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Resolving Financial Distress Where Property Rights Are Not Clearly Defined: The Case of China

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Abstract

We use data on financially distressed Chinese companies in order to study a debt market where property rights are crudely defined and poorly enforced. To help with identification we use an event where a business-friendly province published new guidelines regarding the administration and enforcement of assets pledged as collateral. Although by no means a comprehensive reform of bankruptcy law or property rights, by instructing courts to enforce existing, albeit rudimentary, contractual rights the new guidelines virtually eliminated creditors runs and produced a sharp increase in the survival rate of financially-distressed companies. These changes illustrate how piecemeal reforms of property rights and their enforcement may have a significant impact on economic outcomes. Our analysis and results challenge the view that a fully fledged system of private property is a precondition for economic development.

JEL:Classification: G21, G23, G33, N25, O43, P48s

Key words: Finance and development, property rights, financial distress, creditors runs

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1 Introduction

The right to property is one of the pillars of any market economy. An owner can pledge title, the formal expression of property ownership, as collateral in exchange for credit, a transaction that "is the bedrock on which much of the financial system operates"; see Besley and Ghatak (2008). One important role of collateral is to tighten the debtor's incentive to perform their obligations, thereby decreasing the cost of borrowing; see Hart and Moore (1998). Another role for collateral, which is a major focus of this paper, is to prioritize the creditors' claims by their seniority rights thereby diminishing the hazard of coordination failures and creditors runs.

We study the relationship between property rights through the lens of the Chinese credit markets using a sample of financially distressed small and medium size enterprises (SMEs) in China, where the right to property is only partially developed and still evolving; in theory, as a Socialist Market economy, China still rejects the concept of private property. The study has important implications for the management of bankruptcy and distress, in particular, the role of formal bankruptcy in coordinating dispersed creditors so as to avoid disorderly liquidation. In deriving such implications we note that, presently, China is already industrialized, its markets fiercely competitive, populated by companies that are driven by the profit motive. As is well known, the economy has been performing remarkably well, reversing a century and a half of economic decline. According to Maddison (2018), PPP-adjusted parity with the United States was reached around the year 2020 see Figure 1.

Insert Figure 1 here

We apply an event-study methodology to a relatively minor reform, just one step on the path of financial development; see La Porta et. al. (1998) or Acemoglu, Johnson and Robinson, (2005) for a comprehensive survey. In 2012 the authorities in one of China's most prosperous and business friendly provinces published a technical report "answering questions" about the treatment of secured creditors of distressed companies. In fact, the report's unassuming title[1] delivered a strong and unambiguous message: that, under existing

[1]The Report is described as : Answers to questions regarding disputes in the enforcement of creditors' rights when multiple

law, pledging title by way of a contract is sufficient to rank creditors by order of seniority. Hence, the seniority enjoyed by the secured creditors over unsecured ones, that existed in theory but were ignored in practice, should be enforced as intended by the contracting parties. It had an immediate effect: among "treated" companies, deviations from the contracted order of seniority virtually vanished, with a simultaneous decline in the incidence of creditors runs. Significant improvements in survival rates and credit availability followed. As noted, the reform was piecemeal in nature, avoiding any comprehensive change in bankruptcy or property-rights laws, which in other respects remained rudimentary.

Our data is hand collected from the private records of "the bank" (TB), a relatively small lender headquartered in the treated province. The data covers 969 non listed, private SMEs that suffered financial distress between 2008 and 2015. The data is of exceptional quality and granularity. It includes information about the amount of lending by TB as well as by other banks, loan-to-value ratios, recovery rates and survival outcomes. The data also contains narratives with case histories recorded by TB's credit officers, with valuable institutional information. An important property of the data is that since the reform applied only in-province, and since TB had out-of-province borrowers, unaffected by the reform, the latter can be used as a control group. TB's untitled in-province borrowers are also a second control group since they have no secured creditors and are therefore unaffected by the reform.

For a better understanding of the statistical results we precede the formal analysis with a detailed institutional description. In spite of its socialist principles, China has to accept that companies will not invest money and effort in the development of their assets unless they can exercise substantial control rights over them. Rights vary widely, in terms of strength and quality. The strongest, called "title", is, in fact, a relatively short-term lease that can be pledged as collateral. The weakest is an informal right of usage that, although costly to obtain, cannot be pledged as collateral. Only 55% of the companies in our sample have titles to their assets. Even then, the value of a title depends on auxiliary institutions. For example, a right that is not properly registered could allow a third party to create a conflicting right. More importantly, TB's narratives document incidents where efforts by TB's credit officers to repossess secured assets were frustrated by other courts who favored more junior creditors who filed earlier, thereby incentivizing creditors to run.

We provide a comprehensive analysis of the 2012 reform across a wide range of variables impacted by the reform. To begin with, we document that, pre refom, the first bank to file for repossession benefited

creditors apply for the liquidation of the same debtor's asset

from higher recovery rates, but that pattern changed dramatically, post 2012 among "treated" companies, namely titled companies operating in TB's province. Pre 2012, the mean recovery rate on TB's in-province secured loans was 77%, but that rate dropped to 45% when TB failed to file first for repossession. At the same time, by filing first, TB could increase the recovery rate on its unsecured loans from 26% to 67%. These differences virtually vanish in-province, post 2012 reform. The reform, which prohibits the first-mover from orchestrating asset sales, restricts their opportunistic behavior against secured creditors. More direct evidence for the diminished first-mover advantage is a sharp drop, from 13% to just 1%, in the incidence of secured banks recalling loans prior to maturity, in response to another creditor declaring the company in default. Feeling more secure in their position, the secured banks have little incentive to recall their loan. A similar drop, from 16% to 3%, is observed for banks who lent unsecured to treated companies. Hence, once the junior creditors realize that they cannot "jump the queue" through aggressive recovery tactics, their best interest is served by "staying loyal" to the debtor and hoping that it survives distress. As predicted, no significant changes can be detected in the control group, since they are unaffected by the reform.

The diminished advantage to the first mover delivered material improvements in real economic performance. Survival rates for distressed borrowers treated by the 2012 reform increased from 9% to 19%. With better survival prospects, bank-credit availability also improved, with its volume increasing by some 15%; the effect is significantly stronger where the value of the collateral is higher. Interest rates on such credit fell by about 40*bp*. Notwithstanding, even after 2012, bank lending to titled in-province companies was just 37% of total assets, compared with 66% for SME companies in the UK, 63% in France and 79% in Germany; see Davydenko and Franks (2008). Bank credit for untitled in-province companies was 30% lower relative to titled in-province companies.

The reform also reduced the reliance on "informal" lenders who charged extremely high interest rates. For example, before 2012 the interest rate spread on such credit was around 18% in comparison with 0.9% for unsecured bank credit.[2] Worse, it is not uncommon for suppliers of informal credit to "enforce" their claims through the exercise of physical violence against the defaulting debtor. Our narratives provide evidence of debtors and their families, reporting to the police, asking to be placed in custody for their own protection.

[2]See Leong, Li, Pavanini, and Walsh (2021) for a structural model of illegal money lending by "credit sharks" based on data from Singapore. They report interest rates in the same order of magnitude as in our sample, or even higher. However, they describe their borrowers as "vulnerable individuals", with no access to formal credit, whose main reasons for accessing the illegal market are gambling losses or alcohol abuse. They also report harassment by the credit sharks upon default, but the impression is that the methods are "more restrained"; they suggest this may be because police in Singapore provide debtors with some protection against harassment.

The narratives also indicate that debtors often leave town and flee for fear of harassment. Indeed, for treated company owners, the incidence of fleeing fell from 24% pre 2012 to just 8% post 2012.

With comprehensive data for the composition of bank lending by TB as well as other banks, we analyze the mechanism that companies use in order to better coordinate their creditors. Notice that, the reform transfers control rights from unsecured to secured debt, by preventing the court using collateral to repay the unsecured creditor. Hence, taking the composition of bank lending as given, the reform has increased the *effective* level of debt concentration towards the lender with security, improving creditors coordination. However, debt composition is an endogenous variable, and cannot be taken as given. Accepted theories of debt structure, e.g. Bolton and Scharfstein (1996), argue that offsetting the coordination advantage of concentrated debt, dispersed run-prone debt deters strategic default, where the debtor defaults so as to renegotiate the terms of the contract to its own advantage. Hence, it could be hypothesized that the pre-2012 levels of debt dispersion were already optimized, in which case companies should respond to the reform by diversifying borrowing away from the secured bank. This hypothesis is strongly rejected by the evidence: among treated companies, the share of secured bank debt in total bank lending increased from 51% pre reform to 72% post 2012, implying an even greater increase in the effective debt concentration. That such a debt structure was implemented only after the 2012 reform is consistent with the hypothesis that weak property rights impose a binding constraint on a company's ability to manage their debt structure so as to achieve better coordination among their creditors. Lastly, we demonstrate that the advantages that the 2012 reform delivered to titled (in province) companies came at the expense of untitled in-province companies. Post 2012, untitled companies had less bank credit, paid a higher price and came to rely more heavily on "informal lenders". For such borrowers the incidence of owners fleeing the province increased from 28% pre 2012 to 34% post 2012.

