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Troubled debt restructurings

An empirical study of private reorganization of firms in default*

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This study investigates the incentives of financially distressed firms to restructure their debt privately rather than through formal bankruptcy. In a sample of 169 financially distressed companies, about half successfully restructure their debt outside of Chapter 11. Firms more likely to restructure their debt privately have more intangible assets, owe more of their debt to banks, and owe fewer lenders. Analysis of stock returns suggests that the market is also able to discriminate *ex ante* between the two sets of firms, and that stockholders are systematically better off when debt is restructured privately.

1. Introduction

With the proliferation of leveraged buyouts (LBOs) and other highly leveraged transactions, there has been growing popular concern that the corporate sector is being burdened with too much debt. Much of this concern

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is founded in the belief that highly levered firms could default in large numbers in a major recession (*Wall Street Journal*, 25 October 1988). At issue is whether corporate default is costly, and whether, as recently suggested by Jensen (1989a, b), private contractual arrangements for resolving default represent a viable (and less costly) alternative to the legal remedies provided by Chapter 11.

This study investigates the incentives of financially distressed firms to choose between private renegotiation and Chapter 11. We analyze the experience of 169 publicly traded companies that experienced severe financial distress during 1978–1987. Our investigation yields a number of insights into the corporate debt restructuring decision. In about half of all cases, financially distressed firms successfully restructure their debt outside of Chapter 11. Financial distress is more likely to be resolved through private renegotiation when more of the firm's assets are intangible, and relatively more debt is owed to banks; private negotiation is less likely to succeed when there are more distinct classes of debt outstanding.

An analysis of common stock returns provides complementary evidence on firms' incentives to settle out of court. Abnormal stock-price performance suggests stockholders generally fare better under private renegotiation than bankruptcy. In advance of the outcome, the market appears to be able to identify which firms are more likely to succeed at restructuring their debt outside of Chapter 11.

Finally, we present detailed descriptive evidence of how debt is restructured outside of bankruptcy. Previous empirical research in corporate financial distress has dealt largely with formal reorganization in Chapter 11. Detailed case analyses of selected firms in our sample provide additional insights into firms' incentives to choose between private renegotiation and Chapter 11.

The study is organized as follows. Section 2 discusses firms' incentives to choose between private renegotiation and bankruptcy as alternative mechanisms for dealing with default. Section 3 describes the data and methodology. Section 4 presents the empirical analysis of troubled debt restructurings. Section 5 concludes with a summary of the results. The appendix presents ten detailed case studies of firms that attempted to restructure their debt privately.

2. Corporate default and debt restructuring

A firm that must restructure the terms of its debt contracts to remedy or avoid default is faced with two choices; it can either file for bankruptcy or attempt or renegotiate with its creditors privately in a 'workout'. The alternatives are similar in that relief from default is obtained when creditors consent to exchange their impaired claims for new securities in the firm. Sometimes this exchange is implicit, as when the terms of a debt contract are modified.

If bankruptcy is the alternative to private renegotiation, then firms' incentives to settle with creditors out of court, and the settlement terms, will reflect the legal and institutional constraints of the bankruptcy process. The remainder of this section briefly describes relevant bankruptcy law, and identifies some important economic factors that affect the choice between bankruptcy and private debt renegotiation.

2.1. *Rules and procedures of bankruptcy*

For most companies, bankruptcy practices are governed by Chapter 11 of the U.S. Bankruptcy Code (henceforth, the 'Code'). Filings under Chapter 11 are treated as corporate reorganizations, and the bankrupt firm is expected to continue as a going concern after leaving bankruptcy. To protect the firm from creditor harassment while it tries to reorganize, Chapter 11 imposes an automatic stay that prevents creditors from collecting on their debt or foreclosing on their collateral until the firm leaves bankruptcy.[1]

In Chapter 11, an exchange of securities is formally proposed in a reorganization plan. The plan assigns claimholders to various classes, and a separate exchange is proposed for each class. All claims placed within a given class must be substantially similar. Thus, for example, trade debt might be placed in one class, secured bank debt in another, and so forth, although finer partitioning of claims is possible.

The value of new securities distributed to any class is in principle determined by the absolute priority rule, under which each creditor class is compensated for the face value of its prebankruptcy claims only after all other classes designated as senior are paid in full. Franks and Torous (1989), Eberhart et al. (1990), and Weiss (1990) show that significant deviations from absolute priority occur in practice. All three studies document cases where stockholders participate in a reorganization plan that provides for less than full payment of senior claims.

The filing firm, or debtor, has the exclusive right to propose the first plan. If this plan is not filed within 120 days of the initial Chapter 11 filing, or accepted by creditors within 60 additional days, any claimholder class can propose its own plan. Acceptance of the plan requires an affirmative vote by a majority (two-thirds in value and one-half in number) of the claimholders in each impaired class. To break deadlocks, the court can unilaterally impose or 'cram down' the plan on dissenting classes if the plan is 'fair and

[1]Alternatively, firms can elect to liquidate by filing under Chapter 7 of the Code. Before the Code was enacted on October 1, 1979, bankruptcy practices were governed by the Bankruptcy Act, under which corporations could choose to either liquidate under Chapter VII, or reorganize under Chapters X or XI. Filing for Chapter 11 is not always the exclusive right of stockholders. Creditors may file an 'involuntary' Chapter 11 petition, if they can demonstrate that the firm has been delinquent in making payments on its debt. Following a default, creditors can generally accelerate full payment on their debt after 30 days have elapsed, thus giving the firm little option but to file for bankruptcy.

equitable' – that is, if the market value of new securities distributed to each class under the plan at least equals what the class would receive a liquidation. In practice, cram-downs are extremely rare [Klee (1979)]. It is in the joint interest of all classes to avoid a cram-down, because application of the fair and equitable standard requires the court to determine the firm's liquidation value and going-concern value in a special hearing. These hearings are considered extremely time-consuming and costly. Avoidance of cram-down also explains observed deviations from absolute priority, since classes that receive nothing under the plan (including stockholders) are deemed not to have accepted the plan, giving creditors an incentive to voluntarily relinquish part of their claims.

Chapter 11 also provides for the appointment of committees to represent the interests of certain claimholder classes before the court. Committees normally consist of the seven largest members of a particular class who are willing to serve, and are empowered to hire legal counsel and other professional help. Committees' operating expenses are paid out of the bankrupt firm's assets. Appointment of a committee of unsecured creditors is mandatory in Chapter 11 cases; additional committees can be appointed to represent other classes, including stockholders, at the discretion of the judge [DeNatale (1981)].

2.2. Determinants of the choice between bankruptcy and private renegotiation

Whether financial distress is resolved through bankruptcy or private renegotiation depends on two factors. First, stockholders and creditors will collectively benefit from settling out of court when private renegotiation generates lower costs than bankruptcy. Under the lower-cost alternative, the resulting value of the firm will be higher, and the firm's claims can be restructured on terms that leave each of the original claimholders better off. Claimholders' incentives to settle privately will increase with the size of the potential cost savings from recontracting outside of Chapter 11. Second, the lower-cost alternative will be adopted only if claimholders can agree on how to share the cost savings. Attempts to settle privately are more likely to fail when individual creditors have stronger incentives to hold out for more favorable treatment under the debt restructuring plan.

The remainder of the section develops this simple economic model of the corporate debt-restructuring decision, and derives empirical proxies for firms' incentives to restructure their debt privately.[2]

[2]Previous empirical studies of out-of-court restructuring include Gilson (1989, 1990), who analyzes changes in corporate ownership and governance structure during financial distress, and Hoshi et al. (1990), who investigate the resolution of financial distress in Japan. Previous theoretical research into the choice between bankruptcy and private renegotiation includes

2.2.1. Relative cost of formal bankruptcy versus private renegotiation

Although attempts have been made to measure the costs of Chapter 11 empirically [Warner (1977b), Ang et al. (1982), Altman (1984), Weiss (1990)], we currently know little about how these costs compare with the costs of private renegotiation. In analyzing the costs of financial distress, it has become common to distinguish between direct and indirect costs. Direct costs are out-of-pocket transactions cost (such as charges for legal and investment banking services). Indirect costs include all other costs related to the firm's bankruptcy or debt restructuring. For example, managers may forego profitable investment opportunities because they are distracted by dealings with creditors or the bankruptcy court. Indirect costs also include the value of managers' time spent in such dealings.

It is widely believed among practitioners that direct costs are significantly higher for bankruptcy than private renegotiation, because the procedural demands and legal complexity of Chapter 11 result in inflated lawyers' fees [Stein (1989)]. Formal legal motions must be drafted and argued before the bankruptcy judge at each step of the reorganization. An inordinate amount of time may be required to make any decision that lies outside the ordinary course of the firm's business.[3] When debt is restructured privately, legal costs are reduced because such decisions can be made more quickly. In addition, bankruptcy lawyers have an incentive to prolong the firm's stay in Chapter 11, because their compensation is treated as a priority claim, which entitles them to be paid before any of the firm's general unsecured creditors or shareholders. These arguments suggest that indirect costs (as measured by the expenditure of managers' time) are also higher for bankruptcy than for private renegotiation.

The relative cost disadvantage of bankruptcy is offset by two factors. First, the Code's automatic stay provision ameliorates the common pool problem inherent in distressed situations, by imposing a well-defined queuing order on creditors (who would otherwise rush to be first in line to collect payment on

Haugen and Senbet (1978), Bulow and Shoven (1978), White (1983), Aivazian and Callen (1983), Green and Laffont (1987), Roe (1987), Kahn and Huberman (1988), Brown (1989), Giammarino (1989), Hart and Moore (1989), and Mooradian (1989). Much of this research views the firm's bankruptcy decision as the outcome of a strategic game played between stockholders and creditors. An analogous problem is addressed in the 'theory of litigation', which analyzes the choice faced by plaintiffs and defendents between settling out of court or going to trial [Gould (1973)].

[3]For example, if a debtor wishes to retain the services of an investment bank, it must first file an application with the bankruptcy court. Applications can be made only after appropriate 'notice and hearing' has been given, which requires the firm to inform all creditors of the application in writing, and allow sufficient time for any objections to be filed. The court rules on the application at a special hearing. The time required for approval can be shortened if the debtor requires creditors to show cause, allowing the application to be approved within a few days if no objections are raised.

their debt and seize collateral). Such activity will be wasteful if it results in costly duplication of effort or creates additional distraction for management [Jackson (1986)].

Second, firms in Chapter 11 can grant new lenders superpriority status, or a security interest equal or senior to that of existing debt (also known as debtor-in-possession financing). In the absence of this provision, firm value could be reduced because stockholders have an incentive to underinvest in positive-NPV projects that enrich senior claimholders [Myers (1977), Smith and Warner (1979)]. In principle, an equivalent provision could be negotiated among creditors and stockholders privately; however, senior creditors would have to voluntarily consent to subordinate their claims. The option to grant new lenders superpriority status will be especially valuable for firms that are in need of short-term trade financing and have few free assets to pledge as security.

