *DRT in State*, and private and foreign bank entry. Here the error term is clustered at the state instead of the district level so as not to overestimate the impact of the presence of a DRT. If our results are driven by creditors affecting bankruptcy outcomes, we expect the relationship between bank entry and bankruptcy filings to be stronger in regions where creditors have greater rights to pursue delinquent firms. These estimates are reported in Table VIII.

Consistent with the view that lenders' incentives to monitor borrowers can influence bankruptcy outcomes, we find that the correlation between private bank entry and bankruptcy filings increases when creditor rights are stronger. As seen in Table VIII, a one percentage point increase in private bank ownership is associated with 0.024 increase in the number of bankruptcy filings when no DRT is present and an increase of 0.029 when a DRT is present, corresponding to a 20 percent increase in total filings. This corroborates our interpretation that creditor incentives to monitor borrowers can affect

¹⁴ While the DRTs have jurisdiction over neighboring states, we consider whether a particular state has a DRT in order to capture the fact that distance from the court may affect the rights of creditors.

bankruptcy outcomes. The DRTs, however, appear to have little direct effect on bankruptcy filings. The main coefficient for *DRT in State* is not statistically different from zero.¹⁵

Interestingly, strong creditor rights are particularly important for foreign banks. Foreign bank entry is associated with an increase in filings when creditor rights are strong, but negatively associated with filings when a DRT is not present (Table VIII). A one percentage point increase in the share of deposits held by foreign banks is associated with a 0.090 increase in filings per million persons when a DRT is present, but a 0.092 decrease in regions without a DRT. This result suggests that foreign banks may face more difficulty navigating local bankruptcy procedures in the absence of strong creditor rights.

In unreported results, we find that the increase in filings in districts with both stronger creditor rights and more foreign bank entry is driven by an increase in dismissed filings and not by an increase in distressed firms, which suggests that firms file to escape increased creditor scrutiny following foreign bank entry.

V. Robustness Tests

In this section we discuss the robustness of our results, and examine other possible channels through which bank entry might be related to bankruptcy outcomes.

A. The Impact of Bankruptcies on Bank Entry

We start out by investigating whether reverse causality may be driving some of our findings. For example, if bankruptcies in a region adversely affect the health of incumbent banks, reducing their ability to meet local demand for loans, new banks may

¹⁵ Both the private and foreign shares of deposits in this regression are demeaned such that the estimate for *DRT in State* accurately reflects the average effect of a DRT on bankruptcy filings.

choose to enter districts with more bankruptcies. Bankruptcies of older firms may also clear the way for entry by new firms, which in turn may attract entry by new banks hoping to finance these firms.

However, the correlation between bank entry and bankruptcy outcomes does not appear to be driven by reverse causality. This is seen in Table IX where we add lags and leads of the private bank entry measure to the base specification. If the positive correlation between bank entry and bankruptcies is driven by a change in bankruptcies affecting bank entry choices, then we would expect to find a positive correlation between *current* bankruptcy levels and *future* private bank entry after controlling for contemporaneous entry (Wooldridge (2001), page 285). However, the results show that bank entry in year $t+1$ is uncorrelated to current bankruptcies (Table IX, column 1), and instead, bank entry in $t-1$ is positively correlated with bankruptcies (column 2). In fact, we find that our measure for contemporaneous bank entry is primarily capturing the impact of previous bank entry going back two years (column 3); in unreported estimates we find no evidence of an effect for bank entry in year $t-3$. The lagged impact of bank entry is consistent with causality running from bank entry to bankruptcies rather than vice versa.

B. Factors Related to Banks' Entry Choices

While district-level fixed effects will capture time-invariant differences across districts that are correlated with both bank entry and bankruptcy outcomes, and country-level trends will be absorbed by the inclusion of year fixed effects, another possibility is that some of the observed correlations between bank entry and bankruptcy outcomes reflect time-varying, district-level characteristics that are related to both bank entry choices and bankruptcy outcomes. For example, private banks may be more likely to

enter districts with greater future growth potential, and higher growth may also be associated with greater bankruptcy rates. Or, private bank entry may be more likely in districts where incumbent government-owned banks are burdened by non-performing loans and future bankruptcies may increase irrespective of private bank entry.

We take several steps to investigate whether differential growth rates across districts may be driving some of our results. First, we use the total amount of loans at the district level to control for district-level growth. (Our prior estimates used state-level GDP). Second, we control for the degree of urbanization at the district level, since urbanization is correlated with growth. Third, we include state-year fixed effects to non-parametrically capture differential growth trends across India's states. Fourth, we control for output growth at the district-level using firm-level sales data. The positive correlation between private bank entry and total filings is robust to including these alternative measures. Controlling for the log of total loans at the district level (Table X, column 1), allowing districts to trend differently based on their level of urbanization (column 2), using state-year fixed effects (column 3), or controlling for district-level sales (Table XI, column 3) does not affect our findings.¹⁶

We also find that the positive correlation between private bank entry and filings is robust to the extent of underperforming loans in a district. Specifically, we control for lending to government-owned firms in a district, since preferential loans are more likely to be made to inefficient (but politically connected) government firms. This is seen in

¹⁶ Urbanization is an indicator that is equal to one if a district's share of citizens located in urban areas is in the top quartile according to the 2001 Census. Since the census data is only available for 2001 we interact this indicator with year dummies to control for differential time trends. Our results are similar if we define urbanization more broadly (above median) or more narrowly (top decile). Controlling for urbanization also ensures that our findings are not driven by new bank entry being concentrated in urban districts with rising real estate prices, which might affect the incentives of lenders to liquidate firms and recover underlying assets.