Our results explain the virtual nonexistence of evidence of creditors runs in mature market economies[3] – unlike bank runs that are well documented; see Gorton (1988), Calomiris and Mason (2003) Iyer and Puri (2012) and a survey by Goldstein (2012). Notwithstanding, creditors runs play a prominent role in the analysis of bankruptcy law. Jackson's (1986) influential work starts with the idea that assets of the distressed

[3]The only exception is Hertzberg, Liberti, Paravisini (2011) document a fall in lending activity by banks upon learning that their information is to be revealed to other creditors. The fine granularity of our data allows us to identify the entire causal chain from inadequate implementation of property rights, through the advantage it gives the first mover to economic outcomes, thereby highlighting differences between mature and developing financial markets. However, they use data from Argentina, not quite a mature market economy.

company constitute a common pool, which the competing creditors tend to over exploit. Many have used this idea in order to justify an active role for courts in the resolution of financial distress, including the power to stay certain contractual rights as in Chapter 11 of the US bankruptcy code. The striking effectiveness of the 2012 reform questions whether this is a significant justification for such elaborate measures. Well structured, well prioritized debt contracts already contain distress-contingent plans for the allocation of property rights on the company's assets. Properly enforced, the asset pool is privately rather than commonly owned. Remarkably, such an outcome was achieved by the 2012 reform without any change in corporate bankruptcy law,

Our analysis builds on the description of property rights in Allen Qian and Qian (2005). The results also bear on their hypothesis that China has created an alternative economic model, based on trust and reputation. Rather, we document a reality where the debtor-creditor relationship is still organized around the concept of private property, albeit, poorly implemented. The "alternative" channels of informal lending that did develop are very costly and carry an unacceptable human cost in terms of harassment and even violence against debtors. At the same time, our findings reveal an important role played by local governments, attentive to the needs of business, willing to act promptly to remove constraints that constrain local business. Notwithstanding, we also find in the narratives some clear cases of local governments using its powers, selectively, in order to "help" certain debtors out of distress.

Our results also bear on the finance-development literature, which tends to emphasize that property rights are a precondition for a successful process of economic development; see North and Thomas (1973), De Soto (2000), La Porta et. al. (1998), and Acemoglu, Johnson and Robinson (2001). Rather, our findings highlight the fact that the right to property is a bundle of privileges: the right of usage, the right to lease, the right to pledge assets in order to secure credit, the right to prioritize credit, etc. Indeed, even freedom from harassment can be viewed as part of the debtor's right to their property. It is conceivable that various elements of the bundle bind at different points of the development path. For example, not being able to prioritize security interests may not have been a binding constraint in the 1980s when farming collectives were allowed to allocate plots of land for private cultivation, but did become a binding constraint thirty years later.[4] While starting with a fully-fledged system of property rights is theoretically conceivable, it may be deemed impractical due to other constraints. In particular, such a system is likely to be intensive in legal

[4]Chari, Liu, Wang, and Wang (2019) for a study of a 2003 reform of leasing rights of agricultural land with a 10% productivity gain.

and administrative human capital, a highly constrained resource in emerging economies; see Allen Qian and Qian (2005) for a description of judicial resources in China.

A more evolutionary approach to the interrelated process of institutional and real economic development can be found in the writing of the great English jurist, Henry Maine (1861).[5] At an early stage, societies are "distinguished by the prevalence of co-ownership, by the inter-mixture of personal with proprietary rights, and by the confusion of public with private duties." But then, once "the wheels of society had begun to move quickly," a gradual process starts where rights in assets are carved out of the "common fund" and held individually, first through uninterrupted usage, then possession and, ultimately, private property. Along the transition process, assets are "conveyed with incomplete forms, and held, therefore, under imperfect titles."

It is interesting to note that institutional arrangements similar to China's can be found in poorer emerging markets. For example, Besely (1995) provides a vivid description of rural Ghana, a society in "transition between a traditional system of land rights (which emphasizes claims of the community) and a modern one (which emphasizes the claims of the individual)." The various right commonly bundled in "property" may be broken down; for example, the right to sell does not follow automatically from the right to lease. Even when an asset can be sold, strings of "lineage approval" to the transaction may still attach, revealing the "vestiges of the [older] communal land tenure system." Equally important, "formal (de jure) rights might have very little to do with the ability to exercise these rights (de facto)". Hence, in Anloga, a less developed region of Ghana, although 78% of the currently cultivated farmers could purchase their land, only 3% have actually done so. The interesting feature of China is that such patterns of institutional under-development are still present even when the economy has already reached such an advanced stage of industrialization. However, other historical examples suggest a similar pattern. For example, in 18th century Britain, already in the midst of the industrial revolution, open fields and village commons were fenced, often by coercive means, bearing similarities to present day China; see Clark (1998). Also, Franks and Sussman (2005) document how US bankruptcy law in the 19th century evolved through a series of ad hoc reforms implemented by Federal courts in the reorganization of bankrupt railroads, largely in the absence of any Congress mandated corporate bankruptcy law. It was only in the 20th century that Congress took steps to give statutory formality to the innovations of the courts.

While our sample is made up of small non listed companies, recent events indicate that they may be

[5]The following citations are taken from Chapter 8.

valid well beyond that population. On 9 December 2021, Evergrande a real-estate developer based in Shenzhen (Guangdong province), listed on the Hong Kong stock exchange, with debt obligations in excess of $300 billion, defaulted on loans made by foreign creditors.[6] Concerns about creditors runs are explicitly mentioned, with one analyst stating: "creditors are racing to take Evergrande to court so they can be in a better position to get their money back". Interestingly, even a company as big as Evergrande had to turn to "shadow" or "underground" lenders who charged annualized interest rates as high as 73%.[7] Aware of coordination problems, the provincial authorities set up a special court to handle the case,[8] and, also, "parachute[d] a team of officials into the indebted company,"[9] which "includes representatives from [other] state-owned enterprises".[10] Clearly, the process has become politicized; one analyst comments: "Chinese restructurings are like horse-trading. ... You have to play ball with the government;"[11] our narratives are consistent with this view.

Our paper is organized as follows: Section 2 describes the data, Section 3 describes the institutional setting, Section 4 provides a formal analysis, Section 5 includes some extensions and robustness tests and section 6 provides a discussion of the results and some conclusions.

2 The Data

We have assembled our data from TB's private records, a relatively small bank operating out of one of China's most affluent provinces, reputed for a climate supportive of private business. Cull and Xu (2005) survey company managers in eighteen cities; the capital of TB's province scores highly on questions such as "to what extent do government officials that you regularly have contact with help rather than hinder firms?" or "what is the likelihood that the legal system would uphold your contracts and property rights in business disputes?" Our sample is restricted to SMEs, which are the backbone of China's Domestic Private Enterprise (DPE) sector. According to a recent report by Minsheng Bank[12], DPEs account for more than 60% of China's GDP, more than 50% of the Government's tax revenues and about 80% of urban employment.

[6] See Financial Times (FT), 9 December 2021, https://www.ft.com/content/6d6b1f79-52b3-49e5-aa8a-7068adec7a9d.
[7] See FT, 16 December 2021, https://www.ft.com/content/941c0e96-ebf1-42ee-97ec-ad6764f35cbf?shareType=nongift.
[8] See FT, 16 December 2021, https://www.ft.com/content/941c0e96-ebf1-42ee-97ec-ad6764f35cbf?shareType=nongift.
[9] See FT, 3 December 2021, https://www.ft.com/content/502ab22a-45b4-48e0-afc2-c0fb5e6ac58b.
[10] See FT, 6 December 2021, https://www.ft.com/content/b3df27fb-f54d-4680-95cf-3563bdcd2fe4.
[11] See FT, 10 December 2021, https://www.ft.com/content/476dbe5c-02cd-4650-a48c-ea65201ea6f4.
[12] See http://www.sohu.com/a/136566101_618573, in Chinese.

SME/DPEs make up the most dynamic and the most productive part of the Chinese economy, in comparison with State Owned Enterprises (SOEs). Song, Storesletten and Zilibotti (2011) report a profitability gap of 9% between DPEs and SOEs, while Brandt, Hsieh, and Zhu (2008), Brandt and Zhu (2010) and Hsieh and Klenow (2009) report a Total Factor Productivity (TFP) gap of between 1.42% and 2.3%, respectively, albeit using different methodologies and covering a period slightly earlier than ours.[13] In addition, evidence gathered by Song, Storesletten and Zilibotti (2011) indicates that China's DPEs suffer from low availability of bank credit, where only 10% of investments are funded by bank loans in comparison with 30% in the SOE sector. A Standard Chartered (2010) survey of Chinese SMEs[14], reports that 41% had no access at all to bank credit. This suggests that our sample is taken from the better funded, more developed segment of the Chinese private business population.

TB, like most other Chinese banks, extends credit via fixed-term loans of one-year maturity, although it often extends several staggered loans to the same company within a single year. Our sample, covering the years 2008 to 2015, contains more than half-a million loans, extended to $21,860$ borrowers. In case the debtor defaults on any loan, any creditor is allowed to demand repayment of its own loans. It follows that the reality of Chinese banking is close to credit-line lending (i.e. overdraft facilities in the UK or "revolvers" in the US). Table 1 consolidates the data at the level of company years of which there are $78,343$ data points.

Insert Table 1 here

During the sample period, 969 borrowers defaulted, with an annual default rate of 1.2%. Although a formal bankruptcy procedure does exist in China, it is beyond the reach of the vast majority of SMEs. In fact only 21 distressed companies in our sample were resolved using formal bankruptcy. Another 42 were resolved through ad hoc informal conferences of creditors, sponsored by local government. Interestingly, among our 969 distress cases there are eight SOEs that happen to satisfy the SME definition, all resolved using one of the two procedures above, an indication of the political connections required to access them; see Section 5.3 for a more comprehensive analysis. Excluding these government sponsored resolutions, we are left with $906 = (969 - 21 - 42)$ private cases, constituting our "working sample".

Upon default, TB collects additional, more accurate, information on the borrower so as to better manage its recovery efforts. In particular, TB collects information about other creditors, with whom it has to

[13] According to Song, Storesletten and Zilibotti (2011), China's DPEs are slightly more profitable than Foreign Enterprises active in China.

