Creditor Rights and Legal Transaction Costs

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Abstract: I estimate the relationship between increased creditor rights and legal expenditures of debtor corporations by evaluating a securitization law in India allowing secured creditors to seize collateral. The law decreased spending on legal proceedings used by firms to avoid foreclosure. Firms most affected by the law—with high proportions of tangible assets creditors could seize as collateral—significantly decreased spending on lawyers after the legislation. However, some debtor firms affected by the legislation filed for bankruptcy to take advantage of the automatic stay and prevent creditors from seizing their assets. These firms would have incurred legal costs related to the bankruptcy process. Consistent with this intuition, the post-reform decrease in legal costs is smaller for firms that were closer to insolvency or filed for bankruptcy after the legislation. The results indicate that legal transaction costs associated with foreclosure avoidance are sizable and can be eliminated by strengthening contract enforcement.

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1. Introduction

Lawyers impact debtor-creditor relations in many ways. From determining the contours of debt agreements to assisting in debt renegotiation and the bankruptcy process, lawyers are highly involved in lending relationships (Goyal et al. 2021, Khanna 2017). However, we have little insight into the magnitude of payments made by debtor corporations to their lawyers. This paper uses a unique quasi-natural experiment from a major Indian securitization law to estimate the size of legal transaction costs, and the causal effect of contract enforcement on corporate expenditures on legal fees. The Securitisation and Reconstruction of Financial Assets and Enforcement of Security Interest (SARFAESI) Act of 2002 allowed secured creditors to seize collateral from debtor companies, bypassing the court system. This law represented a large increase in Indian creditor rights and led to a wave of collateral seizures. I find that firms most exposed to the effects of the law—companies with large shares of tangible assets, which can readily serve as collateral—saw a significant decrease in fees paid to lawyers and legal advisors. A one standard deviation increase in pre-reform asset tangibility is associated with a subsequent decrease in legal expenditures equal to 6.5% (29.83%) of the mean (median) spending on lawyers.

Securitization has two distinct effects on the legal expenditures of debtor corporations, which I term *foreclosure avoidance* and *bankruptcy-related* costs. The former refers to the legal proceedings debtors undertake to prevent creditors from seizing the fixed assets contractually designated as collateral. The latter encompasses the debtor's expected costs of navigating the governmental scheme of reorganization or liquidation. These two legal channels are related: the foreclosure of too many assets, or an asset essential to corporate business, could lead to insolvency and a declaration of bankruptcy. However, not all foreclosures lead to bankruptcies. Indeed, the foreclosure of a specific piece of land or machinery may have little to do with a firm's overall insolvency. For example, Article 9 of the U.S. Uniform Commercial Code (U.C.C.) allows creditors

to establish liens against specific pieces of machinery, many of which are short-lived inputs that are unlikely to have a standalone impact on firm survival (Ma et al. 2022). Similarly, the automatic stay in the U.S. bankruptcy code, which forbids creditors from seizing debtor assets, only applies once bankruptcy is declared. Outside of bankruptcy, secured creditors routinely seize collateral upon the debtor's default (Vig 2013). Therefore, foreclosure and bankruptcy are related but not synonymous legal procedures.

SARFAESI allows us a unique setting to quantify and compare these two channels through which securitization affects debtor spending on lawyers. Before the reform, Indian secured creditors were in an unusually weak position compared to their counterparts in other economies: they had no right to seize collateral without initiating decades-long court cases, even when the debtor was not in bankruptcy. Therefore, the SARFAESI reform vindicated creditors' ability to execute foreclosures when the debtor was not in bankruptcy. By allowing creditors to avoid the regular judicial system, the legislation eliminated debtors' need (or ability) to spend on lawyers for the years (or even decades)-long foreclosure proceedings that would earlier take place in civil courts. This reduced the legal costs of foreclosure avoidance in general.

However, SARFAESI also increased the probability of legal costs associated with the bankruptcy process for firms that were close to insolvency. This increase in bankruptcy costs is driven by the fact that managers at debtor firms could *opportunistically* declare bankruptcy in order to evade seizure of their assets by secured creditors. Secured creditors were not allowed to seize the debtor's assets during the operation of the bankruptcy automatic stay, even after the passage of SARFAESI. Gormley et al. (2018), studying the bankruptcy process during a roughly similar time period as this paper, find that debtor firms filed for bankruptcy with the federal Board for Industrial & Financial Reconstruction (BIFR) in order to benefit from an automatic stay. They state that it is "widely acknowledged in Indian policy and business circles that the bankruptcy system has been

abused by firms seeking to avoid their creditors." The opportunistic use of the bankruptcy system is evident from the fact that BIFR dismissed 30% of corporate bankruptcy filings, concluding that the filer was not actually insolvent.

While executives at the debtor firm risked losing control if the BIFR decided to liquidate the company, management would typically present a reorganization plan that preserved the firm as a going concern and kept themselves in control. Therefore, managers at companies affected by SARFAESI and plausibly insolvent may have purposely filed for bankruptcy to harness the automatic stay and to avoid their obligations to secured creditors, while maintaining control over their firms. Contemporaneous reports confirm that managers filed bankruptcy petitions with BIFR to avoid having their collateralized assets seized by banks after SARFAESI.[1] Bankruptcy in India is a long-drawn and heavily litigated process that takes years to resolve and implicates high legal costs (Kazmin 2019). The SARFAESI legislation did nothing to make this bankruptcy process more efficient or less costly. By making it more likely that managers at financially distressed companies with collateralized assets opportunistically filed for bankruptcy, and not changing the details of the insolvency process, SARFAESI increased the expected legal costs related to bankruptcy.

The results, showing a decrease in legal spending for firms with high asset tangibility, suggest that foreclosure avoidance on average accounts for a larger share of legal costs for firms affected by SARFAESI than bankruptcy-related costs. Managers were only likely to make opportunistic bankruptcy filings after SARFAESI if their firms were plausibly insolvent; otherwise, the federal bankruptcy court would dismiss their bankruptcy filing (Gormley et al. 2018). Therefore, to ascertain increases in bankruptcy-related legal costs after SARFAESI, I look at the legislation's differential effect on firms that were objectively close to insolvency. Consistent with the legislation increasing

[1] See https://www.livemint.com/Politics/bKJt79pD89bzstlN9k5t2K/Laws-for-sick-industrial-companies-still-need-to-be-harmoniz.html.

expected bankruptcy-related legal costs, I find that the decrease in legal spending is offset for firms at high risk of bankruptcy, measured using the Z-score developed in Altman (1968). The decrease in legal spending is also smaller for firms with multiple creditors, consistent with the literature showing that a higher number of creditors can lead to a "lender run," with externalities across lenders reducing the incentive to renegotiate debt and increasing the probability of bankruptcy (Diamond 2004). The decrease in legal costs is also smaller for firms with high pre-reform credit risk, which had higher expected bankruptcy-related legal costs.

Finally, the decline in legal spending is smaller in firms whose controllers derive higher private reputational benefits of control, as proxied by membership in business groups. These firms are usually dominated by founding families who highly value their control and strongly identify with the firms they control (Almeida and Wolfenzon 2006, Alok et al. 2022, Bertrand et al. 2002, Claessens et al. 2000, Dyck and Zingales 2004, Khanna and Yafeh 2007). A key implication of these private benefits of control is that business group controllers face high reputational costs from losing control of their firms. This could lead executives at these companies to opportunistically seek restructuring in bankruptcy and maintain control, rather than forfeit collateralized assets to secured lenders.[2] While BIFR could decide to either restructure or liquidate a firm that filed for bankruptcy, managers typically presented a restructuring plan that kept them in control (Gormley et al. 2018). Using data on actual bankruptcy filings from India's federal bankruptcy court, I verify that the decrease in legal spending for firms affected by SARFAESI was smaller for firms that filed for bankruptcy after the passage of the legislation.

[2] An additional reason for the post-SARFAESI decrease in legal spending being smaller for business group firms could be that their controllers, driven by their higher reputational benefits of control, could be more likely to appeal asset seizures to the specialized debt tribunals. As described in section 2, such appeals are expensive and involved posting 75% of the disputed loan, which could plausibly have pushed up legal expenditures for business group companies after the enactment of SARFAESI.

The welfare effects of the reduction in legal spending after SARFAESI depend on the unit of analysis. At the firm level, the net welfare effects are uncertain. On the one hand, companies will spend less on outside lawyers and can reallocate these funds to productive endeavors. On the other hand, debtor corporations may suffer from the seizure of their productive assets. However, the paper's results suggest that stronger creditor rights could have positive welfare effects at the societal level. Before SARFAESI, a large fraction of Indian judicial resources was consumed by lawyers litigating debt contracts where debtor firms had clearly defaulted. Such debt contract litigation contributed to the decades-long delays and backlog in the Indian civil court system (Khanna 2017). Backlogs in court systems, and specifically in the adjudication of debt contracts, are associated with significant economic costs (Iverson 2018, Müller 2022). This paper's results are consistent with debtor companies reducing the resources they devoted to litigating debt contracts, thereby placing less stress on India's backlogged court system.[3]

This paper makes four principal contributions to the literature. First, it adds to the literature on creditor rights, which have been shown to influence corporate outcomes including risk-taking (Acharya et al. 2011), investment policy (Nini et al. 2009), and innovation (Mann 2018). I establish a causal connection between creditor rights and legal transaction costs. SARFAESI did not create any new contractual rights between debtor corporations and their secured creditors; it merely reduced secured creditors' enforcement costs for preexisting debt contracts. The results indicate that increasing creditor rights eliminated a large and economically significant portion of affected firms' legal spending. Second, the paper is consistent with work finding that the direct costs of bankruptcy—the fees paid to lawyers, accountants, and other professionals—consume a large

[3] Another potential societal welfare benefit could be the possible reallocation of human capital within the Indian legal profession after SARFAESI. Before the reform, a significant number of lawyers were engaged in litigation designed to delay the inevitable reallocation of resources from their debtor clients to creditor banks. After SARFAESI, these lawyers were free to focus on other kinds of litigation that potentially add more value to society.

portion of the value of the estate (Altman 1984, Ang et al. 1982, Bris et al. 2006, Warner 1977). Bris et al. (2006) report that even among the different types of direct expenses, the debtor's attorneys represent the single largest category of expense for the estate.

Third, the paper contributes to the scholarship on the determinants of demand in the market for lawyers. Prior scholarship has noted that the demand for lawyers correlates with general economic activity (Pashigan 1977), prevailing wages for legal professionals (Freeman 1975) or rational expectations regarding future income (Siow 1984). This paper focuses on weak contracting institutions as a driver of corporate spending on lawyers. The quasi-natural setting of the SARFAESI legislation and Indian laws mandating that companies disclose all spending on lawyers and legal advisors helps to establish the causality of this connection. The paper also adds to work on the role played by business lawyers. Gilson (1984) describes two competing views of lawyers. The first characterizes lawyers as a type of transaction cost slowing business down, with legal fees representing "a tax on business transactions." The second, more flattering perspective views lawyers as "transaction cost engineers" adding value by creating efficient contractual structures, reducing information asymmetry, and navigating regulatory obstacles. The paper's findings are more consistent with the former view. Its results are most consonant with lawyers functioning as a large transaction cost, aiding debtor corporations in slowing down the enforcement of debt contracts.