Table XI. Using information on firm-level sales and loans at the district-level provided in Prowess, a firm-level financial dataset covering nearly 80% of industrial output in India, we find that controlling for the share of loans to government firms in a district (Table XI, column 1), or the share of sales by government firms in a district (column 2) does not affect our findings.¹⁷

For institutional reasons, bank entry choices are unlikely to be correlated with differences in bankruptcy enforcement at the district level. All bankruptcy rules and procedures at the BIFR, including the financial criteria for determining sickness and the procedures for obtaining a restructuring or liquidation order, are enforced at the federal level. The members of the BIFR court, which is located in New Delhi, are career bureaucrats appointed by the federal government. This centralized decision process minimizes the chance of enforcement variation at the district level.

Lastly, omitted variables related to private banks' entry choices cannot easily explain a number of our other findings. Specifically, neither greater growth at the district level nor private banks entering districts with more underperforming loans can explain the observed increase in workouts, decrease in liquidations, decrease in delays, and increase in bankruptcy filings in states with stronger creditor rights, following bank entry.

C. Channels by which Bank Entry affects Bankruptcy Outcomes

Our results suggest that bank entry improved creditor incentives to monitor borrowers and recover loans, which in turn affected the incidence and outcome of corporate bankruptcies. Next, we investigate additional channels through which bank

¹⁷ Compiled by the Centre for Monitoring Indian Economy (CMIE), Prowess is a panel of listed and unlisted public limited companies with assets plus sales greater than 40 million Rupees (approx. \$900,000), and covers 2,000 to 6,000 firms each year between 1991 and 2002.

entry may affect bankruptcy outcomes: through an increase in the supply of credit or a shift in the allocation of credit. For instance, an increase in the supply of credit associated with bank entry might foster greater product market competition, leading to more exits by weaker firms. A shift in credit allocation, which may occur if foreign and private banks lend to different types of firms, may also affect bankruptcy outcomes.

Our findings do not appear to be driven by a change in the supply of credit following bank entry. First, the relationship between total bankruptcy filings and private bank entry is robust to controlling for the total supply of credit at the district level (Table X, column 1). Second, if an increase in credit supply and exits by weaker firms are causing the rise in bankruptcies, we should observe an increase in the number of financially distressed firms filing for bankruptcy. But, as shown in Table IV, we find the opposite (column 3). Furthermore, a shift in the supply of credit cannot explain the changes in duration or the increased filings in states with stronger creditor rights.

A shift in credit allocation to different types of borrowers following bank entry also does not appear to explain our findings. We investigate this by considering the financial characteristics of firms filing for bankruptcy. In particular, we provide results from two samples. First, we identify bankrupt firms in the Prowess database, which provides data on a larger number of firm financial characteristics, and estimate a firm-level panel data regression with district and year fixed effects in Panel A of Table XII. Specifically, the regression examines whether private bank entry is associated with a change in the characteristics of firms that file for bankruptcy. As shown in Table XII, Panel A, using firm-level data, we do not find evidence that the type of firms filing for bankruptcy changes following bank entry. In particular, there is no correlation between private bank entry and the average sales, profitability, debt to assets ratio, bank debt to

total assets ratio, and interest payments to assets ratio of firms that file for bankruptcy. Hence, using firm level tests, it does not appear that bankrupt firms are different in districts with more private bank entry.

We also conduct a similar test based on the BIFR bankruptcy database, which is at the district level and provides additional firm level characteristics, in Panel B of Table XII. Again, from the observable characteristics of firms that file for bankruptcy in a district, it does not appear that bankrupt firms are different in districts that have more private bank entry.

Since the Prowess database provides data on a larger sample of firms, and not just bankrupt firms, we also examine whether private bank entry varies based on the characteristics of firms in that district. Specifically, we examine the correlation between the characteristics of all firms in a district and bank entry in Table XII, Panel C. The results suggest that there are no significant differences between firms based in districts with more private bank entry and those in districts with less private bank entry.

Moreover, controlling for these firm-level characteristics also does not affect our findings, as shown in Table XII, Panel D. While the results are less statistically significant because of the smaller sample size, they are similar to the main findings. A shift in the allocation of credit also does not explain our other results. If private banks fund better firms, then we should observe a decrease in total filings, contrary to our results. Or, if a shift in credit to better firms causes worse firms to get less credit, then we should observe an increase in distressed firms, which we do not (Table IV).

Overall, our results are consistent with the view that private bank entry shifts the incentives of creditors to monitor borrowers more aggressively. The increase in dismissed filings suggests that firms seek the protection of the automatic stay on assets in

bankruptcy to avoid increased creditor scrutiny. The shift to restructurings from liquidations, which can take even longer to resolve, and the decrease in delays in the bankruptcy process also indicate that a change in creditor incentives to monitor borrowers affect the efficiency of the bankruptcy process. The increase in bankruptcies associated with bank entry when creditor rights are stronger is also consistent with bank entry being related to a shift in creditors' incentives.

VI. Concluding Remarks

We investigate whether increased competition among banks changes lenders' incentives to monitor and exert pressure on defaulting borrowers, thereby affecting bankruptcy outcomes. Consistent with this view, we find that, on average, more firms file for bankruptcy following bank entry. The evidence suggests that this increase is driven by firms trying to avoid heightened creditor scrutiny following bank entry. The results also show that entry by private banks is associated with a shift away from liquidations (which take much longer to resolve) towards more restructurings and a significant decrease in overall delays in the bankruptcy process. These findings suggest that a competitive lending environment creates an incentive for banks to recover assets more quickly.