Data limitations preclude direct measurement of relative recontracting costs (see section 3). In the following analysis, we assume that firms and creditors expect private renegotiation to be less costly than bankruptcy. Empirical justification for this assumption is provided in section 4, although we recognize that bankruptcy will dominate private renegotiation for some firms. The importance of relative recontracting costs is assessed by relating the firm's choice of recontracting method (i.e., private or legal) to a variable that measures cross-sectional variation in this assumed cost difference.

Such a test requires us to discriminate among firms on the basis of their expected cost savings from settling privately. This forced us to exclude certain costs (for example, legal fees and management's time costs) for which we were unable to find suitable empirical proxies. The cost that we use to test our model is the destruction of going-concern value that occurs when assets are sold to pay down debt and remedy default [Jensen (1989a, b)]. This loss of value will be greater for intangible assets and assets that generate firm-specific rents (e.g., growth opportunities, managerial firm-specific human capital, monopoly power, and operating synergies whose value depends on the firm's assets being kept together). If, as argued below, assets are more likely to be sold when debt is restructured in Chapter 11 rather than privately, then Chapter 11 will be relatively most costly for firms whose assets are more intangible or firm-specific. We measure the potential loss of going-concern value due to asset sales by the ratio of the firm's market value to the replacement cost of its assets; replacement cost approximates what the firm's assets could be sold for piecemeal. Firms with a higher market value/replacement cost ratio will be more likely to restructure their debt privately, because Chapter 11 is relatively more costly for such firms.

For several reasons, assets are more likely to be sold when debt is restructured in Chapter 11 rather than privately. First, automatic stay gives the debtor more power over the disposition of the firm's assets, by enjoining

creditors from exercising their nonbankruptcy right to sue the firm and seize collateral. Asset sales that would normally be in violation of the firm's debt covenants will be allowed if the firm can convince the bankruptcy judge that such sales are necessary for the continued operation of the business.

Second, since the debtor can undermine the value of lenders' collateral and grant new lenders superpriority standing, fully secured lenders will in general prefer liquidation over reorganization. This may create additional pressure for asset sales in bankruptcy. In Chapter 11, creditors can initiate asset sales by 'making a motion to sell assets' before the court. In addition, Chapter 11 cases can be converted into Chapter 7 liquidations. Although conversion to Chapter 7 occurs for only about 5% of the bankruptcies that we examine, other studies have found much higher rates of liquidation. For a sample of Chapter 11 filings in the Southern District of New York (including nonpublic firms), White (1989) finds that about one-third either end up in Chapter 7 or as liquidating reorganizations.

Finally, purchasing assets from a financially distressed firm is less risky in Chapter 11, because asset sales are executed by a court order and are thus free from legal challenge. In addition, assets that are purchased from an insolvent firm that subsequently files for Chapter 11 may have to be returned as a 'voidable preference' or 'fraudulent transfer'. Given the costs incurred if an asset sale is later challenged or cancelled, potential purchasers of an asset will prefer to deal with firms in Chapter 11.

2.2.2. *Factors affecting creditors' willingness to settle outside of Chapter 11*

Even if stockholders and creditors believe that their combined wealth will be higher if debt is restructured outside of Chapter 11, negotiations can break down if particular creditors hold out for more generous terms. The severity of the holdout problem will depend on the voting rules for determining acceptance of the plan, the number of creditors who participate in the plan, and the type of debt that is restructured (bank loans, publicly traded debt, etc.). In addition, creditors may withhold their consent from a restructuring plan if they dispute the value of the new securities being offered under the plan.

Adopting a debt restructuring plan outside of bankruptcy generally requires the unanimous consent of all creditors whose claims are in default. Impaired creditors who are excluded from the plan can accelerate payment of their claims, or force the firm into bankruptcy by filing an involuntary Chapter 11 petition. Cross-default provisions in the firm's debt contracts will increase the proportion of creditors who participate in the plan. Thus in a typical workout the potential holdout problem is quite severe because of the veto power held by individual creditors. This problem is less severe in Chapter 11, where approval for a reorganization plan is required only from a

specified majority of the creditors in each class of claims, and dissenting classes can be forced to comply with the plan under the Code's cram-down provision.

We hypothesize that the holdout problem is more severe (and the probability of successful private renegotiation, lower) when relatively more creditors are allowed to participate in the restructuring plan. An increase in the number of total votes to be cast increases the probability that at least one of the votes will be negative. Reasoning along similar lines, Smith and Warner (1979) conjecture that private negotiation of debt will be easier when the debt is privately placed (and owed to fewer lenders). On the other hand, having fewer creditors could result in more frequent bargaining deadlocks, if smallness of numbers causes individual creditors to feel more powerful and perceive greater dollar benefits to holding out. When there are few creditors – as in any bilateral bargaining situation involving few buyers and sellers – mutually beneficial trades will not always take place. If a negotiated solution is not forthcoming, the only way to break the deadlock may be to file for bankruptcy.

A related consideration is the heterogeneity of the firm's financial claims, or the complexity of its capital structure. Firms with more complex capital structures are hypothesized to succeed less often at restructuring their debt privately. The more that creditors' claims differ in seniority rights, security, and other features, the more likely different claims are to be treated differently under any proposal restructuring plan (in the package of new securities offered to holders of each type of claim). As a result, there may be greater disagreement over whether the plan is equitable in its treatment of different claims. In practice, inter-creditor disputes are extremely common, even among creditors who hold the same general type of security (for example, members of a bank lending consortium).

Achieving a consensus among creditors outside of bankruptcy will also depend upon what type of debt is being restructured. The holdout problem is especially severe for publicly traded bonds. Under the Trust Indenture Act of 1939, firms are prohibited from changing any of the 'core' terms of the bond indenture (the principal amount, interest rate, or stated maturity) unless every bondholder gives his/her consent. Although only a simple or two-thirds majority is generally required to change other covenants in the bond, amendment of the core terms is often critical to resolving financial distress.

As a result, restructuring of publicly traded debt almost always takes the form of an exchange offer. In return for tendering their old bonds, bondholders receive a package of new securities (often including some form of equity) that offers a lower cash payout. Since participation in the offer is voluntary, bondholders will have incentives to hold out if their individual tendering decision has little impact on whether the offer is successful; such incentives will be stronger when the bonds are more widely held. To encourage

bondholders to tender, exchange offers are structured to penalize holdouts. The new bonds are generally more senior, and mature sooner, than the old bonds. In addition, holders can be asked to jointly tender their bonds and vote for the elimination of protective covenants in the old bonds; for this reason the success of an exchange offer is often conditional on a stipulated voting majority of bonds being tendered.

In our sample, publicly traded debt is always restructured through exchange offers. These offers are typically completed in under two months. This time can be further reduced if the firm qualifies under Section 3(a)(9) of the 1933 Securities Act for an exemption from ordinary registration requirements for any new securities issued under the offer. These so-called 3(a)(9) offers were pioneered by Drexel Burnham Lambert in the early 1980s. A company will generally qualify to make such an exchange if it is not paying anyone to solicit the exchange, and if both new and old securities involved in the offer have the same issuer. These offers can be made by any firm that qualifies, even if it is not financially distressed. Over the period 1981–1986, approximately 30% of the 184 offers for which Drexel served as advisor were made by financially distressed companies. Currently, virtually all exchange offers made by distressed companies are structured as 3(a)(9) offers.

Bankruptcy practitioners assert that attempts to settle outside of Chapter 11 are more likely to succeed when relatively less debt is owed to trade creditors, and more is owed to bank lenders. The holdout problem is particularly severe for trade debt because the number of trade creditors is often quite large, and their claims are relatively heterogeneous, precluding the use of exchange offers to restructure this debt in the same manner as publicly traded bonds. Securing a consensus among trade creditors is also thought to be more difficult because they tend to be 'acrimonious' and 'unsophisticated'. By similar reasoning, private renegotiation is less likely to succeed when the firm has significant contingent liabilities, such as those arising from product liability suits, where individual tort claims can number in the tens of thousands. Bank lenders, in contrast, tend to be more sophisticated and fewer in number than other kinds of lenders, and are more amenable to settling outside of Chapter 11 [Stein (1989)]. Similar arguments would seem to apply to insurance companies that hold privately placed debt.

Finally, creditors' consent to a restructuring plan will be harder to obtain when there is greater asymmetry in the information used by stockholders and creditors to value the firm. Through their control over the supply of such information, stockholders have incentives to influence creditors' perception of firm value to gain more favorable terms in the restructuring plan. DeAngelo et al. (1990) present evidence that is consistent with financially distressed firms using accounting accruals to influence their negotiations with bank lenders. Since rational creditors are aware of stockholders' incentives to misstate the value of the firm, private renegotiation may fail because of the

resulting 'lemons' problem. In Chapter 11, stockholders have a much smaller information advantage over creditors. Firms are required to make extensive, regular disclosures of their financial and operating data to the court. Additional information is contained in the court testimony of expert witnesses and management, and creditors can exercise their 'rights of discovery' to require additional disclosures from the debtor. Any continuing disputes over value can be arbitrated by the court.

We use three variables as proxies for the severity of the holdout problem. First, troubled debt is more likely to be restructured outside Chapter 11 when there are fewer creditors. Second, debt is more likely to be restructured privately when relatively more of the debt is privately held by banks and insurance companies. In addition to the reasons discussed above, bank and insurance company debt is hypothesized to have this effect because such debt reduces the amount of information asymmetry between stockholders and creditors. Since these lenders are generally few in number, they have stronger incentives to monitor the firm than other kinds of creditors. Also, privately placed debt typically includes more financial covenants than other types of debt; even when firms are fully in compliance with these covenants, more information is implicitly revealed about firms' financial and operating characteristics.

Finally, holdouts by junior creditors will be less common when the firm's market value is high in relation to the replacement cost of its assets. As discussed in section 2.2.1, more going-concern value is dissipated in bankruptcy than in private workouts when more of the firm's assets are sold in bankruptcy. Junior creditors' position in the absolute priority ranking ensures that they bear most of this cost, and they will offer less resistance to any proposed restructuring plan. Thus, firms with a higher market value/replacement cost ratio will be more likely to restructure their debt outside of Chapter 11.

2.3. *'Prepackaged' Chapter 11*

The preceding analysis is based on a simple dichotomy between bankruptcy and private renegotiation. However, the Code also permits firms to make a 'prepackaged' Chapter 11 filing, in which the bankruptcy petition and reorganization plan are filed together. Terms of the plan are negotiated in advance between the firm and its creditors, and a vote is taken almost immediately.[4]

[4]Under section 1126(b) of the Code, any claimholder who accepts or rejects a reorganization plan that is proposed prior to filing for Chapter 11 is deemed also to have accepted or rejected the plan for purposes of plan confirmation, provided that the debtor has disclosed all relevant information for making an informed decision as provided under nonbankruptcy law.