Finally, the paper adds to the literature on the agency costs of debt (Easterbrook 1984, Kalay 1982). More specifically, the finding that the reduction in legal expenditure is smaller for firms with more creditors is consistent with Diamond (2004), who finds that firms with higher agency costs of debt have more lenders, since there is a higher probability that at least one of these lenders will take the debtor to court. Similarly, the decline in legal expenses being smaller for firms with membership in business groups is consistent with Aslan and Kumar (2012), who find that dominant owners trade off private benefits of control against higher borrowing costs. The high private benefits of control

enjoyed by controllers at these firms, and the reputational cost they face upon losing control, may lead them to opportunistically seek bankruptcy restructuring after SARFAESI, rather than assent to the seizure of collateralized assets by their firms' bankers. For these companies, the role of managers' reputational benefits from control helps explain why increased costs of bankruptcy-associated legal costs after SARFAESI offset the decline in foreclosure-avoiding legal actions.

The paper proceeds as follows. Section 2 explains the institutional setting of SARFAESI and the significant changes it caused to creditor rights in India. Section 3 introduces the data used in the paper and presents summary statistics. Section 4 describes the identification strategy and presents the main result regarding the decrease in legal expenditures for firms with a high share of tangible assets, which were most affected by the passage of SARFAESI. Section 5 shows how the decrease in legal spending was smaller for firms at higher risk of bankruptcy, with more lending relationships with banks, higher credit risk, and belonging to a business group. Section 6 shows that the results are robust to using actual filing data from the federal bankruptcy court, checking for pretrends, examining an alternative mechanism of firms reducing legal spending by deleveraging, accounting for possibly missing data on legal expenditures, and omitting the year between the announcement and implementation of SARFAESI from the analysis. Section 6 also analyzes the heterogeneous effect of SARFAESI on legal spending based on the varying efficiency of judicial systems across states. It confirms that the reduction in legal spending for affected firms persisted after a 2004 Indian Supreme Court decision making it easier for debtors to appeal collateral seizures and finds that this main finding is stronger for older rather than younger firms. Section 7 concludes the paper.

2. Institutional Setting: The SARFAESI Act

Historically, Indian law has been characterized by weak creditor rights and decades-long legal proceedings to enforce even straightforward security interests. Before SARFAESI, foreclosing on a defaulting debtor's assets necessarily involved initiating a lengthy court proceeding, with typical

foreclosure cases taking 15 to 20 years to resolve (Khanna 2017).[4] Indian secured creditors had unusually weak protections when compared to their counterparts in most other major economies before 2002. Upon a debtor's default, the secured creditor could not seize the pledged collateral by themselves and had to wait for a court's order to do so. While an automatic bankruptcy stay prevented secured creditors from seizing the assets of a debtor that had declared bankruptcy, secured lenders also had to file a court case to attach the collateral of a debtor firm that had *not* filed for bankruptcy protection.

To put the feebleness of Indian creditor rights in perspective, the major dividing line between most bankruptcy systems is the extent to which creditors may seize collateral after the debtor has declared bankruptcy. While some nations (such as France and the United States) have automatic stays that prevent creditors from depleting a bankruptcy estate after the declaration of insolvency, others (such as Britain and Germany) allow secured creditors to seize collateral belonging to the bankrupt debtor corporation. However, all these systems allow for secured creditors to seize and liquidate collateral for defaulting debtors that are not in bankruptcy. Therefore, in disallowing secured creditors from executing foreclosures without recourse to decades-long court proceedings, even when the debtor firm had not filed for bankruptcy, India offered them even fewer protections than notably pro-debtor systems such as France (Vig 2013).

SARFAESI drastically strengthened the rights of secured creditors vis-à-vis defaulting debtors by allowing them to seize and liquidate collateral without any intervention from the civil courts, as long as the debtor corporation was not in bankruptcy. After the act came into effect, secured creditors had to give defaulters sixty days' notice before they could seize and auction the collateral. SARFAESI allowed debtors to appeal the seizures in specialized debt tribunals, but only after the

[4] Studying earlier data, Gopalan et al. (2016) find that about 40% of pending debt recovery cases in Indian civil courts in 1985-86 had been pending for more than eight years.

creditor had possessed the collateral, and then too only after depositing 75% of the defaulted amount with the tribunal (Vig 2013).[5]

Therefore, borrowers could only appeal asset seizure in specialized debt courts, which were more efficient than the civil system they could use earlier, and even this right to appeal was contingent on overcoming onerous financial obstacles. Secured creditors seem to have used the new tools of possession and liquidation SARFAESI granted them. Studying auction notices in Indian newspapers, Alok et al. (2022) find that banks aggressively used the act's provisions to seize collateral. They conclude that SARFAESI quickly became the predominant method for debt collection by banks. SARFAESI therefore succeeded to a large degree in improving the unusually weak protections for Indian creditors.

The significant changes enacted by SARFAESI should plausibly have changed the legal expenditures of debtor corporations. To see why firms most affected by SARFAESI (i.e., those with higher proportions of collateralizable tangible assets) would see significant decreases in legal spending, it is important to understand the centrality of foreclosure-related legal costs in the Indian legal system before the legislation. First, Khanna (2017), studying the foreclosure process before SARFAESI, finds that Indian civil courts would take fifteen to twenty years before allowing secured creditors to foreclose on collateral even in straightforward cases where the debtor's default was not in question. Debtors and their lawyers were involved at every stage of these proceedings. Therefore, even in the absence of strategic behavior by the debtors, they needed to engage lawyers to participate in decades-long foreclosure proceedings, driving up legal costs.

[5] The requirement for a 75% deposit was subsequently struck down by the Indian Supreme Court in a 2004 case, *Mardia Chemicals v. Union of India*. Section 6.7 examines the effect of *Mardia*, and the governmental legislation to limit the impact of the decision, and finds that the decrease in legal spending for the treatment group *accelerated* after the Supreme Court case.

Second, we have extensive anecdotal evidence from Indian Supreme Court opinions that debtors engaged in frivolous litigation to prolong the foreclosure process, with their lawyers filing adjournment motions and taking advantage of the long gap between hearing dates in the backlogged civil court system. For instance, the Supreme Court described the legal tactics of debtors before SARFAESI as follows:

> Many hundred thousand took advantage of easy financing by the banks and other financial institutions but a large number of them did not repay the amount of loan, etc. Not only this, they instituted frivolous cases and succeeded in persuading the Civil Courts to pass orders of injunction against the steps taken by banks and financial institutions to recover their dues. Due to lack of adequate infrastructure and non-availability of manpower, the regular Courts could not accomplish the task of expeditiously adjudicating the cases instituted by banks and other financial institutions for recovery of their dues. As a result, several hundred crores[6] of public money got blocked in unproductive ventures.[7]

Therefore, in addition to the inherent slowness of Indian civil adjudication, the delay tactics used by debtors' lawyers led to these companies spending significant amounts on foreclosure-avoidance.

Third, the literature provides concrete evidence that foreclosure avoidance represented an economically significant portion of litigation in Indian courts before SARFAESI. Lenders, frustrated by the slow rate of recovery from secured loans, would make borrowers sign post-dated checks for scheduled payments throughout the life of the collateralized loan. If the borrower failed to make a payment, this "bounced check" constituted a *criminal* offense under Section 138 of the Negotiable Instruments Act 1881. After a bounced check, lenders would cause criminal charges to be brought against the borrower (Khanna 2017). Lenders hoped that the prospect of facing criminal charges would intimidate debtors, and this in terrorem effect would lead to higher recoveries. Analyses by elite Indian law firms show that "bounced check" cases under Section 138 were routinely brought against corporate debtors.[8]

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[6] One crore equals 10 million Indian rupees.

[7] *See* United Bank Of India vs Satyawati Tondon (2010).

[8] See https://corporate.cyrilamarchandblogs.com/2022/10/directors-vicarious-liability-under-current-legal-regime-of-negotiable-instruments-act-an-analysis-of-evolving-judicial-precedents/. Lenders would also typically bring associated vicarious liability cases against the firms' directors under Section 141 of the Negotiable Instruments Act 1881.

Section 138, too, pushed up the legal expenses of borrower companies because debtor firms had to bear the expenses of these criminal cases as they slowly made their way through the Indian court system. Khanna (2017), looking at data from 1994-2003 (i.e., before SARFAESI), finds that Section 138 represented 15% of all litigation in Indian courts (civil and criminal). SARFAESI was passed in part because courts were overwhelmed by the large number of Section 138 cases, and simply allowing secured creditors to bypass the court system altogether would lead to higher recoveries than relying on lenders intimidating borrowers through the criminal justice system.

Collectively, the literature on the pre-SARFAESI landscape shows that foreclosure-avoidance comprised a large segment of legal spending by debtor corporations. The combination of the inherent slowness of Indian civil courts, gamesmanship by debtors' lawyers, and the additional legal costs associated with Section 138 criminal proceedings together suggest that a large segment of legal transaction costs was related to debtors avoiding their obligations under debt contracts. After SARFAESI allowed secured creditors to bypass the civil courts and their convoluted procedures, debtor firms could no longer rely on such frivolous lawsuits to delay their contractual obligations. Secured creditors could now either seize collateral or force debtors to renegotiate the contracts. Therefore, several thousand legal actions would no longer be filed by Indian corporations, decreasing the amounts spent on lawyers. This institutional background motivates the paper's first hypothesis:

Hypothesis 1. Firms most affected by SARFAESI spent less on lawyers and legal advisors after the legislation became effective.

Beside reducing the amount spent on foreclosure avoidance, SARFAESI has another plausible effect on companies' legal expenditures: it increases the expected legal costs associated with bankruptcy. As detailed in section 1, contemporaneous reports and prior research on the Indian bankruptcy system suggest that managers at debtor firms affected by SARFAESI would

opportunistically seek bankruptcy protection and use the automatic stay to prevent secured creditors from seizing their assets.

Even without managerial opportunism, secured creditors' new rights under SARFAESI could have triggered more bankruptcy-related costs for debtor firms at the brink of insolvency. During this period, India used a "cash flow test" to determine if a company was insolvent. Under a cash flow test, a firm is adjudicated to be insolvent if a creditor proves the existence of a debt and that the debtor firm failed to pay it (Ram Mohan 2022). The firms most affected by SARFAESI, with a high proportion of tangible assets, depended on these immovable assets (such as factories and machinery) to carry on their business and generate the cash flow needed to remain solvent per the cash flow test used by Indian courts. If one creditor seized such a productive asset, the debtor firm might be unable to generate the cash flows needed to pay its debts to other lenders as they come due, triggering a declaration of bankruptcy. Therefore, financially distressed firms with collateralized assets became more likely to have their assets seized, and to declare bankruptcy, after SARFAESI since their cash flows would suffer in the absence of the seized assets.

