

Financial Distress and Bank Restructuring of Small to Medium Size UK Companies [★]

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Abstract. We use a unique data set to study how U.K. banks deal with financially distressed small and medium-sized companies under a ‘contractualist’ bankruptcy system. Unlike in the U.S., these procedures limit the discretion of courts to strict enforcement of debt contracts, without any dilution of creditors’ claims. We show that lenders and borrowers select a debt structure that avoids some of the market failures often attributed to a contractualist system. Collateral and liquidation rights are highly concentrated in the hands of the main bank, giving it a dominant position in restructuring or liquidating a defaulting firm. There is little litigation, and no evidence of co-ordination failures or creditors’ runs. However, there is some evidence that the bank’s dominance makes it ‘lazy’ in monitoring, relying heavily on the value of its collateral in timing the bankruptcy decision.

1. Introduction

In a well-known paper, Jensen (1989) argues that too often financial distress in the U.S. ends up in a “cumbersome court-supervised bankruptcy process that diverts management time and attention away from managing the enterprise”. Instead, he advocates a privatized system that would “limit the courts abrogation of the contractual priority of claims”. Such a system should “provide incentives for the parties to accomplish reorganization of claims . . . outside the court-room” in those cases where the firm is viable, and push for a speedy liquidation in those cases

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where continuation has no value. Strict enforcement would enhance debt's role "as a monitoring and incentive device, especially in slow growing or shrinking firms" where over-investment problems are pervasive (pp. 42–44).

Many researchers would hesitate to endorse Jensen's (1989) proposals if only for their radical nature. How would such a system work in practice? How would it deal with the problems of premature liquidation or asset grabbing? In this paper we address these questions using evidence from the U.K., where the approach to bankruptcy is similar to the one advocated by Jensen.¹ In such a "contractualist" system bankruptcy law is little more than the strict enforcement of the default clauses in the debt contract, as negotiated ex ante by the lender and the borrower. Obviously, the parties are allowed to renegotiate a new contract, but in the event that renegotiations break down, they should expect the court to strictly enforce the existing contract rather than to try and "supervise" a solution to the company's difficulties.²

To study the operation of the U.K. system, we collected data on 542 small and medium-sized³ financially distressed companies and followed them through, from the beginning of distress to its resolution, ending in either bankruptcy or successful restructuring. The data set is unique and was assembled especially for this study from the private records of three U.K. commercial banks.⁴ In order to avoid selection bias, we include in our data set *all* the corporate borrowers of the three banks above that went into distress within a particular calendar period, regardless of firm type or the outcome of the process. The data set contains information about the type of lender, the value of collateral, the size of the various loans, credit flows into and out of the company during the period of distress and some of the actions taken during the restructuring process, such as changes in management.

Since the U.K. bankruptcy process closely follows the provisions of the debt contract, the system's performance depends, ultimately, on whether the company's debt is efficiently structured. We are particularly interested in the extent to which debt *and liquidation rights* are concentrated in the hands of a single lender, such as the "main bank". A high degree of concentration gives rise to the following tradeoff. On the one hand, dispersion makes it easier for the bank to reject opportunistic demands for write-downs by the borrowing firm (Hart and Moore (1998), and Gertner and Scharfstein (1991)).⁵ On the other hand, dispersion may lead to coordination failures, such as asset grabbing and creditors' runs (Bolton and

¹ In English law, the term "bankruptcy" is reserved for individuals only; the word "insolvency" applies to corporations. We use the term "bankruptcy" in line with international practice.

² See Franks and Sussman (2004) for a more detailed analysis of the differences between the U.S. and the U.K. bankruptcy procedures.

³ Small to medium sized companies account for 43 percent of employment in the UK; see Klapper and Sulla (2002).

⁴ According to the Cruickshank Report (2000), these three banks account for 67 percent of all U.K. commercial lending to small and medium-size corporations.

⁵ By "liquidation right" we mean a contractual right, granted by the borrower to a secured lender, to seize and sell the collateral attached to the debt in the event of default.

Scharfstein (1996), and Von Thadden, Berglöf and Roland (2003)). An additional disadvantage of concentrated debt is that the bank may become “lazy” and liquidate the company prematurely (Hart (1995) and Manove et al. (2000)). Hence, the liquidation rights should be sufficiently concentrated so as to avoid a creditors’ run, but not too concentrated so as to induce lazy banking and strategic renegotiation.

The paper provides four main results. First, we find that the typical debt structure is close to a corner solution, with the liquidation rights almost entirely concentrated in the hands of the main bank. This is in spite of the fact that the sources of lending are quite dispersed, with the main bank supplying only 40 percent of all debt and trade creditors supplying much of the remainder. The bank’s liquidation rights apply to almost all of the company’s assets, placing the bank in full control over the company in the event of default.

Second, we find that while the banks’ typical response to distress is an attempt to rescue the firm (rather than liquidate it automatically), they are very tough in their bargaining with the distressed firm. We find only one case of debt forgiveness in our sample. Additionally, the banks very rarely expand lending during distress; on the contrary, the typical response is a significant contraction of lending. The evidence strongly suggests that opportunistic behavior by the borrower is not an important feature of distress in the U.K.

Third, in accordance with the theoretical prediction, concentrating the liquidation rights helps to resolve co-ordination failures. We find no evidence of asset grabbing or creditors’ runs by the dispersed trade creditors; rather, it is almost always the bank that takes the decision to place the company in bankruptcy. It follows that asset grabbing is not an inherent problem of financial distress, but rather an implication of a particular debt structure, in which several lenders hold the right to liquidate the same asset simultaneously, so that the first to exercise the right would possess that asset.⁶ Hence, the problem of asset grabbing has a contractual solution, which is successfully applied in practice. This finding is important since the alleged vulnerability to a creditors’ run is often used as the main argument against the contractualist system.

Fourth, we find mixed results with respect to “lazy banking”. On the one hand, high recovery rates for the bank and low recovery rates for other creditors suggest that the bank times the liquidation decision close to when the value of the firm equals the value of the bank’s collateral, with little left over to junior creditors. On the other hand, banks do not hurry to exercise their liquidation rights and engage in a fairly elaborate rescue process. The evidence also suggests that the bank’s decision to liquidate a firm is sensitive to the firm’s own restructuring efforts, such as replacing its managers. Thus, there is some evidence that the banks show an interest in the going concern value of the firm, and do not confine themselves to valuing the firm’s collateral.

⁶ See Jackson (1986) for a general discussion of coordination failures as a basic problem of corporate bankruptcy and distress. See also Baird (1986).

Our paper contributes to the literature in two ways. First, very little is known about the functioning of contractual bankruptcy systems. Some limited evidence is available from Scandinavian countries. Thorburn (2000) examines Swedish auctions of bankrupt firms, which resemble English receiverships, and argues that the outcomes compare favorably with Chapter 11. Stromberg (2000), using a similar sample, finds that many of the auctions result in sales to existing management at the expense of the junior creditors.⁷ However, these studies analyze the final stage of only one possible outcome of distress, namely liquidation. In contrast, we sample the companies at an earlier stage of the cycle of distress, follow them through the process and study all possible resolutions, including successful restructuring. As a result, we provide a comprehensive analysis of the interrelations between debt structure, coordination failures, renegotiation and restructuring efforts by the main lender.

Second, there is almost no evidence on financial distress among small, unlisted companies. Well-known American studies such as Gilson et al. (1990), Asquith et al. (1994), LoPucki (1983) and Franks and Torous (1994) use samples of large listed companies with multiple large lenders as well as public bondholders.⁸ Compared with these studies, we find a greater concentration of liquidation rights, a virtual absence of court interference, little potential for coordination failures, and far less evidence of debt forgiveness. Our analysis provides some evidence that these differences arise as a result of the particular legal system rather than company characteristics.

The paper is organized as follows. Section 2 discusses the theory and formulates four testable hypotheses. Section 3 describes the law on corporate bankruptcy in the U.K. Section 4 describes the data set and provides a description of the cycle of distress. Section 5 provides a detailed analysis of the companies' debt structure and the dispersion of liquidation rights. Section 6 presents evidence on the banks' bargaining position, the occurrence of creditors' runs and the "lazy banking" hypothesis. Section 7 provides evidence on the incidence of going concerns in bankruptcy. Section 8 concludes.

2. Theory and Hypotheses

In this section we state four hypotheses that provide the focus for our empirical analysis. The main idea is that the firm and its creditors structure the company's debt so as to trade off the costs and the benefits of debt dispersion. On the one hand, debt dispersion allows the firm to pre-commit not to renegotiate its debt, and thus to "harden its budget constraint". On the other, concentrated debt makes it easier to resolve free riding and coordination failures among lenders, although it

⁷ See Ravid and Sundgren (1998) for a study of Finnish auctions.

⁸ See Brunner and Krahnen (2002) for an analysis of multilateral contractual arrangements among German banks, designed to mitigate co-ordination failures.

may provide the bank with an incentive to be lazy and avoid the effort and the risk involved in restructuring the firm.