Our results also show that the ownership of lenders and borrowers matter. The increase in bankruptcy filings and decrease in delays is driven by the entry of private domestic banks and shifts in the bankruptcy outcomes of privately-owned firms. However, private bank entry is associated with fewer bankruptcy filings among government-owned firms, suggesting that private banks are less willing or able to pursue delinquent government-owned firms.

An improvement in creditor rights appears to amplify these findings. The positive

association between private bank entry and the number of bankruptcy filings is larger when creditor rights are improved. Creditor rights are particularly important for foreign banks. While foreign bank entry on average has no association with bankruptcy outcomes, it is associated with increase in bankruptcy filings when creditor rights are strong. This suggests that foreign lenders may face greater hurdles in navigating the local bankruptcy system in the absence of strong creditor rights.

Overall, our evidence suggests that in addition to bankruptcy regulations and creditor rights, lenders' incentives play an important role in the bankruptcy process. Lenders without a strong incentive to aggressively monitor loans, such as government-owned banks and banks that face relatively little competition in their local market, may contribute to the large differences in bankruptcy outcomes across and within countries. An important implication is that reforms that focus on changes in bankruptcy law should also take into account local financial market characteristics, such as the competitiveness and ownership of the banking sector.

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Table I: Bankruptcy Outcomes Summary Statistics

This table provides summary statistics for the bankruptcy outcomes used in later analyses. *Total Filings* is the number of bankruptcy filings by all firms in that year and district and *Population* is the district-level population (in millions) in 2001; *Dismissed Filings* is the number of firms filing in that district and year that are dropped, dismissed, or declared non-maintainable by the BIFR as they do not meet the criteria for financial distress; *Pending* refers to filings in that district and year that are still pending determination of financial distress by the BIFR; *Sick* is the number of firms filing in that district and year that meet the definition of financial distress by the BIFR; *Workouts* are the number of firms filing in that district and year that the BIFR ruled should be restructured; *Liquidations* refers to the number of firms filing in that district and year that the BIFR ruled should be liquidated. *Average Duration of Workouts* is the average number of days it takes for a firm filing in that district and year to receive a restructuring decision from the BIFR. *Average Duration of Liquidations* is the average number of days it takes for a firm filing in that district and year to receive a liquidation decision from the BIFR. *Average Duration of Workouts and Liquidations* is the average number of days it takes for a firm filing in that district and year to receive a restructuring or liquidation decision from the BIFR.

	<i>Total Filings</i> /Population	<i>Dismissed Filings</i> /Population	<i>Pending Filings</i> /Population	<i>Sick Filings</i> /Population	<i>Workouts</i> /Population	<i>Liquidations</i> /Population	<i>Average Duration of Workouts</i>	<i>Average Duration of Liquidations</i>	<i>Avg. Duration of Workouts and Liquidations</i>
All Firms									
Mean	0.160	0.052	0.028	0.077	0.037	0.041	1497.98	1491.42	1488.16
Standard Deviation	(0.526)	(0.184)	(0.099)	(0.250)	(0.128)	(0.130)	(728.21)	(688.04)	(674.54)
Minimum	0	0	0	0	0	0	356	191	191
Maximum	7.2171	2.5379	1.1103	3.4103	1.9034	1.5069	4587	4475	4587
Number of Observations	7187	7187	7187	7187	7187	7187	950	2293	2560
Private Firms									
Mean	0.149	0.049	0.027	0.071	0.034	0.037	1392.12	1430.08	1422.17
Standard Deviation	(0.507)	(0.179)	(0.098)	(0.237)	(0.124)	(0.120)	(616.14)	(579.20)	(580.24)
Minimum	0	0	0	0	0	0	356	191	191
Maximum	6.8999	2.3793	1.1103	3.2517	1.9034	1.4548	4587	3290	4587
Number of Observations	7187	7187	7187	7187	7187	7187	853	2157	2410
Government Firms									
Mean	0.0104	0.0033	0.0004	0.0062	0.0025	0.0037	2409.22	2083.86	2141.44
Standard Deviation	(0.040)	(0.019)	(0.004)	(0.026)	(0.012)	(0.019)	(1057.88)	(1235.89)	(1192.92)
Minimum	0	0	0	0	0	0	448	267	267
Maximum	0.616	0.308	0.059	0.312	0.141	0.308	4281	4475	4475
Number of Observations	7187	7187	7187	7187	7187	7187	237	531	670

Table II: Bank Entry in India from 1991-2004

This table provides the total deposits and share of deposits by year and by type of bank for 1991 and 2004. Percent changes in shares from 1991 to 2004 are also calculated.

Private Banks

<i>Deposits in 1991 (Rs. Crores)</i>	21.95
<i>Deposits in 2004 (Rs. Crores)</i>	548.15
<i>Share of Total Deposits in 1991</i>	4.42%
<i>Share of Total Deposits in 2004</i>	18.08%
<i>Change in Deposit Share (1991-2004)</i>	13.65%

State and Nationalized Banks

<i>Deposits in 1991 (Rs. Crores)</i>	438.34
<i>Deposits in 2004 (Rs. Crores)</i>	2351.54
<i>Share of Total Deposits in 1991</i>	88.34%
<i>Share of Total Deposits in 2004</i>	77.55%
<i>Change in Deposit Share (1991-2004)</i>	-10.79%

Foreign Banks

<i>Deposits in 1991 (Rs. Crores)</i>	35.92
<i>Deposits in 2004 (Rs. Crores)</i>	132.40
<i>Share of Total Deposits in 1991</i>	7.24%
<i>Share of Total Deposits in 2004</i>	4.37%
<i>Change in Deposit Share (1991-2004)</i>	-2.87%

Table III: Banking Sector Summary Statistics

This table provides summary statistics for the main banking variables used in later analyses. *Total Banks* is the total number of banks in that district and year, and *Population* is the district-level population (in millions) in 2001. *State Bank % of Deposits* is the percent of deposits held by state-owned, nationalized and rural banks in that district and year; *Private Bank % of Deposits* is the percent of deposits held by domestic private banks; *Foreign Bank % of Deposits* is the percent of deposits held by foreign banks.