Overall, whether through managerial opportunism or debtor firms becoming less likely to satisfy the cash flow test, SARFAESI increased the expected bankruptcy legal costs for affected firms that could plausibly declare bankruptcy. Bankruptcy processes entail significant legal costs even in advanced economies with predictable insolvency regimes (Iverson 2018). These costs are even more salient in a legal system like India, which did not have a uniform national bankruptcy code till 2016 and took years to resolve insolvencies even after SARFAESI (Kazmin 2019). Therefore, while SARFAESI reduced the cost of foreclosure avoidance for firms with secured loans in general, it also increased the expected legal costs associated with bankruptcy through debtors opportunistically seeking a bankruptcy stay or legitimately becoming insolvent under the cash flow test. This potential offsetting effect of bankruptcy legal costs leads to the second hypothesis:

Hypothesis 2. The decrease in legal costs for firms affected by SARFAESI is at least partially offset for firms with higher expected bankruptcy costs.

As explained in section 5, I proxy higher expected bankruptcy costs using Altman's Z-score, the number of lending relationships, credit risk, and managerial reputational costs from loss of control. In section 6, I further validate Hypothesis 2 using actual bankruptcy filings data from BIFR.

3. Data and Summary Statistics

Most of the data used in this paper comes from the Prowess database, maintained by the Center for Monitoring Indian Economy (CMIE). Prowess is a standard source for Indian financial data, and has been used in several earlier papers (Bertrand et al. 2002, Gopalan et al. 2016, Vig 2013). I winsorize all continuous variables at the 5% level to prevent my results from being driven by outliers, consistent with earlier work using Prowess data (Dharmapala and Khanna 2013). The results persist if I instead winsorize at 1% or 2.5%. Table 1 contains definitions for the variables, while Table 2 presents summary statistics.

Firm financials are reported for each Indian *fiscal* year, which ends on March 31. Therefore, the 2000 fiscal year refers to the period between April 1, 1999, and March 31, 2000. The SARFAESI Act became effective on June 21, 2002, which was in the 2003 fiscal year. Therefore, for the empirical analysis in the paper, SARFAESI is in effect for fiscal years 2003 and later. Nevertheless, Vig (2013) reports that Indian parliament began discussing the bill in concrete form in June 2001. Debtor firms could have potentially sensed that the law was set to be passed and changed their litigation activity or other behavior in response in the 2002 fiscal year. As part of the robustness tests in section 6, I re-run the analysis without including observations from the 2002 fiscal year and find that the basic result remains unchanged.

3.1. Legal Expenditures

Indian public companies must disclose the amount paid to lawyers and legal advisors in their annual reports. I use the absolute value of legal expenditures from Prowess as the dependent variable. The legal expenditures range from 100,000 to 23.2 million Indian rupees, with a mean value of 3.14 million rupees. The results remain qualitatively similar if I instead use the natural logarithm of legal charges as the outcome variable. Sankaraguruswamy and Varottil (2023), providing summary statistics for the Prowess legal fees data, note that these amounts do not include firms' payments to inhouse counsel. The amounts could therefore understate the amounts spent by firms on legal services. However, they note that firms rely almost exclusively on external lawyers to handle litigation and significant corporate transactions (such as bankruptcy). Moreover, during the time period around the passage of SARFAESI, the Indian inhouse profession was in its infancy. Well into the 2010s, the number of inhouse lawyers in India was just about 10,000, and the number around the passage of SARFAESI was a fraction of that. Inhouse lawyers who did work during this time period often found the details of securitization too confusing and outsourced such issues to external law firms (Khanna 2017). Therefore, the omission of inhouse counsel expenses may lead to the dependent variable being a better proxy for the foreclosure avoidance and bankruptcy-related legal costs studied in this paper, which were mostly handled by outside lawyers.

Another issue with the construction of the dependent variable is that the value for legal fees is often missing in the Prowess database for the time period under study. Legal spending data is only available for 42.14% of firm-year observations between 2000 and 2005. This is a common issue with many outcome variables studied in papers using the Prowess database. The "missing" values likely are cases where reported legal spending equals zero rupees, since the minimum value of non-missing legal spending is greater than zero. Dharmapala and Khanna (2018) suggest two approaches to deal with this issue: re-running the main empirical specification either treating missing observations as

zeroes (their preferred approach) or on the subsample of firms with non-missing values for the dependent variable. Section 6 confirms that the main finding of the paper persists using either of these approaches to account for potentially missing data on legal expenditures.

A limitation of this paper's use of the legal spending variable from Prowess as the dependent variable is that companies are only obliged to report total annual spending on lawyers. I do not have access to the amounts spent on legal actions specifically tied to debt contracting. However, the observed change in total legal spending can still be tied to the effects of SARFAESI for three reasons. First, the decrease in legal spending is concentrated in the group of firms most affected by the legislation: those with a high proportion of tangible assets that can be collateralized by banks. Second, the pre-trend analysis later in the paper shows that these firms only decreased their legal spending after SARFAESI became effective, bolstering the causal connection between the increase in creditor rights and the reduction in debtors' legal transaction costs. Finally, as explained in the previous section, the importance of foreclosure-related actions in the pre-SARFAESI legal system is consistent with the magnitudes of the decrease in legal spending for the treatment group after the reform. If fifteen percent of *all* litigation in Indian courts before SARFAESI was related to bounced check cases filed by lenders against defaulting debtors (Khanna 2017), it is reasonable to expect that eliminating the need for such cases would lead to a significant decrease in legal transaction costs for high-tangibility firms, as shown in section 4.

3.2. Tangibility

I create two measures to capture firms' asset tangibility, i.e., the proportion of their assets that consists of fixed inputs such as land or machinery, which can easily serve as collateral for secured credit agreements. The main measure is a continuous variable that equals the firm's pre-reform (for fiscal years 2000, 2001, and 2002) average ratio between net fixed assets and total assets. For ease of interpretation in subsequent regression analysis, I standardize this tangibility measure to have zero

mean and unit variance (Andrei et al. 2023). As an alternative measure, following Vig (2013), I create an indicator, *High Tangibility Dummy*, if the firm's pre-reform asset tangibility ranks in the top tercile by industry.

3.3. Bankruptcy Risk, Creditor Relationships, and Credit Risk

As the main proxy for higher legal costs of bankruptcy, I create an indicator for firms that are at highest risk of bankruptcy. After computing the pre-reform Z-score proposed by Altman (1968), I create a dummy *High Bankruptcy Risk* that equals 1 if the Z-score is less than 1.81. This is a standard metric for firms having high risk for bankruptcy (Bharath and Hertzel 2019, Giambona and Wang 2020). To capture the number of creditors, I create a continuous variable *Number of Banks*, equal to the average pre-reform number of banking relationships reported for each firm in Prowess. I standardize this continuous variable as well. In India, virtually all secured lending (especially during the time SARFAESI was passed) is by banks, so I use "number of creditors" and "number of banks" interchangeably, as in Gopalan et al. (2016) and Vig (2013).

As a final proxy for bankruptcy-related legal costs, I collect information from Prowess on pre-SARFAESI firm credit ratings. Prowess aggregates credit ratings from four agencies during the 2000-2002 fiscal years: CRISIL, CARE, ICRA, and India Ratings. The ratings have eight gradations, ranging from "Highest Safety" to "Default." I create a scale to measure firm credit risk, equaling 0 for "Highest Safety" and 7 for "Default."[9] A higher value on the index thus implies higher credit risk.[10] To capture firms most susceptible to bankruptcy, I create a dummy variable, *High Credit Risk*, equaling 1 if the average pre-reform credit risk is above 5. This captures firms whose average pre-

[9] Other papers using Prowess credit rating data have similarly constructed numeric scales to proxy for firm creditworthiness (Baghai and Becker 2018).

[10] The full scale is: Highest Safety (0), High Safety (1), Adequate Safety (2), Moderate Safety (3), Inadequate Safety (4), Substantial Risk (5), High Risk (6), Default (7). While the relative placement of "adequate" and "moderate" safety on the scale may seem ambiguous, a review of credit rating agency websites confirms that "adequate" is a higher (and thus less risky) rating for corporate debt. See https://www.crisilratings.com/en/home/our-business/ratings/new-products/insurance-hybrids/rating-scale.html.

SARFAESI credit risk corresponds to "High Risk" and "Default." Prowess contains credit rating information for relatively few companies: 772 unique firms have this data for the pre-SARFAESI period. Nevertheless, credit risk is a good proxy for greater bankruptcy-related legal costs.

3.4. Managerial Private Benefits of Control

I collect data for whether each firm belongs to a business group, which is a standard proxy for governance quality in the corporate finance literature studying India (Bertrand et al. 2002, Manchiraju and Rajgopal 2017). Indian business groups are usually controlled by founding families and operate different firms across industries, typically maintaining control over member firms through a series of cross-ownership and pyramiding structures. Prowess analysts qualitatively analyze the ownership and functioning of companies to classify them as members of different groups. The Prowess business group classification has been extensively validated in the literature (Bertrand et al. 2002).

3.5. State Court Speed

To assess potential heterogeneous effects of SARFAESI on legal costs depending on firms' headquarter states, I collect information on the efficiency of different provincial judicial systems. I define effectiveness as the percentage of trials in the state district or sessions courts that were disposed of in less than a year, following the previous literature (Alok et al. 2022, Amirapu 2021). I collect this information from the 2001 edition of the National Criminal Records Bureau's *Crime in India* report. Despite the title, the report collects information on the duration of proceedings for all trials (criminal and civil) for Indian state courts. I also standardize this variable to have zero mean and unit variance.

3.6. Firm Financials, Headquarters, and Industry

I obtain information on firm size (as proxied by total assets) and profits before extraordinary income and taxes from Prowess as time-varying controls. I also collect information about the firm's

headquarter state and industry. Following Gormley et al. (2012), I use the firm's registered address as a proxy for its state of headquarters. I use the two-digit National Industrial Classification (NIC) code as the proxy for the firm's industry (Goldberg et al. 2010).

4. Legal Expenditures After SARFAESI

SARFAESI was a federal law passed in the Indian parliament and applied across the country, affecting all secured debt contracts. Following Vig (2013), I define the treatment group based on pre-SARFAESI asset tangibility. Firms with more immovable assets—such as plants, machinery, land—were more affected by the legislation because fixed assets can serve as collateral. Secured creditors could possess and auction these assets after the passage of SARFAESI. The corporate finance literature studying the effect of SARFAESI has used this identification strategy to study the legislation's causal impact (Alok et al. 2022). I estimate the following equation for the legal spending of firm *i*, belonging to industry *j* and headquartered in state *s*:

$$Legal\ Spending_{it} = \alpha Post_t + \beta Tangibility_i + \gamma Post_t \text{x} Tangibility_i + \pi X_{it} + \delta_i + \theta_{jt} + \vartheta_{st} + \varepsilon_{it}$$

The empirical analysis uses data from fiscal years 2000 to 2005; i.e., three years before and after the passage of SARFAESI. However, the results persist if I alternatively use longer time periods such as 1997-2006.