The mechanism by which debt dispersion hardens the budget constraint works as follows. According to Hart and Moore (1998), a firm may force a single secured lender to accept an opportunistic debt write-off, down to the liquidation value of the assets.⁹ In contrast, Berglof and von Thadden (1994), and Von Thadden et al. (2003) show that small, dispersed lenders can deter such renegotiation provided that each lender has the right to liquidate the firm, and satisfy himself from the whole pool of the company's assets. The crucial point in the argument is that each dispersed lender provides just a small fraction of the funding, but is granted all of the company's assets as a security, which he is allowed to pursue regardless of the effect on other lenders. That creates a strong incentive to liquidate in case of default, as each lender ignores the fact that he satisfies himself at the expense of other lenders. Once the company anticipates the lenders' greater propensity to liquidate the assets, it avoids renegotiation altogether. Balancing off the effect of the hard-budget constraint against some of the disadvantages, an efficient level of dispersion would arise (see Bolton and Scharfstein (1996)). This leads to the:

Dispersed Lending Hypothesis. *There should be some dispersion of liquidation rights, without seniority or sharing rules limiting the lender's ability to satisfy himself from the entire pool of the company's assets.*

An implication of this hypothesis is that if liquidation rights are concentrated in the hands of a particular lender (say, a bank), that lender is vulnerable to strategic renegotiation. If this is the case, we should expect to observe "soft banks" forgiving a significant amount of debt, waiving interest payments, rolling-over high levels of lending or extending more credit to the distressed company. Hence our second hypothesis:

Soft Banks Hypothesis. *Big lenders, secured on the company's assets, will be soft in response to attempts by the borrower to renegotiate down the debt. In contrast, small and uncoordinated lenders will resist any attempt to re-negotiate.*

It is common to associate dispersed lenders with public bondholders (see Gertner and Scharfstein (1991)). This interpretation is not applicable here, since most of the companies in our database are small and unlisted, and none of them had issued public debt. However, almost all the companies have a significant amount of trade credit, which tends to be dispersed. A question that we analyze below is

⁹ This assumes, implicitly, that the borrowing firm has all the bargaining power in the renegotiations. Note that the liquidation value of the assets is lower the more specific the assets are, and the stronger are the complementarities with managers' human capital and effort. If the bargaining power is more evenly distributed, the result of the renegotiations would also be affected by the rent the manager derives from the assets.

the nature of the trade creditors' liquidation rights, and the extent to which these rights provide them with an incentive to be tough towards the firm in distress. We also consider the issue of whether trade creditors differ from public bond holders by being better informed about the company (see also Biais and Gollier (1997)).

The theory of debt dispersion also provides an important insight into the problem of asset grabbing and creditors' runs. A creditors' run takes place when lenders exercise their first mover advantage, each trying to grab assets before other lenders, thereby precipitating the liquidation of a viable company.¹⁰ It is crucial to note, however, that a first-mover advantage is not a necessary outcome of multiple lending, but rather an implication of a debt structure where liquidation rights are not ordered by seniority (or settled by a sharing rule) so that the first to grab an asset would possess it. Some writers have assumed that a creditors' run is an inherent weakness of a decentralized contractualist system. For example, Webb (1991) argues that, "certain kinds of financial structure [like the U.K.'s] create an incentive for creditors to prematurely and inefficiently liquidate companies. . . . The problem stems from the feature of this system, which allows the creditors to act in individual self-interest. They have the right to recover the value of their claim without considering what happens to the overall pool of assets upon which they draw" (pp. 143–145). Our debt-dispersion hypothesis reflects a different view, which is that un-prioritized liquidation rights have the advantage of hardening the budget constraint. The basic idea is that the debt structure should deliberately be made fragile so as to deter the company from any attempt to renegotiate it.¹¹ Regardless of the cause of the creditors' run, the testable hypothesis is that:

Creditors' Run Hypothesis. *A creditors' run may be observed in those firms where liquidation rights are dispersed among lenders.*

Although the concentration of liquidation rights in the hands of the main bank may prevent creditors' runs, it may distort the liquidation decision. In his discussion of the English system, Hart (1995) suggests that the bank "may decide against keeping a good company going because it does not see the upside potential. Moreover, even when the bank does decide to sell a company as a going concern, it may not have an incentive to push for a high sale price, given the ceiling on its returns. As a result, there may be little left over for junior claimants". Namely, due to the fixed-repayment property of debt, the bank would avoid any costly action that would benefit other stakeholders (such as owners and other creditors): banks may be "lazy",¹² and avoid the effort and the risk involved in the restructuring

¹⁰ The same happens during a bank run; see Diamond and Dybvig (1983).

¹¹ This argument is similar to that of optimal bank runs; see Calomiris and Kahn (1991).

¹² The expression was coined by Manove et al. (2001), which is one of the few papers that provide a coherent welfare argument in favour of bankruptcy law, and more specifically of limits on the amount of collateral. It shows that in a competitive credit market the equilibrium level of collateral is inefficiently large, as it generates too weak an incentive for banks to screen their customers. Hence,

of a distressed company. Such a bank would limit itself to updating the value of the assets, and trigger liquidation at the point in time when that value equals the amount owed (or even before).

We test the hypothesis that the likelihood of liquidation is particularly high when the value of the collateral equals the value of the debt using a probit regression that relates the outcome of distress (bankruptcy or rescue) to the bank's loan to collateral ratio. Another explanatory variable is the incidence of a managerial change within the firm. We would expect a lazy bank to ignore the increased probability of a successful restructuring resulting from management changes, as the value generated would accrue to the owners. An additional implication of laziness is that a bank that is both fully secured against the company's assets and in control of the liquidation process, has no incentive to decrease the direct costs of bankruptcy, since junior creditors would collect the extra value created. As this is the typical situation in the U.K., we would expect to see relatively high direct costs of bankruptcy compared with other countries.

Lazy Banking Hypothesis. Banks will liquidate distressed companies when the value of the collateral equals or exceeds the value of the debt outstanding, regardless of the firm's restructuring efforts. We would also expect to observe excessive direct costs of bankruptcy.

3. Legal Structure

The notion of a legal structure within a contractualist system may seem like a contradiction in terms: if bankruptcy is just a matter of enforcing the liquidation rights allocated by the debt contract and if the debt contract is freely negotiated by the lender and the borrower, then what role is there for the law? As shown by Franks and Sussman (2005), during its formative years in the late 19th century English law did not impose any constraints on debt contracts. Subsequently, however, a body of case law has accumulated, which has standardized particular lending instruments. While it is certainly cheaper to contract using a standard instrument rather than to engage in the costly introduction of new instruments, the system has retained its non-mandatory nature.

3.1. THE DEBT CONTRACT

There are two types of loan securities in the U.K., the *fixed charge* and the *floating charge*. A fixed charge is a security on a specific asset such as real estate or heavy government intervention in private contracting (i.e., bankruptcy law) would be ex-ante welfare improving. This is in contrast to much of the literature where bankruptcy law is justified on the grounds that it "completes" private contracts. It is important to note, however, that we do not offer a test of their model, but rather use the term "lazy banking" more broadly, in the sense that the availability of collateral induces banks to premature liquidation of distressed debtors (rather than insufficient screening of credit applicants).

machinery. A floating charge is a security that may be extended to cover the whole pool of the company's assets, including intangibles or circulating capital (i.e., cash, receivables and future cash flows). A lender is permitted to hold both a fixed and a floating charge (see below).

In order to exercise rights over such a dispersed pool of assets, the floating-charge holder is given broad powers, effectively a default-contingent control right over the entire company. Conditional upon default, he has an exclusive right to decide whether, when and how to seize the company's assets and liquidate them. His discretion cannot be challenged in the courts on grounds (for example) that he has miscalculated the firm's restructuring prospects. The seizing of a company's assets is carried out by a professional agent, called an *administrative receiver* (henceforth, a receiver). Upon appointment, the receiver assumes all the powers of the company's board of directors and exercises them for the sole purpose of "protecting the interests of the security-holders who appointed [him]" (see Davies (1997, p. 385)). The receiver has no duty to consider the interests of other lenders, although he must respect their contractual rights. The receiver's most important discretion is about the mode of liquidation, whether by a going concern sale or a piecemeal liquidation.

The broad powers held by the floating charge leave the unsecured creditors, typically trade creditors, in a very weak position. Nevertheless, the unsecured lenders do have some liquidation rights, which they can use to enforce their claim. First, they can apply for a *winding up*, a procedure that is undertaken by a *liquidator*. Unlike the receiver, the liquidator operates on behalf of all creditors, although he cannot alter the creditor's order of seniority. Moreover, the floating-charge holder can always pre-empt a winding up order by appointing a receiver. Second, trade creditors can incorporate into the sale contract a "Retention of Title" clause that allows them to reclaim – in bankruptcy – any goods supplied on credit, as long as the goods are still distinguishable from other suppliers' goods. For example, once wool has been used to make a fabric it is no longer distinguishable from labor and other raw materials, so that it can no longer be retrieved under the Retention-of-Title clause.

As already noted above, this system for prioritizing and settling liquidation rights is a result of a market-oriented voluntary contracting process. There is no legislation in the U.K. that favors concentrated lending or that prevents pooling of liquidation rights. Companies could create other charges that would give the assets to the first creditor who grabs them, or could establish some "co-operative" procedure to determine the fate of the distressed company. Even within the scope of existing instruments, firms can refuse to give a lender a floating or a fixed charge (and bear a higher interest- rate spread accordingly).

An important exception to the contractualist principle is that wage arrears and debts owed to the tax authorities (called the *preferential creditors*) are senior to the floating charge. Hence, we can summarize the order of seniority as follows. Titles to specific assets, namely a fixed charge or Retention of Title are the most senior.