	<i>Total Banks / Population</i>	<i>State Bank % of Deposits</i>	<i>Private Bank % of Deposits</i>	<i>Foreign Bank % of Deposits</i>
Mean	67.21	93.73	6.12	0.15
Standard Deviation	31.80	12.83	12.65	1.44
Minimum	14.40	9.99	0	0
Maximum	232.30	100	90.01	24.14
Number of Observations	7,187	7,187	7,187	7,187

Table IV: Bank Entry & Bankruptcy Filings

This table describes the results from an OLS district-level panel regression with district and year fixed-effects and time-varying controls for *Total Banks/Population* and *Log(State GDP)*. The dependent variables are *Total Filings/Population*, *Dismissed Filings/Population*, *Pending Filings/Population*, and *Sick Filings/Population*. *Total Filings* is defined as the number of bankruptcy filings by all firms in that year and district; *Population* is the district-level population (in millions) in 2001; *Dismissed Filings* is the number of firms filing in that district and year that are dropped, dismissed, or declared non-maintainable by the BIFR as they do not meet the criteria for financial distress; *Pending* refers to filings in that district and year that are still pending determination of financial distress by the BIFR; *Sick* is the number of firms filing in that district and year that meet the definition of financial distress by the BIFR. *Private Bank % of Deposits* is the percent of deposits held by domestic private banks; *Foreign Bank % of Deposits* is the percent of deposits held by foreign banks. *Log (State GDP)* is the log of the gross domestic product at the state level. The standard errors clustered at the district-level are reported in parentheses. ***,**,* denotes significance at 1, 5 and 10 percent respectively.

<i>Dependent Variable</i> =	<i>Total Filings / Population</i>	<i>Dismissed Filings /Population</i>	<i>Sick Filings /Population</i>	<i>Pending Filings /Population</i>
	(1)	(2)	(3)	(4)
<i>Private Bank % of Deposits</i>	0.041*** (0.009)	0.016*** (0.003)	0.001 (0.002)	0.024*** (0.005)
<i>Foreign Bank % of Deposits</i>	-0.127 (0.093)	-0.040 (0.029)	-0.012 (0.029)	-0.077 (0.065)
<i>Total Banks / Population</i>	0.003** (0.001)	0.001 (0.001)	0.001 (0.001)	0.001** (0.001)
<i>Log (State GDP)</i>	-0.099 (0.129)	-0.062 (0.049)	-0.081 (0.063)	0.046 (0.088)
Year fixed effects	X	X	X	X
District fixed effects	X	X	X	X
Number of District-Years	7,187	7,187	7,187	7,187
Number of Districts	565	565	565	565
R-squared	0.10	0.06	0.02	0.15

Table V: Bank Entry and Workouts vs. Liquidations

This table describes the results from an OLS district-level panel regression with district and year fixed-effects. In Column (1), the dependent variable is *Workouts/Population*, where *Workouts* are the number of firms filing in that district and year that the BIFR ruled should be restructured. In Column (2), the dependent variable is *Liquidations/Population*, where *Liquidations* refers to the number of firms filing in that district and year that the BIFR ruled should be liquidated. *Total Banks* is the total number of banks in that district and year. *Private Bank % of Deposits* is the percent of deposits held by domestic private banks; *Foreign Bank % of Deposits* is the percent of deposits held by foreign banks. *Log (State GDP)* is the log of the gross domestic product at the state level. The standard errors clustered at the district-level are reported in parentheses. ***, **, * denotes significance at 1, 5 and 10 percent respectively.

<i>Dependent Variable =</i>	<i>Workouts</i>	<i>Liquidations</i>
	<i>/ Population</i>	<i>/ Population</i>
	(1)	(2)
<i>Private Bank % of Deposits</i>	0.006*** (0.002)	-0.006*** (0.001)
<i>Foreign Bank % of Deposits</i>	-0.018 (0.016)	0.007 (0.022)
<i>Total Banks / Population</i>	0.000 (0.000)	0.001 (0.001)
<i>Log (State GDP)</i>	-0.035 (0.032)	-0.046 (0.041)
Year fixed effects	X	X
District fixed effects	X	X
Number of District-Years	7,187	7,187
Number of Districts	565	565
R-squared	0.03	0.03

Table VI: Bank Entry and Duration of Workouts and Liquidations

This table describes the results from an OLS district-level panel regression with district and year fixed-effects. The dependent variables *Average Duration of Workouts & Liquidations* is the average number of days taken by the BIFR to render a restructuring or liquidation decision for all firms filing for bankruptcy in that district and year; *Average Duration of Workouts* is the average number of days taken by the BIFR to render a restructuring decision for all firms filing for bankruptcy in that district and year; *Average Duration of Liquidations* is the average number of days taken by the BIFR to render a liquidation decision for firms filing for bankruptcy in that district and year. *Total Banks* is the total number of banks in that district and year and *Population* is the district-level population (in millions) in 2001; *Private Bank % of Deposits* is the percent of deposits held by domestic private banks; *Foreign Bank % of Deposits* is the percent of deposits held by foreign banks. Log (State GDP) is the log of the gross domestic product at the state level. The standard errors clustered at the district-level are reported in parentheses. ***, **, * denotes significance at 1, 5 and 10 percent respectively.