Prepackaged Chapter 11 is thus a hybrid of conventional bankruptcy and private renegotiation that incorporates certain features of each recontracting alternative. In practice, successful prepackaged filings are extremely rare. Although prepackaged filings can significantly reduce the time that firms spend in court and obviate the need for costly creditors' committees, disputes involving the plan are still possible after filing. We were informed by a professional bankruptcy consultant that only 5% to 10% of the largest bankruptcies begin as prepackaged filings, and that fewer than half of these are successful (the original plan is accepted). Only one firm in the sample made a prepackaged Chapter 11 filing [see the case of Crystal Oil in the appendix]. The company spent a total of only three months in bankruptcy, compared with a median of eighteen months for all bankrupt firms in the sample.

3. Data and sample selection

Although identifying bankrupt firms is fairly straightforward, there are few legal or institutional guideposts for deciding what constitutes a debt restructuring. In contrast to Chapter 11 cases, most debt restructurings do not have a well-defined beginning or ending date. Restructuring rarely begins or ends with a formal public announcement, and no special documents have to be filed with any government agency. Information about the restructuring disclosed in normal Securities and Exchange Commission (SEC) filings often lacks detail. Sometimes the same debt is restructured on a number of successive occasions, or different classes of debt are restructured concurrently as separate transactions.

This study uses the same sampling procedure and definition of a debt restructuring as Gilson (1989, 1990). This definition emphasizes the economic similarities between Chapter 11 and private renegotiation as alternative mechanisms for dealing with financial distress. A firm is financially distressed if it has insufficient cash flows to meet the payments on its debt. To avoid or remedy a default, the firm must reduce or defer the payments, or replace the debt with securities having residual rather than fixed payoffs. Consistent with this simple intuition, a debt restructuring is defined as a transaction in which an existing debt contract is replaced by a new contract, with one of the following consequences: (i) required interest or principal payments on the debt are reduced; (ii) the maturity of the debt is extended; or (iii) creditors are given equity securities (common stock or securities convertible into common stock). In addition, the restructuring must be undertaken in response to an anticipated or actual default. This last requirement ensures that the sample includes only restructurings that are undertaken by financially distressed firms. As reported later in table 3, approximately two-thirds of

sampled firms that privately restructure their debt are in default at some point during their restructuring.[5]

A debt restructuring is assumed to take place over the interval defined by the first and last reference to the restructuring in the *Wall Street Journal* (*WSJ*), unless more accurate dates are available from other sources. Event-study tests undertaken below measure stock returns in relation to these two dates. If a firm restructures its debt in several discrete periods, these are treated as a single restructuring transaction if less than a year separates adjoining periods. A debt restructuring plan is considered successful if the firm does not file for bankruptcy within a year of the last reference to the restructuring.[6] Consistent with the joint reorganization of claims under Chapter 11, concurrent restructuring of the firm's publicly traded and privately placed debt is treated as a single debt restructuring.

This study analyzes a sample of 169 exchange-listed companies that were in severe financial distress during 1978–1987; 80 firms privately restructured their debt, and 89 firms filed for Chapter 11. Selection of the sample was a two-step process. First, for a given year, firms listed on the New York and American Stock Exchanges were ranked by unadjusted common stock returns at year-end (cumulated over three years), and a stratum was formed consisting of those firms in the bottom five percent. Second, financially distressed firms within this stratum were identified by searching through the *WSJ Index* for any reference to a default, bankruptcy, or debt restructuring in each of the surrounding five years. This two-step procedure was repeated for each of the years 1979–1985, resulting in an initial stratified sample of 793 firm-years (447 firms). Under the assumption that extreme stock-price declines reflect extreme declines in firms' cash flows, this sampling procedure replicates the sequence of actual events that lead to financial distress.

This sampling method has two principal advantages. First, since we are interested in contrasting private renegotiation and bankruptcy as alternative mechanisms for dealing with extreme financial distress, we want to exclude debt restructuring by nondistressed firms. For example, a highly levered but

[5]Defaults on technical convenants (for example, those requiring firms to maintain a minimum level of net worth) are not explicitly considered in this definition because such covenants are frequently renegotiated by financially healthy firms when debt is privately placed. As Zinbarg (1975, p. 35) notes: 'My own institution's experience (Prudential Insurance Company of America) may serve as an illustration. In any given year, we will, on average, receive one modification request per loan on the books. In no more than five percent of these cases will we refuse the request or even require any quid pro quo, because the vast majority of corporate requests are perfectly reasonable and do not increase our risk materially.' For a detailed discussion of the economic function of covenants, see Smith and Warner (1979).

[6]Thus, for example, if the last reference to an ongoing restructuring of a firm's bank debt was on June 15, 1982, and the next such reference occurs on September 12, 1983, these would be treated as references to two separate restructurings. Similarly, if a firm's bank debt is successfully restructured on March 22, 1980, and it begins to restructure its publicly traded debt on November 2, 1980, these would be treated as two references to the same ongoing restructuring. Five firms in the sample appear twice as two separate restructurings, and four firms appear as both a debt restructuring and a bankruptcy.

profitable firm may wish to amend certain terms in its debt to enable it to invest in a positive-NPV project. Extreme negative stock returns are a relatively unambiguous indicator of poor financial performance. Inspection of the source documents reveals that 56% of firms in the sample explicitly restructured their debt to avoid bankruptcy. The remaining firms either received a going concern qualification from their auditors during the restructuring, where in default, or experienced a change in control at the hands of creditors (as evidenced by a creditor-initiated senior-management change or placement of stock with creditors).

A second advantage is that the sample contains a more representative cross-section of debt restructurings than if the search had been based on reported cases of default. The latter criterion would exclude firms that restructure their debt to avoid default; evidence reported in the next section suggests that such preemptive restructuring is fairly common. Similarly, a sample that consists of defaults reported by *Moody's* or *Standard and Poor's* would exclude firms that have no publicly traded debt; such firms make up 54% of the current sample. Potential biases inherent in the sampling procedure are discussed in the next section.

Information on debt restructuring plans and other relevant data are obtained from the *WSJ*, the *Moody's* manuals, the *Capital Changes Reporter*, and the *Q-File* directory of 10k reports and proxy statements. Additional data are obtained from the exchange-offer circulars issued by firms that restructured their publicly traded bonds. The market value/replacement cost ratio is constructed using data from the COMPUSTAT data base, and is described in Lang et al. (1989). Because stock returns (and market values) of highly levered firms are extremely volatile, we use a three-year average of this variable in the empirical analysis. The bank-debt ratio is defined as the book value of debt owed to banks and insurance companies divided by the book value of total liabilities. Eighty-five percent of all firms in the sample owe debt to banks, while only eleven percent owe debt to insurance companies; results are qualitatively the same when the numerator includes only bank debt. The number of creditors is approximated by the number of distinct classes of debt referenced in the long-term debt section of *Moody's*. Data used to construct these variables predate as closely as possible the start of the firm's debt restructuring or bankruptcy.

4. Results

4.1. Sample characteristics

Most of the debt-restructuring activity in the sample is clustered in the years 1981–1985 (see table 1). This is consistent with the timing of the general economic recession of the early 1980s, when one would expect there

Table 1

Time series of corporate debt-restructuring activity, by starting date and eventual outcome of restructuring. Sample consists of 80 firms that successfully avoid bankruptcy by restructuring their debt out of court, and 89 firms that are unsuccessful in restructuring their debt and file under Chapter 11 of the U.S. Bankruptcy Code. The sample period is 1978–1987.[a]

Year	Number of attempted debt restructurings	Percentage of restructuring attempts that end in bankruptcy
1978	9	11.1
1979	8	50.0
1980	11	63.6
1981	18	66.7
1982	38	47.4
1983	28	46.4
1984	25	60.0
1985	20	60.0
1986	10	50.0
1987	2	100.0
Total	169	52.7

[a]A debt restructuring is defined as a transaction in which an existing debt contract is replaced by a new contract, with one of the following consequences: (i) required interest or principal payments on the debt are reduced, (ii) the maturity of the debt is extended, or (iii) creditors are given equity securities (common stock or securities convertible into common stock). All restructurings are undertaken in response to an anticipated or actual default. Sources used to determine firms' financial status include the *WSJ*, Commerce Clearing House's *Capital Changes Reporter*, the *Moody's* manuals, and the *Q-file* directory of annual 10k reports and proxy statements.

to be relatively more reported cases of financial distress. Seventy-six percent of the debt restructurings in the sample begin in this period. Also indicated is the percentage of restructuring attempts that eventually fail, and end with a Chapter 11 filing. The sample is about evenly divided between successful and failed attempts. Except in the first and last years of the sample period (when the number of events is extremely small), there does not appear to be any time trend in the observed failure rate.

The frequency of events corresponding to the beginning and conclusion of debt restructurings is listed in table 2. Separate figures are reported for successful and failed restructuring attempts. Primary sources used to identify these events include the *WSJ* and firms' 10k reports. Panel A of the table reveals that in a number of cases, negotiations took place prior to the starting date identified from public sources. Forty-seven initial references in fact pertain to the final resolution of a debt restructuring. We believe that we have come reasonably close to identifying the true starting dates for 90 firms (53 percent of the sample), where the initial event either takes the form of a default (52 firms) or an announcement that the firm has just commenced (or

Table 2

Frequency distribution of events used to identify the beginning and conclusion of 80 successful and 89 unsuccessful attempts by firms to restructure their debt privately to avoid bankruptcy. All transactions take place between 1978 and 1987. Figures in the table are based on information contained in the *Wall Street Journal*, the *Moody's* manuals, Commerce Clearing House's *Capital Changes Reporter*, and the *Q-file* directory of annual 10k reports and proxy statements.[a]

	Outcome of debt-restructuring attempt	
	Successful	Unsuccessful
Panel A: Events that identify the beginning of debt restructuring		
Default	29	23
Final resolution of debt restructuring announced	20	27
Initial announcement of debt restructuring	18	20
Reference to a debt restructuring that is already in progress	11	16
Creditor-initiated senior-management change	1	1
Firm receives a going-concern qualification from its auditors	1	0
Firm engages investment banker to lead debt restructuring	0	1
Senior management denies that bankruptcy is imminent	0	1
Panel B: Events that identify the conclusion of debt restructuring		
Restructuring agreement formally consummated	46	0
Last public reference to an ongoing restructuring in progress	13	0
Sale of equity or debt securities as part of restructuring plan	10	0
Merged into another company	4	0
Creditors receive equity securities under restructuring plan	4	0
Shareholder approval obtained for restructuring plan	3	0
Chapter 11 filing	0	89
Totals	80	89

[a]See table 1 for a definition of debt restructuring and bankruptcy.

will shortly commence) restructuring its debt (38 firms). Of the 52 default announcements, 34 refer to payment defaults and 18 to technical defaults on financial covenants. Over the course of a restructuring, firms can be associated with more than one event listed in panel A. Although a default normally allows the debtor a 30-day grace period before creditors can exercise their right to accelerate full payment of the debt, negotiations to restructure the debt are assumed to begin immediately after the firm defaults.