Post equals 1 for fiscal years 2003-05, and zero otherwise. As explained earlier, *Tangibility* is either the continuous measure of average pre-reform asset tangibility or a dummy for whether the firm ranks in the top tercile of pre-reform tangibility by industry. The variable of interest is the interaction between *Post* and *Tangibility*. X_{it} is a vector of firm financials. δ_i, θ_{jt}, and ϑ_{st} represent firm, industry-year, and state-year fixed effects, respectively. The identification strategy therefore accounts for within-industry and within-state variation in legal expenditures around the enactment

of SARFAESI. It controls for time-varying industry and state effects correlated with the significant changes brought about by the legislation (Alok et al. 2022). ε_{it} is the regression standard error. I cluster standard errors at the firm level throughout the empirical analysis. The inclusion of industry-year and firm fixed effects subsumes the *Post* and *Tangibility* variables, respectively.

Table 3 presents the results from estimating this equation. Panel A uses the average pre-reform tangibility, while Panel B uses *High Tangibility Dummy*. In either panel, column (1) presents the baseline results without controlling for firm financials, while column (2) adds controls for time-varying firm size and profits.[11] Regardless of which proxy for tangibility is used, and whether I control for firm financials, the coefficient for the interaction term between *Post* and asset tangibility is negative and statistically significant.

The high level of statistical significance, as proxied by the *t*-statistic, is reassuring, since I am reusing an empirical setting already exploited by previous researchers to test different hypotheses. Heath et al. (2023) suggest that such reuse of natural experiments to study different outcomes can lead to a "multiple testing problem," and assert that a new hypothesis should have a *t*-statistic with magnitude exceeding 2.5 if approximately five prior studies have already used the same experiment, as is the case for the effects of SARFAESI studied in this paper.[12] The magnitude of the *t*-statistic for the coefficient of interest exceeds this benchmark of 2.5 in both panels of Table 3. Therefore, the results are unlikely to be affected by the multiple testing problem.

The baseline result in Panel A shows that a one standard deviation increase in pre-reform asset tangibility is associated with a subsequent decrease in legal spending equal to 209,000 Indian rupees.

[11] It is possible that SARFAESI itself affected the total assets or profitability of affected firms, due to their higher exposure to collateral seizure by creditors. Including time-varying firm financials in this case could lead to the problem of endogenous controls described in Angrist and Pischke (2009) and Gormley and Matsa (2016). Therefore, in all specifications, I report the results with as well as without these firm financials. In no case do the results depend on the inclusion of time-varying controls.

[12] Alok et al. (2022), Bhue et al. (2015), and Vig (2013) find that SARFAESI had significant effects, selecting as their outcome variables the choice between labor and capital, the extent of relationship banking, and the level of secured debt, respectively.

This decrease is economically significant, equaling 6.5% (29.83%) of mean (median) legal spending in the regression sample. Similarly, the baseline model in Panel B indicates that a firm belonging to the top tercile of pre-reform tangibility reduced legal spending by 525,000 Indian rupees after SARFAESI. The economic significance of the decrease is even higher using this measure of tangibility, equaling 16.34% (74.95%) of the mean (median) legal spending in the regression sample.

The results in Table 3 are consistent with the notion that SARFAESI reduced the legal spending of firms with high proportions of collateralizable fixed assets, which were most affected by the legislation. Unable to delay their contractual obligations by relying on the inefficiency and slow speed of the civil courts, these debtors were forced to either repay their debts, allow the creditors to seize their assets, or renegotiate their debt contracts on terms acceptable to the secured creditors. The economically significant magnitude of decrease in legal spending by affected firms is consistent with a large share of legal transaction costs in the pre-SARFAESI economy being related to foreclosure avoidance and weak creditor rights.

5. Foreclosure Avoidance Versus Bankruptcy Risk

While the previous section suggests that firms with high asset tangibility reduced legal expenditures after SARFAESI because of the decline in foreclosure avoidance costs, this decrease could be offset for firms with larger expected bankruptcy-related legal expenditures. I proxy higher expected bankruptcy-related legal spending using four different measures: insolvency risk as indicated by Z-scores, the number of creditors, credit risk, and managerial private benefits of control. I estimate a triple difference model:

$$
\begin{aligned}
Legal\ Spending_{it} &= \alpha Post_t + \beta Tangibility_i + \gamma Post_t \mathrm{x} Tangibility_i \\
&+ \mu Bankruptcy\ Risk_i\ xTangibility_i + \rho Bankruptcy\ Risk_i\ xPost_t \\
&+ \sigma Bankruptcy\ Risk_i\ xPost_t xTangibility_i + \pi X_{it} + \delta_i + \theta_{jt} + \vartheta_{st} + \varepsilon_{it}
\end{aligned}
$$

If managers opportunistically sought protection from SARFAESI via the bankruptcy stay, their companies had to meet the insolvency conditions under Indian law. Therefore, only managers at firms that could plausibly claim to be insolvent could successfully obtain the protection of the automatic stay from BIFR. Similarly, if bankruptcy-related costs went up after SARFAESI because the firm failed to meet the requirements of the cash flow test, this would only be the case for companies that were objectively at risk of insolvency. Therefore, $Bankruptcy\ Risk_i$ is the proxy for higher probability of bankruptcy costs, while the other terms have the same meaning as before. To estimate the offsetting effect of bankruptcy-related legal costs, the variable of interest is the triple interaction term $Bankruptcy\ Risk_i\ xPost_t xTangibility_i$. The inclusion of fixed effects leads to the variables $Bankruptcy\ Risk_i$, $Bankruptcy\ Risk_i\ xTangibility_i$, and $Bankruptcy\ Risk_i\ xPost_t$, dropping out of the equation.

5.1. Z-scores

Table 4 presents the result of the triple difference model where the measure of higher expected bankruptcy-related legal spending is the bankruptcy risk as captured by the pre-SARFAESI Z-score. As before, the coefficient for the interaction between *Post* and *Tangibility* is negative and statistically significant. However, the triple interaction between *Post*, *Tangibility*, and *High Bankruptcy Risk* (which equals 1 if the pre-reform Z-score was less than 1.81) has a positive and significant coefficient. This coefficient is of large magnitude and offsets most of the post-SARFAESI decrease in legal spending for firms affected by the reform. Therefore, using the most straightforward measure of high expected bankruptcy-related legal costs—the risk of insolvency—the increase in the expected legal costs associated with navigating the Indian insolvency procedure seems to partially offset the decline in foreclosure avoidance costs.

5.2. Creditor Concentration

As a second proxy for heightened bankruptcy-related legal spending, I use each firm's average pre-SARFAESI number of banking relationships. A higher number of creditors may lead to a "lender's run," with the possibility of foreclosure by other lenders dissuading creditors from renegotiating contracts and instead seizing collateral, potentially pushing the firm into insolvency (Diamond 2004). Alternatively, the firms with multiple lending relationships pre-SARFAESI might be the ones with the highest agency costs of debt. In order to secure credit, they may have borrowed from multiple creditors to make enforcement (via a court case by at least one of the creditors) more credible (Gopalan et al. 2016). Either of these theories predicts that firms with a higher number of creditor relationships before SARFAESI would have higher expected bankruptcy-related costs.

Table 5 presents the results for the triple difference model with the number of banking relationships as the proxy for higher bankruptcy probability. Once again, the interaction of *Post* and *Tangibility* has a negative and significant coefficient, indicating that the reduction in foreclosure avoidance led to a decrease in legal spending. Consistent with the thesis that higher bankruptcy-related legal spending offsets this decrease, the coefficient for triple interaction of these variables with the number of banking relationships is positive and significant.

5.3. Credit Risk

Table 6 presents a triple difference model where I proxy bankruptcy-related legal costs using credit risk. 8.41 percent of firms with credit risk information had pre-SARFAESI ratings corresponding to "high risk" or "default" (i.e., with average pre-reform credit risk exceeding 5 on the scale described in section 3.3). Since Prowess does not have information about credit ratings in 2000-02 for many firms, the number of observations in this table is lower than for the preceding analysis. However, the main result, with *Post x High Tangibility* having a negative significant coefficient, persists. The triple interaction of these terms with *High Credit Risk* has a positive

significant coefficient, of a magnitude large enough to offset the post-SARFAESI reduction in legal spending implied by a one standard deviation increase in pre-reform tangibility.

5.4. Private Benefits of Control

As a final proxy for bankruptcy risk and insolvency-related legal costs, I use a dummy for whether the firm is a member of a business group. Since the controllers at these firms typically belong to founding families and highly value their control, their expected losses from asset seizures are higher: they stand to lose not just the value of their stock, but also the control over firms they value highly and derive much of their reputation from (Khanna and Yafeh 2007). Controllers at business group firm are also more likely to be able to opportunistically file for bankruptcy after SARFAESI: since governance is opaquer at these companies, management can more easily make the decision to seek bankruptcy restructuring from BIFR to avoid obligations to secured creditors. The results in Table 7 are qualitatively similar to the previous three triple difference tests showing the offsetting effects of bankruptcy risk. While the main effect of SARFAESI on the legal costs of the treated group—proxied by the interaction between *Post* and *Tangibility*—continues to be negative and significant, the coefficient for the triple interaction with business group membership is positive and significant. This is consistent with managers' higher reputational benefits of control at business group firms translating to larger bankruptcy-related legal spending at these firms.

6. Robustness Checks

6.1. Pretrend Analysis

I make sure that the difference in legal spending between firms affected by SARFAESI (companies with high shares of tangible, collateralizable assets) and other firms was a result of the decrease in foreclosure avoidance after the securitization legislation, rather than the continuation of a preexisting differential trend. In Figure 1, I plot the coefficient estimates for the interaction between the continuous measure of average pre-SARFAESI asset tangibility and time dummies for

individual years before and after the year SARFAESI was enacted. Following Gopalan et al. (2016), I set the base year in the fully-saturated regression model equal to the year before the SARFAESI treatment, i.e., the 2002 fiscal year, and show the 90% confidence intervals. Figure 2 plots the same coefficient estimates when I use *High Tangibility Dummy* as the proxy for pre-SARFAESI asset tangibility. The fixed effects and time-varying controls remain the same as in the main regression specification. Regardless of how I measure firm asset tangibility, the figures show there is no discernible differential pretrend in legal spending between high-tangibility and low-tangibility firms. Therefore, it is unlikely that the results are the product of legal spending trends preceding the enactment of SARFAESI.