<i>Dependent Variable =</i>	<i>Average Duration of Workouts & Liquidations</i>	<i>Average Duration of Workouts</i>	<i>Average Duration of Liquidations</i>
	(1)	(2)	(3)
<i>Private Bank % of Deposits</i>	-38.06** (17.86)	-26.10 (33.41)	-42.83** (19.11)
<i>Foreign Bank % of Deposits</i>	-24.64 (19.94)	43.781 (28.72)	-42.39* (22.12)
<i>Total Banks / Population</i>	8.741* (4.57)	-6.56 (12.01)	10.762** (4.65)
<i>Log (State GDP)</i>	-201.87 (636.08)	-3,747.48*** (1137.49)	-596.65 (677.02)
Year fixed effects	X	X	X
District fixed effects	X	X	X
Number of District-Years	489	136	423
Number of Districts	185	69	165
R-squared	0.25	0.56	0.24

Table VII: Bank Entry & Bankruptcy by Firm Ownership

This table describes the results from an OLS district-level panel regression with district and year fixed-effects. In Column (1), the dependent variable is *Private Firm Filings/Population*, where *Private Firm Filings* is the number of bankruptcy filings by non-government firms in that year and district and *Population* is the district-level population (in millions) in 2001. In Column (2), the dependent variable is *Government Firm Filings/Population*, where *Government Firm Filings* is the number of bankruptcy filings by government firms. *Total Banks* is the total number of banks in that district and year. *Private Bank % of Deposits* is the percent of deposits held by domestic private banks; *Foreign Bank % of Deposits* is the percent of deposits held by foreign banks. *Log (State GDP)* is the log of the gross domestic product at the state level. The standard errors clustered at the district-level are reported in parentheses. ***,**,* denotes significance at 1, 5 and 10 percent respectively.

<i>Dependent Variable =</i>	<i>Private Firm Filings / Population</i>	<i>Government Firm Filings / Population</i>
	(1)	(2)
<i>Private Bank % of Deposits</i>	0.043*** (0.009)	-0.002*** (0.001)
<i>Foreign Bank % of Deposits</i>	-0.118 (0.097)	-0.009 (0.007)
<i>Total Banks / Population</i>	0.003** (0.001)	0.000 (0.000)
<i>Log (State GDP)</i>	-0.082 (0.131)	-0.016 (0.020)
Year fixed effects	X	X
District fixed effects	X	X
Number of District-Years	7,187	7,187
Number of Districts	565	565
R-squared	0.11	0.02

Table VIII: Creditor Rights, Bank Ownership and Bankruptcy Filings

This table describes the results from an OLS district-level panel regression with district and year fixed-effects. The dependent variable is *Total Filings/Population*, where *Total Filings* is the number of bankruptcy filings by all firms in that year and district and *Population* is the district-level population (in millions) in 2001. *DRT in State* is an indicator that equals one if a DRT is present in that particular state during that year. *Total Banks* is the total number of banks in that district and year. *Private Bank % of Deposits* is the demeaned percent of deposits held by domestic private banks; *Foreign Bank % of Deposits* is the demeaned percent of deposits held by foreign banks. *Log (State GDP)* is the log of the gross domestic product at the state level. The standard errors clustered at the state-level are reported in parentheses. ***,**,* denotes significance at 1, 5 and 10 percent respectively.

<i>Dependent Variable</i> =	<i>Total Filings / Population</i>
<i>DRT in State</i>	0.008 (0.025)
<i>Private Bank % of Deposits</i>	0.024*** (0.008)
<i>DRT in State * Private Bank % of Deposits</i>	0.005** (0.003)
<i>Foreign Bank % of Deposits</i>	-0.092** (0.038)
<i>DRT in State * Foreign Bank % of Deposits</i>	0.182*** (0.021)
<i>Total Banks / Population</i>	0.002* (0.001)
<i>Log (State GDP)</i>	-0.141 (0.120)
Year fixed effects	X
District fixed effects	X
Number of District-Years	7,187
Number of Districts	565
R-squared	0.18

Table IX: Timing of Bank Entry and Increased Filings

This table describes the results from an OLS district-level panel regression with district and year fixed-effects. *Total Filings* is the number of bankruptcy filings by all firms in that year and district and *Population* is the district-level population (in millions) in 2001; *Total Banks* is the total number of banks in that district and year. *Private Bank % of Deposits* is the percent of deposits held by domestic private banks; *Foreign Bank % of Deposits* is the percent of deposits held by foreign banks. *Log (State GDP)* is the log of the gross domestic product at the state level. The standard errors clustered at the district-level are reported in parentheses. ***, **, * denotes significance at 1, 5 and 10 percent respectively.

<i>Dependent Variable =</i>	<i>Bankruptcy Filings / Population</i>		
	(1)	(2)	(3)
<i>Private Bank % of Deposits [t+1]</i>	0.011 (0.008)	0.009 (0.008)	0.011 (0.008)
<i>Private Bank % of Deposits [t]</i>	0.037*** (0.010)	0.004 (0.008)	0.000 (0.008)
<i>Private Bank % of Deposits[t-1]</i>		0.047*** (0.016)	0.027** (0.012)
<i>Private Bank % of Deposits [t-2]</i>			0.036*** (0.010)
<i>Foreign Bank % of Deposits</i>	-0.128 (0.104)	-0.134 (0.100)	-0.149 (0.094)
<i>Total Banks / Population</i>	0.003* (0.001)	0.002* (0.001)	0.002* (0.001)
<i>Log (State GDP)</i>	-0.127 (0.170)	-0.233 (0.184)	-0.366* (0.213)
Year fixed effects	X	X	X
District fixed effects	X	X	X
Number of District-Years	6,643	6,088	5,533
Number of Districts	565	565	558
R-squared	0.11	0.13	0.14