The holders of such charges or titles are given priority in reclaiming the secured objects out of the pool of company's assets.¹³ Of the remaining pool of assets, the preferential creditors come first, then the floating charge holder and finally the unsecured creditors; the latter share any proceeds on a pro-rata basis according to the size of their loans. This legal structure explains why British banks take both a fixed and floating charge. The floating charge gives the bank control rights over the bankruptcy process and the fixed charge gives it seniority over the proceeds of sale of a significant portion of the company's assets, ahead of the preferential claims and the unsecured creditors.

It is notable that the British have had mixed views about the system. Hence, the U.K. government initiated the 1986 Insolvency Act in an attempt to even out the allocation of rights in bankruptcy across the secured and unsecured lenders. The Act introduced two new rescue procedures influenced by America's Chapter 11: *Administration* and *Company Voluntary Arrangements* (CVA). Both of these procedures are court-administered and provide the company with temporary protection from creditors' actions. However, the holder of the floating charge has the power to veto both procedures and appoint a receiver instead. As noted by Webb (1991, p. 156), the new procedures have "stopped a long way short of giving the U.K. the equivalent of Chapter 11". Since the floating charge is so commonly used in our sample, and since these new procedures are so clearly dominated by receivership, we shall not give them much attention in the analysis.¹⁴

3.2. LITIGATION

Litigation is an infrequent event in U.K. bankruptcy. Receivers are usually appointed out of court, leaving the borrower with the right to appeal for an injunction against the lender or the receiver on grounds that his rights were breached. In case of litigation, the courts confine themselves to the question whether the parties have the contractual right to take a certain action, rather than to a review of the discretion exercised within that right. Indeed, for our entire sample of 542 financially distressed companies, we find only one case of litigation. The firm (i.e., the borrower) argued that a charge was not properly registered and that the bank did not leave it sufficient time to resolve its difficulties. The case was dismissed after a brief hearing.

It is easy to explain Britain's low litigation rate by reference to the Coase theorem: if bargaining is ex-post efficient, then the lender and the borrower would share a "bigger pie" once they settle out of court. Contracts are enforced through the threat of litigation, with actual litigation remaining off the equilibrium path. As

¹³ To be precise, the floating-charge holder has the right to satisfy himself from the assets; in case the proceeds of sale exceed the value of the debt, the extra value would accrue to the stakeholder next in order of seniority.

¹⁴ A modest law reform, yet of uncertain consequences, has taken place after our study was completed, requiring the receiver to act for all creditors and not just the floating-charge holder.

is well known, however, this argument does not apply to the U.S., where the courts are heavily involved in bankruptcies, particularly in those executed under Chapter 11, which is – by definition – a coordination failure. It is interesting to explore why these failures are more frequent in the U.S., and how the English system avoids them. Two factors seem to be important.

First, unlike in Britain, in the U.S. courts have broad discretionary powers. For example, a U.S. court may approve supra-priority finance, thereby diluting the claims of senior creditors, if it is convinced that the company has a reasonable chance of survival. In theory, knowing the likelihood that the court will approve such funding, the parties could settle out of court an equivalent debt restructuring. However, they cannot contract a binding agreement that would prevent an appeal by the borrower for further supra-priority finance upon the completion of the settlement. That forces the parties to involve the court in the first instance.

Secondly, Chapter 11 tends to disperse power away from the secured creditors. For example, the reorganization plan requires the approval of all classes of lenders and shareholders. This results in a complicated multi-party bargaining process, where the renegotiations are more likely to break down, forcing the courts to intervene. As we shall see below, the idea that the concentration of power helps to resolve coordination failures is a generic one, and applies to a creditors' run as well as to litigation.

4. The Data

In this section we describe in detail how we have constructed our data set. This requires a description of the various stages in the cycle of distress, rescue and bankruptcy, which is given in Section 4.1. In Section 4.2 we describe the sampling procedure and particularly the measures that we have taken in order to avoid selection bias. In Section 4.3, we compare the level of distress of the companies in our sample to that of the general population of similar-sized U.K. companies.

4.1. THE CYCLE OF DISTRESS

A company is defined to be in distress once the local bank branch and the regional credit officer decides to transfer the account to the bank's *Business Support Unit* (BSU). Such a decision may be triggered either by the firm's breaching the terms of its loan agreement (like failing to make an interest payment, or exceeding its overdraft limit), or by the credit-officer's assessment that the firm's future prospects are poor (due to factors such as high leverage or low profitability). The BSU is a head-office department that specializes in dealing with distressed small and medium-sized companies. Very small distressed businesses are dealt with at a branch level, while large and listed companies are dealt with at another head-office department. The distinct objective of the BSU is to *turn around* the company and "send it *back to branch*".

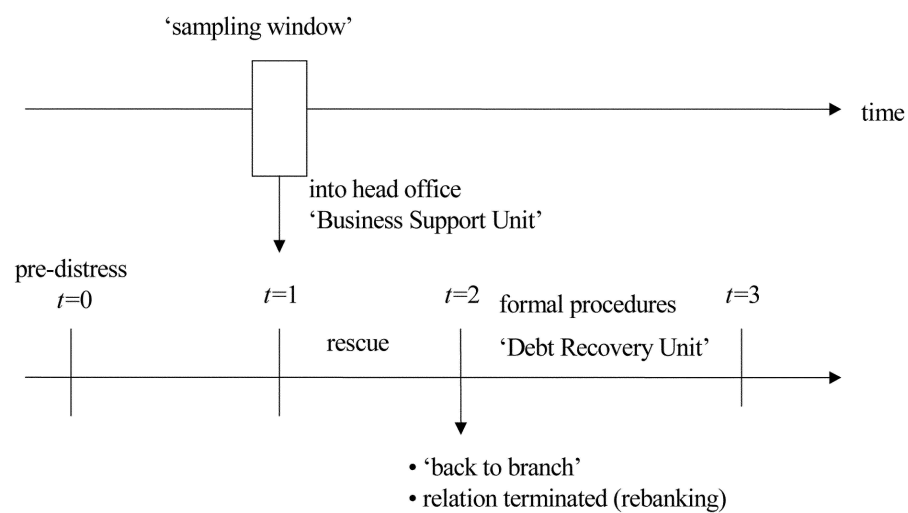


Figure 1. The cycle of financial distress. The figure describes the various stages in the cycle of distress, rescue and bankruptcy. A firm enters the Business Support Unit (BSU) at $t = 1$. The rescue process ends at $t = 2$, with three possible outcomes: successful rescue and the firm returns to branch, the firm is transferred to the debt recovery unit (DRU) where formal bankruptcy procedure starts ending at $t = 3$, or the firm repays the loan and 'rebanks' with another bank. To avoid selection biases, we have included in the data set all the firms that went into the BSU within a certain sampling window.

Figure 1 describes the cycle of financial distress. We denote the point when the company enters the BSU as $t = 1$. We denote by $t = 0$ the period prior to distress, and by $t = 2$ the point at which the rescue effort ends and the firm leaves the BSU. Upon a successful rescue the firm would "go back to branch". Otherwise, it is placed in the *Debt Recovery Unit* (DRU), where formal bankruptcy proceedings are undertaken.¹⁵ The DRU will decide which bankruptcy procedure to employ, and if necessary, whether to appoint a receiver. A third possible outcome is that the firm repays its debt to the bank, terminates its relationship and "rebanks" elsewhere.¹⁶

4.2. SAMPLE SELECTION

The data set includes *all* companies that within the sampling window entered the BSU in any one of the three banks that provided our data. The calendar period of the sampling window differs slightly across the three banks, but in all cases

¹⁵ It is possible that a firm would fall into severe distress so unexpectedly that there would be no time for a rescue effort, in which case the firm would be placed directly in DRU and bankruptcy procedures would follow without any rescue effort. In the case of Bank 1, for example, this happened in 7 out of 85 bankruptcies.

¹⁶ Interestingly many rebanked firms survive distress. Using the FAME database we can trace 59 out of the 86 rebanked firms in the sample; 47 are still operating as of 2001, and 12 companies have been placed in bankruptcy by their new bank, a survival rate of about 80 percent.

straddles 1997 through to 1998 (see Table I, Panel A). Effectively, our data set is a survey of the entire population of small and medium-sized distressed companies among the clients of the three banks within the sampling window.

The timing of the sampling window was dictated by technical considerations. Earlier data were difficult to obtain because the banks had only recently centralized data collection electronically. Later data were undesirable because they would not allow us sufficient time to observe how financial distress was resolved. During the sampling window the economy was relatively strong, with 15,500 bankruptcies compared with an annual average of 19,000 (from 1987 to 1999).¹⁷

Default, bankruptcy and recovery are sensitive to macroeconomic conditions (see Altman et al., 2001) for some evidence),¹⁸ so that our findings may have been different had we surveyed the economy during a recession.¹⁹

As noted above, the BSU deals with ‘small and medium-size’ companies only, a criterion that is defined slightly differently by the three banks. Bank 1 uses the size of bank debt outstanding, whereas the other two banks use different measures of sales (see Table I, Panel A). As a result, the size distribution of our firms differs considerably across the banks, although it is heavily skewed towards smaller firms with a median turnover between £0.8 and £5.5 million depending upon the bank (see Table I, Panel C).