[14] Median total assets of only 10 million RMB in compatrison to about 95 million RMB in our sample – see Table 1.

compete for recovery, including private, non-bank creditors. Of the extra information gathered at that stage, of particular interest are narratives by TB's credit officers documenting the difficulties encountered during the debt recovery process.

According to financial indicators reported in Table 1, the companies in the working sample are not that different in size or even profitability relative to the general population of non-distressed companies; one year before default they still report return on assets (ROA) of 9.7%. Possibly, at that point, TB was oblivious to the performance of its borrowers, raising questions about the quality of its monitoring.[15] To address this concern, we correlate default with TB's pricing and funding decisions two years prior to default; Table 2 reports the results. (Firm FEs and other controls are included.) The strong statistical significance indicates that TB was aware of the problem though the scale of its response was somewhat mild: interest rates increase by 15*bp*s two years before default and by 25*bp*s one year before default. That may be explained by the fact that although regulatory interest-rate ceilings were abolished a few years before the beginning of our sampling period, customary adherence to the policy lingered on. However, TB's aversion to debt repricing is accompanied by a sharper reaction in lending volumes, which are cut back 4% two years before default and by 19% in the year preceding default.

Insert Table 2 here

3 Institutional framework

"China has been a country of many ironies that continue to perplex a thoughtful outsider. Particularly perplexing is the disparity between the words and the reality"; see Zhang (2003). To better understand these "words" we present a short description of the complicated institutional system that governs the resolution of financial distress among Chinese SMEs.

3.1 Property rights

As far as land is concerned, "private property" is a misnomer. In legal-political theory, China is a Socialist Market Economy. Socialism implies that all land and, by implication, any attached equipment or structures,

[15] A point made by Jack Ma in his well-known speech to the Bund Financial Summit, Shanghai 24 October 2020, describing Chinese banks as having a "pawn-shop mentality". These allegations are not supported by the analysis below.

are ultimately "owned" by an abstract entity that is "the people of China".[16] In practice, "the people" exercise ownership either through one of the State's organs (e.g. the People's Liberation Army or provincial governments), or, directly, via local farming collectives, who control much of the land that has economic value.

At the same time, an economy as vibrant and fast growing as China's, also requires that companies are able to acquire some control rights on assets that they use and develop. To accommodate these conflicting demands, China has developed a whole spectrum of ad hoc institutional arrangements, varying by the strength of the right and by the quality of its implementation. At the low end, farming collectives, who are not allowed to create any rights to land that is classified as rural, may still grant (for a fee) the right of usage to an industrial company. Since the arrangement has no legal standing, such a right is neither transferable nor pledgeable. At the high end, local government can "sell" land classified as urban as a *conveyance*, effectively a fixed term leasehold (typically, for a duration of thirty to fifty years). There exists no formal procedure to extend the lease before it expires. Such a conveyance is transferable to a third party and, also, pledgeable as collateral against credit. In China, such conveyances are commonly called "titles", misleadingly. The entire process is administrative in nature, so the de-facto strength of the right often depends on how diligently the bureaucracy of the local government handles the process. Of major importance is the documentation of the right, whether by some communication with a local official or through a public register (so that the right can be observed and verified by any third party). In the latter case, public registers vary, significantly by the quality of their administration.[17]

Of the 906 companies in our working sample, only 494 or 55%, have titles. Even for those (in-province) companies, the value of assets pledged as collateral is just 35% of total asset value reported by the company. Pre 2012, the amount of credit secured on those assets was just 17% of total asset value, implying a loan-to-value ratio of 49%, highlighting the SME credit-shortage problem; Section 4 provides a more rigorous analysis. Adding unsecured credit, the total amount of bank lending to titled companies was just 32% of total assets; untitled companies received about one half of that amount.

Our narratives provide two interesting examples of the problems created by inadequate registration of titles. A private steel trader pledged some rolling stock as collateral. The steel was stored with a specialist

[16]It could be argued that the socialist tenure system draws on older communal traditions, but the analysis of this argument falls beyond the scope of the current paper.

[17]This paragraph draws, heavily, on Ho (2001) and Ho and Li (2003), where much additional detail can be found.

warehouse and the receipt was pledged as collateral. In this case, however, the trader colluded with the warehouse to issue duplicate receipts, which were both pledged in order to secure two bank loans (against the same stock). Although TB recorded the value of the collateral at 2.35 million RMB, when the company defaulted, the recovery amounted to only 0.2 million RMB. In another case, a shipping operator borrowed 24 million RMB from TB, secured by three tugboats worth 20 million RMB. However, when TB tried to repossess the collateral, the owner claimed that the signature, of his daughter, on the pledging document, was not authentic. Eventually, TB managed to recover 11 million RMB.

3.2 Rule of law

Historically, China treated its legal system as just one part, not necessarily the most important one, of the State apparatus. This attitude is well exemplified by Mao Zedong's words in 1957, cited by Ho (2005): "you cannot rely on law to rule the majority of the people ... I took part in establishing the Constitution, but I do not remember it. Every one of our resolutions is a law; when we hold a meeting, that's law too." One implication of that attitude is that judicial service was considered a "job" that required no particular skill or training. Judges, many still serving during our sample period, were recruited from the ranks of the army, the Party or the bureaucracy. Even in the 1990s, when the administration of justice improved considerably, it was estimated that only 25% of judges had a law degree. Even in the more developed coastal provinces qualifications were often obtained by "televised education" or through some "specialized colleges"; see Zhang (2003). Apart from concerns about judges' independence and integrity[18], it is clear that lack of professionalism meant that certain legal rights were not treated with the same level of attention and diligence that they would receive in a mature market economy. Of critical importance to our analysis is the haphazard enforcement of priority rights among the creditors of a defaulted company.[19]

[18] See, for example, Peerenboom (2008) and Wang (2013).

[19] We came across the following anecdote talking to lawyer involved in much repossession work for TB, whom we met while collecting our data. An elderly debtor refused to evacuate a residential property that he had previously pledged as collateral. On humanitarian grounds, a judge refused to issue an eviction order, but did grant TB an injunction that banned the debtor from traveling on the State's train grid. Alas, the borrower was of such poor health that he no longer traveled to visit his daughter, making the injunction worthless.

3.3 Contract enforcement

China has two methods for dealing with failing corporate debtors in the event of default. The first, is to use the procedures available under the bankruptcy code, although this law does not apply to the vast majority of SMEs, and the courts will usually refuse the SME's bankruptcy petition. The alternative is for the creditor to apply for repayment under contract law. According to contract law, the creditor must first petition the court to seize sufficient of the debtor's property to repay the loan, The court will conduct a hearing and in the event of a decision favouring the creditor it will seize and sell sufficient assets of the debtor to repay the outstanding debt. An important difference between contract law and bankruptcy petition is that in the former case the hearing will not be well publicised and unlike bankruptcy procedures other creditors will not be invited to submit their claims prior to the sale of assets and the distribution of the proceeds. This creates a significant first-come, first-mover advantage.

To provide more detail we examine two cases: first where there are two unsecured creditors and second, where one is secured and the other unsecured. In the case of two unsecured creditors competing for the sole asset of the debtor, assume one creditor starts litigation some weeks before the other. The proceeds are insufficient to meet both creditors' claims. Currently, there are two potential outcomes: settlement on a pro rata basis and settlement on a first-come, first-served basis. In practice, the second is far more prevalent than the first. The initial creditor may collude with the debtor, requesting the court to give priority to the first creditor on the grounds that this will better preserve the company's going concern value.[20] In particular, if the court is encouraged by the debtor to expedite the procedure, then it is likely that the asset will be put up for sale within 10 days, often before other creditors are aware of the court case. This outcome is helped by the lack of dissemination of the court hearing of the first creditor's claim, which prevents other creditors from being informed and suing in a timely manner. Even if the second creditor petitioned the court soon after the first creditor, it is likely that judge would refuse their request to consolidate the claims, particularly in the event the debtor supported the first creditor.

A similar ordering of claims may also happen iwhere the second creditor is secured. Outside bankruptcy, the court can order the security of the second creditor to be sold to repay the unsecured particularly if the court thinks the secured creditor is over collateralised.

[20]There are opportunities for tunneling: the debtor may persuade an associate to act as a fake creditor in order to seize the company's assets after the debtor intentionally defaults on the fake contract.

Again, the narratives provide useful illustrations. A private IT company "purchased" some land on which it constructed a plant. Local zoning laws defined the land as rural, so although the transaction was executed in cash, no title could be pledged. As a result, with assets of 258 million RMB, the company could secure bank credit of only 75 million RMB, of which 14.8 million RMB were provided by TB against a mortgage on the owner's residential property, valued at 20 million RMB.[21] Upon default, TB filed for repossession in a court located in the province's capital city, where TB's own head office was also located. However, another *unsecured* creditor, also a bank, filed earlier in another court, in the same city, for repossession of the same residential property. TB's officers report that the court in which they filed was "unable to initiate a compulsory auction, and the communication has been fruitless, [because] the first seizing court ... refused to initiate the auction process" on TB's behalf.

Since Chinese law recognized the right to create seniority through the pledge of security, the court dealing with the claim of the junior creditor should have relinquished the case to the court dealing with the senior claim. An important source of the first mover advantage is that, unlike in bankruptcy where the court advertises for claims against the company before the proceeds of asset sales are distributed, such a consolidation of claims does not often take place in practice when claims are filed under contract law. The issues are made more complicated because several court smay be involved in a company's distress. Often an unsecured creditor will go to a different court than the secured creditor in the hope that the court for the unsecured will hold up the sale of the collateral by the second court. Dispute between the two courts often centered on the question of which creditor took steps first to "seal off" the property, rather than which creditor's right was senior to the other. The state of affairs provides a built-in first-mover advantage, at least prior to the redorm and one which will be analyzed in greater detail in Section 4 below.

