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Volume Title: Transition in Eastern Europe, Volume 2, The

Volume Author/Editor: Olivier Blanchard, Kenneth Froot, Jeffrey Sachs, eds.

Volume Publisher: University of Chicago Press

Volume ISBN: 0-226-05662-7

Volume URL: http://www.nber.org/books/blan94-3

Conference Date: February 26-29, 1992

Publication Date: January 1994

Chapter Title: The Economics of Bankruptcy Reform

Chapter Author: Philippe Aghion, Oliver D. Hart, John Moore

Chapter URL: http://www.nber.org/chapters/c6727

Chapter pages in book: (p. 215 - 244)

15 The Economics of Bankruptcy Reform

Philippe Aghion, Oliver Hart, and John Moore

Following the rapid demise of socialism, East European countries have been grappling with the question of what kind of market economy is best suited to their future needs.[1] Should they incorporate capitalism wholesale, and, if so, which kind: American, European, Japanese, or some new version? How should problems of the transition be handled? What kinds of institutional structures and laws are most appropriate for their situation?

This paper is concerned with an aspect of this last question: the choice of bankruptcy law. The decision facing East European countries on this question is both important and far from straightforward. It is generally recognized by economists and lawyers in the West that bankruptcy law has an important role to play in ensuring a timely resolution of the problems of insolvent or financially distressed firms and a socially efficient disposition of such firms' assets. Yet both practitioners and academics are dissatisfied with current Western procedures, which are thought either to cause the liquidation of healthy firms (as in Chapter 7 of the U.S. Bankruptcy Code) or to be inefficient and biased toward reorganization under incumbent management (as in Chapter 11 in the United States). Nor is there any consensus about how to improve these procedures. Thus, it is far from obvious that East European countries should simply pick "the best available Western procedure" (whatever that may be).

In this paper, we describe a new bankruptcy procedure that we believe

The authors thank Stuart Gilson, Leo Herzel, Bengt Holmstrom, John Kihn, Shan Li, Lynn LoPucki, Jay Ritter, Roberta Romano, Andrei Shleifer, Jeremy Stein, David Webb, Philip Wood, and two referees for their help and comments. They acknowledge financial support from the National Science Foundation, the United Kingdom Economic and Social Research Council, and the International Financial Services Research Center at the Massachusetts Institute of Technology. This paper is reprinted, with a new appendix, from *The Journal of Law, Economics, and Organization* (8, no. 3 [1992]: 523–46), © Oxford University Press.

[1] Throughout the paper, *Eastern Europe* is used as shorthand for *Eastern Europe and the former Soviet Union.*

avoids some of the main pitfalls of existing procedures. While the stimulus for this proposal comes from the current situation of East European countries, we should emphasize that the proposal is potentially just as relevant for Western countries that are trying to improve existing procedures. We should also point out that our procedure is designed to be effective in the new post-transition-to-capitalism Eastern Europe, rather than being concerned directly with the transition process itself.

Our procedure is a simple one. First, when a firm goes bankrupt, all the firm's existing debts are canceled, and an individual—a judge, say—is appointed to supervise the procedure. This individual has two immediate tasks: task A is to solicit cash and noncash bids for all or part of the "new" firm (which at this juncture is all equity); task B is to allocate rights to the equity in this new firm among the former claimholders. These two tasks could be carried out in parallel and completed within a prespecified period of time: for example, three to four months. After this, the new shareholders—that is, the former claimholders who now hold shares—vote on which bid to select. The successful bid may be a cash bid (which corresponds to a liquidation or a sale of the firm) or a noncash bid. Noncash bids allow for reorganization and/or recapitalization of the firm as a going concern. For example, the old managers might propose that they keep their jobs and that each current shareholder receive a share in the postbankruptcy firm. Or the same financial arrangement might be offered by a new management team. A third possibility is that management (old or new) might induce some leverage in the postbankruptcy firm by proposing to borrow from the capital market and to offer each current shareholder a combination of cash and equity in the (leveraged) firm. After the vote, the firm exits from bankruptcy.