6.2. Using Actual Bankruptcy Filings

Previous studies of the Indian bankruptcy system during this paper's time period have used filing data from BIFR, which functioned as the federal bankruptcy court (Gopalan et al. 2016, Gormley et al. 2018). However, BIFR has subsequently been dissolved and its website is no longer active.[13] I obtain the list of companies filing bankruptcy cases with BIFR using the Internet Archive.[14] Following Gopalan et al. (2016), I name-match BIFR bankruptcy filers with the firms in the main Prowess sample. Table 8 reports the results from re-estimating the triple interaction model from section 5, where I replace bankruptcy risk with an indicator for whether a firm actually filed with the BIFR. In columns (1) and (2), the dummy *BIFR Filer* equals 1 if the firm filed for bankruptcy with BIFR in the sample period (2000-05), while in columns (3) and (4) it only equals 1 if the firm filed a BIFR petition in the post-SARFAESI period (i.e., 2003-05). I analyze companies that filed with the BIFR after 2003 separately in the latter two columns because they are more likely to have opportunistically sought a bankruptcy stay in response to SARFAESI. Firms that filed for

[13] See http://www.bifr.nic.in/.
[14] See https://web.archive.org/web/20180107222243/http://www.bifr.nic.in/casesregd.htm.

bankruptcy protection before the legislation became effective, on the other hand, may have sought a bankruptcy stay for reasons unrelated to SARFAESI's bolstering of creditor rights. In all specifications, the main effect persists, with the coefficient for the interaction between *Post* and *Tangibility* being negative and significant.

Consistent with bankruptcy-related legal costs going up for firms affected by SARFAESI, the triple interaction term between *Post*, *Tangibility*, and *BIFR Filer* is positive. While this coefficient is marginally significant in columns (1) and (2), where we set *BIFR Filer* equal to 1 for firms declaring bankruptcy with BIFR any time in 2000-05, it has a greater magnitude and is more significant in columns (3) and (4), when *BIFR Filer* only equals 1 if the firm declared bankruptcy after SARFAESI became effective. Therefore, Table 8 confirms that while firms affected by SARFAESI reduced legal spending on average, this reduction is smaller for firms that had to bear the legal costs of navigating the bankruptcy system. Moreover, the triple interaction model suggests that this effect is concentrated in firms that declared bankruptcy after SARFAESI became effective, consistent with the interplay between foreclosure-avoidance and bankruptcy-related legal costs being caused by the legislation's change to creditor rights.

Gormley et al. (2018) note that 30% of BIFR filings were dismissed because solvent debtor firms filed for insolvency to take advantage of the automatic stay and the slow proceedings of bankruptcy courts. Therefore, *BIFR Filer* may not be a perfect measure of firms that undergo the bankruptcy process. Nevertheless, the previous section showed that the post-SARFAESI reduction in legal spending was smaller for firms that had higher bankruptcy risk using objective indicia such as the Z-score and number of creditors. The results in Table 8 hence use actual bankruptcy filing data to show evidence consistent with SARFAESI leading some affected firms to use the insolvency system to avoid having their assets seized by secured creditors, thus pushing up bankruptcy-related legal transaction costs.

6.3. Was it Because of a Decrease in (Secured) Debt?

Vig (2013) argues that firms with more tangible assets decreased their leverage, and especially their level of secured debt, in response to SARFAESI, since banks could more easily foreclose on secured assets after the legislation. Such a decrease in debt could be an important alternative mechanism for understanding the decrease in legal fees incurred by firms after SARFAESI. Rather than the decrease in legal spending being driven by creditor rights and reduced foreclosure avoidance, it could be attributed to better debt management by companies in the treated group. Lower debt levels could hence represent an important omitted variable in the analysis.

To appraise this potential alternative mechanism, I estimate a triple difference model interacting *Post*, pre-reform asset tangibility, and time-varying debt or secured debt ratios. The variable $LeverageRatio_{it}$ equals either the debt ratio or the secured debt ratio for firm *i* at time *t*, depending on the empirical specification. As with other continuous variables in the paper, I standardize these ratios for ease of exposition. Note that asset tangibility is a pre-reform average of each firm's ratio of net fixed assets to total assets in the 2000–02 fiscal years, while the leverage ratios are time-varying quantities.

$$
\begin{aligned}
Legal\ Spending_{it} &= \alpha Post_t + \beta Tangibility_i + \gamma Post_t x Tangibility_i \\
&+ \mu LeverageRatio_{it}\ x Tangibility_i + \rho LeverageRatio_{it}\ x Post_t \\
&+ \sigma LeverageRatio_{it}\ \ x Post_t x Tangibility_i + \ \pi X_{it} + \delta_i + \theta_{jt} + \vartheta_{st} + \varepsilon_{it}
\end{aligned}
$$

Table 9 presents the results from estimating this triple difference model. The first two columns use debt ratio as a measure of leverage, while the last two use secured debt ratio. In columns (1) and (2), the triple interaction term between *Post*, tangibility, and time-varying debt ratio does not have a significant coefficient, while the interaction between *Post* and tangibility continues to have a negative and significant coefficient. When I use secured debt ratio as the measure of leverage,

the triple interaction between *Post*, tangibility, and time-varying secured debt ratio has a negative and significant coefficient in column (3). This is the opposite sign from what we would expect if the decline in legal spending were driven by lower debt levels: the result indicates that the decrease in legal transaction costs is concentrated in firms that were affected by SARFAESI *and* continued borrowing from banks (as proxied by higher time-varying secured debt ratios). This triple interaction term continues to have a negative coefficient, albeit one that is not significant at traditional levels, when we additionally control for firm financials in column (4). The results in Table 9 are hence more consistent with legal spending being driven down by creditor rights than affected firms decreasing debt levels.

6.4. Missing Values for Legal Fees

Table 10 accounts for the cases of missing observations for legal spending in the Prowess database using the two approaches suggested by Dharmapala and Khanna (2018). In the first two columns, I re-rerun the main difference-in-difference specification only for firms with non-missing values for legal spending for each of the fiscal years in the 2000-2005 period. In the last two columns, I treat missing observations for legal spending as zeroes, consistent with the literature on variables such as research and development expenditures (Koh and Reeb 2015). As explained in section 3.1, it is likely the case that missing values of legal spending are cases of zero spending, since the minimum non-missing value of the outcome variable is strictly positive. Using either approach and regardless of controlling for firm financials, the main result persists: high asset-tangibility firms, which were most affected by SARFAESI, reduced their legal spending after the enactment of the securitization legislation.

6.5. Excluding the 2002 Fiscal Year

The legislative history of SARFAESI indicates that Indian parliament met in June 2001 (i.e., during the 2002 fiscal year) to begin deliberating on the details of the legislation, and that the passage

of the law (though not its exact details) began to be evident during this period (Vig 2013). There are two ways in which the imminent passage of SARFAESI could have influenced corporate spending on lawyers during the 2002 fiscal year, before the enactment of the bill on June 21, 2002 in the 2003 fiscal year. First, as Vig (2013) describes, there were a flurry of lawsuits filed challenging the constitutional validity of the legislation. Therefore, the result could be driven by a temporary increase in litigation spending in the 2002 fiscal year, just before the enactment of the legislation. Second, debtor firms affected by SARFAESI may have changed their behavior realizing that creditor rights were about to be strengthened. They could have, for example, renegotiated debt contracts or otherwise voluntarily decreased foreclosure avoidance activities. Therefore, the decrease in legal spending may have begun in the 2002 fiscal year, before the legislative enactment.

The first factor—an explosion of lawsuits challenging SARFAESI in 2002 driving up litigation costs—is unlikely to drive the results. This is because these lawsuits were filed *after* the enactment of the legislation, in the 2003 fiscal year (Vig 2013). To the extent these lawsuits pushed up legal spending for affected firms, they would have introduced bias against the paper's finding, since they occurred in the post-SARFAESI period. The second factor, positing debtors' change in behavior in the 2002 fiscal year, is also unlikely, since debtors offered significant resistance to SARFAESI, and banks' recovery rates from secured credit agreements did not improve till after the legislation had gone into effect (Alok et al. 2022).

Despite the institutional reasons to doubt that the decrease in affected firms' legal expenditures would have pre-dated the effective date of SARFAESI, I re-run the main empirical test omitting data from the 2002 fiscal year. Table 11 presents the results of this analysis. The main finding remains qualitatively unchanged, with the coefficient for the interaction between *Post* and *Tangibility* remaining negative and statistically significant.

6.6. Controlling for Court Efficiency

In Table 12, I present a triple difference model, interacting *Post* and *Tangibility* with a state-specific measure of court efficiency, equaling the percentage of trials disposed of in the district or sessions court within a year, as of 2001. There are two possible views of the heterogeneous effect of pre-SARFAESI court efficiency on legal spending by firms headquartered in different states. First, secured creditors may be more likely to bypass the judicial process in states with inefficient judicial processes and seize the collateral. Therefore, foreclosure avoidance may be reduced to a greater extent in inefficient state systems, and the decrease in legal spending could be greater in regions with slower courts (Alok et al. 2022). However, there are reasons to doubt that banks would differentially skip the civil court system and invoke SARFAESI based on the inefficiency of the judicial process. Institutionally, the Indian banking sector is characterized by several large government-controlled banks that operate throughout the country, are autonomously run, and set their policies at a bank-wide level (Bhaumik et al. 2011). Specifically, these banks seem to have adopted the SARFAESI route of seizing collateral and bypassing the judicial system throughout the country, as a matter of bank-wide policy.[15] Given that SARFAESI applies nationwide and offers a cheaper enforcement mechanism than even the most efficient Indian civil courts, it may not seem likely that secured creditors would opt to stick with the regular adjudicative process to vindicate their contractual rights in any state.

The second and perhaps more plausible prediction for the interaction between pre-SARFAESI judicial efficiency and subsequent changes in legal spending is that firms in *high*-efficiency states ought to have seen greater decreases in spending on lawyers. Firms with collateralizable assets in inefficient states could simply piggyback off the tortuous judicial process: a single foreclosure

[15] See https://www.livemint.com/industry/banking/banks-try-to-repossess-auction-properties-as-more-home-loans-turn-bad-11630121506592.html/

avoidance action could take years to resolve, freeing the debtor from the responsibilities of the secured debt contract. On the other hand, firms headquartered in states where courts cleared more trials in a short period of times may have had to file multiple lawsuits or appeals in order to delay foreclosure on assets before SARFAESI. On this view, the decrease in legal costs should be greater for affected firms located in states with more efficient judicial systems.