3.4 "Alternative" credit market

One of the main points made by Allen, Qian and Qian (2005) is that informal credit markets might provide an adequate alternative to imperfect formal markets. Tsai (2004) quotes survey results where farmers obtain four times more credit from informal markets than from formal ones. Ayyagari Demirgüç-Kunt and Maksimovic

[21] In most cases, residential property is pledged via intermediaries, who obtain title from the debtor and guarantee the loan vis-a-vis the bank, saving the bank the political embarrassment of evacuating residents from their homes and, at the same time, allowing the intermediary to use more extreme measures to achieve the same end. The use of personal guarantees is widespread in China. Our impression is that they are not very effective or, at least, are a much less effective means of enforcing recovery via pledging a title. For that reason, and due to shortage of data, we have decided to ignore their presence.

(2010), although rejecting the association between informal credit markets and enhanced performance[22], still describe them as benign institutions that "rely on relationships and reputation" with superior monitoring capacity allowing them to provide funding to borrowers that are rejected by the banks. Our data reveal a very different and less benign picture of the non bank sources of finance: the mean interest rate premium, over and above the Bank of China's base rate, is around 20%; see Section 4 for a more detailed analysis. Even more significantly, enforcement is often accompanied by significant levels of criminality. The narratives speak of debtors placed in "private confinement" by alternative lenders. In one case, a businessman and his wife surrendered to the police and asked to be held in custody for their own safety. Such voluntary custody suggests that the police are unable or unwilling to protect debtors and their families from harassment by "private lenders". Our data suggests that around 30% of untitled defaulting borrowers in TB's province fled their city and vanished, to escape harassment and possible violence from the non bank lenders or loansharks.

Violence results in further violations of the priority of debt claims. In one case, TB lent 25 million RMB to a textile company. Private creditors who lent 35 million RMB must have been threatening enough so that the owner "disappeared and could not be contacted". For some reason, the local government was willing to contribute additional funding, but all those funds were used to pay the private (unsecured) creditors who were repaid in full, while TB managed to recover only 9.4 million RMB. This is in spite of the fact that the informal loans charged an interest rate of 30%, compared with only 6.3% charged by TB. Hence, even if the concept of seniority is well understood, the asymmetry in effective enforcement power between bank and non bank creditors may change the effective order of seniority in favor of the latter.

3.5 Implications to limited liability

It follows that although many SME names are followed by the letters "Ltd.", in practice, liability is often unlimited. It is worth articulating how the inadequate management of property rights actually undermines this basic legal instrument. Once businesses lack pledgeable titles, they can no longer pledge their fixed assets as collateral, so the provision of bank credit is restricted. They have no choice but to apply for credit in the "informal" or non bank market accompanied by personal guarantees. Once that is done, they cannot shield personal assets from business failure, and they are potentially subject to serious harassment. Moreover, there

[22]They also report much smaller magnitudes: while banks fund 20.5% of companies' new investments, informal resources fund 1.9%.

is still no personal bankruptcy law in China that will allow debtors to write-off debt in default. Although the Supreme Court released a plan to establish such a law,[23] implementation has been slow.[24]

3.6 The role of local government

The description above already implies that business, law and regional politics are interwoven, rather than clearly separated as they are (or supposed to be) in mature markets economies. Given the wide powers that they possess, regional governments have been resourceful in "helping" companies that they deem worthy of such help. An interesting case is that of a private manufacturing company located in TB's own province that borrowed unsecured 35 million RMB from TB. Though not an SOE, the narrative speaks of a preferential treatment by the local government. Help came in the form of hastily initiating a change in zoning law to convert the company's land status from industrial to residential, thereby sharply increasing its value, generating a considerable amount of cash. As a result, TB was repaid 32.5 million RMB, an almost full recovery.

3.7 The Reform

In April 2012, the enforcement department of the High Court in TB's own province used its semi legislative powers in order to issue some "Answers to questions regarding disputes in the enforcement of creditors' rights when multiple creditors apply for the liquidation of the same debtor's asset".[25] No new legislation was required because, in theory, privately contracted security interests were legal and enforceable under existing Chinese law. Notwithstanding, these "answers" did deliver a strong message that the existing law needed to be implemented as intended.[26] In particular, they implied that a court that is asked to seize an asset on behalf of a junior creditor should transfer the case to the court where the senior creditor has filed for repossession, regardless of who filed first. In case the first-moving court refuses to comply, the Province Supreme Court can enforce such a transfer (within the province). In China, higher courts are powerful since they are part of the nomination process of judges in subordinate courts and also approve part of their expenditures.

[23] See The Guidelines for People's Courts on Enforcement Work (2019-2023) (http://news.sina.com.cn/sf/news/fzrd/2019-06-12/doc-ihvhiews8261703.shtml)

[24] Two cities, Wenzhou and Shenzhen, enacted personal bankruptcy procedures independently of the national government.

[25] See http://www.360doc.com/content/18/0205/12/30598038_727853750.shtml

[26] Other provinces such as Jiangsu or Fujian have followed.

Again, it is worth emphasizing that the intervention by the provincial supreme court was not part of a more comprehensive reform to resolve the many other problems that affect the Chinese credit market, such as that fact the title is, in fact a short-term lease agreement. Note also that the inability to extend the title before it expires reduces its value to the creditor in case it repossesses the property.

4 Formal analysis

In this section we exploit the 2012 reform in order to study the interaction between property, credit markets and economic performance. First, we document the existence of a significant pre-2012 first mover advantage, which is virtually eliminated following the 2012 reform.

4.1 First-mover advantage and creditors runs

In some important respects, the theory of creditors runs works much like Diamond-Dybvig (1983) bank runs: the creditors (depositors) are lined-up in a queue and, then, "served sequentially", i.e. paid at par until the debtor runs out of money. Clearly, in such a situation, those who are close to the head of the line have an advantage over those who are located further down. It is therefore in the best interest of each and every creditor to move first in an attempt to "grab" an advantageous position in the queue. The equilibrium outcome is a creditors run.

In another respect, creditors runs are very different from bank runs, in that sequential servicing is a much less plausible assumption. Diamond and Dybvig (1983) motivate it on grounds that it "capture[s] the flavor of continuous time" with depositors realizing a shortage of liquidity "at different random times". However, corporate (particularly SME) debt is not meant to serve as a liquid instrument. Absent the element of immediacy that is associated with the demand for liquidity, there is enough time to implement a mechanism that removes the first-mover advantage; c.f. Green and Lin, (2003). Indeed, this is a crucially important function of title pledging: to distribute the recovery value according to a scheme contracted upon ex-ante rather than on an ex-post rush to the head of the queue. By this theoretical argument creditors runs should vanish once contractual priority rules are enforced.

Notwithstanding, "asset grabbing" does play a prominent role in the finance-law analysis of bankruptcy and distress (see Jackson (1986)), which justifies the empirical tests. Since our data contains information

about the timing of repossession filing, it allows us a direct observation of the first-mover advantage, before and after 2012. Hence our first testable hypothesis is that there was a strong correlation between the position of the creditor in the queue before the reform, which vanished, among treated companies, following the 2012 reform. The treatment group contains in-province companies with a pledgeable title over their assets. The rest are used as a control group, and include both in-province companies without a title and out-of-province companies with and without a title.

Since we have recovery data only for TB, we utilize the fact that TB's loans to in-province titled companies can be secured, in case the title was pledged to TB, or unsecured, in case the title was pledged to another bank. In the former case we predict that the reform protects TB from early filing by junior creditors attempting to jump the queue. In the latter case, the reform prevents TB from early filing so as to get an advantage over the secured bank. Either way, the first-mover advantage is predicted to vanish.

Insert Table 3 here

Results in Table 3 are consistent with this prediction. Columns (1) and (3) report clear evidence that pre-2012 first-movers can obtain an advantage over second-movers across all borrower classes. Thus, for example, even in-province, where TB is secured and files first, its mean recovery rate is 77%; but once it fails to file first, its mean recovery rate drops to just 45%. At the same time, in-province and pre 2012, where TB is unsecured, by filing first it can increase its mean recovery rate from 26% to 67%. Note that this result applies to unsecured borrowings when the borrower is titled and when the borrower is untitled, when all its borrowings are by definition unsecured.

Post 2012, the first-mover advantage virtually vanishes among treated borrowers; see Column 2. Where TB is secured, whether it files first or not, its mean recovery rates are between 80% and 82%. Where TB is unsecured, but where the borrower has titled assets, its mean recovery rates are between 26% and 35%,whether or not it files first. In contrast, within the control group, post 2012 the first-mover advantage lingers on, operating in the same manner as it was pre 2012. In-province, for borrowers without titles, by moving first TB can increase its mean recovery rate from 29% to 69%. In the absence of a title, the borrower has no mechanism through which it can prioritize and coordinate its creditors, so TB's recovery rates are determined by the timing of its filing. Out-of-province, even where borrowers have titles, by moving first, an unsecured TB can increase its mean recovery rate (post 2012) from 31% to 68%. The explanation is that

the reform does not apply, therefore priority is not enforced, and TB can still gain an advantage by filing first.