In essence, our proposed scheme is a decentralized variant on Chapter 7, in which noncash (as well as cash) bids are allowed and ownership of the firm is homogenized (to all equity) so that the owners can decide (by vote) which of the bids to accept.[2] However, insofar as noncash bids allow for reorganization/recapitalization, our proposal can also be viewed as a decentralized version of Chapter 11, in which conflicts of interest among different claimant groups are avoided through the homogenization of ownership.

We think that our procedure strikes the right balance between liquidation and reorganization. Unlike Chapter 7, the procedure gives claimholders the option of maintaining the firm as a going concern if the company's bad fortunes are the result of bad luck rather than bad management. Unlike Chapter 11, the procedure creates a (roughly) level playing field in which incumbent management is not advantaged in the reorganization process.

The paper is organized as follows. In section 15.1, we examine the need

[2] What is less essential to our scheme is the precise mechanism by which rights to equity in the firm are allocated (task B). The main version of our procedure uses an allocation scheme developed by Lucian Bebchuk (1988). In sec. 15.5, however, we present some alternative mechanisms for allocating equity.

for a statutory bankruptcy procedure. In section 15.2, we discuss a number of procedures that either are used in practice worldwide or have been proposed in the literature. In section 15.3, we lay out our new procedure. We assess our scheme in section 15.4. In section 15.5, we present some alternative mechanisms that might be used for allocating equity. In section 15.6, we discuss certain key ancillary issues, such as claims disputes, the treatment of secured creditors, and the need for debtor-in-possession financing. Finally, in section 15.7, we raise some questions concerning the feasibility of our scheme in the current environment of Eastern Europe. In an appendix, we briefly survey what is happening now in two of the countries of Eastern Europe—Hungary and Poland.

15.1 The Role of Bankruptcy Procedure

It is generally accepted by lawyers and economists that the state has an important role in enforcing private contracts. The point is that, while ex ante two parties may find a contractual arrangement mutually beneficial, ex post one of them may have an incentive to breach. Thus, it is in the interests of both parties that a third party—the state—have the power to enforce contractual performance or to compel the breaching party to compensate the victim by paying money damages.

A debt contract is a particular kind of contract where one party, the debtor D, borrows money from another party, the creditor C, and in return promises C a (typically larger) payment in the future. If D defaults (i.e., breaches), C has two main remedies at his disposal (outside bankruptcy). First, in the case of a secured loan, C can seize the assets that serve as collateral for the loan. Second, in the case of an unsecured loan, C can sue D and can call on the clerk of the court (or the sheriff) to enforce the court's judgment, possibly by selling the debtor's assets (see Baird and Jackson 1985, 2).

This method of debt collection seems fairly uncontroversial when there is only a small number of creditors or when the debtor has sufficient assets to cover his liabilities.[3] However, problems arise if there are many creditors and the debtor's assets are less than his liabilities (i.e., he is insolvent). Under these conditions, as Jackson (1986) among others has emphasized, creditors will waste resources trying to be first to seize their collateral or to obtain a judgment against the debtor. Also, this race by creditors to be first may lead to the dismantling of the firm's assets and to a loss of value for all creditors if the firm is worth more as a whole than as a collection of pieces.

Given this, it is in the collective interest of creditors—and society too—that

[3] An exception should be mentioned. This is where the debtor is an individual whose wealth would be reduced to close to zero if creditors could seize his assets. Part of (personal) bankruptcy law is concerned with providing such individuals with protection from their creditors. In this paper, we are interested in the debts of firms, not individuals, and so will not deal with this issue directly.

the disposition of the debtor's assets be carried out in an orderly manner, via a centralized bankruptcy procedure.