Panel B of table 2 reports the frequency of events used to identify the conclusion of a debt restructuring. By definition, all 89 restructuring attempts that fail end with a Chapter 11 bankruptcy filing. Of the remaining 80 successful debt restructurings, for 44 firms it was possible to identify the date on which the restructuring agreement was formally consummated. For 13 firms there was no clear concluding date, only some final reference in the *WSJ* to a restructuring that was still in progress. For ten firms the restructur-

Table 3

Selected attributes of 80 successful corporate debt restructurings undertaken to avoid bankruptcy between 1978 and 1987.[a]

Attribute	Percentage of sample
Panel A: Incidence of default during debt restructuring[b]	
Payment default	36.3
Technical default	21.3
Unspecified default	17.5
All defaults	66.3
Panel B: Stockholder approval for restructuring plan	
Approval for issuance of new common stock specified under plan	17.5
Approval of asset sales specified under plan	1.3
No stockholder approval required	81.2
Panel C: Type of debt restructured	
Bank debt (by firms that have bank debt outstanding)	90.0
Publicly traded debt (by firms that have publicly traded debt outstanding)	69.8

[a]See table 1 for a definition of debt restructuring and bankruptcy.
[b]A *payment default* is defined as a default on an interest or principal payment; included are cases where a firm unilaterally suspends payment on its debt, even though no default is formally declared by creditors. A *technical default* is defined as a default on a financial covenant in the firm's debt. Sources used to determine whether debt is in default include the *Moody's* manuals, Commerce Clearing House's *Capital Changes Reporter*, the *Q-file* directory of annual 10k reports and proxy statements, and Standard and Poor's *Bond Owner's Guide*.

ing concluded with the sale of new debt or equity securities, with the issue proceeds used to help finance the restructuring. In four additional cases the restructuring ended with creditors receiving an equity interest in the firm, either directly or as a result of interest being paid in equity securities instead of cash.

Starting and ending dates for bankruptcy are generally better defined. Of the 89 firms in the sample that filed for Chapter 11, 42 leave bankruptcy when their reorganization plans are formally confirmed by the court. An additional ten firms are merged into nonbankrupt firms, and four are liquidated following the conversion of their cases to Chapter 7 proceedings. For the remaining 33 firms, either bankruptcy was still in progress at the time of this writing (eight firms), or it was not possible to determine precisely when or how the firm emerged from Chapter 11.

Some general attributes of the 80 successful debt restructurings in the sample are presented in table 3. Reported default rates in panel A indicate whether any of the firm's outstanding debt is in default; data limitations preclude a finer breakdown by particular classes of debt (secured debt, trade debt, etc.). Although defaults on senior securities and related 'material' events must be reported in the firm's 10k report, the amount and detail of

disclosure vary significantly. For example, a firm is not required to report when it first started to restructure its debt, or that it has been in discussion with creditors concerning a possible default. A firm might disclose that it has restructured its 'subordinated debt', without specifying how particular claims in this category have been restructured. A default may go unreported if the firm does not file its 10k report; filing omissions by financially distressed firms are fairly common [Gilson (1990)]. As well, firms and creditors exhibit a penchant for secrecy in these transactions. For example, the debt restructuring of Tiger International Inc. (included in the appendix) began when the *WSJ* reported that the firm unilaterally suspended payments on about half of its $1.8 billion in debt:

> Tiger said that a total of $350 million in interest and principal on its bank and institutional debt is scheduled for payment in 1983. But the company wouldn't disclose how much of the $350 million would be affected by its decision to 'temporarily defer' debt service on $900 million of its total debt. Tiger also wouldn't disclose when specific payments were due on any of the $350 million. Asked for elaboration... a company spokeswoman said she didn't know whether the company had missed a deadline for any payments on the $900 million in debt.... Tiger's lenders, whom the company declined to identify, were informed of the decision at yesterday's meeting.
>
> (*WSJ*, 15 February 1983, 5)

Fifty-three firms (66.3 percent of the sample) were in default before successfully restructuring their debt. Since 29 of these restructurings begin with a default (see table 2), 24 firms did not default until after entering negotiations with creditors to restructure their debt. In 51 firms (64 percent of the sample), no default occurred, or occurred after the debt restructuring began. Thus, firms often begin restructuring their debt before any actual default (or without any default occurring).

Explicit stockholder approval was required for only 18.8 percent of all restructuring plans that were adopted (panel B). In most of these cases, approval was required to issue common stock under the plan, either as a requirement imposed by the firm's stock exchange, or because it was necessary to increase the number of authorized shares. For the remaining 81.2 percent of all cases where such approval was not obtained, the possibility exists that adoption of these plans was not always in the best interests of stockholders. Where managers have the authority to accept or reject a restructuring plan, there is no assurance that they will make the decision that maximizes stockholders' wealth. Gilson (1989, 1990) finds that turnover of senior managers and directors is lower when firms restructure their debt outside of Chapter 11. Thus, managers could have incentives to settle with

Table 4

Summary of restructuring terms for 80 successful corporate debt restructurings undertaken between 1978 and 1987, by general class of debt restructured (bank, publicly traded, and other debt).[a]

Restructuring terms	Percentage of debt within a given class restructured on specified terms			Percentage of firms that restructure any debt on specified terms
	Bank	Public	Other	
Extension of maturity	48.6	6.7	25.0	48.8
Reduction of interest or principal	54.2	56.7	75.0	72.5
Distribution of equity securities	51.4	86.7	75.0	73.8
Percentage of firms that restructure debt in a given class	90.0	37.5	20.0	

[a]*Extension of maturity* includes deferral of promised interest or principal payments. *Reduction of interest or principal* includes foregiveness of overdue or future promised payments, in addition to reductions in the stated rate of interest. *Distribution of equity securities* includes distributions of common or preferred stock, as well as securities that can be converted into either class of stock (e.g., warrants and convertible bonds); also included are provisions in the debt contract that give firms the option to make payments either in cash or in equity securities. *Bank debt* includes debt owed to commercial banks and insurance companies. *Other debt* includes debt owed to suppliers, trade creditors, and other nonbank companies.

creditors on overly generous terms to secure their consent to a plan, even though stockholders would be better off in bankruptcy. Stock-return evidence presented below, however, suggests that the market on average reacts positively to events that increase the probability of successful private renegotiation and negatively to events that increase the probability of bankruptcy. This suggests that potential agency conflicts between managers and stockholders are not a deciding factor in whether firms privately restructure or file for Chapter 11.

Finally, firms that restructure their debt privately sometimes restructure only a subset of their outstanding debt contracts (panel C). Only 90.0 percent of firms in the sample with bank debt outstanding, and 69.8 percent of firms with publicly traded debt, actually restructure such debt. In contrast, Chapter 11 cases necessarily require participation by all impaired claimholder classes, which in practical terms generally means all of the firm's outstanding claims. This suggests that private renegotiation may be less costly than Chapter 11 if the firm is able to recontract only with those creditors whose claims are in default, thus conserving on transactions costs.

Table 4 summarizes the principal terms on which firms in the sample restructure their debt, based on the three criteria used to define a debt

restructuring (that is, there must either be a reduction in interest or principal payments, an extension of the debt's maturity, or a distribution of equity securities to creditors). Since firms do not always disclose the exact terms on which debt is restructured, figures in the table represent lower bounds on the frequency with which these terms are actually incorporated in restructuring plans.

New equity securities are distributed to creditors in almost 74 percent of all successful restructurings. A similar percentage of restructurings results in a reduction in promised payments on the debt. The least common provision in these agreements is an extension of maturity. Different classes of debt also appear to be restructured on substantially different terms. Approximately 49 percent of bank debt restructurings provide for an extension of maturity, compared with only 6.7 percent of restructurings of publicly traded debt; this latter result is consistent with firms offering shorter-maturity debt in exchange offers to discourage holdouts (see section 2.2.2). Although 51.4 percent of bank debt restructurings result in bank lenders receiving equity in the firm, holders of publicly traded debt are given equity securities 86.7 percent of the time. The latter difference is a likely consequence of various legal and regulatory factors that make it prohibitively costly for banks to hold large amounts of equity in publicly traded companies.

In particular, banks are constrained from holding significant blocks of stock in other firms by section 16 of the Glass-Steagall Act, the Bank Holding Company Act and the Federal Reserve Board's Regulation Y, although temporary exceptions are granted when stock is obtained in a debt restructuring. In general, banks must divest their stockholdings after approximately two years, although extensions are possible. Second, creditors can be held legally liable to other claimholders if the firm's financial condition deteriorates subsequent to their assuming a controlling interest in the firm and exercising 'undue influence' over its business [Douglas-Hamilton (1975), Smith and Warner (1979)]. A given percentage equity ownership in a firm might, for purposes of proving legal liability, be assumed to confer greater control on a small group of bank lenders than a dispersed group of public bondholders. Finally, a controlling shareholding in a firm could be construed as an 'insider relationship', thus obliging banks to return any monetary consideration received from the firm as a 'preference item' if it later files for bankruptcy. Banks may prefer to receive relatively less equity in a debt restructuring if they assess a high probability that the firm will subsequently become bankrupt.

The preceding simple classification of restructuring terms provides a general overview of how these deals are structured. Given the complexity and idiosyncratic nature of these transactions, some useful insights can also be gained by direct examination of individual cases. The appendix presents detailed case descriptions of ten debt restructurings in the sample. The cases are intended to be a representative cross-section of various restructuring plan

types and outcomes. These case descriptions provide evidence that complements evidence presented in the next section, where we attempt to identify factors conducive to restructuring debt outside of Chapter 11.

Table 5 contrasts selected characteristics of firms by whether or not they successfully restructure their debt outside of Chapter 11. Firms that privately restructure their debt have a higher market value/replacement cost ratio and have relatively more bank debt than firms in Chapter 11. The means and medians of both variables are significantly different between subsamples at the 1 percent level of significance. Both differences are consistent with the theory developed in section 2. Firms with a higher market value/replacement cost ratio are hypothesized to find bankruptcy more costly than private renegotiation, and to be less prone to holdouts by junior creditors. Firms with more bank debt outstanding can more easily renegotiate their debt because banks are more sophisticated and less numerous than other kinds of creditors, resulting in fewer holdouts.

The mean number of debt contracts (approximated by the number of entries in the long-term debt section of *Moody's*) is marginally higher for firms that restructure their debt privately, but the difference is not statistically significant, and the medians are identical. Alternatively, we define the standardized number of debt contracts as the number of contracts divided by the book value of total liabilities. This variable is significantly lower for firms that restructure successfully; mean and median differences (not shown) are significant at the 2 percent and 7 percent levels, respectively. The standardized number of debt contracts, or the number of creditors per dollar of debt, is arguably a better proxy for creditors' incentives to hold out. Anecdotal evidence suggests that holdouts are relatively more common among smaller creditors, possibly because they have less wealth at risk if the restructuring attempt fails.