In order to establish statistical significance, we split the sample into the treatment group – in province with titles, using the rest as a control group, and estimate the triple difference-in-difference (DiD) regressions:

$$RR_i = \alpha + \beta_{P12} \times P12_i + \beta_{SCR} \times SCR_i + \beta_{1ST} \times 1ST + \beta_{INT} \times INT_i + \theta \times \boldsymbol{X}_i + \eta \times FE_i + \varepsilon_i. \quad (1)$$

RR is TB's recovery rate on loans extended to borrower i. $P12$ is a dummy for post-2012 defaults, SCR is a dummy for TB's secured position (assuming that where TB is unsecured, the title is in possession of another bank) and $1ST$ is a dummy for TB filing first. INT is vector that includes all possible interactions of these dummies, although only the economically interesting ones are reported below. X is a vector of additional control variables including total assets and return on assets, and FE is a vector of fixed effects. Ideally, one would add a treatment variable or, even better, break it down into its two components, whether the company is in or out of province and whether it has a title or not, but that would result in a fifth-order DiD, for which our sample is far too small.

Insert Table 4 here

As a result of these considerations, Table 4 reports estimates of equation (1) separately for the treatment group (titled in-province borrowers) in column (1) and the control group (in province without titles, out of province with and without titles) in column (2). The results confirm earlier observations: Pre-2012, there is a strong first-mover advantage in both the treatment and the control group. TB's recovery rate is higher where it files first for repossession. However, for the treatment group, that first mover advantage, in terms of recovery rates, drops sharply post 2012. At the same time, there is a similar increase in the effect of being secured. When you are secured post 2012 and the borrower files first it does not receive better recovery rates compared with its position pre-2012. That is, post 2012, it is the security rather than moving first that enhances the position of the creditor. No difference in performance is present in the control group.

Next, we investigate the lenders' response to the vanishing first-mover advantage. We predict that following post 2012 creditors of treated companies are more patient and wait longer before initiating repossession procedures. If secured, they have less a reason to worry about junior creditors getting ahead of them. If

unsecured, they realize that early action to seize assets or demand payment will likely accelerate liquidation but, then, their position on the priority ladder would leave them with lower recoveries, as it is the senior creditor who would be the first in line. As a result, the reform operates to stabilize the debt structure of treated companies.

Insert Table 5 here

As already noted above, Chinese bank loans are extended via staggered fixed-term loans, but it is relatively easy for a creditor to recall the loan prematurely, particularly if there is a default event against any other creditor.[27] Consistent with our prediction, columns (9) and (10) of Table 5 report a sharp drop, post 2012, in the share of loans early recalled by creditors of treated companies. For in-province titled borrowers, the incidence of secured banks calling back their loans drops from 13% to 1%; the incidence of unsecured banks calling back their loans drops from 16% to 3%; indeed, even among private (alternative) lenders, the call-back rate dropped from 26% to 6%. No discernible effect can be detected in the control group. Note that the proportion of creditors recalling loans is relatively low. In many instances, the first creditor applying to the court for repayment would try to avoid publicising the petition so that other creditors would not be alerted to the claim. Thus the low level of recalled loans reflects the low dessemination of information about creditor claims made under contract law. Other creditors are either uninformed of the first-moving creditor, or even if they are aware, they do not have the time to take action.

Insert Table 6 here

In order to establish statistical significance, Columns (1) to (3) in Table 6 report regression results of a DiD specification similar to equation (1) above (the first to file variable is no longer relevant). The results are consistent with those shown in columns (9) and (10) of Table 5. The dependent variable is a dummy that receives a value of one if any lender within the respective credit class recalls its loan. Creditor classes include secured banks, unsecured banks and private (alternative) non-bank lenders. Only titled companies can issue secured loans, which truncates the sample size in column (1). It follows that the Titled variable equals one for all 431 observations in column (1), so that the triple interaction reduces to just a double interaction in that column. To put it differently, the control group in column (1) is just out-of-province titled companies, while in columns (2) and (3) the control group also includes non-titled in-province companies. All three

[27] Once a loan is recalled by any creditor, junior or senior, all other creditors can go to court an file a case for repossession.

columns confirm the statistical and economic significance of the sharp drop in the incidence of calling back loans to treated companies, by all creditor classes, post 2012.

Most importantly, the stabilizing effect of the 2012 reform can be detected in the sharp rise in survival rates within the treatment group. For in-province titled companies, the prospect of surviving a distress episode increases from just 9% to 19%; see columns (13) and (14) of Table 5 – a direct consequence of a diminished first-mover advantage and, therefore, a lower propensity of creditors to seize assets. Column (4), in Table 6 shows statistical significance.

4.2 Debt concentration

All else equal, including *nominal* debt structure, that is the RMB-denominated amounts that a company borrows from its banks, the 2012 reform reallocated both cash rights and control rights from unsecured to secured debt, thereby *effectively* concentrating debt towards the secured lender. Obviously, all else is not equal, because debt structure is endogenously determined. The textbook theory draws on the following tradeoff: on the one hand, more concentrated debt facilitates coordination when the company is genuinely distressed. On the other hand, more dispersed debt makes strategic default (when the debtor defaults just in order to negotiate better terms) more costly because it might trigger a creditors run; c.f. Berglöf and von Thadden (1994), Bolton and Scharfstein (1996). By making strategic default less attractive, companies could increase their debt capacity – or harden their budget constraint. Hypothetically, pre 2012, "efficient runs" could have been part of an optimized debt structure along the lines of Calomiris and Kahn (1991). In that case treated companies should have responded by dispersing their nominal debt structure post 2012, so as to restore the effective level of concentration to its re-reform level. By rejecting this hypothesis, that is by showing that post 2012 nominal debt concentration increased even further, we demonstrate that weak property rights impose a material constraint on companies' ability to control the effective level of debt concentration and, thereby, to coordinate their creditors.

We measure debt concentration in two ways: the number of banks and the share of the secured bank in total bank credit. Columns (3) and (4) in Table 5 show only modest changes in the first measure, as the number of unsecured bank lenders to titled in-province borrowers decreased from 2.8 before 2012 to 2.3 after 2012. At the same time, columns (5) and (6) report an increase in the share of the secured bank's lending relative to total bank lending from $(0.172/\left(0.172+0.146\right)=)54\%$ before 2012 to 65% after 2012, based on roughly the same value of pledged collateral; see Columns (1) and (2). Notice, also, that total bank credit

to treated companies increased by 15%. At the same time, treated companies became less reliant on private (alternative) lenders: their number fell from 3.9 to 2.8, while the volume of lending fell by more than 80%, from 4.9% of total assets to just 0.8%.

Insert Table 7 here

In order to establish statistical significance, Table 7 reports regression results of a DiD specification similar to Table 6 above. In Columns (1) to (4) the dependent variable is the amount of credit measured against total assets, while in columns (5) and (6) it is the number of unsecured and private creditors, confirming the increase in debt concentration in the hands of the secure bank. While the increase in the total amount of bank credit was modest, the statistical significance is very high. Section 5.2, below, provide evidence for higher economic significance, depending on the value of titled assets.

4.3 Additional responses to the 2012 reform

The significant change in the composition of bank credit was matched by changes in interest rates. Columns (7) and (8) of Table 5 report that the cost of secured bank credit for treated companies fell by $(0.585-0.181 =)40bp$ (measured against the Bank of China's base rate) while the cost of unsecured credit increased by $80bp$. That is, TB quickly recognized that the reform reduced the risks of secured lending at the expense of unsecured lending.

It is important to note that, while the reform operated to the advantage of titled companies, it made things worse for untitled companies: the volume of bank credit fell by 13% (from 0.172 of total assets to 0.142), its premium increased by $(1.446 - 0.899 =) 55bp$. At the same time, untitled companies had to rely more heavily on private (alternative) credit has increased from 9% of total assets to 12%.

Another important effect of the reform is the sharp reduction in the incidence of violence against distressed borrowers. According to TB records, pre-2012, 24% of titled in-province debtors felt sufficiently harassed by private creditors that they had to flee town and hide. With the lower reliance on private credit, that rate fell to just 8% post 2012. Again, the burden fell on untitled debtors, whose incidence of fleeing increased from 28% to 34%. Commonly ignored by standard welfare measures, such a substantial human cost, this aspect of weak property deserves much better attention.

Insert Table 8 here

In order to establish statistical significance, Columns (1) to (3) in Table 8 report regression results of a DiD specification similar to those reported in Table 7 above. In Columns (1) to (3) the dependent variable is the interest rate spreads (over the Bank of China's base rate). For treated companies secured credit became less costly, although unsecured credit increased in price. In Column (4) the dependent variable is a dummy that identifies debtors who fled the province and lost contact with TB. It confirms a sharp drop in such incidents post 2012 for titled in-province debtors.

Insert Table 9 here

Of particular interest are those companies that managed to survive the distress episode. Table 9 reports some key performance indicators, for treated (titled in province) and non-treated survivors, in distress time $\tau = -2, ..., 2$, measured in years, 0 being the distress year. Companies in the two groups are of similar size, but those in the treatment group are better funded: their initial bank debt, is $43\% (= 36.3 + 6.3)$ of total assets against only 27% for companies in the control group. In addition, debt structure is more concentrated in the treatment group relative to the control group. Both treated and non-treated companies were probably healthier pre distress relative to companies that did not survive, indicated by the fact that, initially, they have no private debt. The most dramatic difference between the two groups is that between year -2 and year 0 secured bank lending contracts only 10% in the treatment group, against a contraction of 51% in the control group. Although companies in both groups are forced to sell assets (probably under pressure from the secured bank) total assets contract only 24% in the treatment group against 56% in the treatment group, with a respective effect on sales. Interestingly, in-province unsecured bank lending is hardly affected in line with the argument above: with a reasonable chance of survival, it is not in the best interest of the unsecured to "rock the boat".

5 Robustness checks and extensions

Two concerns can affect our analysis: that title is an endogenous variable that captures certain properties, e.g. productivity, that affect performance in distress. The second concern is that the results may be explained by some other factor that affects a trend in the data, observable before and after 2012 – as well as in other points of time. These concerns are dealt with in Section 5.1 through IV and falsification robustness testing. Section 5.2 extends earlier results, demonstrating that the effect of the reform on total bank lending is increasing

in the size of titled assets. Section 5.3 extends the analysis to highlight the role of political connections in gaining access to a formal bankruptcy or informal government-sponsored resolution mechanism.