Of course, in an ideal world, there would be no need for the state to set up its own bankruptcy procedure: individuals could do it by themselves. That is, a debtor who borrows from a creditor could specify as part of the debt contract how his assets will be divided among various creditors (and the debtor himself) in the event of a default or insolvency. Writing such a contract is likely to be very difficult and costly, however, particularly since the debtor may acquire different types of assets and new creditors as time passes, and it may be very hard to specify how the division process should change as a function of such developments. Moreover, in practice, contracts like this are not written.[4] Thus, it seems likely that many parties will choose to take advantage of the bankruptcy mechanism provided by the state; moreover, even if, by some chance, a substantial number of parties choose to make their own arrangements, society must still deal with those parties who make no arrangements at all.[5]

15.2 Existing Bankruptcy Procedures

We turn now to bankruptcy procedures that either are used in practice or have been proposed in the literature. It is useful to classify them under four broad headings: (1) auctions, (2) structured bargaining, (3) administration, and (4) automatic financial restructuring.

15.2.1 Auctions

If the only problem with a standard debt collection scheme were that it led to inefficient "grab" behavior by creditors, then the obvious solution would be for a trustee or receiver to supervise the sale of the firm's assets and distribute the proceeds according to the priority of creditors' claims. This is essentially a description of Chapter 7 in the United States and of U.K. bankruptcy law prior to the 1986 Insolvency Act.[6]

A widespread concern with a Chapter 7–type proceeding, however, is that viable companies will be sold off at a substantial discount in a piecemeal liquidation. Some law and economics scholars (e.g., Baird 1986) have argued that this concern is misplaced because there is nothing to stop someone bidding for the company as a going concern: if the whole is really worth more than the

[4] This may be because current laws do not allow parties to opt out of the state's bankruptcy procedure.

[5] Of course, it does not follow from this that the costs of providing a bankruptcy mechanism for firms in financial distress should be paid for out of general taxation; arguably, firms that want to take advantage of such a mechanism should be forced to pay a fee (presumably before they get into financial distress!).

[6] The German bankruptcy code also has the flavor of Chapter 7 in that it favors liquidation over reorganization. A debtor firm can avoid liquidation only if at least 35 percent of its creditors can be repaid *in cash* and the reorganization plan is approved by three-fourths (in value terms) of the unsecured creditors (see Mitchell 1990).

parts, then a bid for the whole will dominate a set of independent bids for the parts. These scholars have gone on to argue that, because of this, Chapter 7 is indeed the best bankruptcy procedure: it is simple, it avoids protracted bargaining and litigation, and it leads to an efficient outcome.[7]

While the argument of these scholars has some merit, the conclusion that a competitive auction will inevitably lead a firm to be sold to the highest-willingness-to-pay bidder at its (maximized) value is extreme. Auctions work well if raising cash for bids is easy and there is plenty of competition among bidders. However, even in the most advanced Western economies, these conditions often will not be met, and they are even less likely to be satisfied in Eastern Europe.[8]

Consider first what we shall call the *financing problem*. Imagine that a huge company like IBM were put on the block. (In Eastern Europe, where markets are less well developed, similar problems could arise with a much smaller company.) Say that the expected present value of IBM's earnings is $100 billion. Would any bidder be prepared to offer this much for the company? The answer to this question might well be no. One way to raise $100 billion is to approach a large number of small investors through what is in effect a public offering, but this is likely to be difficult given the time scale of an auction like Chapter 7. A more practical way is to raise the money from a few large institutions/investors (possibly with a view to going public later). The problem with this strategy is that (at least in the short run) these investors will be bearing substantial risk and so will be prepared to buy IBM only at a discount.[9]

We should emphasize that the financing problem that we are identifying here is not to do with management having private information about the firm's value (and being unable to verify it to the market). Rather, it is to do with the transactions costs associated with assembling a suitable group of investors to be risk bearers for the new firm. But notice that there is a natural group of risk bearers

[7] Some scholars would push the argument for Chapter 7 still further. The piecemeal liquidation value of a firm may sometimes exceed its going-concern value. This could happen if the firm is inefficiently large but managers have been unwilling to split it up, possibly because they enjoy the perquisites of power. A Chapter 7 auction is then a good way of realizing value for creditors and shareholders.