For the three banks, the length of time spent in the BSU varies between 6.9 and 11.2 months, with an average of 7.5 months. The period spent in the BSU is higher for firms that are rescued than for those that end up in bankruptcy, 9.2 versus 5.2 months.²⁰ The outcome of distress differs significantly across the three banks, with Bank 3 having the lowest rate of bankruptcy (13 percent) and the highest incidence of rebanking (33 percent); see Panel B of Table I. The length of the rescue period provides preliminary evidence that U.K. bankruptcy does not result in automatic liquidation upon default regardless of future prospects.

To improve our understanding of the data, we conducted numerous interviews with the staff of each bank. We were allowed unrestricted access to the banks’ original files, and used this access to verify the quality of the data. In addition, we collected data from reports of receivers appointed by Banks 1 and 2. Where needed, we complemented the data supplied by the banks with those available in FAME, a publicly available data set (assembled by Thompson Financial), which provides accounting data for many private U.K. companies. Finally, we obtained

¹⁷ Source: Table I in “A Review of Company Rescue and Business Reconstruction Mechanisms: Report by the Review Group, Department of Trade and Industry and HM Treasury”, May 2000.

¹⁸ See also Altman and Brady (2001).

¹⁹ Franks et al. (2004) confirm that recovery rates in the UK are sensitive to GDP growth. Using a sample of distressed firms over a longer period from 1997–2003 than ours, they find somewhat similar recovery rates: a mean of 69 percent and a median of 82 percent, to be compared with a mean of about 75 percent and median of 94 percent for the recovery rate of Banks 1 and 2 in our study.

²⁰ Possibly, 9.2 months is downward bias since 28 percent of the firms in the sample were still in BSU at the time data collection was completed. Discussions with the banks lead us to believe that most of these firms will go back to branch.

Table I. Sample structure and outcome of financial distress

Panel A gives the sample size, the sampling period, and the criterion used by each bank to define a ‘small or medium size’ company. Panel B describes the outcome of the rescue process at $t = 2$: survival as a going concern, bankruptcy, ongoing in the rescue unit, or rebanking with another bank after full repayment of Bank 2’s loan. Panel C gives the age, turnover and number of employees at the time of entry into the Business Support Unit (BSU) at $t = 1$.

Panel A: Choice of sample	Bank 1	Bank 2	Bank 3
Number of firms sampled	241	192	109
Sampling period	Jan 98–Mar 98	Jan 97–Mar 98	Dec 97–Mar 98
‘Small to medium size’ criterion	> 50k (debt)	> 1m (turnover)	> 0.5m (turnover)
Panel B: Outcome of rescue (at $t = 2$)			
Going concern	34.4%	40.1%	19.3%
Bankruptcy	35.7%	37.0%	12.8%
Ongoing	24.1%	2.6%	34.9%
Rebanking	5.8%	20.3%	33.0%
	100%	100%	100%
Panel C: Firm characteristics			
	Mean (median)	Mean (median)	Mean (median)
Age (years)	19.6 (13.7)	25.2 (17.6)	17.4 (12.0)
Turnover (£ millions) ¹	3.5 (0.8)	9.6 (5.5)	4.6 (2.1)
Employees (No.)	50 (20)	108 (75)	59 (25.5)
Main bank debt at $t = 1$ (£ thousands)	348 (143)	963 (700)	342 (202)
No. of publicly quoted firms in sample	1 (0.4%)	25 (12.9%)	3 (2.8%)

¹ Turnover is taken from the last P&L account before distress (i.e., between $t = 0$ and $t = 1$ in Figure 1).

a limited amount of data on trade creditors and their recovery rates in bankruptcy from Girlings, one of the largest insurers of trade creditors in the U.K.²¹

4.3. HOW DISTRESSED ARE FIRMS IN THE SAMPLE?

Since the decision to place a company in the BSU is essentially an administrative one – the company need not even be in default – it is interesting to see how distressed are the companies in our sample compared with the general population of firms. In Table II, we present some measures of financial health for companies entering the BSU of Banks 1 and 2 (referred to as the “bank’s sample”) against the entire FAME population of firms that are within the sales-turnover range of our

²¹ Such an insurer guarantees the repayment of trade credit in the event that the recipient is insolvent. Girlings supplies 37 percent of all trade credit insurance in the U.K.

sample.²² Since Bank 3 did not report to us the names of its BSU firms, we could not identify them in FAME. We compare the means and medians in the banks' sample for the year of entry to BSU ($t = 1$), one year before and one year after with those of the FAME population. We also report the decile in the FAME population, in which the median of the banks' sample falls.

In Panel A we report three balance sheet ratios: book leverage (total debt/total assets), return on assets (net operating income before interest and after taxes divided by total assets), and the liquidity ratio (current assets minus inventory/current liabilities). Compared with the FAME sample, our firms are highly levered (8th decile), have low profitability (2nd decile), and are illiquid (3rd decile). We also report two statistics from the profit and loss accounts (Panel B). The sales turnover of the banks' sample tends to be larger than that of the FAME sample (8th decile), but much less profitable, with only 44 percent of firms in our sample reporting a profit before entering distress, compared with 73 percent in the FAME sample.

5. Debt structure

In Section 3 we argued that the standard U.K. debt contract carefully prioritizes and sets the rights of the lenders to the liquidated assets of the firm, so as to avoid any first-mover advantage that might destabilize the distressed company by triggering creditors' runs. However, these standard lending instruments still leave the parties with substantial flexibility to restructure their debt; for example, the parties may equalize liquidation rights across lenders by not granting a fixed or floating charge and thereby preventing any one of them being senior to the others. In this section, we establish the extent to which parties use this discretion by examining in detail the debt structure of the companies in our sample. The picture that emerges reinforces the observations made above: most of the liquidation rights are concentrated in the hands of the main bank, placing it in a clear leadership position in case of distress. This happens in spite of the fact that significant amounts of funding are provided by other lenders, particularly trade creditors.

5.1. THE COMPOSITION OF THE DEBT

Panel A of Table III shows that the companies' main source of credit is their main bank (henceforth, 'the bank'). The second largest source of funding is trade credit. For firms dealing with Banks 2 and 3, these two sources of borrowing exceed 80 percent of the total; the figure is somewhat lower, at 62 percent for Bank 1's borrowers. Other sources of lending (labeled 'other') include other banks, leasing companies (including subsidiaries of the firm's main bank), and purchasers of receivables (or 'trade factors' as they are sometimes called). The entire distribution of debt for Bank 2 is described in Figure 2, with larger companies (total debt above £2

²² We report unweighted statistics for the FAME sample. We have verified that size adjusting (by the size-composition of our sample) would not affect the results.

Table II. Accounting measures of financial distress for firms borrowing from Banks 1 and 2 compared with the entire FAME population

We report various accounting ratios for the firms borrowing from banks 1 and 2 (henceforth 'Banks' sample') compared with the entire FAME population (within the same sales-turnover range of our Banks sample). Statistics for the Banks' sample are provided for three years: the year when the firm enters the bank's rescue unit, the year prior to entry, and the year subsequent to exit (defined as 1, 0 and 2, respectively). Statistics for the FAME population are reported for 1997, which is the year when most of the banks' sample entered the BSU. In addition to the mean and median, the 'Decile' column reports the decile in the FAME sample corresponding to the median in the Banks' sample. Panel A reports balance sheet statistics. Leverage is the book value of debt over total assets. Return on assets is profit before interest but after taxes as a percentage of total assets. Liquidity ratio is current assets minus inventories over current liabilities. Panel B shows profit and loss statistics: sales turnover and proportion of firms reporting profits after tax.

Distress time, years (DRU = 1)		Banks' sample			FAME population	
		0	1	2	Statistics	Decile
Panel A: Balance sheet statistics						
Leverage (%)	Mean	62	64	54	46	
	Median	66	65	56	45	8th
	<i>N</i>	249	167	124	99,210	
Return on assets (%)	Mean	−9.2	−16.4	−7.25	12.3	
	Median	−1.49	−0.44	1.56	6	2nd
	<i>N</i>	185	140	100	133,026	
Liquidity ratio	Mean	0.59	0.79	1.75	1.66	
	Median	0.56	0.57	0.62	0.93	3rd
	<i>N</i>	307	239	174	133,223	
Panel B: Profit and loss account statistics						
Sales turnover (£ Million)	Mean	9.7	9.7	9.4	3.9	
	Median	4.9	4.3	4.0	0.8	8th
	<i>N</i>	185	138	104	135,303	
Firms reporting profits after tax	Proportion	0.44	0.47	0.50	0.73	
	<i>N</i>	201	154	115	135,389	

million) designated with a triangle. The figure indicates that main bank's debt and trade credit are the dominant sources of lending for most companies in our sample (i.e., the observations lie close to the diagonal), especially for smaller firms.

Although we have no comprehensive data about the composition of trade credit, we have good reason to believe that each company has numerous providers of trade credit. Using receivers' reports we obtained lists of individual creditors for some

Table III. Composition of firms’ debt, interest-rate spreads and incidence of securities while entering the Business Support Unit (BSU) at $t = 1$

Panel A shows the debt structure and interest-rate spreads of firms that enter the BSU at $t = 1$. Panel B shows the amount borrowed from owners in pounds sterling. Panel C shows the incidence (percentage of firms in sample) where the main bank has fixed or floating charges or where the owners have provided personal guarantees against the debt. Panel C also shows the amount of collateral held by the bank as a percentage of its loan to the firm.