5.1 Robustness checks

Insert Table 10 here

To instrument titles, one would look for a variable that creates entitlement across debtors, without affecting outcomes in any other manner. Section 3 already hints that location might provide such an instrument. As explained there, titles can be created only on land that is classified by existing zoning laws as urban. Notwithstanding, the province government grants city administrations (who control much rural land in their metropolitan area) a quota for the conversion of rural land to urban land, with titles that can be sold to local businesses. Cities have the discretion to select locations for such conversions according to long-term considerations of urban planning. We therefore treat location as an exogenous variable correlated with a company's likelihood of having a title, yet largely independent of characteristics that affect the company's performance in distress. Hence, the first-stage variable, Urban, in Table 10, is a dummy that receives a value of 1 if the debtor is located in an area where titles are available and zero otherwise. To strengthen the argument, we restrict the instrument to debtors who were already located in the area for at least two years prior to it receiving the status.[28] The exclusion tests rule out additional channels that could raise concerns about exogeneity.

Insert Table 11 here

Second-stage IV results are reported in Table 11. For brevity, we limit the analysis to just three key performance indicators of major importance, already studied above: a dummy variable for the survival of the debtor, a dummy variable for the debtor fleeing – a proxy for the threat of violence, and total bank credit; see Columns (1) to (3). No reversal in signs or magnitude is detected, compared with the OLS DiDs results above.

Columns (4) to (6) report the results of a falsification test, using the same three performance indicators, designed to detect a trend with similar effects to those detected in 2012. The placebo is placed in the year

[28] The results are robust to dropping this limitation on the definition of the urban variable.

2010 and covers the period before the 2012 reform. Had such a trend been detected, it would falsify the claim that the changes post 2012 result from the reform. Evidently, the test rejects the existence of a trend.

5.2 The magnitude of the reform on total bank credit

Insert Table 12 here

Tables 5 and 7 point out that the reform did have a positive, statistically-significant effect on total bank credit to treated companies, though the economic significance is somewhat low. In Table 12 we test the hypothesis that the effect depends not just on whether the borrower has a title but also, on the value of the titled asset. In Column (1), titled assets as a percentage of total assets, is allocated into quartile dummies; for example, Title25-50 equals 1 if that percentage is between 25% and 50%. In Columns (2) to (4), the dummies are defined by that percentage exceeding the quartile threshold; for example, Title>50 equals 1 if that percentage exceeds 50%. All interactions are included, but only the triple interaction is included. Evidently, there is a strong increase in the magnitude of the effect as we progress from lower to higher quartiles.

5.3 Government-sponsored resolution mechanisms

As noted above, China does have a corporate bankruptcy law which is beyond the reach of most SMEs. Moreover, filing for bankruptcy requires special permission from the local government. An additional resolution mechanism is for local government officials to call a creditors' conference in order to coordinate the rescue efforts of a company that, probably, is considered to have some public interest. It is understood that the government will find a way to penalize a creditor that deviates from the policy agreed upon in the conference. Clearly, the process is highly politicized. As noted above, of 969 distressed companies in our sample, only 21 went into formal bankruptcy while for 42 an informal conference was called.

Insert Table 13 here

As expected, Table 13 confirms that being an SOE strongly increases the likelihood of a government-sponsored resolution process. So are those firms affiliated with conglomerates that are usually too big to fail. Interestingly, the likelihood of a government-sponsored resolution also increases with the number of creditor

banks, which makes coordination more necessary. For the opposite reason, private creditors make informal coordination more difficult.

6 Discussion and conclusions

The coincidence of strong performance and weak property rights has puzzled many students of the Chinese economy. Allen Qian and Qian (2005), observe that China "is an important counterexample to the findings in the law, institutions, finance, and growth literature: Neither its legal nor financial system is well developed." That the private sector has played such a pivotal role in the country's economic development "challenges the view that property rights and the lack of government corruption are crucial in determining financial and economic outcomes". Instead, they hypothesize that an alternative economic model "based on reputation and relationships may be behind" China's success. However, neither the zeal of creditors to exploit the first-mover advantage, nor the ruthless methods used by "alternative lenders" is consistent with this hypothesis. Instead of an alternative relationship-based model, we document a system of institutional arrangements that are largely based on the concept of property rights, albeit instituted in a haphazard manner and, often, inadequately implemented.

A further indication that one need not invoke the notion of an alternative economic model in order to understand present-day China, we point out some interesting similarities with 18^{th}century England and 19^{th}-century United States, both on the cusp of becoming the world's dominant industrial powers, yet operating rudimentary financial systems. In the former case, we have already mentioned the violent conflicts that erupted when communal land was enclosed by local businesses. In that respect, it's worth mentioning that private incorporation was illegal in Britain before the repeal of the Bubble act in 1825; see Franks and Sussman (2005). There, we also document widespread violations of the property rights of some secured creditors in a landmark US railroad-insolvency case. Through successive cases heard by the Federal Courts, and with hardly any assistance from the central government, concepts such as automatic stay on debt repayments, debtors in possession financing, and supra priority financing were gradually developed, step by step. The ad hoc nature of these reforms bears many similarities to those in China in recent years.

Additionally, the outstanding performance of China's economy needs to be viewed in the historical context of the country's earlier implosion. For the better part of the previous millennium, China's share in world

GNP was about a quarter, collapsing to just 5% by the 1950's; see Figure 1. A quick recovery from such self-inflicting harm is an implication of standard models of economic growth. This should not diminish the importance of governments, central and regional, in facilitating that remarkable recovery, through piecemeal market reforms, mostly of benign and local nature. One example is the 2012 reform analyzed in this paper. Another, perhaps more important is Deng Xiaoping reforms in the 1960's that allowed farmers to privately cultivate plots of communal land and, then, take their products to market. Rather than some "alternative economic model", China may owe its success to the accumulated effect of a multitude of such ad hoc, sometimes small, reforms.

However, such a view of China's performance does call for a certain modification of our understanding of the concept of private property, including its relation to economic growth. In theory, the right to property is the right to use, deploy or alienate an asset in whatever manner the owner pleases. In practice the right to property is only a cluster of separate rights, largely implementable one independently of the other: the right of usage does not imply a right to pledging, the right to pledge does not imply the right to alienate, etc. In that respect, the views of North and Thomas (1973), that property rights are a necessary condition for a significant process of economic growth may seem somewhat simplistic. Those rights whose absence bind in the later stage of economic development may not bind at an earlier stage; for example, absent a right to pledge was not binding in early agricultural reforms, but did become binding at a more advanced stage of industrialization. Implementing the entire bundle at the onset of development may be an elegant solution in theory, but may be infeasible in practice. We point out a severe shortage of legally-trained human capital as an important impediment to instituting a fully-fledged system of property rights at the very early stage of economic development. We refer to the reader to the more evolutionary approach of the great English jurist, Henry Maine (1861).

In addition to historical insights, the study of economies at an earlier stage of institutional development can offer a valuable perspective into the working of mature markets. In an influential work, Jackson (1986) characterizes the condition of the distressed company using the metaphor of the common pool, prone to economically inefficient over-fishing in the form of a rush by creditors to grab as many assets as they can. It is implied that dealing with creditors runs is one of the main functions of corporate bankruptcy law. Our results expose the weakness of the common-pool argument. Remember that the companies in our sample had no access to bankruptcy law; their distress was handled, purely, through the enforcement of debt contracts

and, in particular, clauses that deal with the repossession of collateral. The basic function of such contracts is to allocate property rights on the distressed company's assets, thereby "privatizing the common pool" and resolving the over-fishing problem. Our results also explain the scarcity of evidence of creditors runs. Though many developed markets, from where most of the data for financial research originates, have certain deficiencies in their property rights, they are rarely so severe as to allow a party to establish possession of an asset just because it was the first to claim ownership.

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7 Tables and Figures

Figure 1: China, Western Europe and the United Stats

China, Western Europe and the United States, share in total world outpit, from the year 1000 to 2015. Quadratic time scale. Source: the Maddison Project, Bolt et. al. (2018).

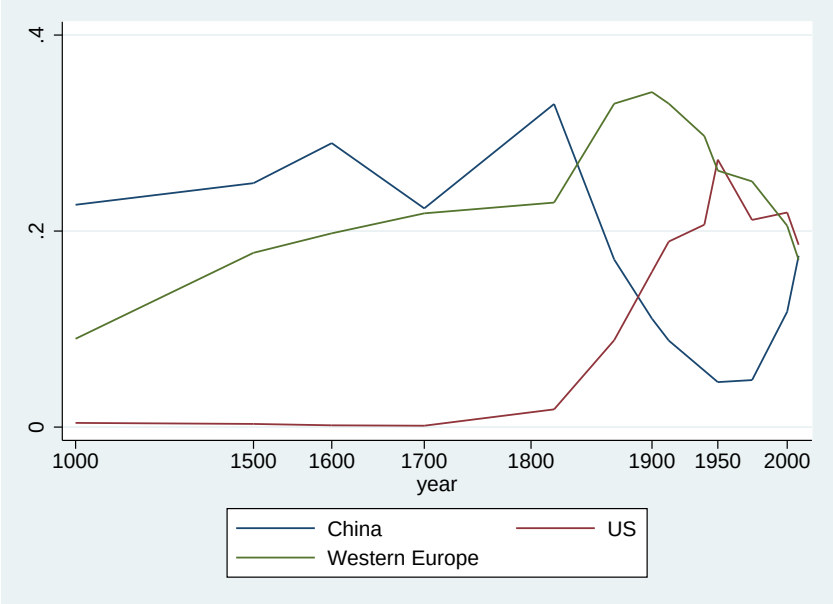

Table 1: Descriptive statistics, non-distressed sample versus distressed sample, 2008-2015

Descriptive statistics for the non-distressed sample versus the distressed, "working sample". The non-distressed sample aggregates more than half a million term loans at the level of the company and the year for the 2008-2015 period. There are 21,860 companies and 78,343 company years. The working sample includes 906 privately-resolved distressed companies, that is 969 distressed companies less 63 companies resolved via government-sponsored channels. The reported financial indicators in the working sample cover the year before default.