[8] One might ask why it matters how much shareholders and creditors receive in an auction as long as the firm's assets end up in their highest-value use. There are two reasons why shareholder and creditor receipts do matter. First, the more the firm's claimants receive in bankruptcy states, the more the firm's claims will sell for initially, and the greater the incentive the firm's founders will have in setting up the firm. Second, in the absence of a competitive auction, the winning bidder may not be the highest-value user of the firm's assets; that is, a competitive auction serves an important screening role in ensuring that the assets are indeed transferred to their best use.

[9] The costs of financing a cash bid are akin to the costs of an initial public offering (IPO), which can be significant. For example, Ritter (1987) investigates two quantifiable components of the costs of going public: direct expenses and underpricing. From a sample of firms that were taken public by investment bankers in the United States during 1977–82, he finds that these two costs together averaged between 21 and 32 percent of the realized market value of the securities issued, depending on the type of IPO. The underpricing effect can be attributed to the risk aversion of issuers/investment bankers, in conjunction with various forms of asymmetric information (see, e.g., Rock 1986).

at hand: the former claimants (who were, after all, the previous risk bearers). Transactions costs would be reduced if bidders could reach this group directly by offering them securities in the postbankruptcy company. This is not allowed for in cash-only auctions like Chapter 7, but it is a key feature of Chapter 11 (see below) and also of the procedure that we propose in section 16.3.[10]

A second reason for doubting the efficiency of a Chapter 7 proceeding concerns what we shall call the *lack-of-competition problem.* Although there may be many *potential* bidders who could in principle raise the necessary funds, not all of them may participate. Preparing a bid is a costly and time-consuming process.[11] Unfortunately, only the winning bidder will recoup his costs, and this deters entry. In fact, in extreme cases, it may be an equilibrium for just one bidder to enter the auction and win with a low price because all other potential bidders realize that entry would cause such a fierce competition that everyone would make losses.

As Shleifer and Vishny (1992) have recently pointed out, both the financing problem and the lack-of-competition problem are likely to be exacerbated to the extent that the natural bidders for a bankrupt firm are other firms in the same industry; these firms may also be suffering financial distress and may therefore find it hard to raise capital.[12]

15.2.2 Structured Bargaining

If auctions cannot be relied on, what are the other possibilities? Many countries have tried to provide a framework within which claimants can bargain about the future of the firm, that is, decide by structured negotiation whether it should be liquidated or reorganized. A leading example of this in the West is Chapter 11 of the U.S. Bankruptcy Code.

The details of Chapter 11 are complicated, but the basic idea is the following: claimholders are grouped into classes according to the type of claim they have; committees or trustees are appointed to represent each class; and a judge supervises a process of bargaining among the committees to determine a plan of action for the firm, together with a division of value. During the process, incumbent management usually runs the firm. An important part of the proce-

[10] Note that we are not denying that managerial private information can also cause financing problems. For example, suppose that IBM's management knows that the company is worth $100 billion but the market does not. Then management may be unable to raise $100 billion to make a cash bid, and the company could be sold inefficiently. Unfortunately, it is not clear that this problem lies in the province of bankruptcy law (nor is it clear that the law can help). As we argued in sec. 15.1, the rationale for bankruptcy law is to deal with collective-action problems among creditors, yet this asymmetric information problem would arise even if there were a single creditor.

[11] For a compelling account of the cost of a bidding process, see Burrough and Helyar (1990) on the RJR Nabisco leveraged buyout.