	Bank 1		Bank 2		Bank 3	
	Mean	Median	Mean	Median	Mean	Median
Panel A: Debt composition (%)						
Main Bank	38.2	35.3	49.0	49.7	41.9	39.9
Trade Credit	24.0	15.8	37.4	35.5	40.2	40.4
Other lenders/creditors ¹	31.7	33.2	11.1	4.5	15.5	7.4
Owners–Directors	6.1	0.2	2.5	0.0	2.4	0.0
	<u>100</u>		<u>100</u>		<u>100</u>	
Interest-rate spread above prime, %	3.46	3.0	2.58	2.5	1.85	2.0
Panel B: Lending by owners/directors						
Mean (£ thousands)	38.5		60.8		62.5	
Median	0		0		0	
90th percentile (£ thousands)	118		150		97	
95th percentile (£ thousands)	159		339		200	
Panel C: Collateral						
Percentage of loans with:						
Fixed and floating charges ²	91.2		52.6		78.9	
Fixed or floating charges	100.0		97.9		94.5	
Personal guarantees by owners	60.4		51.0		55.0	
Collateral as a percentage of bank loan	103.7		74.6		118.5	

¹ Including non-banking subsidiaries of the main bank, debt to other banks, and loans by leasing companies and trade factors.

² Only Bank 1 makes a clear distinction between the absence of a charge and missing observations; hence its percentage of charges tends to be higher.

firms. We cite two examples. For one firm, the total proceeds of sale in receivership were £619,000. There were 91 trade creditors who were owed a total of £330,000. Of these 91 trade creditors, 46 were owed less than £1000, 31 between £1000 and £5000, and 14 more than £5000. The largest trade creditor was owed £42,000. For another firm, where the sales proceeds were £2.46 millions, 94 trade creditors were owed in aggregate £1.52 million pounds. Of these, 46 were owed less than

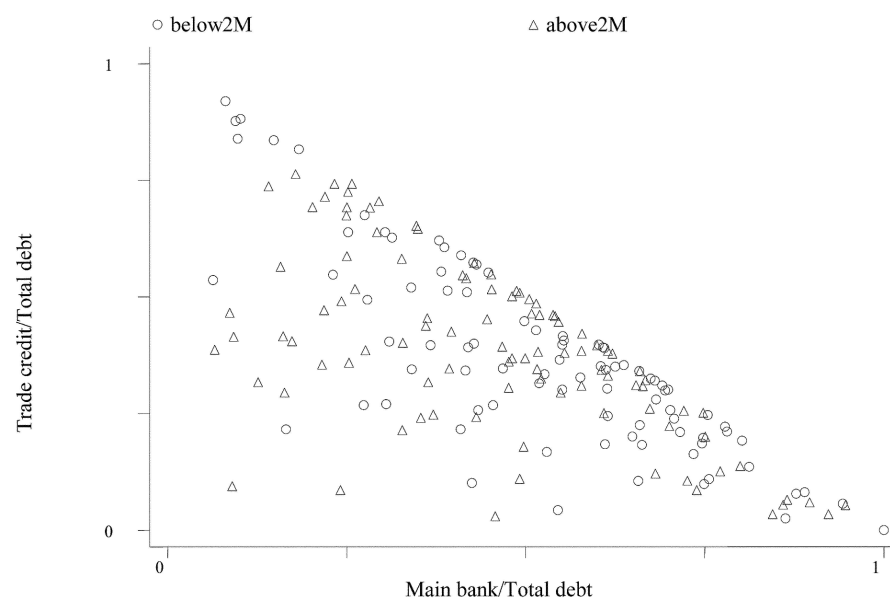


Figure 2. Bank 2: main-bank debt and trade credit as a proportion of firm's total debt. The figure shows the main-bank debt and trade credit as a proportion of total debt for the entire Bank-2 sample, upon entry to the Business Support Unit (BSU) at $t = 1$. Total debt includes all bank debt, trade creditors, and other loans outstanding, such as leasing. Each point represents a single company. Firms with total debt above (below) £2 million are designated with a triangle (a circle).

£1000, 24 between £1000 and £5000, 19 between £5000 and £100,000 and 4 over £100,000.

Owners account for only a small fraction of companies' debt (see Panel A of Table III). Nevertheless, the amounts are sizeable in terms of personal wealth. Although the median lending by managers is zero, in 10 percent of cases it exceeds £100,000 (see Panel B). Typically, this kind of debt is very junior. Additionally, Panel C reports that the majority of owners provide personal guarantees for their business loans. The potential importance of guarantees can be better appreciated once it is realized that, unlike in the U.S., in the U.K. laws do not provide any exemption for the individual's assets in the event of personal bankruptcy. The implication is that owners and managers contract away some of the protection provided by limited liability: in the event of the company's failure they stand to lose not only their salary and equity, but also some of their personal assets.

Although a significant proportion of lending is provided by non-bank sources, the liquidation rights are very concentrated in the hands of the bank. Panel C shows that for Bank 1 firms, 91.2 percent of loans are secured by both a fixed and a floating charge. For firms with Bank 3 the equivalent figure is 78.9 percent. The proportion is the lowest for Bank 2 at 52.6 percent. However, officers of Bank 2 have informed us that taking both a fixed and a floating charge is the bank's

standard policy. Possibly, the policy is so common that the credit officers have taken it for granted that reporting one implies the other, in which case, 98 percent of firms provide a fixed and a floating charge.²³ Also, the bank's debt is almost fully covered by collateral. Panel C shows that for Bank 1 firms, 103.7 percent of the bank's loan is covered by collateral. For firms with Bank 2 and 3 the equivalent figure is 74.6 percent and 118.5 percent, respectively.

The bank's rights over such sizeable collateral places it in a powerful position in case of distress. The extent of this power may be better appreciated once it is realized that much of the bank's debt is provided through overdraft facilities and is callable at 48-hours notice.²⁴ A failure to repay on demand will put the company in breach of its covenant and will provide the bank with a legal right to place the company in bankruptcy. However, as already mentioned, the banks are in no hurry to exercise their liquidation rights, allowing the rescue efforts in BSU to last several months. This patience is another indication of the banks' confidence in the quality of their collateral, and the dominance of their position among other lenders.

As described in Section 3, trade creditors can create liquidation rights through Retention-of-Title clauses. In order to establish the incidence of this practice, we obtained data from Girlings (a trade-credit insurer), who provided us with information about suppliers to 113 bankrupt companies from our sample. We found that Girlings had insured suppliers to 21 of them. However, the compensation paid to these suppliers was typically small. In 7 cases nothing was paid; in 13 cases up to £15,000, and in one case £142,000 was paid. Crucially, only in the last case were payments made against a Retention of Title claim; however, the amount was very small at £2,400, less than 2 percent of total payments. This suggests that Retention of Title is not commonly used, and does not diminish the bank's dominance over the bankruptcy process.

5.2. RECOVERY RATES

As one would expect, the disparity of power between the banks and the unsecured creditors is reflected in the recovery rates of those companies who were eventually liquidated. In reporting recovery rates, we aggregate over the various legal procedures (see Panel A of Table IV). The decision to aggregate is partially based on an unreported regression analysis, which failed to identify significant differences in

²³ Also, there are several cases where the credit officers have left the fixed and floating charge boxes on the loan reports un-ticked. It is not clear whether this should be interpreted as unsecured lending or a missing observation. We have assumed the former. For additional evidence see Franks et al. (2004) who report a 90 percent incidence of floating charges among 1000 UK small and medium-size corporate borrowers.

²⁴ Although we cannot say how much debt is made up of overdraft facilities, a study by Franks et al. (2004) shows that on average 55 percent of all bank debt is made up of overdrafts (the median being 100 percent). This may understate the importance of overdrafts since the study covers a longer period than ours and, as stated by a UK government report, 'there has been a shift away from overdraft lending towards term lending' (Cruikshank (2000, p. 147)).

Table IV. Firms in bankruptcy: legal procedure, recovery rates and the costs of bankruptcy

Panel A shows the total number of firms entering the Debt Recovery Unit (DRU) at $t = 2$, and the legal procedure in use. Panel B shows mean and median recovery rates for various creditors. Recovery rates are calculated as lender's proceeds as a percentage of the face value debt at $t = 2$. Panel C shows the proceeds for the various creditors and direct costs (fees etc.), as a percentage of the total liquidation value. No data on preferential creditors is available for Banks 1 and 3. Hence, for these banks the total liquidation value does not include payments made to preferential creditors.

	Bank 1		Bank 2		Bank 3	
	No. of cases		No. of cases		No. of cases	
Panel A: Outcome of DRU						
Total no. in DRU	85		71		14	
Receivership	20		44		7	
Administration/CVA	4		11			
Winding-up	32		7		5	
Ongoing	29		9		2	
Panel B: Recovery rates at $t = 2$ (%)						
	Mean	Median	Mean	Median	Mean	Median
Main bank	73.8	87.9	76.7	100	76.2	100
Preferential creditors ¹	N/A	N/A	33.9	3.3	N/A	N/A
Trade creditors	N/A	0	N/A	0	N/A	N/A
Number of observations	56		62		12	
Panel C: Distribution of proceeds (%)						
Main bank	57.6	73.2	70.8	74.1	61.3	60.1
Preferential creditors	N/A	N/A	4.9	1.1	N/A	N/A
Direct cost	42.4	26.8	24.3	18.5	38.7	39.9
Number of observations	56		62		12	

¹ Mainly wage arrears and the tax authorities.

recovery rates across bankruptcy procedures (however, the test has low power due to small sample size). This result is consistent with our legal analysis in Section 3, where we have shown that receivership dominates all other procedures. This suggests that the bank uses receivership as a threat point, and would allow an alternative procedure only if it expects it to generate higher recovery rates.