Firms that restructure their debt privately are also generally larger, as measured by the book value of assets and the number of shareholders and employees. Both mean and median book values of assets are higher for firms that restructure successfully, although only the difference in medians is statistically significant using a Wilcoxon rank-sum test (p-value of 0.02). Firm size may be a proxy for the number of creditors or the complexity of the firm's capital structure; the simple correlation between the book value of assets and the (nonstandardized) number of debt contracts is positive and significant (0.72, with a p-value of 0.00).

The two groups of firms are fairly similar in overall leverage (measured by the ratio of total liabilities or long-term debt to total assets), and mean stock-price performance (measured over the current and preceding two years). On the other hand, median unadjusted and net-of-market returns are significantly higher for the firms that restructure privately, according to a Wilcoxon rank-sum test for differences in medians (p-values of 0.04 and 0.05,

Table 5

Selected firm and debt characteristics for 80 firms that successfully restructure their debt out of court, and 89 firms that are unsuccessful in restructuring their debt and file under Chapter 11 of the U.S. Bankruptcy Code. Beginning dates for attempted debt restructurings all take place between 1978 and 1987.[a]

Characteristic	80 successful restructurings				89 unsuccessful restructurings				*p*-value of *t*-test (Wilcoxon rank sum test) for difference in:	
	Mean	Median	Min.	Max.	Mean	Median	Min.	Max.	Mean	Median
Market value/replacement cost ratio	0.83	0.65	0.23	2.92	0.61	0.56	0.20	1.75	0.01	0.01
Debt ÷ total liabilities (book values)										
(i) Bank debt	0.40	0.36	0.00	0.88	0.25	0.20	0.00	0.83	0.00	0.00
(ii) Public debt	0.13	0.02	0.00	0.66	0.08	0.00	0.00	0.61	0.08	0.08
(iii) Secured debt	0.14	0.00	0.00	0.82	0.12	0.00	0.00	0.70	0.51	0.91
(iv) Convertible debt	0.07	0.00	0.00	0.68	0.06	0.00	0.00	0.77	0.67	0.65
Number of debt contracts outstanding	7.0	5.0	1.0	28.0	6.0	5.0	1.0	31.0	0.22	0.18
Book value of total assets ($millions)	633	101	9	10,209	317	49	6	9,383	0.15	0.02
Number of shareholders (1,000s)	14	4	1	207	5	3	1	34	0.04	0.08
Number of employees (1,000s)	5	1	0	76	3	2	0	32	0.26	0.88
Total liabilities ÷ book value of assets	0.94	0.83	0.43	4.92	1.01	0.86	0.39	10.00	0.65	0.99
Long-term debt ÷ book value of assets	0.64	0.55	0.00	4.23	0.58	0.45	0.00	8.70	0.63	0.02
Prior 3-year common stock return (%)										
(i) Unadjusted	−36.4	−50.3	−93.3	360.0	−48.6	−60.7	−98.0	179.3	0.17	0.04
(ii) Less market return	−134.0	−142.0	−230.4	273.8	−147.7	−160.4	−249.9	62.0	0.15	0.05
Length of debt restructuring attempt (months)	15.4	11.0	1.0	72.0	8.1	3.0	1.0	42.0	0.00	0.00
Length of bankruptcy proceedings after unsuccessful restructuring attempt (months)	—	—	—	—	20.4	18.0	3.0	43.0	—	—

[a]See table 1 for a definition of debt restructuring and bankruptcy. When applicable, figures are those that most closely predate the beginning of firms' debt restructuring or bankruptcy. Figures defined in terms of firms' assets and liabilities are all based on reported book values in the *Moody's* manuals. *Bank debt* includes outstanding liabilities to both commercial banks and insurance companies. The *market value/replacement cost ratio* equals the three-year average ratio of the market value of assets to their replacement value. The *number of debt contracts* equals the number of separate descriptive headings in the long-term debt section of the *Moody's* manuals. The *market return* is the equally weighted market portfolio return in the CRSP daily returns file.

respectively). A comparison of medians is probably more appropriate given the extreme nonnormality of the sample (drawn from the left-hand tail of unconditional returns distribution). One explanation for this difference is that superior performance is associated with a smaller reduction in going-concern value, resulting in a higher market value/replacement cost ratio and increased incentives to renegotiate debt privately. Consistent with this posited relationship, the correlation between prior unadjusted stock returns and the market value/replacement cost ratio is positive and significant (0.19, with a p-value of 0.04).

Finally, firms that restructure their debt privately require an average of 15.4 months, and a median of 11 months, to complete the restructuring. Restructuring of publicly traded debt is completed in a much shorter time than restructuring of nontraded debt. The 30 exchange offers in the present sample take an average of 6.6 months to complete (not shown), compared with 15.9 months for all other debt; corresponding median times are 2 and 10.5 months. Differences in both means and medians are statistically significant using a t-test and Wilcoxon rank sum test (p-values of less than 0.01).

Firms that file for Chapter 11 spend an average of 8.1 (median of 3) months attempting to restructure their debt before seeking bankruptcy protection, and an average of 20.4 (median of 18) additional months in Chapter 11. In the present sample, Chapter 11 cases take significantly longer to complete than successful debt restructurings; differences in the mean and median number of months elapsed under each alternative are significantly different from zero (p-values of less than 0.01).

4.2. Direct measurement of debt-restructuring costs

We argued in section 2 that relative restructuring costs are an important determinant of whether firms restructure their debt privately or in Chapter 11. Because firms are generally not required to disclose the total costs incurred in a private workout, explicit measurement of these costs is generally not possible. Only four firms in the present sample reported debt-restructuring expenses in their 10k reports (and only for restructuring of publicly traded debt). Data on bankruptcy costs are available only at considerable expense, by direct examination of court records [Weiss (1990)].

It is possible, however, to estimate the direct costs of exchange offers for publicly traded debt. Firms must provide an estimate of offer-related costs in the exchange offer circular distributed to bondholders. We obtained the circulars for 26 of the 32 exchange offers in the sample (including two made by firms that ultimately went bankrupt). For 18 of these offers, the circular provided an estimate of out-of-pocket costs (including payments made to the exchange and information agent, and related legal, accounting, brokerage, and investment banking fees). Firms were omitted when only a subset of the

Table 6

Direct costs of troubled exchange offers for publicly traded debt. Sample consists of 18 exchange offers undertaken between 1981 and 1988. Costs consist of compensation paid to the exchange and information agent, and all legal, accounting, brokerage, and investment banking fees incurred by the firm in connection with the offer.[a]

	Mean	Median	Min.	Max.
Exchange offer costs ($1,000s)	799	424	200	2,500
Offer costs as a percentage of the book value of assets	0.65	0.32	0.01	3.40
Offer costs as a percentage of the face value of bonds restructured under offer	2.16	2.29	0.27	6.84

[a]These 18 exchange offers represent all offers in the sample for which an estimate of total offer-related costs was disclosed in either the exchange offer circular of the firm's 10k report. Such documentation was obtained for 26 of the 32 exchange offers in the entire sample (two of which were undertaken by firms that ultimately filed for bankruptcy). The book value of assets and the face amount of debt are the figures that most closely predate the commencement of the offer.

offer's total costs were presented, to avoid biasing the cost estimates downward (several circulars reported only that certain costs would be of some 'customary' amount; another circular contained only blank spaces where offer costs were to have been reported). Firms were also omitted if the investment bank that served as financial advisor to the offer was paid in warrants or common stock, unless a dollar estimate of the value of this payment was provided in the circular.

In economic terms, exchange-offer costs appear to be trivial (table 6). Mean and median exchange-offer costs as a percentage of the book value of assets prior to the offer are only 0.65 and 0.32 percent, respectively. In relation to the face amount of the debt involved in the exchange offer, the corresponding figures are 2.16 and 2.29 percent. These estimates do not include any indirect costs of exchange offers or the costs of restructuring nonpublic debt.

There is evidence that direct bankruptcy costs are also relatively small. Warner (1977b) reports that direct costs for a sample of 11 railroad bankruptcies from the period 1933–1955 represent, on average, 5.3 percent of firms' market value at the time of the bankruptcy filing. Ang et al. (1982) investigate a sample of 86 firms that filed for bankruptcy (and eventually liquidated) in the Western District of Oklahoma between 1963 and 1979. They report mean and median direct costs (as a percentage of total liquidation proceeds) of 7.5 and 1.7 percent, respectively. Weiss (1990) analyzes a sample of 37 New York- and American Stock Exchange-listed firms that filed for bankruptcy between 1980 and 1986, and finds that average direct costs are, on average, 2.9 percent of the book value of assets prior to filing.

Direct costs of exchange offers in our sample also exhibit economies of scale. Average offer costs decline with both the book value of assets and the face value of debt involved in the offer. The correlation between average costs and the book value of assets (not shown) is -0.42 (p-value of 0.08); the correlation between average costs and the face value of debt is -0.57 (p-value of 0.01). A statistically significant negative relation is also found when average costs are regressed against each deflator in ordinary least-squares regressions. Economies of scale have previously been documented for direct bankruptcy costs [Warner (1977b), Ang et al. (1982)].

4.3. Prediction of successful private renegotiation

This section presents a logit regression analysis that relates the probability of successful private renegotiation to our empirical proxies for relative bankruptcy costs and the magnitude of the potential holdout problem. The dependent variable equals 1 if a firm successfully restructures its debt without entering Chapter 11, and equals 0 if the restructuring attempt fails and the firm files for bankruptcy. Thus, a positive coefficient on an independent variable in the regressions implies that firms for which this variable takes on a higher value are more likely to settle with creditors privately. Our explanatory variables are the firm's market/replacement cost ratio, the bank-debt ratio, and the standardized number of debt contracts outstanding (scaled by the book value of total liabilities).

Four estimated specifications of the model are shown in table 7; in the first, all three explanatory variables are included, and in the remaining three, the variables are included separately. In general, all three variables have significant explanatory power, and are consistent with the univariate comparisons made in table 5. The estimated coefficient on the market value/replacement cost ratio is positive and highly significant in both the combined and univariate regressions (both coefficients have p-values of 0.01). The positive coefficient has two non-mutually-exclusive interpretations, since this ratio is a proxy for both relative recontracting costs and the magnitude of junior creditors' losses if the firm files for Chapter 11 (greater expected losses will increase creditors' willingness to settle privately). The logit regression tests do not allow us to distinguish between these two hypotheses.