[12] Shleifer and Vishny's point is supported by evidence from LoPucki and Whitford (1992, sec. IV), who find that, in the forty-three largest U.S. bankruptcy cases between 1979 and 1988, *all* asset sales were to existing companies, usually within the same line of business.

dure is that a plan can be implemented if it receives approval by a suitable majority of each claimant class: unanimity is not required.[13]

We believe that there are serious theoretical and practical problems with Chapter 11 (and similar procedures). At a theoretical level, Chapter 11 mixes two decisions together: the decision of who should get what (i.e., whose debt should be forgiven, and by how much), and the decision of what should be done with the firm (should it be liquidated or reorganized, and, if reorganized, who should manage it, and what should be its new financial structure). This latter decision creates an additional dimension of conflict. For example, senior creditors may press for liquidation (since they will then be paid off for sure), whereas junior claimants may hold out for reorganization (since they enjoy the upside potential but not the downside risk). There are already reasons to think that bargaining may break down when agents negotiate over a *given* pie (e.g., if there is asymmetric information among the agents); matters are merely made worse by having a further conflict of interest over *which* pie should be chosen.

In addition, placing decisions in the hands of representatives—and indeed the supervising judge—creates agency problems. Since individuals on shareholder and creditor committees own only a small fraction of the equity and debt themselves, they are unlikely to devote the socially efficient level of resources to figuring out what a good reorganization plan is. This may leave the one informed group—management—with considerable power to tilt the outcome of the bargaining toward reorganization (and the retention of their jobs). Judges too can use their supervisory powers to pursue their own agendas, which may be in conflict with the claimants' narrow objective of value maximization.

The empirical evidence appears to support the theoretical view that Chapter 11 is imperfect. We mention a few relevant findings. (i) Chapter 11 can take a great deal of time.[14] (ii) During this time, there can be a serious loss in value—because of managerial distraction, incompetence, or negligence; forgone investment opportunities; or a drop in demand (either because competitors be-

[13] Specifically, for a plan to be agreed to, it must receive approval by a two-thirds majority in value terms (and a simple majority in number terms) of each debt class and a two-thirds majority of equity—although under certain circumstances a plan can be forced on a class (the cram-down provision).

A similar system to Chapter 11 operates in Japan. Reorganization plans are drafted by a trustee appointed by the court; the court can amend the plan in consultation with the interested parties; for a plan to be ratified, it must receive four-fifths of secured creditors' approval and two-thirds of unsecured creditors' approval (shareholders cannot veto); if the plan is not ratified, the company is liquidated (see Mitchell 1990).

[14] Flynn (1989) finds that nearly two-thirds of Chapter 11 confirmations occur in the second and third years after filing. LoPucki and Whitford (1992) find that the largest bankruptcy cases ($100 million plus) spend an average of two to three years in Chapter 11. Gilson, John, and Lang (1990) report a similar figure for exchange-listed companies in Chapter 11 between 1978 and 1987.

have more aggressively or because customers lose confidence).[15] Also, suppliers may be unwilling to extend credit.[16] (iii) The procedure involves significant legal and administrative costs.[17] (iv) The procedure appears to be soft on management.[18] (v) Chapter 11 judges sometimes abuse their discretionary powers.[19]

15.2.3 Administration

An alternative to structured bargaining is to appoint a "benign dictator"—that is, to appoint an administrator who, through the court, has authority to decide which parts of the firm should be sold off and which parts (if any) maintained as a going concern. This is roughly the way the French system operates.[20] (It is also roughly the way Chapter X of the old U.S. Bankruptcy Act operated prior to 1978.) Administration avoids many of the costs of Chapter 11 and is far less likely to be a soft option for management (insofar as management is no longer in charge of the firm). However, a lot of power is placed in the hands of the judge and administrator, who may have little or no background or expertise in the firm's operations and little or no financial incentive to make the right decisions about the firm's future. We know of no systematic empirical work that evaluates the administration procedure, but there are certainly theoretical reasons for being skeptical about it.[21]

[15] A spectacular example of loss in value is provided by Eastern Airlines, which suffered operating losses of around $1.6 billion while in Chapter 11 from March 1989 until January 1991 (see Weiss 1991). In examining the Texaco Chapter 11 bankruptcy (resulting from the Texaco-Pennzoil litigation), Cutler and Summers (1988) discovered losses of over $3 billion, which may be attributable to the costs of financial distress. Other studies of the (indirect) costs of financial distress include Altman (1984), Baldwin and Mason (1983), White (1983), and Wruck (1990).