Recovery rates are defined as actual recovery over the face value of the loan. Panel B of Table 4 reports recovery rates for each of the three banks. The main bank recovers on average between 74 and 77 percent of their loan, with medians as high as 100 percent for two banks. These numbers are based on the face value of the loan upon entry into DRU, namely at $t = 2$. Since bank debt tends to fall

between $t = 1$ and $t = 2$ (see Section 6 below), the bank's effective recovery rates (including repayments in BSU) as a fraction of debt outstanding at $t = 1$ is even higher.

Little is known about recovery rates for trade creditors. The banks do not collect such data, and the information in receivers' reports is incomplete. However, we are able to infer the median recovery rates for trade creditors in the case of Bank 2. Since the unsecured is lowest in priority, it follows that where preferential creditors recover less than 100 percent, the unsecured receive no payout.²⁵ Receivers' reports provided by Bank 2 show that the median recovery rate for preferential creditors is only 3.3 percent, which implies that the median recovery rates for the trade creditors are zero. Bank 1 did not provide any data about recovery rates for preferential creditors. However, we can use a similar argument: since median recovery rates for the bank are less than 100 percent, medians for both preferential and trade creditors must be zero.²⁶

5.3. CROSS-BANK HETEROGENEITY IN LENDING STRATEGIES

There is some indication that lending strategies differ across banks. For example, the average interest-rate spread in Bank 3 is 1.85 percent, much lower than the 3.46 percent spread of Bank 1, with Bank 2 in the middle with a spread of 2.58 percent; see Table III Panel A. This is consistent with the ordering of bankruptcy rates across the three banks – 35.7 percent, 40.1 percent and 19.3 percent – while the ordering of the rebanking rates is exactly the opposite – 5.8 percent, 20.3 percent, and 33 percent, respectively (see Table I, Panel B). This pattern is consistent with a separating equilibrium, with high-quality customers obtaining service from Bank 3, who punish low performance by terminating the relationship and sending the company to another bank with lower-quality customers.

The high incidence of firm mobility across banks while in distress is somewhat surprising. As expected, we find more evidence of mobility if we examine the pre-distress history of these firms. For example, out of 186 companies who supplied credit history to Bank 2, 89 have switched from another bank. Of 23 companies that joined Bank 2 in the two years prior to distress, 7 have switched from another bank. Together with relatively thin spreads, this is an indication of the intensity of competition in British banking.

6. The Rescue Process

Sections 3 and 5 provide evidence of the dominant position of the bank during the period of distress. This raises the question as to how such a position would determine the bank's own conduct, and how this might affect the evaluation of

²⁵ We are able to confirm this inference for 28 firms where detailed receivers' reports are available.

²⁶ These numbers are much lower in the U.S. Franks and Torous (1989) provide evidence that unsecured creditors receive 27 cents in the dollar in Chapter 11 reorganizations.

the British bankruptcy procedure. More specifically, we examine three questions. Would the bank's dominant position expose it to borrowers' opportunistic behavior as implied by the soft-bank hypothesis (Section 6.1)? Would the concentration of liquidation rights prevent a creditors' run (Section 6.2)? And, would the bank's secured position encourage it to be lazy, or would it be active in the rescue process (Section 6.3)?

6.1. SOFT BANKS

Under the soft-bank hypothesis, debt may be renegotiated down to the liquidation value of the assets. Clearly, once bank debt is secured against all the company's assets, the scope for opportunistic behavior against the bank is much diminished. Given, however, that average recovery rates are below 100 percent, the hypothesis is not vacuous, in the sense that soft banking may be occurring at least in some cases. Such behavior may come either in the form of debt forgiveness or in the form of expanding and rolling over existing debt, without a significant increase in spreads. The evidence in Table V shows tough behavior on the part of the banks. In Panel B we report only one case in the entire sample where a bank has forgiven debt during rescue. We also observe that on average, the banks' lending is reduced by between 30.8 percent and 43.5 percent during the rescue period (see Table V, Panel A).²⁷

The only indication of soft behavior by banks is the tendency not to increase interest-rate spreads in BSU to reflect the increased risk exposure following distress. However, in unreported spread regressions (using data at $t = 0$, prior to distress), we find some evidence that Bank 2 charges a higher interest rate for firms with a history of distress.²⁸ Hence, it is possible that the bank increases spreads once a firm returns to branch, and is no longer included in our data set.

At the same time that banks contract their lending, trade creditors expand theirs.²⁹ On average, trade credit tends to *grow* in BSU, between 11.1 percent and 32.6 percent, depending on the bank. This growth is concentrated in a minority of firms since the medians are zero for two banks (see Table V, Panel A).

The different pattern of credit flows across banks and trade creditors can be seen even more dramatically once we split the sample according to the outcome of the rescue process. In Figure 3, we plot credit flows (incremental debt) by both the bank and the trade creditors to Bank-2 firms while in BSU. (Data availability restricts the exercise to that bank only.) To make the two credit flows comparable, we deflate both by the same denominator, which is total debt at the beginning of

²⁷ It should be emphasized however, that we do not know what has happened to lending prior to entry to BSU, when the firm was supervised by credit officers closer to the firm, possibly more willing to be soft towards the firm.

²⁸ The regressions are available on request.

²⁹ We are not certain, however, whether it is the old trade creditors who provide additional funding, or new creditors.

Table V. Features of the rescue process (between $t = 1$ and $t = 2$)

Panel A describes changes in bank debt, trade credit and interest-rate spreads between $t = 1$ and $t = 2$ (while the distressed firm is in BSU). Panel B shows the incidence of debt forgiveness (i.e., a write-down of the face value of debt) by banks. Panel C shows the incidence of managerial replacement.

	Bank 1			Bank 2			Bank 3		
	<i>N</i>	Mean	Median	<i>N</i>	Mean	Median	<i>N</i>	Mean	Median
Panel A: Changes in debt structure									
Growth in main bank debt (%)	219	−32.9	−19.1	192	−30.8	−18.1	80	−43.5	−33.2
Growth in trade credit (%)	72	32.6	0	142	11.1	0	16	26.3	−5.8
Change in interest rate spread (%)	126	−0.1	0	162	0	0	13	0.7	0.7
Panel B: Debt forgiveness in rescue									
	<i>N</i>	Debts forgiven		<i>N</i>	Debts forgiven		<i>N</i>	Debts forgiven	
No. of firms and % of <i>N</i>	219	1 (0.4%)		192	0		192	0	
Panel C: Managerial replacement									
	<i>N</i>	Incidence		<i>N</i>	Incidence		<i>N</i>	Incidence	
Replacement, % of <i>N</i>	241	5.0		192	22.4		109	17.4	

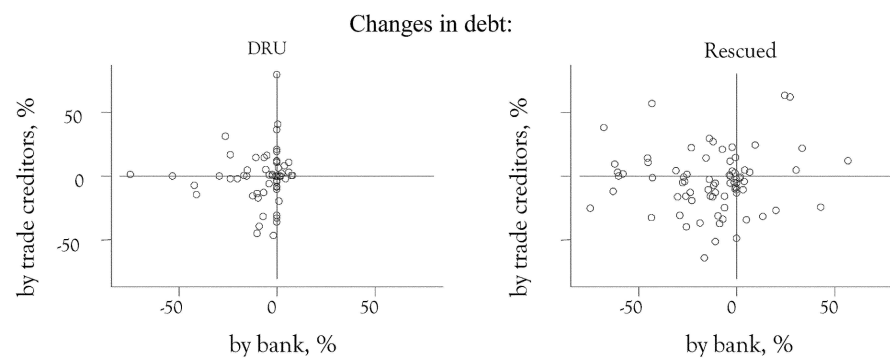


Figure 3. Changes in bank debt and trade credit for distressed Bank-2 firms, while in the Bank's Business Support Unit (BSU). Credit flows (incremental debt) from the bank and from the trade creditors to 132 Bank-2 firms while in BSU (between $t = 1$ and $t = 2$). Both magnitudes are normalized by total debt outstanding at $t = 1$. The sample is sorted by the outcome of the rescue process, either successful rescue (68 firms) or liquidation via the Debt Recovery Unit (64 firms), i.e., bankruptcy.

the rescue period ($t = 1$). The sample is sorted according to the resolution of the rescue process – either bankruptcy (denoted as the DRU) or successful rescue.

The patterns differ sharply. While trade creditors often extend credit, the bank rarely does so, particularly for firms that eventually go bankrupt: see the truncation of the “cloud” along the vertical axis in the DRU panel of Figure 3. Moreover, in quite a few cases the magnitude of trade credit expansion is similar to the contraction of bank debt (the diagonal of the NW quadrant), as if the money obtained from the trade creditors is used to repay the bank. In no case does the bank increase its lending in response to a contraction of trade credit (illustrated by the absence of observations in the SE quadrant of the DRU panel). The picture is very different for the firms that are rescued. We estimate, in unreported linear regressions on the same data as in Figure 3, that for those companies that end in DRU, for every pound sterling that the bank has withdrawn, the trade creditors have put in on average £0.50. At the same time, for rescued firms, for every pound sterling that the bank has withdrawn, the trade creditors have withdrawn on average £0.28. It seems that the contraction of bank debt during the period in BSU may provide a good prediction of bankruptcy or successful restructuring, a relationship that we test later (see Table VI).