The estimated coefficient on the bank debt ratio is positive and significant in both of the regressions in which it appears, although it is somewhat more significant when included separately (with a p-value of 0.00, versus 0.05 for the combined regression). The standardized number of debt contracts is negatively related to the probability of successful private renegotiation, although the estimated coefficient is only marginally significant when included in the combined regression (p-value of 0.12). When this variable appears alone, the estimated coefficient is negative and significant (p-value

Table 7

Logit regressions relating firm characteristics to outcome of debt restructuring. Sample consists of 80 firms that successfully avoided bankruptcy by restructuring their debt out of court, and 89 firms that were forced to seek protection under Chapter 11 of the U.S. Bankruptcy Code. All transactions take place between 1978 and 1987. The dependent variable equals 1 if a firm successfully restructures its debt out of court, and equals 0 if the restructuring attempt fails and the firm files for bankruptcy. Asymptotic p-values are shown in parentheses.[a]

Independent variables	(1)	(2)	(3)	(4)
Intercept	−1.40[b] (0.01)	−1.16[b] (0.01)	−0.82[b] (0.00)	0.21 (0.33)
Market value/replacement cost ratio	1.51[b] (0.01)	1.49[b] (0.01)	—	—
Bank-debt ratio	1.59[c] (0.05)	—	2.20[b] (0.00)	—
Number of debt contracts outstanding	−2.60 (0.12)	—	—	−2.91[c] (0.03)
Sample size	112	119	159	157
Model p-value	0.0012	0.0030	0.0005	0.0163
Pseudo R-square	0.051	0.026	0.026	0.013

[a]See table 1 for a definition of debt restructuring and bankruptcy. Explanatory variables predate as closely as possible the start of each firm's debt restructuring or bankruptcy. The *market value/replacement cost ratio* equals the three-year average ratio of the market value of assets to their replacement value. The *bank-debt ratio* equals the book value of debt owed to banks and insurance companies, divided by the book value of total liabilities. The *number of debt contracts outstanding* equals the number of distinct descriptive headings under the long-term debt section of the *Moody's* manuals, divided by the book value of total liabilities; to facilitate reporting in the table, the estimated coefficient on this variable is divided by 1,000.

[b]p-value ≤ 0.01.

[c]p-value ≤ 0.05.

of 0.03). These results suggest that creditor holdouts are less common when relatively more debt is owed to banks, and there are fewer creditors.

The results in table 7 hold with the addition of alternative explanatory variables. Earlier, we hypothesized that private renegotiation is less likely to succeed when relatively more debt is owed to trade creditors, because it is more difficult to obtain their unanimous consent to a restructuring plan. In addition, firms that are more reliant on trade credit may view Chapter 11 more favorably, because the Code's superpriority provision makes it easier to raise new working capital. As a proxy for the importance of trade credit, we use the ratio of accounts payable to total liabilities observed before restructuring activity begins. The trade-debt ratio is negatively correlated with the bank-debt ratio (not shown), and positively correlated with the standardized number of debt contracts (correlations are −0.29 and 0.31, respectively, with p-values of 0.00). It is insignificant in the regressions, however, whether included alone or in combination with other variables.

Although the estimated coefficients are consistent with the hypotheses developed in section 2, the overall explanatory power of the regressions is small. 'Pseudo' R-squares [Madalla (1983)] calculated for each regression indicate that the logit regressions explain no more than about 5 percent of the total variation in the dependent variable, although model p-values are generally less than 1 percent. The lack of overall power may be due to the relatively small sample size and the use of cross-sectional data. In addition, a number of other economic factors that may be critical to the success of private renegotiation are either unsystematic or impossible to quantify (e.g., the relative bargaining abilities and personalities of the parties involved). This last consideration underlies the analysis of stock returns in the next section.

A final concern is that the logit results may be subject to two possible biases. First, our empirical tests assume that private renegotiation is less costly than bankruptcy. Although we do not presume this to be true for all firms, general support for this assumption is found in anecdotal accounts of the bankruptcy process [Stein (1989)] and in stock-return evidence presented in the next section. In addition, a bankruptcy filing represents the first public announcement of financial distress for only 27 firms in the sample (see table 2); for 14 of these firms the *WSJ* report of the filing refers to a previous failed restructuring attempt. Thus 92 percent of firms in the sample first attempted to settle privately with creditors. It can be shown that creditors and stockholders will never attempt to settle privately if bankruptcy is less costly (assuming full participation by all creditors).

A second possible source of bias is the use of a nonrandom sample to estimate the logit regressions. The coefficient estimates in table 7 will be biased if the relative frequency of private restructuring and Chapter 11 in the sample differs from the population frequency [Manski and McFadden (1983)]. Since firms are sampled on extreme negative stock returns, these relative frequencies could differ if the probability of successful private renegotiation depends on prior stock-price performance. Prior stock returns are insignificant when added to the regressions, however, and the remaining coefficient estimates are qualitatively unchanged.

4.4. Evidence from stock returns

Ideally, claimholders' incentives to choose between private renegotiation and bankruptcy could be assessed directly by comparing the value of the securities distributed under each alternative to various claimholder classes (secured lenders, public bondholders, etc.). Although such direct comparisons are precluded by a lack of relevant price data, analysis of common stock

returns provides some insights into what determines claimholders' incentives to settle privately.

Given evidence in the last section that certain firm characteristics can be used to predict whether attempted private renegotiation will be successful, we are interested in knowing whether the stock market also forms such a prediction. By examining abnormal stock returns around the initial announcement of a restructuring attempt, one can assess whether the market uses similar information to predict the likelihood of successful private renegotiation.

To investigate this possibility, we perform two related analyses of stock returns. First, we partition the sample by whether or not firms are ultimately successful in privately restructuring their debt. If the market is correct on average in predicting this outcome, we should observe a different stock-price reaction for the two subsamples. This approach imposes no prior constraints on the information set that the market uses in making its forecast. The same approach is used by Bradley et al. (1983) in analyzing target companies' stock-price performance following a failed tender offer. Second, we use cross-sectional regression analysis to relate announcement-day returns to variables that were used in the logit analysis to predict the success of private renegotiation. This approach implicitly constrains the market's information set to contain only some subset of these variables.

By analyzing cumulative stock returns over the entire restructuring interval, it is also possible to make certain inferences about relative recontracting costs. Positive cumulative abnormal returns for successful restructurings are consistent with the hypothesis that fewer total costs are incurred (firm value is higher) under private renegotiation than bankruptcy. This allows us to contrast the costs of private renegotiation and bankruptcy without having to measure these costs directly. Baldwin and Mason (1983) undertake a similar analysis of the debt restructuring of Massey Ferguson (included in the current sample).

Stock returns observed around the outcome announcement will contain more information about relative recontracting costs when more of the firm's debt is restructured under the plan. If the unanimous consent of all creditors is required, abnormal returns at the announcement of a successful restructuring must reflect total savings in recontracting costs from avoiding bankruptcy. Given that all creditors (and stockholders) consent to the plan, the wealth of each claimholder, and thus the value of the firm, will be higher under private renegotiation than bankruptcy.

If only a subset of the firm's debt is restructured, adoption of a restructuring plan could in principle reduce the wealth of nonparticipating creditors (by granting participating creditors increased seniority interests, for example). The size of these wealth transfers will be limited, however, by the right of

nonparticipating creditors to sue the firm (and other creditors), covenants that restrict the issuance of more senior debt, and cross-default provisions that restrict the firm's ability to exclude certain creditors from participation in the plan.

Abnormal common stock returns around the initial announcement of a restructuring attempt are reported in table 8. We exclude the 27 bankrupt firms in the sample (see table 2) for which the Chapter 11 filing was the first public announcement of financial distress, since it is not known for these firms when (or whether) private renegotiation was attempted before the bankruptcy filing. Reported returns are two-day mean market-model residuals, estimated using Center for Research in Security Prices (CRSP) daily returns for the period 250 days to 50 days prior to the announcement date, and the equally weighted market return. Since infrequent trading is an especially common problem for measuring stock returns of financially distressed firms, abnormal returns are based on Scholes–Williams estimates of the market-model parameters [Scholes and Williams (1977)].

Separate results are presented for the total sample, and for a subsample of 90 restructuring attempts (including 38 successful and 52 failed restructurings) where the initial public announcement contains a reference to either a default or what appears to be the actual commencement of negotiations with lenders. Announcements in the latter sample may contain relatively more surprise, and therefore provide a more powerful test of the market's ability to discriminate between firms that ultimately either succeed or fail to restructure their debt privately.

For the total sample, two-day average returns associated with the initial announcement of a debt restructuring equal -1.6 percent for firms that successfully restructure their debt, and -6.3 percent for firms whose restructuring attempt ultimately fails. These returns are significantly different at the 5 percent level (t-statistic of 2.50). Corresponding returns estimated for the sample of 'surprise' announcements are -3.0 and -8.7 percent, and are significantly different at the 10 percent level (t-statistic of 1.90). Although less significant results are obtained for the 'surprise' sample (which may be attributable to the smaller sample size), both sets of results are consistent with the market being able to distinguish in advance which firms are more likely to be successful at restructuring their debt privately. As pointed out above, these results do not allow us to identify what specific information the market uses in forming its prediction.

Table 8 also reports two-day abnormal returns for the announcement of the outcome of a debt restructuring. For unsuccessful attempts to restructure, this is the announcement of a firm's Chapter 11 filing. For successful restructurings, abnormal returns around the outcome announcement are insignificantly different from zero, for both samples. For unsuccessful restructurings, abnormal returns are significantly negative around the announce-

Table 8

Two-day average returns associated with the initial announcement of a private debt restructuring, and of the first announcement of the restructuring's resolution. Figures are based on a sample of 80 firms that successfully restructured their debt to avoid bankruptcy, and 89 firms that were ultimately unsuccessful in restructuring their debt and filed under Chapter 11 of the U.S. Bankrutpcy Code. Announcement dates are determined from the *Wall Street Journal*. All announcements take place between 1978 and 1988. In panel B, results are based on a subsample of 90 debt restructurings (47 successful and 43 unsuccessful) that begin with the announcement of a default or for which the actual commencement date of the restructuring is known. *t*-statistics are given in parentheses.[a]

Announcement type	(1) Successful debt restructuring	(2) Unsuccessful debt restructuring	*t*-statistic of (2) minus (1)
	Panel A: Total sample		
(A) Initiation of debt restructuring	−0.016 (1.53)	−0.063 (4.03)[b]	(2.50)[c]
Sample size	68	57	
(B) Resolution of debt restructuring	0.007 (0.63)	−0.167 (6.68)[b]	(6.37)[b]
Sample size	66	38	
t-statistic of (A) minus (B)	(1.51)	(3.53)[b]	
	Panel B: Restructurings that begin with a default or for which actual commencement date is known		
(A) Initiation of debt restructuring	−0.030 (1.94)[d]	−0.087 (3.39)[b]	(1.90)[d]
Sample size	37	31	
(B) Resolution of debt restructuring	−0.009 (0.70)	−0.166 (5.98)[b]	(5.16)[b]
Sample size	34	19	
t-statistic of (A) minus (B)	(1.07)	(2.09)[c]	

[a]See table 1 for a definition of debt restructuring and bankruptcy. The two-day average return is an average of daily returns realized on the *Wall Street Journal* announcement day and the preceding day. Stock returns are obtained from the 1988 CRSP daily returns file.
[b]p-value ≤ 0.01.
[c]p-value ≤ 0.05.
[d]p-value ≤ 0.10.

ment of the Chapter 11 filing, again for both samples (respective abnormal returns are −16.7 and −16.6 percent, with corresponding *t*-statistics of 6.68 and 5.98).