Pre-distressed sample, 21,860 companies, 78,343 company years			
	Mean	Median	S.D.
Total assets (Million RMB)	94.8	22.2	138.4
Sales (Million RMB)	87.6	32.3	158.3
ROA(%)	9.66	6.53	9.76
Total bank lending/Tot. assets	0.342	0.319	0.176
Distressed (working) sample, 906 companies, pre default			
Total assets (Million RMB)	86.5	37.3	132.3
Sales (Million RMB)	92.1	34.3	252.3
ROA(%)	9.73	6.65	9.32
Total bank lending/Tot. assets	0.335	0.296	0.159

Table 2: The response of TB to pending default

Panel regressions the non-distress sample as defined in Table 1. Dependent variables are TB's interest rate and volume of lending. Default(-τ) is a dummy variable that receives the value of 1 τ year before default, $\tau = 1, 2$,and zero otherwise. Controls include Total Assets, leverage (total bank debt/total assets) and ROA. Firm and Year FEs also included. Standard errors in parenthesis; *, ** and *** indicate statistical significance at the at the 10%, 5% ans 1%, respectively.

	Interest rate	log of TB lending
	(1)	(2)
Default(-1)	0.254***	-0.187**
	(0.032)	(0.083)
Default(-2)	0.152***	-0.041
	(0.042)	(0.110)
Firm FE	Yes	Yes
Year FE	Yes	Yes
Controls	Yes	Yes
N	73,675	73,675
R^2	0.049	0.287

Table 3: TB's recovery rates by debtor's title, location, TB's security andfiling time, pre and post 2012

Mean recovery rates on TB loans to 906 distressed debtors (the working sample). A debtor is classified as in-province if it operates in the same province as TB's and out of province otherwise. Titled debtors have titles on their productive assets, mainly land and buildings. TB is considered to be secured where the title is pledged to it and unsecured if it is pledged to another bank. Whether secured or unsecured, TB may be the first for recovery or not. The sample is also split by the time that the debtor entered distress, before or after the 2012 reform.

	In province debtors		Out of province debtors	
	Before	After	Before	After
	(1)	(2)	(3)	(4)
Titled debtors				
TB secured, filed first	0.765	0.820	0.753	0.739
TB secured, did not file first	0.449	0.804	0.538	0.492
TB unsecured, filed first	0.671	0.353	0.661	0.676
TB unsecured, did not file first	0.263	0.256	0.282	0.308
Untitled debtors				
TB unsecured, filed first	0.670	0.685	0.725	0.753
TB unsecured, did not file first	0.262	0.288	0.296	0.289

Table 4: The effect of the 2012 reform on TB's recovery rate, conditional on filing time and treatment

Difference-in-difference regressions, testing the effect of the 2012 reform on TB's recovery rates, by security and time of filing, using 906 distressed debtors (the working sample). The sample is split to the treatment group – titled borrower in province, in Column (1), and the control group, both untitled debtors in province and all out of province debtors, in column (2). Post12 is a dummy variable that equals 1 if the company enters distress post 2012 and 0 otherwise; TB-secured is a dummy variable that equals 1 if the debtor has a title that is pledged to TB and 0 otherwise. (It is assumed that titled borrowers who did not pledge a title to TB have done so to another bank.) Filed First is a dummy variable that equals to 1 if TB file for repossession ahead of all other creditors. All interactions are included in the regressions but only the economically interesting ones are reported. Controls include: total assets, leverage ratio, ROA, local GDP and employment rate. FEs include for the city where the borrower is located, time and industry.. *, **, and *** are corresponding to significant level of 10%, 5% and 1%.

	TB's recovery rate	
	Treatment: titled in province	Control: the rest
	(1)	(2)
Filed First	0.417***	0.490***
	(0.105)	(0.141)
Post12 ×Filed First	-0.333***	-0.059
	(0.138)	(0.155)
Post12 ×TB-Secured	0.399***	-0.071
	(0.109)	(0.178)
Post12×TB-Secured×Filed First	0.018	0.046
	(0.170)	(0.259)
Controls	Yes	Yes
Years FE	Yes	Yes
Industry FE	Yes	Yes
R^2	0.533	0.346
N	318	588

Table 5: Debt structure and resolution for the distressed firms before and after the 2012 legal change for both borrowers within and outside the province

Debt structure and performance, for in/out of province borrowers, before and after 2012, with and without titles for 906 TB borrowers in default (the working sample). Titled (untitled) borrowers (don't) have titles on their productive assets, mainly land and structures. Bank lending against a pledged title is defined as secured; all other bank lending is classified as unsecured, even though some forms of guarantees exist in many. (In a few rare cases, the titles was pledged to more than one lender, in which case the junior one is classified as unsecured). Private lending is by non banks finance operators. Column (1)-(2) reports the number of providers within each category. Column (3)-(4) reports the amount of lending within each category, divided by the borrower's total assets. Column (5)-(6) reports the interest-rate spread, above the Bank of China base rate.Column (7)-(8) reports the value of the collateral, divided by the borrower's total assets. Column (9)-(10) report the share of loans called back by the lender before loan maturity. Column (11)-(12) reports the share of borrowers who fled. Column (13)-(14) reports the share of borrowers who survived bankruptcy.

Panel A: In-province borrowers														
	Collateral/Tot. assets		#(creditors)		Lending/Tot. assets		Interest spread (%)		Loan called		Share of fleeing		Share of surviving	
	Before	After	Before	After	Before	After	Before	After	Before	After	Before	After	Before	After
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Titled borrowers											0.242	0.082	0.094	0.189
Secured bank lending	0.345	0.349	1	1	0.172	0.237	0.585	0.181	0.130	0.011				
Unsecured bank lending			2.818	2.275	0.146	0.130	0.881	1.688	0.16	0.034				
Private lending			3.857	2.785	0.049	0.008	17.542	19.482	0.255	0.059				
Untitled borrowers											0.28	0.338	0.095	0.074
Unsecured bank lending			3.722	3.518	0.172	0.142	0.899	1.446	0.177	0.183				
Private lending			2.98	3.185	0.09	0.116	19.185	19.853	0.245	0.253				
Panel B: Out-of-province borrowers														
	Collateral/Tot. assets		#(creditors)		Lending/Tot. assets		Interest spread (%)		Loan called		Share fleeing		Share surviving	
	Before	After	Before	After	Before	After	Before	After	Before	After	Before	After	Before	After
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9	(10)	(11)	(12)	(13)	(14)
Titled borrowers											0.223	0.234	0.09	0.092
Secured bank lending	0.373	0.381	1	1	0.179	0.193	0.658	0.698	0.137	0.138				
Unsecured bank lending			2.495	2.718	0.124	0.121	1.073	1.059	0.167	0.169				
Private lending			3.303	3.499	0.044	0.046	19.382	19.189	0.252	0.255				
Untitled borrowers											0.282	0.293	0.101	0.091
Unsecured bank lending			3.284	3.452	0.152	0.148	0.96	0.958	0.173	0.179				
Private lending			2.999	2.952	0.09	0.092	19.47	19.357	0.244	0.271				

Table 6: The impact of the 2012 reform on creditors calling back loans and company survival

Difference-in-difference regressions testing the effect of the 2012 reform on the incidence of creditors calling back their loans, by creditor class, using 906 distressed debtors (the working sample). Post12 is a dummy variable that equals 1 if the default occurred post 2012 and 0 otherwise; Titled is a dummy variable that equals 1 if the debtor has title on her productive assets and 0 otherwise. In-province is a dummy variable that receives a value of 1 if the debtor is located within TB's province and 0 otherwise. All interactions are included in the regressions but only the economically interesting ones are reported. In columns (1) to (3) the dependent variable is a dummy that equals one if any creditor within the class calls back the loan before maturity. Creditor classes are secured banks, unsecured banks and private (alternative) non-bank lenders. Since only titled companies can issue secured loans, Titled=1 for all 431 observations in column (1), which reduces the triple interaction to just a double interaction. In column (4), the dependent variable is a dummy that equals 1 if the debtor survived distress. Controls include: total assets, leverage ratio, ROA, local GDP, employment rate. FEs include time and industry. *, **, and *** are corresponding to significant level of 10%, 5% and 1%.

	Prematurely called by creditor class:			debtor survives
	secured	unsecured	private	
	(1)	(2)	(3)	(4)
Post12×Titled×In-province	-0.126**	-0.127**	-0.213**	0.112**
	(0.059)	(0.062)	(0.101)	(0.051)
Interactions	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes
FEs	Yes	Yes	Yes	Yes
R^2	0.101	0.107	0.149	0.059
N	431	906	906	906

Table 7: The impact of the 2012 reform on bank and private lending

Difference-in-difference regressions testing the effect of the 2012 reform on lending by different classes of creditors, using 906 distressed debtors (the working sample). Creditor classes are secured banks, unsecured banks and private (alternative) non-bank lenders. Post12 is a dummy variable that equals 1 if the debtor entered distress post 2012 and 0 otherwise; Titled is a dummy variable that equals 1 if the debtor has title on her productive assets and 0 otherwise. In-province is a dummy variable that receives a value of 1 if debtor is located within TB's province and 0 otherwise. All interactions are included in the regressions but only the economically interesting ones are reported. In columns (1) to (4) the dependent variable is the amount of credit provided by each creditor class as a percentage of total assets. Since only titled companies can issue secured loans, Titled=1 for all 431 observations in column (1), which reduces the triple interaction to just a double interaction. In columns (5) and (6), the dependent variable is the total number of unsecured and private (alternative) creditors, respectively. Controls include: total assets, leverage ratio, ROA, local GDP, employment rate. FEs include for the city where the borrower is located, time and industry. *, **, and *** are corresponding to significant level of 10%, 5% and 1%.