Table X: Robustness Check, Controlling for Growth

This table describes the results from an OLS district-level panel regression with district and year fixed-effects. *Total Filings* is the number of bankruptcy filings by all firms in that year and district and *Population* is the district-level population (in millions) in 2001; *Total Banks* is the total number of banks in that district and year. *Private Bank % of Deposits* is the percent of deposits held by domestic private banks; *Foreign Bank % of Deposits* is the percent of deposits held by foreign banks. *Log (State GDP)* is the log of the gross domestic product at the state level, and *Log(Total Loans in District)* is the log of total loans in the district. In Column (2), urban-year fixed effects are added where *urban* is an indicator that equals one if a district's share of citizens located in urban areas is in the top quartile according to the 2001 Indian Census, and in Column (3), state-year fixed effects are added. The standard errors clustered at the district-level are reported in parentheses. ***, **, * denotes significance at 1, 5 and 10 percent respectively.

<i>Dependent Variable =</i>	<i>Total Filings / Population</i>		
	(1)	(2)	(3)
<i>Private Bank % of Deposits</i>	0.040*** (0.009)	0.034*** (0.008)	0.038*** (0.010)
<i>Foreign Bank % of Deposits</i>	-0.127 (0.093)	-0.127 (0.093)	-0.125 (0.097)
<i>Total Banks / Population</i>	0.003* (0.001)	0.003** (0.001)	0.003** (0.001)
<i>Log (State GDP)</i>		-0.108 (0.131)	
<i>Log (Total Loans in District)</i>	-0.006 (0.052)		
Year fixed effects	X	X	X
District fixed effects	X	X	X
Urban-year fixed effects		X	
State-year fixed effects			X
Number of District-Years	7,187	7,187	7,187
Number of Districts	565	565	565
R-squared	0.10	0.12	0.29

Table XI: Robustness Check, Controlling for Political Loans

This table describes the results from an OLS district-level panel regression with district and year fixed-effects. *Total Filings* is the number of bankruptcy filings by all firms in that year and district and *Population* is the district-level population (in millions) in 2001; *Total Banks* is the total number of banks in that district and year. *Private Bank % of Deposits* is the percent of deposits held by domestic private banks; *Foreign Bank % of Deposits* is the percent of deposits held by foreign banks. *Log (State GDP)* is the log of the gross domestic product at the state level. *% of Borrowings by Gov't Firms* is the percent of borrowing done by government-owned firms in a district-year, as reported by the Prowess dataset, and *% of Sales by Gov't Firms* is the percent of sales coming from government firms in the district. *Log(Firm Sales in District)* is the log of total sales in a district reported by the Prowess dataset. The standard errors clustered at the district-level are reported in parentheses. ***, **, * denotes significance at 1, 5 and 10 percent respectively.

<i>Dependent Variable =</i>	<i>Total Filings / Population</i>		
	(1)	(2)	(3)
<i>Private Bank % of Deposits</i>	0.074*** (0.015)	0.074*** (0.015)	0.074*** (0.015)
<i>Foreign Bank % of Deposits</i>	-0.138 (0.099)	-0.138 (0.100)	-0.138 (0.100)
<i>Total Banks / Population</i>	0.005** (0.002)	0.004** (0.002)	0.004** (0.002)
<i>Log (State GDP)</i>	-0.102 (0.488)	-0.107 (0.486)	-0.117 (0.471)
<i>% of Borrowings by Gov't Firms</i>	-0.164 (0.171)		
<i>% of Sales by Gov't Firms</i>		0.018 (0.187)	
<i>Log (Firm Sales in District)</i>			0.014 (0.017)
Year fixed effects	X	X	X
District fixed effects	X	X	X
Number of District-Years	2,470	2,506	2,549
Number of Districts	238	241	242
R-squared	0.18	0.18	0.18

Table XII: Bank Ownership and Characteristics of Bankrupt Firms

Panel A describes results from an OLS firm level panel regression using firm-level data from the Prowess database to examine whether characteristics of bankrupt firms change following private bank entry with district and year fixed effects. The dependent variables in Panel A are $\ln(\text{Sales})$, the revenues from the main operations of the firm, $\text{PBDT}/\text{Assets}$, profits before depreciation and taxes as a ratio of total assets; $\text{Debt}/\text{Assets}$, or total borrowings of the firm divided by the total assets of the firm; and $\text{Bank Debt}/\text{Assets}$, or bank borrowings divided by the total assets of the firm. $\text{Private Bank \% of Deposits}$ is the percent of deposits held by domestic private banks. The control variables include $\text{Total Banks}/\text{Total Firms}$, the total number of bank branches in a district divided by the total number of firms in that district, and $\text{Log}(\text{State GDP})$ defined as the log of the gross domestic product at the state level. Panel B describes the results from an OLS district-level panel regression with district and year fixed-effects. In Panel B, the dependent variables $\ln(\text{Average Net Worth})$, $\ln(\text{Average Accumulated Losses})$, and $\ln(\text{Average Number of Workers})$, are the average values of net worth, accumulated losses, and workforce size of firms filing for bankruptcy in that district and year. Total Banks is the total number of banks in that district and year and Population is the district-level population (in millions) in 2001. Panel C describes results from an OLS firm level panel regression using data on all firms from the Prowess database to examine whether private banks are more likely to enter districts with different types of firms. Panel D describes the results from an OLS district-level panel regression with district and year fixed-effects, controlling for firm level characteristics. The dependent variables in Panel B have been described earlier. The standard errors clustered at the district-level are reported in parentheses. ***, **, * denotes significance at 1, 5 and 10 percent respectively.