When these results are combined with the initial-announcement returns, it appears that stockholders do better over the entire restructuring interval when their firms ultimately settle with creditors out of court. This impression

Table 9

Average cumulative returns for successful and unsuccessful debt restructurings. Returns are measured from one day before the commencement of restructuring to day on which success of restructuring attempt is determined. Figures are based on a sample of 80 firms that successfully restructured their debt to avoid bankruptcy, and 89 firms that were ultimately unsuccessful in restructuring their debt and filed under Chapter 11 of the U.S. Bankruptcy Code. Announcement dates are determined from the *Wall Street Journal*. All announcements take place between 1978 and 1988. In panel B, results are based on a subsample of 90 debt restructurings (47 successful and 43 unsuccessful) that begin with the announcement of a default or for which the actual commencement date of the restructuring is known. *t*-statistics are given in parentheses.[a]

Outcome of debt restructuring	Average cumulative return
Panel A: Total sample	
(A) Successful	0.414
	(2.71)[c]
Sample size	69
(B) Unsuccessful	−0.399
	(3.28)[b]
Sample size	55
t-statistic of (A) minus (B)	(4.17)[b]
Panel B: Restructurings that begin with a default or for which actual commencement date is known	
(A) Successful	0.713
	(3.21)[b]
Sample size	38
(B) Unsuccessful	−0.361
	(2.19)[c]
Sample size	30
t-statistic of (A) minus (B)	(3.88)[b]

[a]See table 1 for a definition of debt restructuring and bankruptcy. Stock return data are obtained from the 1988 CRSP daily returns file.
[b]*p*-value ≤ 0.01.
[c]*p*-value ≤ 0.05.

is confirmed in table 9, which reports average cumulative abnormal returns for the entire restructuring interval. For the total sample, stockholders of firms that successfully restructured realized average abnormal returns of 41.4 percent over the restructuring interval, whereas stockholders of ultimately bankrupt firms realized abnormal returns of −39.9 percent. Corresponding returns for the 'surprise' subsample are 71.3 and −36.1 percent. For both panels, differences in returns are significant at the 5 percent level. These results are not driven by outliers. Seventy-two percent of cumulative returns are negative for firms that ultimately file for Chapter 11, and 58 percent are positive for firms that successfully restructure. The percentage of negative

returns is significantly different between the two subsamples at the 5 percent level.

These results suggest that, for whatever reason, stockholders on average fare less well in bankruptcy than in private renegotiation, and thus have incentives to settle with creditors privately. Consistent with this possibility, stockholders seldom exercise their option to file for Chapter 11 without first attempting to restructure the firm's debt privately (see table 2). An alternative interpretation, however, is that firms that file for bankruptcy experience unexpectedly worse operating performance than firms that ultimately restructure their debt privately. Thus larger stock-price declines for bankrupt firms may not be due to the recontracting process itself, but instead reflect a selection bias resulting from the fact that bankrupt firms are inherently less profitable (subsequent to the bankruptcy filing).

Finally, attempts to relate abnormal stock returns to the explanatory variables used in the logit regressions yielded insignificant results. Cross-sectional regressions of abnormal returns against various combinations of these variables generally produced adjusted R-squares of less than 5 percent, and individual coefficient estimates were almost always insignificant. The insignificant results cannot be attributed to multicollinearity or heteroskedasticity of the error terms. The low explanatory power of these regressions is consistent with the market's using more information to forecast the outcome of private renegotiation than is captured by the explanatory variables.

5. Conclusion

In this study we investigate how financially distressed firms restructure their debt. For a sample of 169 distressed companies, we investigate firms' economic incentives to choose between private renegotiation and formal bankruptcy as alternative mechanisms for dealing with default. In about half of all cases, financially distressed firms successfully restructure their debt outside of Chapter 11. Financial distress is more likely to be resolved through private renegotiation when more of the firm's assets are intangible, and relatively more debt is owed to banks; private renegotiation is less likely to succeed when there are more distinct classes of debt outstanding. Analysis of stock returns suggests that the market is also able to identify in advance which firms are more likely to succeed in restructuring their debt privately. Cumulative stock returns are significantly higher when debt is restructured privately; thus on average stockholders have incentives to avoid bankruptcy and settle out of court.

One implication of our results is that troubled companies are likely to find informal alternatives to bankruptcy increasingly attractive in dealing with financial distress. As recently argued by Jensen (1989a, b), companies that have relatively more debt outstanding will default sooner if they are being

mismanaged. This has the virtue of forcing management to undertake corrective changes in corporate policy sooner, thus preserving more of the firm's going-concern value. Consistent with this, the present study finds that insolvent firms with relatively high going-concern value are more likely to restructure their debt privately, because more of this value tends to be lost for a variety of reasons (including through asset sales) when debt and the firm's operations are reorganized in Chapter 11. Thus, future defaults by the current generation of highly levered companies may be increasingly resolved through private renegotiation.

Our results also have important implications for interpreting recent evidence that shows an increase in the default rate of high-yield publicly traded bonds [Altman (1989), Asquith et al. (1989)]. We present evidence that restructuring of publicly traded debt almost always takes the form of an exchange offer, and is generally completed within two months. The out-of-pocket costs incurred in connection with these offers are economically insignificant (amounting on average to less than 1 percent of the firm's book value of assets). It remains an unanswered empirical question whether other default-related costs are sufficiently high to warrant continued concern over the recent rise in defaults.

Appendix

Case studies of attempts by ten firms to restructure their debt privately to avoid bankruptcy

This appendix presents brief case studies describing the experience of ten firms that attempted to restructure their debt privately to avoid bankruptcy. Each case study describes major events relating to the restructuring, general terms (either proposed or adopted) for restructuring the firm's debt, and other relevant information. The cases are based on information contained in published reports in the *Wall Street Journal* and disclosed in firms' 10k reports, shareholder proxy statements, and exchange-offer prospectuses. The ten firms examined here represent a cross-section of various possible restructuring plan types and outcomes. At the beginning of each case we classify the debt restructuring according to the principal types of debt involved, and whether the restructuring attempt was successful (i.e., whether the firm avoided having to file for Chapter 11). In addition, for each case we report (i) the period over which the restructuring took place (as defined in section 3 of the text), (ii) the Scholes–Williams cumulative abnormal common stock return over the restructuring interval (labeled *car*), and (iii) the firm's common stock price at the beginning and end of the restructuring, or the most recent prices reported inside the restructuring interval (labelled *p0* and *p1*, respectively). Stock prices are obtained from Standard and Poor's *Daily*

Stock Price Record. Reported time intervals are all rounded to the nearest month. 'n.a.' means that cumulative abnormal returns could not be calculated because there were insufficient stock returns available as a result of nontrading.

Brock Hotel Corporation Classification: *Successful restructuring of bank and publicly traded debt, accompanied by stock placement with financial advisor to restructuring and common stock rights offering (6/28/85–6/26/86; car* = n.a.; *p0* = $2\frac{7}{8}$, *p1* = $\frac{2}{8}$).

The company made an exchange offer to holders of its eight publicly traded debenture issues, offering a package of common stock and new debentures (having a lower coupon rate, payable in cash or common stock). Although 86 percent of the debentures were tendered under the offer, it was decided that the offer would not be sufficient to resolve the company's financial problems. As a result, the company implemented a comprehensive plan to restructure all of its long-term debt. Under the plan, all of the new debentures issued under the previous exchange offer were converted into various amounts of common and preferred stock, common stock options, and cash. In addition, the company acquired the bank debt and capitalized lease obligations of its operating subsidiaries (using a combination of cash, warrants, and common stock options), and exchanged new debentures for all of the preferred stock of a partly owned subsidiary. Various other debt was also restructured, including liabilities arising from canceled operating leases and company guarantees, and the lease agreement on the company's headquarters building. A critical feature of the plan was a rights offering of 266 million common shares to current stockholders (only about 13 million shares were outstanding before the offering). Following a vote of the common stockholders, the plan was adopted one year from the announcement of the initial exchange offer. A major role in the restructuring was played by The Hallwood Group Inc., which the company engaged as a financial advisor to the restructuring. In addition to managing the rights offering, Hallwood obtained secured lenders' consent to the plan by agreeing to guarantee the minimum proceeds that would be realized from selling various assets under the plan. In return for providing these and other services, Hallwood received the right to elect a majority of the company's board of directors (including its chairman), and was issued 14 percent of the company's common stock.

Crawford Energy Inc. Classification: *Unsuccessful restructuring of bank and trade debt (10/20/83–9/30/85; car* = −63.3%; *p0* = $3\frac{1}{8}$, *p1* = $\frac{2}{8}$).

Following eight months of negotiations, the company eliminated most of its $10 million in trade debt by offering new common stock to its 44 trade creditors in a negotiated exchange offer. In return for canceling almost half of the debt, trade creditors received 21 percent of the company's common stock. Also participating in the plan was A. Gail Crawford, the company's founder, chairman, and CEO. Mr Crawford, who before the offer held 79 percent of the company's stock, was issued new stock representing 33 percent of the total shares outstanding after the offer, in return for his personally assuming the remainder of the debt. Four months later, the company announced an agreement in principle with its two banks to restructure its bank loans. Although payment on these loans was four months overdue, neither bank had yet formally declared the company in default. This agreement, which provided for an extension of the loans' due date, was in default eight months later. The banks then agreed to fund the company on a monthly basis while it sought to sell off assets or obtain an infusion of outside equity. Four months after that, the company filed for Chapter 11.

Crystal Oil Company Classification: *Unsuccessful restructuring of bank, trade, and publicly traded debt (6/11/85–10/1/86; car* = n.a.; *p0* = 2, *p1* = $\frac{3}{8}$).

The company entered into an agreement with a major supplier to extend payment on its trade debt, in return for issuing the supplier a secured note. As disclosed in the company's 10k report,

it was also in technical default on a secured mortgage note held by a bank, although details concerning how (or whether) the default was resolved were not reported. At the same time, the company undertook an exchange offer for its six publicly traded debenture issues, offering a package of common stock and new secured notes (having a higher coupon rate, payable in either cash or common stock). The old debentures represented approximately 80 percent of the company's long-term debt. Four months later, after extending and sweetening the offer seven times, the company accepted all 70 percent of the debentures that were tendered, resulting in the issuance to noteholders of approximately 26 percent of the company's common stock (following payment of interest on the new notes with common stock, noteholders' ownership increased to 59 percent within three months). Despite the success of the exchange offer, the company subsequently found it necessary to again restructure its debt. Within approximately a year of the conclusion of its exchange offer, the company made a 'prepackaged' Chapter 11 filing, after having first obtained creditors' consent to a reorganization plan. The company emerged from Chapter 11 after only three months.