The results from the triple difference model displayed in Table 12 are consistent with this second view. The interaction between *Post* and *Tangibility* continues to have a negative and significant coefficient. However, the triple interaction term between *Post*, *Tangibility*, and *Court Efficiency* also has a negative and statistically significant coefficient. A one standard deviation increase in both pre-SARFAESI asset tangibility as well as pre-SARFAESI court efficiency corresponds to a subsequent decrease in legal spending equal to 420,000 Indian rupees. SARFAESI thus seems to have had the largest effect on legal transaction costs in the states where debtor corporations had previously needed to file multiple legal actions and incur more attorney fees to delay foreclosure.

6.7. The Effect of *Mardia Chemicals*

The only major court decision altering the details of SARFAESI was the Supreme Court's opinion in *Mardia Chemicals v. Union of India*, issued on April 8, 2004. The court upheld the constitutional validity of SARFAESI, therefore signaling to borrowers and creditors that secured lenders could continue to seize defaulters' collateral. However, the court struck down SARFAESI's requirement that a borrower challenging an asset seizure deposit 75% of the value of the collateral before appealing to a specialized debt tribunal. Since *Mardia* made it easier for firms to appeal to debt tribunals, it could be seen as diluting SARFAESI's pro-creditor orientation and encouraging a resurgence of foreclosure-avoiding legal spending by debtors.

However, the Indian government responded to the Supreme Court decision by quickly amending SARFAESI to circumvent the pro-debtor *Mardia* opinion. This legislation, enacted on

November 11, 2004, was prompted by intense lobbying by secured creditors worried about *Mardia* constraining their newfound ability to seize collateral.[16] The amendment ordered the specialized debt tribunal to dispose of any appeal by the borrower within four months, a far quicker processing time than the decades-long procedures in civil courts pre-SARFAESI.[17] Still, borrowers no longer needed to post a deposit to get their case before a judge.[18]

The 2004 amendment had a novel provision that should nevertheless have reduced foreclosure-avoidance despite the elimination of a bond requirement. Secured creditors were now allowed to take over the business operations of a defaulting borrower's company. The original SARFAESI act of 2002 had merely allowed secured creditors to seize collateral and subsequently sell or lease the attached chattel. After the 2004 amendment, the secured creditor could take control of the entire business enterprise from its shareholders and sell it, without the traditional safeguards associated with conventional bankruptcy regimes such as Chapter 11 in the United States. A prominent legal practitioner described these 2004 amendments as having "fundamentally altered [the] basic design of SARFAESI Act" and changed it from a foreclosure law to an insolvency regime.[19]

Therefore, while the *Mardia* decision made it easier for borrowers to appeal collateral seizures, the subsequent SARFAESI amendments limited the amount of judicial delay an appeal would create by ordering tribunals to dispose of cases within four months and increased the penalty for defaulting debtors by allowing secured creditors to seize the debtor's entire business (rather than just the disputed collateral). These legislative changes may have acted to dissuade borrowers from

[16] See https://economictimes.indiatimes.com/news/economy/policy/borrowers-may-have-to-deposit-75-of-debt-before-appeal/articleshow/753093.cms?from=mdr/
[17] See https://pib.gov.in/newsite/erelcontent.aspx?relid=4921. The November amendment also introduced the requirement that the debtor post a 50% bond if they subsequently chose to appeal to the appellate level of the specialized debt tribunal.
[18] See https://pib.gov.in/newsite/erelcontent.aspx?relid=4921/.
[19] See https://blog.theleapjournal.org/2021/09/zombie-laws.html#gsc.tab=0.

challenging secured creditors in the courts, and reduced foreclosure avoidance despite the court's elimination of the 75% deposit requirement.

To assess the impact *Mardia* may have had on legal transaction costs, I re-estimate the main regression specification, extending the post-SARFAESI period till the 2006 fiscal year. The Supreme Court's decision was issued on April 8, 2004, which falls within the 2005 fiscal year. I therefore create a dummy, *Mardia*, which equals 1 for the 2005 and 2006 fiscal years. Another dummy, *Immediately Post-SARFAESI*, equals 1 for the 2003 and 2004 fiscal years, when SARFAESI was in place, but the Supreme Court had not yet issued its *Mardia* decision. The base category remains the pre-SARFAESI period, from 2000 to 2002. Table 13 presents the results for this modified regression. The interaction between pre-reform asset tangibility and both the time dummies is negative and highly significant, indicating that affected firms continued to decrease their legal spending after *Mardia*.

Interestingly, the magnitude of the decrease is larger for the post-*Mardia* period: a one standard deviation increase in pre-SARFAESI asset tangibility is associated with a subsequent decrease in legal spending of 176,000 Indian rupees in fiscal years 2003 and 2004, and 366,000 Indian rupees in fiscal years 2005 and 2006 (after *Mardia* and the legislative amendment in response to it were effective). Table 13 hence suggests that the Supreme Court's elimination of the 75% deposit requirement did not obviate the decrease in legal costs for firms affected by SARFAESI. The results are more consistent with the theory that debtor firms became even warier of foreclosure-avoidance activities, due to the 2004 amendments increasing creditor power by transforming SARFAESI from a foreclosure law to a de facto insolvency regime.

6.8. Heterogeneity by Firm Age

In Table 14, I re-run the main equation for legal spending from section 4 separately for subsamples of firms depending on whether they are above or below the median age in the sample. I

calculate firm age based on each company's incorporation year, as provided by Prowess. Table 14 shows that the coefficient for the interaction between *Post* and *Tangibility* is negative for both younger and older firms. However, this coefficient has greater magnitude and is highly statistically significant for the subsample of older firms, while it is both smaller and not significant at traditional levels for the subsample of younger firms. The decrease in legal spending being more pronounced for older firms is consistent with anecdotal evidence that entrenched incumbent Indian companies are especially likely to avoid their obligations under debt contracts (Kazmin 2019). If older firms were spending more on foreclosure-avoiding proceedings before SARFAESI, the legislation may have especially decreased their expenditures on lawyers. However, the smaller size of these subsamples reduces the power of the regression analysis, which warrants caution in interpreting these results.

7. Conclusion

This paper studies the effect of a major securitization reform in India, which reduced enforcement costs for secured creditors, on the legal expenditures of debtor corporations. The empirical strategy uses the fact that Indian public firms must disclose the amount they spend on lawyers, and that the legislation especially affected firms with high shares of collateralizable fixed assets. I find that firms affected by the legislation decreased legal spending. This decrease is economically significant, representing 6.5% (29.83%) of mean (median) legal spending by Indian public companies. I interpret this decrease as a sign that debtor corporations reduced spending on lawsuits designed to avoid foreclosure by secured creditors. The decrease in legal costs is attenuated for firms with higher expected costs of bankruptcy-related legal costs (proxied by higher insolvency risk, a greater number of creditors, higher credit risk, or higher managerial reputational benefits of control) as well as companies that actually filed for bankruptcy protection after the reform. This is consistent with prior literature suggesting that some debtor firms filed for bankruptcy to take

advantage of the automatic stay and avoid their obligations to secured creditors under SARFAESI. Therefore, reducing enforcement costs for secured creditors decreases debtors' spending on foreclosure avoidance, but raises the expected cost of bankruptcy-related legal spending.

By using the quasi-natural setting of the increase in Indian secured creditors' rights and the comprehensive data on legal spending by firms, the paper adds to the literatures on the effect of creditor rights, the economic significance of the direct costs of bankruptcy, the market for lawyers, and the consequences of agency costs of debt. The main policy implication of the empirical analysis is that a large fraction of legal transaction costs exists because of weak contracting institutions such as high enforcement costs for debt agreements. Improving contract enforcement can eliminate many of these legal transaction costs. The reduction in legal spending by firms affected by SARFAESI may be seen as improving social welfare, by reducing the resources spent on litigating straightforward corporate defaults and alleviating the backlogs that plague India's congested court systems.

Figure 1

Pre-Trend: Continuous Measure of Pre-Reform Asset Tangibility

This figure graphs the 90% confidence interval for the coefficient for the interaction between average pre-SARFAESI asset tangibility and dummies for individual fiscal years, where *T* is the 2003 fiscal year (when SARFAESI became effective). The values on the x-axis represent the year relative to the 2003 fiscal year. All standard errors are robust and clustered at the firm level.

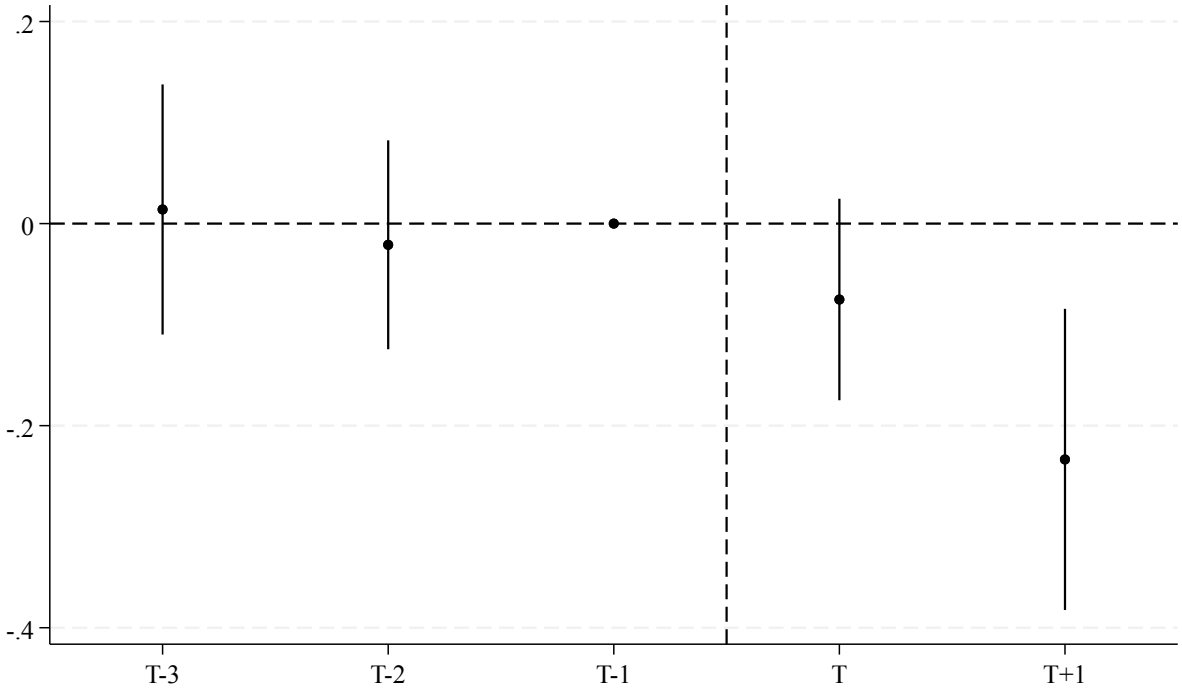


Figure 2

Pre-Trend: Dummy for High Pre-Reform Asset Tangibility

This figure graphs the 90% confidence interval for the coefficient for the interaction between *High Tangibility Dummy* and dummies for individual fiscal years, where ***T*** is the 2003 fiscal year (when SARFAESI became effective). The values on the x-axis represent the year relative to the 2003 fiscal year. All standard errors are robust and clustered at the firm level.