[16] Roe (1983, n. 2) cites the cases of Food Fair Inc., Wickes, and AM International, in which customers and, particularly, suppliers refused to trade with the companies after they had filed for bankruptcy, causing serious revenue losses. However, Chapter 11 also plays an important role in facilitating debtor-in-possession financing, whereby suppliers' credit is placed ahead of existing (unsecured) senior debt. (For more on debtor-in-possession financing, see sec. 15.6.4 below.)

[17] In a sample of New York and American Stock Exchange firms that filed for bankruptcy between 1979 and 1986, Weiss (1990) estimated these direct costs to be 3.1 percent of the book value of debt plus market value of equity (measured prior to bankruptcy).

[18] Gilson (1989, 1990), Gilson and Vetsuypens (1992), LoPucki and Whitford (1992), and Betker (1992) show that senior managers often suffer as a result of their firms entering Chapter 11. However, we think that the proper comparison should be between how these managers are treated in Chapter 11 and how they would have been treated in Chapter 7. In the latter, one can presume that far more of them would have lost their jobs (and far more quickly). So, *relative to Chapter 7*, Chapter 11 is likely to be a soft option.

[19] Weiss (1991) argues persuasively that the presiding judge in the case of Eastern Airlines was quite determined to maintain the company in business despite huge losses incurred while in Chapter 11. LoPucki and Whitford (1992) cite the Chapter 11 bankruptcy cases of Johns-Manville and Evans Products to demonstrate the exercise of judicial power at the extreme.

[20] Under the French bankruptcy law enacted in 1985, the court can accept a reorganization plan without the approval of creditors (or workers), provided that it best ensures the maintenance of employment and the repayment of creditors. (Note that these two objectives may be in conflict.) See Mitchell (1990).

[21] Since 1986, the U.K. bankruptcy system has also made use of an administrator—although, compared to France, creditors have greater powers to reject the administrator's reorganization plan.

15.2.4 Automatic Financial Restructuring

So far we have discussed procedures that are used in practice. Another possibility, which has been suggested by some scholars, is that bankruptcy should merely trigger an automatic financial restructuring—for example, all debts could be converted into equity in some prespecified manner.[22] Then the decision whether to liquidate or reorganize would be left to management (possibly constrained by the market for corporate control).

We believe that this approach to bankruptcy is flawed because it ignores conflicts of interest between managers and shareholders. In practice, managers, who enjoy private benefits of control, may be unwilling to shrink or liquidate an unprofitable company of their own accord. Moreover, the market for corporate control may not work well enough to force them to do so.[23] Under these conditions, debt plays an important role in constraining or bonding managers to act in the interests of securityholders. Specifically, the managers of a highly leveraged firm face a choice: reduce slack, or go bankrupt.[24]

Of course, for the bonding role of debt to be effective, management must suffer a significant penalty for nonpayment of debts, that is, for going bankrupt. But, under an automatic financial restructuring, there is no penalty at all: managers are in effect allowed to postpone or cancel debts and to continue to run the firm as if nothing had happened!

The U.K. administration system is in a sense a cross between the French system and Chapter 11 in the United States. In the United Kingdom, a bankruptcy court issues an administrative order outlining particular goals to be achieved and appoints an administrator who takes control of the firm and, within three months, prepares a reorganization plan. Ratification of a plan requires approval by at least half (in value terms) of the (unsecured) creditors. In principle, the court could bypass a negative vote and proceed at its own discretion. However, in practice, if the vote is negative, the court either convenes another creditors' meeting or appoints a receiver who liquidates the firm (see e.g., Mitchell 1990; and Webb 1991).

[22] For instance, using the scheme proposed by Bebchuk (1988). For more on Bebchuk's scheme, see below.