Dunes Hotels and Casinos Inc. Classification: *Successful restructuring of bank and other privately-placed debt, accompanied by outside stock placement (8/31/83–2/6/84; car* = 102.9%; $p0 = 4\frac{4}{8}$, $p1 = 6\frac{4}{8}$).

For six months, the company attempted to restructure a $30 million debt held by two private investors, Ronald and Stuart Perlman. Initially, the Perlmans agreed to acquire the company for $80 million in notes and the assumption of $105 million in debt. This agreement was replaced by another under which the Perlmans were to convert their debt into approximately 45 percent of the company's common stock. The restructuring of this and other debt was deemed essential to avert a bankruptcy filing. Finally, the company reached an agreement to place 41 percent of its common stock with John Jack Anderson, a private investor with prior management experience in the industry. At about the same time, the company restructured approximately $80 million of debt owed to its three institutional lenders (a bank, a leasing company, and American Financial Corporation), resulting in various payment deferrals. Terms of the agreement gave Mr. Anderson effective voting control over additional shares held by management, increasing the percentage of common shares he either owned or controlled to 51 percent. Mr. Anderson was named chairman of the company, succeeding Morris Shenker, who prior to the restructuring held 41 percent of the company's stock. Mr. Shenker, who remained CEO, had filed for personal bankruptcy four months previously.

Lamson & Sessions Co. Classification: *Successful restructuring of bank debt, accompanied by new private debt placement (12/31/82–4/29/85; car* = 51.3%; $p0 = 3\frac{1}{8}$, $p1 = 3\frac{6}{8}$).

The company disclosed in its annual report that it was not in compliance with 'certain' covenants in its loan agreements, and had been attempting to restructure its debt to 24 bank and insurance company lenders. The company had no publicly traded debt. Ten months into the negotiations, the company announced that the restructuring effort had stalled because of disagreements among lenders over terms. The company refused to explain what the differences were, or disclose the identity of the lenders. A debt restructuring plan was announced five months later. Under the plan, the company's institutional debt was to be converted into cash, new secured notes, and convertible preferred stock (with dividends payable in either cash or common stock). Assuming full conversion of the preferred stock, the lenders would hold 34 percent of the firm's common stock. The cash payment, representing 24 percent of the balance owed, was raised through a new short-term secured credit facility with Congress Financial Corp. As part of the plan, borrowings under this facility were to be reduced by applying part of the proceeds raised from the subsequent divestiture of an operating subsidiary. The plan was adopted three months later at the company's annual meeting, where stockholders approved a requisite increase in the number of authorized common shares. At the same meeting, the company's chairman relinquished the post of CEO to the company president, and announced

that he would soon also step down as chairman. Ten months later, the company repurchased (with cash) all of the new notes for 60 percent of their face value, and exchanged new common stock warrants for approximately a third of the preferred stock held by lenders.

Oak Industries Inc. Classification: *Successful restructuring of publicly traded debt, accompanied by outside stock placement* (*2/11/85–5/6/86*; *car* = −33.3%; *p0* = $2\frac{1}{8}$, *p1* = $1\frac{4}{8}$).

The company, which had no bank debt, offered to exchange a package of notes, warrants, and common stock for its three outstanding publicly traded debenture issues. The new notes had a lower promised coupon rate and identical face value, and were to mature approximately ten years before the old debentures. The notes also allowed payment of interest in either cash or common stock (the company indicated that interest would be paid in common stock for the 'foreseeable future'). After extending the offer three times, the company accepted all 79 percent of the old debentures tendered, two months following the initial announcement of the offer. Approximately one week before the offer's expiration, the company's president resigned to 'pursue other business interests', amid an SEC investigation into alleged disclosure violations by the company. Seven months after the first exchange offer concluded, the company announced a new exchange offer for all of its publicly traded debt, in which holders were offered a package of cash and common stock. The cash part of the offer was financed by the sale of a major operating division and block of new equity securities to Allied-Signal Inc. (not previously a stockholder). The equity placement, which was made conditional on the success of the debt restructuring, consisted of common stock and warrants, representing about 20 percent of the company's common stock outstanding at the conclusion of the offer (assuming full exercise of the warrants). As part of the agreement, Allied-Signal also received three seats on the company's seven-member board of directors. The second exchange offer and the transaction with Allied-Signal were completed five months later, resulting in a doubling of the total number of common shares outstanding.

Petro Lewis Corp. Classification: *Successful restructuring of publicly traded debt, effected through acquisition of the company* (*3/28/85–12/31/86*; *car* = −50.2%; *p0* = $4\frac{1}{8}$, *p1* = $2\frac{1}{8}$).

The company attempted to restructure its publicly traded debt through a series of three exchange offers. Approximately 75 percent of the company's long-term debt was publicly traded. In the first offer, which took two months to complete, the company sought to exchange new (secured and unsecured) notes and common stock for one of its note issues and three issues of preferred stock. Approximately 80 percent of the notes, and on average 58 percent of the preferred-stock issues, were tendered and accepted. Five months later, the company undertook a new exchange offer for four of its outstanding issues of subordinated notes and debentures. Holders were offered a package of new secured notes (carrying a higher coupon rate but lower face value), common stock, and cash. After several extensions of the expiration date, the offer concluded two months later, with about 50 percent of holders tendering. The third and final offer was announced five months later, and consisted of an offer to exchange a package of new secured and convertible notes and common stock for all nine of the company's publicly traded debt issues outstanding (including those that were issued under the earlier exchange offers). The company terminated this offer four months later, after deciding that it did not 'represent a viable alternative for the company'. Two months previously, an agreement had been announced in which Freeport-McMoRan Inc. would acquire the company to enable it to avert a bankruptcy filing, for a total price of about $770 million. Ultimately Freeport purchased the company by making a public tender offer for all of its outstanding publicly traded securities (debt as well as equity). The time that elapsed between the initial exchange offer and the consummation of the merger was approximately 20 months.

Seiscom Delta Inc. Classification: *Successful restructuring of bank debt, followed by bankruptcy more than one year later (5/12/83–4/26/85; car = −65.3%; p0 = 5⅜, p1 = 1⅛).*

The company announced that it restructured its bank debt by obtaining a one-year extension of the date on which its revolving bank loans would convert to term loans. In the *WSJ* story that reported the restructuring, the company refused to identify which banks were involved, and no mention of the transaction was made in the firm's 10k report for that year. The company had no publicly traded debt outstanding. Fourteen months later, the company was granted a 'second' waiver on a bank loan covenant (the first was not reported) that was in default because the company had exceeded the borrowing limit specified in its revolving credit agreement. Two weeks later, D. Gale Reese, chairman and CEO of the company, resigned under pressure from its banks. The *WSJ* quoted a company spokesman as saying: 'It's just a matter of the bank being willing to do certain things provided Gale Reese was not on the team.' In the same story that reported Mr. Reese's resignation, it was revealed that one of the company's banks granted a third waiver of the same loan covenant. Nine months later, a definitive agreement was reached to restructure the company's bank debt. The agreement provided for the banks to forgive 52 percent of the outstanding bank-loan balance, and grant a seven-month waiver of interest and nineteen-month waiver of principal owed on the remaining balance. In return, the banks were given a package of common stock, convertible preferred stock, and warrants, which together represented 77 percent of the company's outstanding common stock (assuming full conversion of preferred stock and warrants). In addition, the banks were granted an increased security interest in all of the company's assets. The agreement also provided for forgiveness of certain lease payments owed on the company's headquarters building. Seventeen months later, the company and four of its wholly owned subsidiaries filed for Chapter 11.

Tiger International Inc. Classification: *Successful restructuring of bank and publicly traded debt by parent company, accompanied by bankruptcy of subsidiary (2/14/83–3/25/85; car = 18.3%; p0 = 7⅛, p1 = 8⅝).*

The company and its bank lenders agreed on a tentative restructuring plan four months following the company's decision to unilaterally suspend interest and principal payments on about half of its total $1.8 billion in debt. Regarding the company's decision to suspend payments on its debt, a company spokesman was paraphrased by the *WSJ* as saying that 'the company chose to announce suspension of interest and principal on debt, rather than issue a joint release with lenders, because of the large number of banks involved (60, including certain other unspecified 'lending institutions') and the complexity of the loan agreements'. Under the proposed plan, the company was to be granted an extension on scheduled payments owed by three operating subsidiaries, receive a new revolving credit line from an existing lender, and implement an exchange offer for its two publicly traded issues of debentures. Regarding lenders' reaction to the plan, the firm's chairman noted: 'It's in the lenders' interest to do this. All of them agree that the going concern is the important thing.' On the day before the announcement of the plan, it was announced that the company's president and financial vice president had both resigned; the company denied allegations that this action had been prompted by its lenders. Interest on the new credit line was tied to the company's future earnings performance. The exchange offer took three months to complete, with approximately 81 percent of all bonds being tendered. Tendering debenture-holders received a package of new debentures (having a lower face value, shorter average maturity, and identical coupon rate), common stock, and warrants; interest on the new debentures was payable in either cash or common stock. Final agreement on the restructuring of subsidiary debt was reached by two of the subsidiaries seven months after the initial plan was proposed, and by the third, a year after the plan proposal date. Shortly thereafter the company undertook an additional exchange offer for two issues of publicly traded

debt owed by one of its subsidiaries, offering a package of common stock and warrants. Fourteen months following the initial suspension of debt payments, the company revealed in its annual report that it was still attempting to restructure the debt of a subsidiary. Eight months later, the subsidiary independently filed for Chapter 11, after it failed to reach a standstill agreement with its banks on a $132 million secured note that was in default.

Verna Corp. Classification: *Successful restructuring of bank and privately placed debt (12/31/82–4/29/85; car = −136.7%; p0 = 4⅞, p1 = 13/16).*

After reporting a quarterly loss, the company granted its two banks a security interest in 39 drilling rigs (although no default was reported). Six months later the company announced that it had restructured its bank debt. The banks, which were owed approximately $28 million, were given warrants convertible into 13 percent of the company's common stock, a security interest in accounts receivable, and a 'fee' of $850,000. In return, the company was granted a thirteen-month deferral of interest and principal payments, and an increase in its borrowing limit under an existing revolving loan. Concurrently with the bank debt restructuring, the company privately placed $1 million of new secured subordinated notes with a group of three venture capital companies. In return for purchasing the notes, said companies were given common stock warrants for 8 percent of the common stock and three permanent seats on the board of directors. Ten months later, both the bank debt and new notes hadto be restructured, resulting in various payment deferrals and increased grants of security. Among other things, the banks were given the right to force certain asset sales to effect repayment of the debt. Eighteen months later, the company restructured its debt for a third and final time, following stockholder approval of the transaction. Debt owed to the two banks was converted into an issue of new secured notes, convertible preferred stock, and preferred stock warrants, representing 56 percent of the company's common stock (assuming full conversion of the banks' claims). The notes held by the three venture capital lenders were exchanged for new common stock, representing 24 percent of the common stock then outstanding. Three months later, four of the firm's five outside directors resigned after the company's insurer withdrew its liability coverage.

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