These findings raise two interesting questions. First, why do trade creditors expand their lending to distressed companies, particularly among those firms that eventually end up in bankruptcy? One possible explanation is that trade creditors are simply unaware of the firm's distress, particularly as the bank's decision to place a firm in BSU is not a public event.³⁰ Alternatively, if rents are derived from

³⁰ However, Peterson and Rajan (1997) have argued that trade creditors are typically well informed. At the same time, in interviews with Girlings seem to provide anecdotal evidence supporting the idea that trade creditors are sometimes ill-informed.

the relationship, trade creditors have an equity-like stake in the distressed company and therefore have a greater incentive to take risks and contribute towards its rescue: see Cunat (2002). The typically high cost of trade credit should compensate the trade creditors for bearing the implied risk.

Second, how do the banks manage to pre-commit themselves so effectively not to renegotiate or write-down some fraction of the debt? One answer given in interviews with the banks' lending officers is that debt forgiveness is simply "out of the question". In other words, the credit officers have no authority to negotiate such concessions. Thus, the absence of debt forgiveness (in all three banks) may be an outcome of the bureaucratization of the rescue process.³¹ We might then expect to observe some concessions among larger firms, where managers higher up in the bank's hierarchy make the relevant decisions. Indeed, a new study by Franks and Sanzhar (2004) of larger, listed U.K. companies confirms that banks do forgive debt in a significant proportion of workouts in exchange for new equity. It is not clear, however, whether it is the larger size of companies in their sample, the presence of external shareholders (since all their companies are listed on the stock exchange) or the injection of outside equity that accounts for the difference.

6.2. CREDITORS' RUN

A creditors' run is often perceived to be an endemic problem of contractualist systems, as dispersed creditors exercise their right to wind up the company in the event of default. As described in Section 3, trade creditors are junior, but still have the right to liquidate a defaulting borrower, by applying for a winding-up order. Since all the junior creditors would share in the liquidation value, debt dispersion does not create any first-mover advantage. In theory, this should be sufficient to prevent a creditors' run; as we shall see below, the evidence is consistent with this prediction.

In order to test it, we estimate a probit regression where the dependent variable equals 1 if the firm is placed in bankruptcy and 0 otherwise.³² The explanatory variables can be classified into three groups. The first includes variables such as size and interest rate spreads upon entry to BSU, which control for *ex ante* firm characteristics. The second group includes variables such as the share of (main) bank debt and collateralization rates, based upon amounts outstanding at the beginning of the rescue process, to control for debt structure. The third group includes variables for managerial replacement and the evolution of both bank and trade credit, which captures the actions of major players during the rescue process.³³ To

³¹ An extreme example is that of the tax authorities, whose policy is to disallow officers to negotiate debt forgiveness under any circumstances.

³² Data availability restricts the analysis to Bank 2 only.

³³ We report in our resolution regressions shown in Table VI results for the presence of personal guarantees. We do not report results using size of guarantee since it did not prove significant. The

facilitate the economic interpretation of the results, the coefficients are expressed as marginal probabilities per unit of standard deviation of each independent variable.

Under the creditor-run hypothesis, the contraction of trade credit during the rescue process (GR-TRADE-1-2) should have a significantly negative effect on the probability of survival. Namely, a creditors' run starts when the company can no longer resist trade-creditors' demands for payment, which forces the bank to appoint a receiver. Hence, under the null hypothesis of creditors' run, the more trade credit is reduced in BSU, the higher is the probability that the distressed firm will be placed in bankruptcy. This hypothesis is clearly rejected. The coefficient of GR-TRADE-1-2 is always positive and significant at better than the 10 percent level. Its economic significance is also high: a contraction of trade credit in BSU by one standard deviation decreases the probability of bankruptcy by up to 17 percent (see for example regression 2 in the table). The results are consistent with a competing hypothesis, whereby repaying trade creditors enhances other creditors' confidence in the firm's ability to survive.³⁴

Additional evidence against the creditor-run hypothesis is provided by the low frequency of winding up orders, which is the remedy available to unsecured creditors. Across the three banks, of the 170 firms sent to DRU (see Table 4, Panel A), only 44 were liquidated via a winding-up procedure. Of these, 11 entered the BSU already having a winding-up order, which indicates that someone other than the bank initiated a liquidation procedure. However, trade creditors did not initiate any of these winding-ups; 4 were initiated by the preferential creditors and the remaining 7 by the owners.³⁵ Further evidence on the trigger of distress is provided by Bank-3's description of the cause of distress. Of 109 firms that were placed in BSU, 100 were classified as "bank-initiated" and the rest as "owner-initiated". There is not a single case where Bank 3 reports that trade creditors triggered entry into BSU.

We have already explained this result by reference to the standard lending practice of carefully prioritizing liquidation rights. Thus, if the trade creditors attempt to initiate liquidation, the floating-charge holder would appoint a receiver and realize the company's assets. Even if some funds remain after the secured creditor has been satisfied, the trade creditors will share them pro-rata. Hence, there is no first-mover advantage. The crucial importance of this finding is that it shows that the creditor-run problem has a contractual solution, which debtors and creditors can implement

data set is not comprehensive for this variable, and the inclusion of additional (guarantee) variables typically resulted in a substantial decrease in the sample size available.

³⁴ One concern is that the growth in trade credit may be endogenous to the outcome of distress. Namely, an ex-ante more-risky firm will have a higher probability of bankruptcy, to which the lenders would respond by withdrawing credit; hence a correlation between an independent variable and the error term. To address this problem, we have used the "time in BSU" as an instrument; under the null hypothesis of a creditors' run, it is correlated with the withdrawal of credit, but not with the ex-ante credit risk. We can report that the results in Table VI are not significantly affected. Similar results are obtained by using leverage (taken from FAME) as an instrument.

³⁵ Nor were any of the remaining 33 initiated by trade creditors.

Table VI. Probit regressions: determinants of the likelihood of bankruptcy, Bank-2 firms

The dependent variable equals 1 if the firm enters bankrupt, and 0 otherwise. The values in parentheses are z -statistics. Coefficients are expressed as marginal probabilities per unit of standard deviation of each independent variable and a change from 0 to 1 for dummies. Variable definitions are as follows. $L(\text{MAIN1})$ is the logarithm of debt owed to the main bank at $t = 1$. SPREAD1 is the interest rate spread at $t = 1$. D-PRSNL is a dummy variable that equals 1 if a personal guarantee is provided and zero otherwise. D-MANGE is a dummy variable that equals one if the manager is replaced while the company's accounts are with a bank's Business Support Unit (BSU). GR-MAIN-1-2 is the growth of main-bank debt from $t = 1$ to at $t=2$. GR-TRADE-1-2 is the growth of trade credit from $t = 1$ to at $t = 2$. $L(\text{MAIN1/TOT1})$ is the logarithm of the debt owed to the main bank scaled by total debt, both at $t = 1$. $L(\text{SCRT1/MAIN1})$ is the logarithm of collateral scaled by bank debt at $t = 1$. D-SLOPE is a slope dummy, which equals $L(\text{SCRT1/MAIN1})$ if $\text{SCRT1/MAIN1} > 1$, and 0 otherwise. D-PUBLIC is a dummy variable that equals 1 if the firm is publicly traded and zero otherwise.

	(1)	(2)	3)	(4)	(5)	(6)
$L(\text{MAIN1})$	-0.109 (-1.916)	-0.157 (-2.045)	-0.147 (-1.897)	-0.149 (-1.818)	-0.136 (-1.752)	-0.143 (-1.829)
SPREAD1	0.043 (0.816)	0.016 (0.248)	0.021 (0.314)	0.020 (0.306)	0.033 (0.471)	0.019 (0.276)
D-PRSNL	0.061 (0.647)	0.057 (0.499)	0.053 (0.464)	0.052 (0.450)	0.062 (0.529)	0.047 (0.414)
D-MANGE	-0.413 (-3.291)	-0.578 (-3.586)	-0.574 (-3.532)	-0.573 (-3.508)	-0.547 (-3.326)	-0.568 (-3.445)
GR-MAIN-1-2	0.259 4.410		0.093 (1.404)	0.093 (1.405)	0.067 (1.198)	0.093 (1.351)
GR-TRADE-1-2		0.169 (2.093)	0.169 (1.853)	0.085 (1.807)	0.140 (1.823)	0.085 (1.760)
$L(\text{MAIN1/TOT1})$				0.004 (0.059)		
$L(\text{SCRT1/MAIN1})$					0.044 (0.713)	
D-SLOPE					-0.426 (-1.126)	
D-PUBLIC						-0.093 (-0.533)
Pseudo R -square	0.28	0.24	0.25	0.25	0.24	0.25
No. of observations	163	123	123	123	119	123

on their own, in a decentralized manner, and without active court involvement. This undermines one of the main arguments against the contractualist system: that market-generated debt structures are inherently unstable and can only be stabilized by judicial intervention.