Panel A: Firm Level Test

<i>Dependent Variable =</i>	<i>Interest</i>				
	<i>Ln (Sales)</i>	<i>PBDT/Assets</i>	<i>Debt/Assets</i>	<i>Bank Debt/Assets</i>	<i>Payments/Assets</i>
	(1)	(2)	(3)	(4)	(5)
<i>Private Bank % of Deposits</i>	-2.1509 (0.646)	-1.0066 (0.423)	1.5597 (0.249)	0.0418 (0.942)	0.0758 (0.785)
<i>Total Banks / Total Firms</i>	-0.0173 (0.385)	-0.0002 (0.962)	0.0107* (0.098)	0.0025 (0.145)	-0.0001 (0.957)
<i>Log (State GDP)</i>	1.8605 (0.268)	0.2575 (0.169)	0.3667 (0.407)	0.1466 (0.557)	-0.1223** (0.023)
Year fixed effects	X	X	X	X	X
District fixed effects	X	X	X	X	X
Number of Firms	641	657	657	657	657
R-squared	0.259	0.081	0.251	0.271	0.133

Table XII continued: Panel B: District Level Test

<i>Dependent Variable =</i>	<i>Ln(Average Net Worth)</i>	<i>Ln(Average Accumulated Losses)</i>	<i>Ln(Average Number of Workers)</i>
	(1)	(2)	(3)
<i>Private Bank % of Deposits</i>	0.007 (0.016)	0.011 (0.016)	0.001 (0.014)
<i>Total Banks / Population</i>	0.002 (0.003)	0.005 (0.004)	0.005 (0.004)
<i>Log (State GDP)</i>	0.704 (0.686)	0.393 (0.709)	0.140 (0.500)
Year fixed effects	X	X	X
District fixed effects	X	X	X
Number of District-Years	1031	1029	1018
Number of Districts	252	251	251
R-squared	0.14	0.09	0.08

Table XII continued***Panel C: Firm Level Test***

<i>Dependent Variable =</i>			<i>Bank</i>		<i>Interest</i>
	<i>Ln (Sales)</i>	<i>PBDT/Assets</i>	<i>Debt/Assets</i>	<i>Debt/Assets</i>	<i>Payments/Assets</i>
<i>Private Bank % of Deposits</i>	-1.0443 (0.136)	0.0658 (0.561)	-0.4455 (0.185)	-0.1181 (0.152)	-0.0310 (0.488)
<i>Total Banks / Total Firms</i>	0.0038*** (0.005)	0.0000 (0.938)	-0.0004 (0.675)	-0.0001 (0.439)	0.0001 (0.501)
<i>Log (State GDP)</i>	-0.5698 (0.106)	0.0132 (0.660)	-0.0065 (0.968)	-0.0636** (0.034)	-0.0091 (0.661)
Year fixed effects	X	X	X	X	X
District fixed effects	X	X	X	X	X
Number of Firms	31,315	32,305	32,305	32,305	32,305
R-squared	0.082	0.025	0.019	0.024	0.019

Table XII continued Panel D: Controlling for firm characteristics

<i>Dependent Variable =</i>	<i>Total Filings</i>	<i>Dismissed</i>	<i>Pending</i>	<i>Sick Filings</i>	<i>Workouts</i>	<i>Liquidations</i>	<i>Duration of</i>
	<i>/Population</i>	<i>Filings</i>	<i>Filings</i>	<i>/Population</i>	<i>/Population</i>	<i>/Population</i>	<i>Workouts and</i>
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
<i>Private Bank % of Deposits</i>	0.094*** (0.026)	0.034*** (0.008)	0.040** (0.018)	0.019** (0.009)	0.020*** (0.005)	-0.001 (0.006)	-31.71* (16.91)
<i>Ln(Average Accumulated Losses)</i>	0.017 (0.049)	0.030 (0.030)	0.036 (0.029)	-0.061** (0.028)	-0.021 (0.021)	-0.041** (0.019)	101.92 (108.87)
<i>Ln(Average Net Worth)</i>	0.076** (0.037)	0.000 (0.023)	0.002 (0.022)	0.078*** (0.024)	0.047** (0.021)	0.031* (0.017)	-125.43 (99.67)
<i>Ln(Average Number of Workers)</i>	-0.086** (0.040)	-0.069*** (0.024)	-0.022 (0.020)	0.001 (0.022)	0.010 (0.015)	-0.009 (0.017)	140.13** (63.24)
<i>Total Branches/ Population</i>	0.009*** (0.003)	0.003 (0.002)	0.005 (0.003)	0.002 (0.002)	-0.001 (0.001)	0.003 (0.002)	6.900 (4.975)
<i>Log (State GDP)</i>	-0.227 (0.715)	-0.006 (0.292)	0.497 (0.648)	-0.669 (0.459)	-0.168 (0.259)	-0.502* (0.292)	-337.84 (588.76)
Year fixed effects	X	X	X	X	X	X	X
District fixed effects	X	X	X	X	X	X	X
Number of District-Years	1,016	1,016	1,016	1,016	1,016	1,016	485
Number of Districts	250	250	250	250	250	250	182
R-squared	0.29	0.23	0.46	0.17	0.12	0.22	0.27