[23] Even a very badly run firm may not be vulnerable to a (hostile) takeover. One reason is that a raider may have to share a large fraction of the takeover gains with shareholders of the target firm because (i) minority shareholders can free-ride on the raider's offer (see Grossman and Hart 1980) or (ii) rival bidders can free-ride on the information embodied in an initial offer and make a counteroffer. Hence, a raider may fail to cover the ex ante costs of making a bid. (The evidence does indeed show that most of the gains from a successful takeover accrue to shareholders of the target firm rather than to the acquiring firm [see Jensen and Ruback 1983].) Further factors deterring a raider are management's ability to engage in various defensive measures (lawsuits, poison pills, employee stock ownership plans) or, at the last moment, to carry out the actions the raider was planning to undertake.

An alternative mechanism for removing badly performing managers—or, more accurately, directors—is a proxy fight. However, incumbents have the upper hand in a proxy fight because (i) they can use company funds to fight their campaign, whereas an insurgent typically cannot, and (ii) there is inevitably an element of "the devil you know is better than the devil you don't" (the insurgent, after all, is not offering something tangible like cash).

Note finally that, in practice, large premiums of 30 percent or more are earned by shareholders of target firms in takeovers (see, e.g., Jensen and Ruback 1983). These premiums are consistent with the existence of substantial slack in target firms prior to a takeover.

[24] On the bonding role of debt, see Grossman and Hart (1982) and Jensen (1986). For evidence that the bonding role of debt is important in practice, see Jensen (1986) and Hart (1993).

15.2.5 Summary

In sum, we see flaws in all four kinds of bankruptcy procedures that we have discussed. Auctions (like Chapter 7) can lead to inefficient liquidation at fire-sale prices. Structured bargaining (like Chapter 11) is unlikely to work with large numbers of claimants given that they have different objectives. Administration procedures (as in France) place too much control in the hands of one person, who may not have the necessary expertise. Automatic financial restructuring eliminates the bonding role of debt. Thus, it seems desirable to consider alternatives.[25]

15.3 A New Bankruptcy Procedure

A fully fledged analysis of bankruptcy would derive optimal bankruptcy procedure from first principles. Unfortunately, this is an extraordinarily difficult task, not least because, as we noted in section 15.1, in an ideal world there would be no need for a state procedure at all: debtors and creditors would choose their own bankruptcy procedure as part of an optimal debt contract.[26] What is really needed is a full theory of contractual incompleteness based on transactions costs, which we do not yet have. Thus, while we have tried to provide some foundations for our proposed bankruptcy procedure, what follows must be seen as quite tentative.

In broad terms, we think that a good bankruptcy procedure is one that meets two goals: goal 1 is that it maximizes the ex post value of the firm (with an

[25] One argument that we have not dealt with runs as follows: why have a "good" bankruptcy procedure at all? After all, there is nothing to stop the interested parties from renegotiating to avoid bankruptcy. In fact, this is exactly what we see in prebankruptcy workouts between firms and their creditors. However, such workouts may fail—inter alia because of holdout and free-rider problems and asymmetries of information among claimants. In a study of the companies listed on the New York and American Stock Exchanges that were in severe financial distress during 1978–87, Gilson, John, and Lang (1990) found that workouts fail more than 50 percent of the time and are more likely to fail the larger the number of creditors (see also Gilson 1991).

In the last few years, "prepackaged" bankruptcies have emerged as a new hybrid form in the United States. These informal reorganizations—agreed on before entering into bankruptcy—avoid some of the costs of Chapter 11 but take advantage of the fact that within Chapter 11 a reorganization plan can be ratified by a smaller fraction of creditors than would be needed outside bankruptcy. (Hence a prepackaged bankruptcy may be easier to implement than a workout.) However, by no means all financially distressed firms can be rescued this way; as McConnell and Servaes (1991) conclude, "A pre-packaged bankruptcy . . . is not likely to be useful in resolving complex, litigious disputes among hundreds of creditor groups with sharply divergent interests—the kind we often see in a traditional, highly contentious Chapter 11 reorganization" (see also Gilson, John, and Lang 1990, sec. 2.3).