6.3. LAZY BANKING

In our context, lazy banking implies that the bank, holding a fixed and secured claim against the company, has little incentive to take on risk or exert effort in order to rescue the firm, as the beneficiaries are likely to be other creditors or stakeholders. We would expect that a lazy bank would (i) put too little or no effort into rescuing the company, (ii) ignore the restructuring efforts of the firm such as management replacement, (iii) liquidate the firm automatically once the value of the collateral nears the face value of the loan, and (iv) incur excessive direct costs of bankruptcy, which it would try to offload onto the junior creditors. As we shall see, the evidence on lazy banking is mixed.

As to the first implication, we have already seen that a distressed company spends on average 7.5 months in BSU, with the pronounced objective of turning the company around. It is somewhat difficult to quantify the amount of effort put into the distressed company during that period. It is even more difficult to find a benchmark against which to evaluate whether this effort is ‘inadequate’. However, there is strong evidence that U.K. banks do not opt for automatic liquidation upon any violation of the debt contract.

A second, and more formal, hypothesis is that a lazy bank that could satisfy itself by liquidating the company’s assets would ignore the rescue prospects of the firm. We use managerial replacement as a proxy for the rescue efforts of the company and its prospects of recovery. We thus include in our probit regression a dummy variable (D-MANGE), which equals 1 if the company replaces its senior manager while in BSU, and 0 otherwise (see Table VI). In this respect, the lazy banking hypothesis is clearly rejected. The statistically significant negative coefficient indicates that replacement of a senior manager decreases the probability of bankruptcy by almost 57 percent (see regression 6 in the table).³⁶

A third implication of lazy banking is that the bank would not allow the value of the assets to fall below the value of the debt. Since the average recovery rate is below 100 percent (see Table 4), in some cases liquidation takes place when the value of the debt exceeds the value of the assets. However, high recovery rates imply that the bank does not wait long before it puts the distressed firm into bankruptcy. A more precise test is that the probability of liquidation should peak when the value of the collateral is 100 percent of the loan. Note that the relation between the collateral/debt ratio and the liquidation decision is unlikely

³⁶ The firms that replace managers tend to be of above average size. This may be because ownership and control tend to be combined in smaller firms, and replacing a senior manager means giving up ownership, with all the associated private benefits.

to be monotonic. Clearly, when the value of the collateral exceeds the value of the loan, the bank should have little interest in liquidation. As the value of the collateral nears the value of the debt, the incentive to liquidate is increasing. However, at the other extreme, if the firm has only a small amount of collateral, the lazy option of bankrupting the firm may be of very little value; the bank has more of an equity stake in the firm and therefore has a stronger incentive to bet on recovery. To test this non-linear effect, we define a pair of variables: the log of the security coverage ratio $\text{LN}(\text{SCRT1}/\text{MAIN1})$, and a slope dummy D-SLOPE with a breaking point at the value where the value of collateral equals main bank debt. The coefficients have the predicted signs, but are not statistically significant.

The fourth implication of lazy banking is that the bank has little incentive to decrease bankruptcy costs, as long as those costs are borne by other creditors. We find evidence that direct costs of bankruptcy appear to be relatively high.³⁷ In panel C of Table IV we report medians of 26.8 and 18.5 percent based on the total proceeds of sale recovered by the receivers for Banks 1 and 2, respectively; means are 42.4 and 24.3 percent, respectively.³⁸ (There is insufficient data for Bank 3.) These figures seem to be high in relation to other countries. For example, Thorburn (2000) reports direct costs of 13.2 percent (medians) and 19.1 percent (means) for Swedish auctions. The comparison to Sweden is particularly interesting because there the receiver is legally responsible to all creditors, rather than being an agent of the secured lender like in the U.K., which in theory should mitigate the agency problem.³⁹

There is further evidence that the high costs of bankruptcy are related to the non-competitive nature of market for receivers' services. One, U.K. bank, The Royal Bank of Scotland, has set up a system that requires receivers to tender for bankruptcy appointments. Preliminary results obtained by the authors indicate a significant reduction in direct costs. A sample of 31 receiverships shows costs averaging 14.5 percent as a percentage of total recoveries, which is between one third and one half below the costs for receiverships in our sample for Bank 1, after controlling for the size of company.⁴⁰ Figures for The Royal Bank are very similar to the direct costs reported by Thorburn (2000) for Sweden.

There is also some evidence that the banks manage to divert some of the direct costs to other creditors. The mechanism works as follows. As noted in Section

³⁷ Costs include the receiver's fees, the costs of selling assets, and legal fees.

³⁸ These numbers may be upward biased because we have no data about the recoveries of the preferential creditors (for Bank 1) and for trade creditors (for both Bank 1 and 2).

³⁹ Comparisons with the U.S. are more difficult, as we deflate the cost by the liquidation value, while most American studies deflate by the book value of the companies. By that measure, Thorburn (2000) concludes that Chapter-11 direct reorganization costs are between 3.1 and 3.6 percent. She also estimates that Swedish direct costs are 50–80 percent higher than in the U.S. However, those differences are partly explained by the different size of companies.

⁴⁰ For assets between £500,000 and £1000,000, the costs are 9 percent for Royal Bank of Scotland compared with 19 percent for Bank 2. For assets over 01 millions, they are 7 and 16 percent, respectively.

3, the bank's fixed charge is senior to the preferential creditors, but their floating charge is junior to the preferential creditors (mainly the tax authorities). Thus, by reallocating the direct costs from the fixed to the floating charge, the bank may increase its recovery rate. Consider, for example, a hypothetical company in liquidation with fixed assets worth £400 and floating assets worth £100. The bank is owed £400 and has both a fixed and a floating charge; the preferential creditors are owed £100. The direct cost of the liquidation, mainly the receiver's fee, is £100. If the cost is allocated pro-rata (according to the value of the assets), the bank will receive £320 and the preferential creditors will receive £80. However, by loading all the direct costs onto the floating charge the bank would be fully paid while the preferential creditors would be wiped out.

We find this pattern in the data. Using 35 receivers' reports,⁴¹ we compare a hypothetical pro-rata allocation of costs to the fixed charge and the floating charge with the actual allocation. The results are striking: with the exception of two cases, the actual allocation to the floating charge is always above the hypothetical one. Of the 21 cases where the bank's recovery rate is less than 100 percent, in 10 cases the bank has allocated sufficiently large costs to the floating charge so as to wipe out completely any recovery by the preferential creditors. The difference between the hypothetical and actual allocation is on average 5.8 percent of the total proceeds available. These findings are consistent with a Report by the Comptroller and Auditor General (1996), which also finds that the tax authorities may not be recovering their fair share of proceeds in receivership.

7. Going Concerns Versus Liquidation in Bankruptcy

In line with most of the literature, we assumed so far that bankruptcy is a "bad outcome". However, this is a strong and unrealistic assumption that biases the evaluation of a bankruptcy system against a "hard" procedure like that of the U.K., which does not put any restriction on exercising contractual liquidation rights. The argument is simple: even if we assume that the main problem in bankruptcy is to avoid the liquidation of viable companies,⁴² the economic value lies in the combination of physical assets and human capital rather than in the corporate name. Thus, receivership may end up in a transfer of ownership of the company's assets (including intangibles such as patents or commercial logos) to a new owner who will incorporate them under a different name. Relieved of debt, the new company can continue its operations, retaining employees and business relationships. We know very little about these features of receivership. While it is relatively easy to track companies, it is much more difficult to track assets and business relationships. The only information available to us is notes made in the receiver's report. In the case of Bank 2, of 27 receiverships 8 are reported as "going concern sales", 8 as "partial going concerns", with the rest being sold piecemeal. Hence, the propor-

⁴¹ The reports were supplied by 'Bank 2'.

⁴² A strong assumption indeed, as inefficient continuation is theoretically as serious a problem.

tion of receiverships resulting in going-concern sales is 44 percent, assuming that a partial going-concern sale keeps half of the former company in business. The corresponding proportion for Bank 1 is 63.6 percent. Thorburn (2000) finds that in Sweden 74 percent of bankrupt companies were auctioned as going concerns, which is higher than our figures.

8. Conclusion

We began this paper with Jensen's proposals advocating the privatization of U.S. bankruptcy. Our study of the U.K. bankruptcy system sheds some light on the feasibility, if not the desirability, of Jensen's proposals.

The evidence is not sufficient to establish that a contractualist system performs better than a judicially active system such as Chapter 11. Efficiency in bankruptcy is the result of a complicated trade off between conflicting objectives, providing incentives to the firm to service the debt, to the bank not to be lazy, and to the junior creditors not to precipitate a run on the company's assets. Proving that a particular system is indeed efficient requires a quantification of these effects, which is well beyond the scope of this paper.

However, our paper makes a contribution towards a normative evaluation of a contractualist approach to corporate bankruptcy. The paper provides a description of how U.K. bankruptcy operates: how debt contracts allocate rights across creditors, how those rights are enforced and how the resulting incentives affect the behavior of the distressed company and its creditors. The description strongly suggests that the U.K. approach, whether optimal or not, is at least a viable option.

In the tradeoff between concentration of power to avoid coordination failures, and dispersion of power to avoid opportunistic behavior, the revealed preference in the U.K. is towards avoiding coordination failures. In that respect, the concentration of liquidation rights achieves its purpose: creditors' runs are eliminated and the incidence of litigation is extremely low. However, we also show that banks rely heavily on collateral, which may increase the incentive to take the lazy option. For example, we find relatively high direct costs of bankruptcy, reflecting inadequate supervision by the banks over receivers' costs. At the same time we also find evidence against lazy banking, reflected in the sensitivity of the bank's liquidation decision to managerial replacement.

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