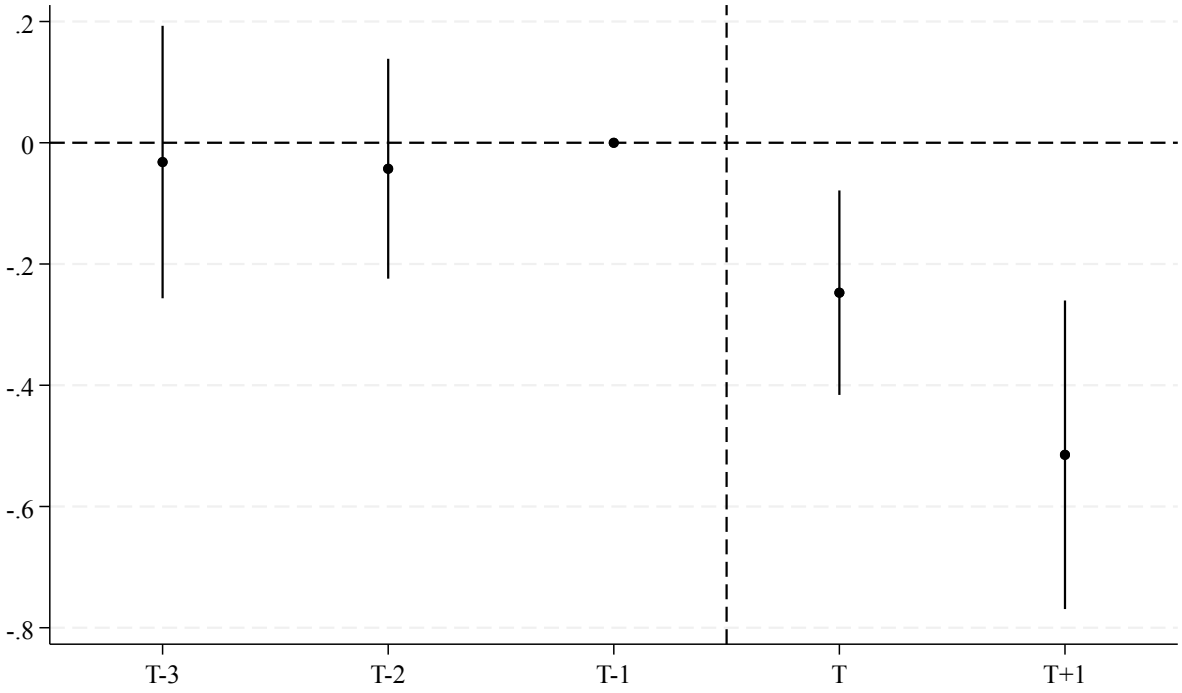


Table 1

Variable Definitions

Variable	Definition	Source
BIFR Filer	An indicator variable equal to 1 if the firm filed a bankruptcy petition with the Board for Industrial & Financial Reconstruction (BIFR)	BIFR website, manual checks
Business Group Membership	An indicator variable equal to 1 if the firm belongs to an Indian business group	Prowess
Court Efficiency	The percentage of trials disposed by district courts in the firm's headquarter state in less than a year in calendar year 2001, winsorized at the 5% level, then centered and scaled to have zero mean and unit sample variance	National Crime Records Bureau
Debt Ratio	The ratio of total debt to total assets, winsorized at the 5% level, then centered and scaled to have zero mean and unit sample variance	Prowess
High Bankruptcy Risk	An indicator variable equal to 1 if the firm's average Altman Z score for the fiscal years 2000-2002 (winsorized at the 5% level) is less than 1.81	Prowess
High Credit Risk	An indicator variable equal to 1 if the firm's average credit rating for the fiscal years 2000-2002 (winsorized at the 5% level) corresponds to high risk or default	Prowess
High Tangibility Dummy	An indicator variable equal to 1 if the firm's average tangibility (as measured by the ratio of net fixed assets to total assets) for the fiscal years 2000-2002, winsorized at the 5% level, is in the top tercile by industry	Prowess
Immediately Post-SARFAESI	An indicator variable equal to 1 for fiscal years 2003-2004	Prowess
Legal Fees	The amount paid by companies to lawyers and legal advisors in a fiscal year, winsorized at the 5% level	Prowess
Mardia	An indicator variable equal to 1 for fiscal years 2005-2006	Prowess
Number of Banks	The average number of banking relationships the firm had in the fiscal years 2000-2002, winsorized at the 5% level, then centered and scaled to have zero mean and unit sample variance	Prowess
Post	An indicator variable equal to 1 for fiscal years 2003-2005	Prowess

Secured Debt Ratio	The ratio of secured debt to total assets, winsorized at the 5% level, then centered and scaled to have zero mean and unit sample variance	Prowess
Tangibility	The firm's average tangibility (as measured by the ratio of net fixed assets to total assets) for the fiscal years 2000-2002, winsorized at the 5% level, then centered and scaled to have zero mean and unit sample variance	Prowess

Table 2

Summary Statistics

This table presents the summary statistics for the data used in the paper. All variables are defined in Table 1. The statistics refer to the main 2000-2005 sample used for the analysis in Tables 3-9. While continuous variables are standardized for ease of exposition in subsequent regression models, I present the un-standardized summary statistics here.

	N	Mean	SD
Business Group Membership	30120	.2972	.457
Court Efficiency	27103	11.8091	6.4999
High Bankruptcy Risk	30120	.2603	.4388
High Credit Risk	4220	.0988	.2984
High Tangibility Dummy	30120	.3023	.4593
Legal Fees	12693	3.1069	5.7932
Number of Banks	30120	2.1423	1.9788
Post	30120	.5163	.4997
Tangibility	27999	.3403	.2285

Table 3

Asset Tangibility and Legal Expenditure

This table presents the results of a linear regression model where the dependent variable is the amount companies spent on legal fees, in millions of Indian rupees. All models use data from fiscal years 2000 to 2005, and t-statistics are presented in parentheses. Panel A uses *Tangibility*, a continuous measure of pre-SARFAESI asset tangibility which is standardized to have zero mean and unit variance, while Panel B uses *High Tangibility Dummy*, equal to 1 if the firm had pre-reform asset tangibility in the top tercile. All specifications include firm, industry-year, and state-year fixed effects, and column (2) further controls for firm size and profits. All variables are described in Table 1. All standard errors are robust and clustered at the firm level. All continuous variables are Winsorized at the 5% level. The ***, **, and * denote significance at the 1%, 5%, and 10% levels.

Panel A. Continuous Measure of Pre-Reform Asset Tangibility

	(1) Baseline	(2) With Firm Financials
Post *x* Tangibility	-0.209***	-0.178***
	(-2.737)	(-2.606)
Observations	11,795	11,794
Adjusted R-squared	0.848	0.862
Controls for Firm Financials	No	Yes
Firm Fixed Effects	Yes	Yes
Industry-Year Fixed Effects	Yes	Yes
State-Year Fixed Effects	Yes	Yes

Panel B. Dummy for High Pre-Reform Asset Tangibility

	(1) Baseline	(2) With Firm Financials
Post *x* High Tangibility Dummy	-0.525***	-0.422***
	(-3.855)	(-3.497)
Observations	12,131	12,127
Adjusted R-squared	0.849	0.862
Controls for Firm Financials	No	Yes
Firm Fixed Effects	Yes	Yes
Industry-Year Fixed Effects	Yes	Yes
State-Year Fixed Effects	Yes	Yes

Table 4

The Effect of Bankruptcy Risk

This table presents the results of a linear regression model where the dependent variable is the amount companies spent on legal fees, in millions of Indian rupees. All models use data from fiscal years 2000 to 2005, and t-statistics are presented in parentheses. All specifications include firm, industry-year, and state-year fixed effects, and column (2) further controls for firm size and profits. All variables are described in Table 1. All standard errors are robust and clustered at the firm level. All continuous variables are Winsorized at the 5% level. The ***, **, and * denote significance at the 1%, 5%, and 10% levels.

	(1) Baseline	(2) With Firm Financials
Post *x* Tangibility	-0.810***	-0.805***
	(-3.702)	(-3.836)
Post *x* High	-0.188	0.0443
Bankruptcy Risk	(-0.818)	(0.210)
Post *x* Tangibility *x*	0.706***	0.676***
High Bankruptcy	(2.815)	(2.889)
Risk		
Observations	6,195	6,195
Adjusted R-squared	0.846	0.862
Controls for Firm Financials	No	Yes
Firm Fixed Effects	Yes	Yes
Industry-Year Fixed Effects	Yes	Yes
State-Year Fixed Effects	Yes	Yes

Table 5

The Effect of Creditor Concentration

This table presents the results of a linear regression model where the dependent variable is the amount companies spent on legal fees, in millions of Indian rupees. All models use data from fiscal years 2000 to 2005, and t-statistics are presented in parentheses. All specifications include firm, industry-year, and state-year fixed effects, and column (2) further controls for firm size and profits. All variables are described in Table 1. All standard errors are robust and clustered at the firm level. All continuous variables are Winsorized at the 5% level. The ***, **, and * denote significance at the 1%, 5%, and 10% levels.

	(1) Baseline	(2) With Firm Financials
Post *x* Tangibility	-0.215***	-0.184***
	(-2.803)	(-2.678)
Post *x* Number of Banks	0.193**	0.108
	(2.203)	(1.373)
Post *x* Tangibility *x* Number of Banks	0.186**	0.198**
	(2.192)	(2.425)
Observations	11,795	11,794
Adjusted R-squared	0.849	0.862
Controls for Firm Financials	No	Yes
Firm Fixed Effects	Yes	Yes
Industry-Year Fixed Effects	Yes	Yes
State-Year Fixed Effects	Yes	Yes

Table 6

The Effect of Credit Risk

This table presents the results of a linear regression model where the dependent variable is the amount companies spent on legal fees, in millions of Indian rupees. All models use data from fiscal years 2000 to 2005, and t-statistics are presented in parentheses. All specifications include firm, industry-year, and state-year fixed effects, and column (2) further controls for firm size and profits. All variables are described in Table 1. All standard errors are robust and clustered at the firm level. All continuous variables are Winsorized at the 5% level. The ***, **, and * denote significance at the 1%, 5%, and 10% levels.