	Lending/Tot. assets				Number of creditors	
	Secured	Unsecured	Total bank lending	Private	Unsecured	Private
	(1)	(2)	(3)	(4)	(5)	(6)
Post12×Titled×In-province	0.073***	-0.008	0.083***	-0.021**	-0.633	-1.015
	(0.027)	(0.038)	(0.026)	(0.011)	(0.951)	(0.953)
Interactions	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.562	0.091	0.276	0.282	0.203	0.106
N	431	906	906	906	906	906

Table 8: The impact of the 2012 reform on the cost of credit and the incidence debtors fleeing

Difference-in-difference regressions testing the effect of the 2012 reform on the interest rate charged by various classes of creditors as well as a proxy for violence against debtors, using 906 distressed debtors (the working sample). Creditor classes are secured banks, unsecured banks and private (alternative) non-bank lenders. Post12 is a dummy variable that equals 1 if the debtor entered distress post 2012 and 0 otherwise; Titled is a dummy variable that equals 1 if the debtor has title on her productive assets and 0 otherwise. In-province is a dummy variable that receives a value of 1 if the debtor is located within TB's province and 0 otherwise. All interactions are included in the regressions but only the economically interesting ones are reported. In columns (1) to (3) the dependent variable is the spread charged by the respective credit class over and above the Bank of China base rate. Since only titled companies can issue secured loans, Titled=1 for all 431 observations in column (1), which reduces the triple interaction to just a double interaction. In column (4), the dependent variable is a dummy that equals 1 if the debtor flees the province, her whereabouts unknown to TB. Controls include: total assets, leverage ratio, ROA, local GDP, employment rate. FEs include time and industry. *, **, and *** are corresponding to significant level of 10%, 5% and 1%.

	Interest-rate spread (%)			Owner fleeing
	Secured	Unsecured	Private	
	(1)	(2)	(3)	(4)
Post12×Titled×In-province	-0.461*	0.818*	2.201*	-0.168***
	(0.246)	(0.427)	(1.235)	(0.054)
Interactions	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes
Fixed effects	Yes	Yes	Yes	Yes
R^2	0.596	0.051	0.182	0.134
N	431	906	906	906

Table 9: Key performance indicators, in distress time, for 101 survivors, not/treated by the 2012 reform

Key performance indicators, for 101 debtors who survived distress, along a distress time line. Distress time, τ, is measured in years, with $\tau = 0$ being the year when the debtor entered distress. Survival is defined by still being active and banking with TB at $\tau = 2$. Loans and ROA are measured against total assets at $\tau = -2$.

Distress time, τ, years	-2	-1	0	1	2
Treatment group: titled survivors, in province, post 2012 ($N = 35$)					
Total assets (RMB, millions)	152.3	147.2	115.3	128.3	142.4
Sales (RMB, millions)	132.4	121.3	93.7	115.35	125.32
ROA (% of Total Assets at $\tau = -2$)	6.1	6.1	2.5	5.3	6.2
Secured loans (% of Total Assets at $\tau = -2$)	36.3	35.0	32.5	34.3	36.3
Unsecured loans (% of Total Assets at $\tau = -2$)	6.3	6.3	6.0	6.9	6.9
Private loans (% of Total Assets at $\tau = -2$)	0	0.1	1.3	1.4	0.8
Control group: other survivors ($N = 66$)					
Total asset (RMB, millions)	140.4	136.0	61.7	89.1	117.2
Sales (RMB, millions)	126.1	118.4	37.5	93.5	98.8
ROA (% of Total Assets at $\tau = -2$)	5.9	6.1	-3.0	1.3	5.6
Secured loans (% of Total Assets at $\tau = -2$)	14.4	11.6	7.1	11.7	13.0
Unsecured loans (% of Total Assets at $\tau = -2$)	12.6	10.1	9.1	10.5	11.2
Private loans (% of Total Assets at $\tau = -2$)	0.0	1.4	3.5	3.3	2.3

Table 10: First stage IV

First-stage regression and some exclusivity tests of the instrumental variable using 906 borrowers in default (the working sample). The instrument, Urban, equals 1 if the titled debtor was operating within her current locality already 2 years before zoning laws were changed, allowing operators in that locality to acquire title. The exclusivity tests in columns (2)-(7) demonstrate that the instrument is unlikely to operate through other channels, such as the size, profitability, or the industry distribution. We control for total assets, leverage ratio, ROA, FEs time and industry. *, **, and *** are corresponding to significant level of 10%, 5% and 1%.

	First stage	Exclusivity tests					
	Titled	Size	Profitability	Government	Industry Profitability	Post12	In Province
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Urban	0.612***	0.125	0.016	0.003	0.043	-0.001	0.121
	(0.040)	(0.080)	(0.157)	(0.016)	(0.033)	(0.033)	(0.147)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
City FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.228	0.363	0.010	0.158	0.350	0.020	0.395
N	906	906	906	906	906	906	906

Table 11: Instrumental variable and falsification tests

Robustness tests for three key performance variables used in tests above. In columns (1) and (4), the dependent variable is a dummy that receives a value of 1 if the debtor survives and 0 otherwise. In columns (2) and (5) the dependent variable is a dummy that receives the value of 1 if the debtor flees and 0 otherwise. In columns (3) and (6) the dependent variable is total bank credit. In columns (1) to (3) we perform an IV estimation using Table 10's Urban variable as an instrument. In columns (4) to (6) we perform a falsification test using the pre-reform period. For the falsification test, Post10 is a dummy variable that equals 1 if the debtor entered distress post 2010 and 0 otherwise. Titled is a dummy variable that equals 1 if the debtor has title on her productive assets and 0 otherwise. In-province is a dummy variable that receives a value of 1 if the debtor is located within TB's province and 0 otherwise. All interactions are included in the regression but only the two below are reported. We control for total assets, leverage ratio, ROA, FEs for the city where the borrower is located, time and industry. *, **, and *** are corresponding to significant level of 10%, 5% and 1%.

	IV			Falsification test		
	Debtor survives	Owner flees	Total bank credit	Firm survives	Owner flees	Total bank credit
	(1)	(2)	(3)	(4)	(5)	(6)
Post12×Titled	0.168***	-0.361***	0.325**			
	(0.062)	(0.119)	(0.160)			
Post10×Titled×In-province				-0.070	0.094	-0.003
				(0.097)	(0.990)	(0.259)
Controls and Fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.226	0.130	0.204	0.148	0.505	0.336
N	675	675	675	111	111	111

Table 12: Effect of the reform on bank landing - by the amount of titled assets

OLS regressions, refining results in Table 7 column (3) regarding the effect of the 2012 reform on total bank credit, so as to account for the amount of titled assets. The dependent variable is the Total bank lending/Total Assets. In Column (1), titled assets as a percentage of total assets, are allocated into quartile dummies; for example, Title25-50 is a dummy that equals 1 if the that percentage is between 25% and 50% and zero otherwise. In Columns (2) to (4), the dummies are defined by that percentage exceeding the quartile threshold; for example, Title>50 is a dummy equals 1 if the said percentage exceeds 50%. All interactions are included, but only the triple interaction is included. Controls include: total assets, ROA, local GDP, employment rate. FEs include time and industry. *, **, and *** are corresponding to significant level of 10%, 5% and 1%.

	Total bank lending/Total assets			
	(1)	(2)	(3)	(4)
Titled25-50	0.058***			
	(0.017)			
Titled50-70	0.116***			
	(0.017)			
Titled75+	0.345***			
	(0.017)			
Titled $>$ 25		0.172***		
		(0.017)		
Titled $>$ 50			0.201***	
			(0.014)	
Titled $>$ 75				0.282***
				(0.015)
Interactions	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes
Fixed effects	Yes	Yes	Yes	Yes
R^2	0.517	0.318	0.395	0.475
N	906	906	906	906

Table 13: State-sponsored resolutions and firm characteristics

OLS regressions that correlate government-sponsored resolution (applied to 63 cases) with certain company characteristics using 969 distressed debtors. In column (1) the dependent variable is a dummy that equals 1 if the debtor enters a formal bankruptcy and 0 otherwise. In column (2) the dependent variable is a dummy that equals 1 if the creditor banks organize a conference to coordinate a resolution and 0 otherwise. Affiliated to aconglomerate is a dummy variable that equals 1 if the borrower is a subsidiary of a large conglomerate and zero otherwise. We control for the total asset, leverage ratio, ROA, year, industry, city fixed effects. *, **, and *** are corresponding to significant level of 10%, 5% and 1%.

	Bankruptcy	Conference
	(1)	(2)
SOE	0.059***	0.101**
	(0.022)	(0.041)
Affiliated to a conglomerates	0.136***	0.070**
	(0.016)	(0.031)
Number of bank creditors	0.000	0.011***
	(0.001)	(0.002)
Number of private creditor	0.000	-0.006**
	(0.001)	(0.003)
Control	Yes	Yes
Year dummy	Yes	Yes
Industry dummy	Yes	Yes
City dummy	Yes	Yes
R^2	0.196	0.119
N	969	969