Appendix Table I: Bank Branches and Bankruptcy Outcomes

This table describes the results from an OLS district-level panel regression with district and year fixed-effects and time-varying controls for *Total Banks/Population* and *Log(State GDP)*. The dependent variables are *Total Filings/Population*, *Dismissed Filings/Population*, *Pending Filings/Population*, *Sick Filings/Population*, *Workouts/Population*, *Liquidations/Population*, and *Average Duration of Workouts and Liquidations*. *Total Filings* is defined as the number of bankruptcy filings by all firms in that year and district; *Population* is the district-level population (in millions) in 2001; *Dismissed Filings* is the number of firms filing in that district and year that are dropped, dismissed, or declared non-maintainable by the BIFR as they do not meet the criteria for financial distress; *Pending* refers to filings in that district and year that are still pending determination of financial distress by the BIFR; *Sick* is the number of firms filing in that district and year that meet the definition of financial distress by the BIFR; *Workouts* are the number of firms filing in that district and year that the BIFR ruled should be restructured; *Liquidations* refers to the number of firms filing in that district and year that the BIFR ruled should be liquidated; *Average Duration of Workouts and Liquidations* is the average number of days taken by the BIFR to render a workout or liquidation decision for firms filing for bankruptcy in that district and year. *Private Bank % of Branches* is the percent of branches held by domestic private banks; *Foreign Bank % of Branches* is the percent of branches held by foreign banks. *Log (State GDP)* is the log of the gross domestic product at the state level. The standard errors clustered at the district-level are reported in parentheses. ***, **, * denotes significance at 1, 5 and 10 percent respectively.

<i>Dependent Variable =</i>	<i>Total Filings /Population</i>	<i>Dismissed Filings /Population</i>	<i>Pending Filings /Population</i>	<i>Sick Filings /Population</i>	<i>Workouts /Population</i>	<i>Liquidations /Population</i>	<i>Average Duration of Workouts and Liquidations</i>
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
<i>Private Bank % of Branches</i>	0.044*** (0.017)	0.019*** (0.007)	0.024** (0.010)	0.001 (0.004)	0.007*** (0.003)	-0.006** (0.003)	-29.88 (41.83)
<i>Foreign Bank % of Branches</i>	0.174 (0.277)	-0.087 (0.159)	0.423 (0.310)	-0.195 (0.190)	-0.040 (0.080)	-0.155 (0.145)	61.71 (134.7)
<i>Total Banks / Population</i>	0.003** (0.001)	0.001 (0.001)	0.001** (0.001)	0.001 (0.001)	0.000 (0.000)	0.001 (0.0010)	6.092 (4.800)
<i>Log (State GDP)</i>	-0.049 (0.129)	-0.040 (0.048)	0.067 (0.084)	-0.074 (0.058)	-0.025 (0.030)	-0.049 (0.040)	-337.9 (648.3)
Year fixed effects	X	X	X	X	X	X	X
District fixed effects	X	X	X	X	X	X	X
Number of District-Years	7,187	7,187	7,187	7,187	7,187	7,187	489
Number of Districts	565	565	565	565	565	565	185
R-squared	0.06	0.05	0.13	0.03	0.02	0.04	0.24

Appendix Table II: Banking Sector Competition and Bankruptcy Outcomes

This table describes the results from an OLS district-level panel regression with district and year fixed-effects. *Total Filings* is the number of bankruptcy filings by all firms in that year and district and *Population* is the district-level population (in millions) in 2001; *Dismissed Filings* is the number of firms filing in that district and year that are dropped, dismissed, or declared non-maintainable by the BIFR as they do not meet the criteria for financial distress; *Pending* refers to filings in that district and year that are still pending determination of financial distress by the BIFR; *Sick* is the number of firms filing in that district and year that meet the definition of financial distress by the BIFR; *Workouts* are the number of firms filing in that district and year that the BIFR ruled should be restructured; *Liquidations* refers to the number of firms filing in that district and year that the BIFR ruled should be liquidated. *Average Duration of Workouts and Liquidations* is the average number of days it takes for a firm filing in that district and year to receive a restructuring or liquidation decision from the BIFR. *Total Banks* is the total number of banks in that district and year. *HHI of Deposits* is the Herfindahl-Hirschman Index of Deposits of all banks in that district and year. *Log (State GDP)* is the log of the gross domestic product at the state level. The standard errors clustered at the district-level are reported in parentheses. ***,**,* denotes significance at 1, 5 and 10 percent respectively.

<i>Dependent Variable =</i>	<i>Total Filings</i> <i>/Population</i>	<i>Dismissed</i> <i>Filings</i> <i>/Population</i>	<i>Pending</i> <i>Filings</i> <i>/Population</i>	<i>Sick Filings</i> <i>/Population</i>	<i>Workouts</i> <i>/Population</i>	<i>Liquidations</i> <i>/Population</i>	<i>Average Duration</i> <i>of Workouts and</i> <i>Liquidations</i>
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
<i>1 - HHI of Deposits</i>	1.237*** (0.414)	0.521*** (0.179)	0.812*** (0.203)	-0.111 (0.136)	0.224*** (0.086)	-0.335*** (0.106)	-2,983.9** (1174.5)
<i>Total Banks / Population</i>	0.0038** (0.0015)	0.0010 (0.0006)	0.0021*** (0.0008)	0.0008 (0.0007)	0.0003 (0.0003)	0.0006 (0.0006)	7.142** (3.109)
<i>Log (State GDP)</i>	0.074 (0.130)	0.008 (0.049)	0.148 (0.094)	-0.080 (0.063)	-0.007 (0.031)	-0.073* (0.042)	-297.7 (646.2)
Year fixed effects	X	X	X	X	X	X	X
District fixed effects	X	X	X	X	X	X	X
Number of District-Years	7,187	7,187	7,187	7,187	7,187	7,187	489
Number of Districts	565	565	565	565	565	565	185
R-squared	0.66	0.41	0.25	0.48	0.39	0.34	0.55