	(1) Baseline	(2) With Firm Financials
Post *x* Tangibility	-1.292***	-1.006**
	(-2.671)	(-2.356)
Post *x* High Credit Risk	-0.482	-0.384
	(-0.624)	(-0.582)
Post *x* Tangibility *x* High Credit Risk	1.646**	1.778**
	(2.011)	(2.302)
Observations	1,707	1,707
Adjusted R-squared	0.821	0.838
Controls for Firm Financials	No	Yes
Firm Fixed Effects	Yes	Yes
Industry-Year Fixed Effects	Yes	Yes
State-Year Fixed Effects	Yes	Yes

Table 7

The Effect of Business Group Affiliation

This table presents the results of a linear regression model where the dependent variable is the amount companies spent on legal fees, in millions of Indian rupees. All models use data from fiscal years 2000 to 2005, and t-statistics are presented in parentheses. All specifications include firm, industry-year, and state-year fixed effects, and column (2) further controls for firm size and profits. All variables are described in Table 1. All standard errors are robust and clustered at the firm level. All continuous variables are Winsorized at the 5% level. The ***, **, and * denote significance at the 1%, 5%, and 10% levels.

	(1) Baseline	(2) With Firm Financials
Post *x* Tangibility	-0.338***	-0.268***
	(-4.169)	(-3.507)
Post *x* Business Group Membership	0.435***	0.300**
	(2.652)	(2.026)
Post *x* Tangibility *x* Business Group Membership	0.409**	0.288*
	(2.442)	(1.870)
Observations	11,795	11,794
Adjusted R-squared	0.849	0.862
Controls for Firm Financials	No	Yes
Firm Fixed Effects	Yes	Yes
Industry-Year Fixed Effects	Yes	Yes
State-Year Fixed Effects	Yes	Yes

Table 8

Using BIFR Filings

This table presents the results of a linear regression model where the dependent variable is the amount companies spent on legal fees, in millions of Indian rupees. All models use data from fiscal years 2000 to 2005, and t-statistics are presented in parentheses. All specifications include firm, industry-year, and state-year fixed effects, and column (2) further controls for firm size and profits. All variables are described in Table 1. All standard errors are robust and clustered at the firm level. All continuous variables are Winsorized at the 5% level. The ***, **, and * denote significance at the 1%, 5%, and 10% levels.

	(1)	(2)	(3)	(4)
	BIFR Filer=1 if filed in 2000-2005		*BIFR Filer=1 if filed in 2003-2005*	
	Baseline	With Firm Financials	Baseline	With Firm Financials
Post *x* Tangibility	-0.213***	-0.189***	-0.222***	-0.193***
	(-2.648)	(-2.595)	(-2.854)	(-2.764)
Post *x* BIFR Filer	-1.028***	-0.648***	-1.260***	-0.830***
	(-5.965)	(-3.737)	(-5.552)	(-3.535)
Post *x* Tangibility *x* BIFR Filer	0.579*	0.496	0.831**	0.690*
	(1.895)	(1.545)	(2.373)	(1.881)
Observations	12,203	12,202	11,914	11,913
Adjusted R-squared	0.849	0.862	0.849	0.862
Controls for Firm Financials	No	Yes	No	Yes
Firm Fixed Effects	Yes	Yes	Yes	Yes
Industry-Year Fixed Effects	Yes	Yes	Yes	Yes
State-Year Fixed Effects	Yes	Yes	Yes	Yes

Table 9

Is it Because (Secured) Debt Decreased?

This table presents the results of a linear regression model where the dependent variable is the amount companies spent on legal fees, in millions of Indian rupees. All models use data from fiscal years 2000 to 2005, and t-statistics are presented in parentheses. All specifications include firm, industry-year, and state-year fixed effects, and columns (2) and (4) further control for firm size and profits in both panels. All variables are described in Table 1. All standard errors are robust and clustered at the firm level. All continuous variables are Winsorized at the 5% level. The ***, **, and * denote significance at the 1%, 5%, and 10% levels.

	(1) Baseline	(2) With Firm Financials	(3) Baseline	(4) With Firm Financials
Post *x* Tangibility	-0.188**	-0.176**	-0.00814	-0.00120
	(-2.198)	(-2.237)	(-0.0953)	(-0.0155)
Debt Ratio	-0.212*	-0.0353		
	(-1.866)	(-0.322)		
Secured Debt Ratio			-0.339***	-0.114
			(-2.912)	(-1.083)
Post *x* Debt Ratio	-0.225***	-0.173***		
	(-3.270)	(-2.623)		
Tangibility *x* Debt Ratio	0.000843	-0.0648		
	(0.00827)	(-0.664)		
Post *x* Tangibility *x* Debt Ratio	0.0648	0.0852		
	(0.983)	(1.323)		
Post *x* Secured Debt Ratio			0.0275	0.0673
			(0.401)	(1.048)
Tangibility *x* Secured Debt Ratio			0.0937	-0.0295
			(0.912)	(-0.321)
Post *x* Tangibility *x* Secured Debt Ratio			-0.119**	-0.0818
			(-2.036)	(-1.480)
Observations	10,915	10,914	9,783	9,782
Adjusted R-squared	0.848	0.860	0.856	0.870
Controls for Firm Financials	No	Yes	No	Yes
Firm Fixed Effects	Yes	Yes	Yes	Yes
Industry-Year Fixed Effects	Yes	Yes	Yes	Yes
State-Year Fixed Effects	Yes	Yes	Yes	Yes

Table 10

Accounting for Missing Values of Legal Expenditure

This table presents the results of a linear regression model where the dependent variable is the amount companies spent on legal fees, in millions of Indian rupees. All models use data from fiscal years 2000 to 2005, and t-statistics are presented in parentheses. Columns (1) and (2) only consider firms that report non-missing values of legal expenditures for all years from 2000 to 2005, while columns (3) and (4) treat any missing values for legal expenditures from 2000 to 2005 as zero. All specifications include firm, industry-year, and state-year fixed effects, and columns (2) and (4) further control for firm size and profits. All variables are described in Table 1. All standard errors are robust and clustered at the firm level. All continuous variables are Winsorized at the 5% level. The ***, **, and * denote significance at the 1%, 5%, and 10% levels.

	(1)	(2)	(3)	(4)
	Firms With No Missing Values for Legal Expenditures		*Treating Missing Values for Legal Expenditures as Zero*	
	Baseline	With Firm Financials	Baseline	With Firm Financials
Post *x* Tangibility	-0.274***	-0.240***	-0.120***	-0.0723*
	(-2.781)	(-2.638)	(-2.878)	(-1.829)
Observations	8,007	8,007	27,802	27,474
Adjusted R-squared	0.841	0.853	0.761	0.774
Controls for Firm Financials	No	Yes	No	Yes
Firm Fixed Effects	Yes	Yes	Yes	Yes
Industry-Year Fixed Effects	Yes	Yes	Yes	Yes
State-Year Fixed Effects	Yes	Yes	Yes	Yes

Table 11

Excluding Fiscal Year 2002

This table presents the results of a linear regression model where the dependent variable is the amount companies spent on legal fees, in millions of Indian rupees. All models use data from fiscal years 2000 to 2005, *excluding* fiscal year 2002, and t-statistics are presented in parentheses. All specifications include firm, industry-year, and state-year fixed effects, and column (2) further controls for firm size and profits. All variables are described in Table 1. All standard errors are robust and clustered at the firm level. All continuous variables are Winsorized at the 5% level. The ***, **, and * denote significance at the 1%, 5%, and 10% levels.

	(1) Baseline	(2) With Firm Financials
Post *x* Tangibility	-0.221**	-0.197**
	(-2.408)	(-2.399)
Observations	9,596	9,595
Adjusted R-squared	0.843	0.857
Controls for Firm Financials	No	Yes
Firm Fixed Effects	Yes	Yes
Industry-Year Fixed Effects	Yes	Yes
State-Year Fixed Effects	Yes	Yes

Table 12

Controlling for Court Efficiency

This table presents the results of a linear regression model where the dependent variable is the amount companies spent on legal fees, in millions of Indian rupees. All models use data from fiscal years 2000 to 2005, and t-statistics are presented in parentheses. All specifications include firm, industry-year, and state-year fixed effects, and column (2) further controls for firm size and profits. All variables are described in Table 1. All standard errors are robust and clustered at the firm level. All continuous variables are Winsorized at the 5% level. The ***, **, and * denote significance at the 1%, 5%, and 10% levels.

	(1) Baseline	(2) With Firm Financials
Post *x* Tangibility	-0.252***	-0.230***
	(-3.126)	(-3.154)
Post *x* Tangibility *x* Court Efficiency	-0.168**	-0.152**
	(-2.316)	(-2.167)
Observations	10,232	10,231
Adjusted R-squared	0.844	0.858
Controls for Firm Financials	No	Yes
Firm Fixed Effects	Yes	Yes
Industry-Year Fixed Effects	Yes	Yes
State-Year Fixed Effects	Yes	Yes

Table 13

Assessing the Effect of *Mardia Chemicals*

This table presents the results of a linear regression model where the dependent variable is the amount companies spent on legal fees, in millions of Indian rupees. All models use data from fiscal years 2000 to 2006, and t-statistics are presented in parentheses. All specifications include firm, industry-year, and state-year fixed effects, and column (2) further controls for firm size and profits. All variables are described in Table 1. All standard errors are robust and clustered at the firm level. All continuous variables are Winsorized at the 5% level. The ***, **, and * denote significance at the 1%, 5%, and 10% levels.

	(1) Baseline	(2) With Firm Financials
Immediately Post-SARFAESI	-0.176**	-0.156**
x Tangibility	(-2.381)	(-2.297)
Mardia *x* Tangibility	-0.366***	-0.307***
	(-3.666)	(-3.604)
Observations	13,992	13,991
Adjusted R-squared	0.841	0.859
Controls for Firm Financials	No	Yes
Firm Fixed Effects	Yes	Yes
Industry-Year Fixed Effects	Yes	Yes
State-Year Fixed Effects	Yes	Yes

Table 14

Subsample Analysis: Firm Age and Legal Expenditure

This table presents the results of a linear regression model where the dependent variable is the amount companies spent on legal fees, in millions of Indian rupees. All models use data from fiscal years 2000 to 2005, and t-statistics are presented in parentheses. All specifications include firm, industry-year, and state-year fixed effects, and column (2) further controls for firm size and profits. All variables are described in Table 1. I define younger (older) firms as those with below- (above-) median age as calculated using the incorporation year provided in the Prowess database. All standard errors are robust and clustered at the firm level. All continuous variables are Winsorized at the 5% level. The ***, **, and * denote significance at the 1%, 5%, and 10% levels.

	(1)	(2)	(3)	(4)
	Younger Firms		*Older Firms*	
	Baseline	With Firm Financials	Baseline	With Firm Financials
Post *x* Tangibility	-0.128	-0.134	-0.305***	-0.227**
	(-1.121)	(-1.327)	(-2.867)	(-2.343)
Observations	5,778	5,777	5,909	5,909
Adjusted R-squared	0.818	0.831	0.864	0.877
Controls for Firm Financials	No	Yes	No	Yes
Firm Fixed Effects	Yes	Yes	Yes	Yes
Industry-Year Fixed Effects	Yes	Yes	Yes	Yes
State-Year Fixed Effects	Yes	Yes	Yes	Yes

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