[26] In an ideal world, parties can write "comprehensive" contracts. A comprehensive contract is one where, at the outset, everyone's obligations are sufficiently clearly stated that the contract never has to be renegotiated as the state of the world unfolds. (That is, if in equilibrium parties ever recontract ex post, then they could have built in the outcome of this renegotiation ex ante.) In the absence of comprehensive contracts—i.e., where contracts are "incomplete"—there will sometimes be occasion to renegotiate. In the present context, bankruptcy is a clear example of such an event.

appropriate distribution of this value across claimants); goal 2 is that it preserves the (ex ante) bonding role of debt by penalizing management adequately in bankruptcy states.

It is worth pointing out that goals 1 and 2 may be in conflict. For example, if 2 were the only issue, then there would be nothing wrong with a "nuke-the-firm" strategy: any firm that went bankrupt could simply be shut down. However, such a strategy may be disastrous in terms of 1: given the presence of uncertainty, even well-run firms will sometimes go bankrupt, and it would obviously be very inefficient to close them all down. Equally, if 1 were the only goal, incumbent managers might be retained a lot of the time on account of their special knowledge or skills, which would be bad in terms of 2.

We now outline our procedure. It is an attempt, first, to strike a balance between goal 1 and goal 2 and, second, to achieve a point on the "frontier" of feasible combinations—that is, to maximize ex post value, subject to an adequate amount of bonding.

15.3.1 The Proposed Procedure

At the outset, after the firm has declared (or been pushed into) bankruptcy, the firm's debts are canceled. The firm's creditors do not go away empty-handed, however; as described in task B below, they may well become significant shareholders. What matters is that the firm starts out life in bankruptcy essentially as a "new," all-equity company.

An individual—a judge, say—is appointed to supervise the process. The judge has two immediate tasks: task A is to solicit cash and noncash bids for the new all-equity firm, task B is to allocate rights to the shares in this firm. We anticipate that these tasks could be carried out in parallel and completed within a prespecified period of time; three months might be reasonable.

Task A: Soliciting Bids

The judge solicits bids for the firm's assets and proposals for the firm's continuing operations. That is, over the three-month period, individuals are encouraged to make cash bids for all or parts of the firm's operations; in addition, management teams (including the incumbent) are encouraged to make proposals for how to run the firm as a continuing entity.

In fact, it turns out that, in a formal sense, there is no real difference between a bid for the firm and a proposal to run the firm as a continuing entity, once we allow for *noncash* bids. For example, if management (either the incumbent team or a new one) proposes to maintain the firm as a going concern with an all-equity financial structure, this is equivalent to their making the following "bid" for the firm: "We are prepared to buy each share of the present firm for no cash down and one share in the (identical) postbankruptcy firm." Similarly, if management wishes to deviate from an all-equity financial structure for (future) tax or bonding reasons, it can arrange to borrow $\$D$ in the capital market and offer to buy each of the N shares of the present firm for $\$D/N$ down and one share in the (leveraged) postbankruptcy firm. Another way for management to obtain leverage is to offer each shareholder a share *and* a bond in the postbankruptcy firm.

Thus, it is useful to think of the judge simply soliciting a variety of cash and noncash bids rather than a set of bids for the firm's assets on the one hand and a set of restructuring plans on the other.

Task B: Allocating Rights

Before the judge can allocate rights to the shares of the new (all-equity) firm, he must first determine who the firm's claimants were and the amounts and priority of their claims. For example, if the firm owed taxes to the government, is that claim senior or junior to a claim by workers for unpaid wages or for pension benefits? How do these claims compare in priority to a claim by a secured or senior debtholder? Where do trade creditors or future tort claimants fit into the picture? If the firm recently borrowed $1,000 for one year at a rate of interest of 10 percent but the rate of interest has now fallen to 5 percent, is this creditor owed $1,000 or $1,100/1.05?

These are complicated questions, which have to be answered currently in both a Chapter 7 and a Chapter 11 bankruptcy.[27] Since we have nothing new to say about the answers, we shall simply assume that some procedure is adopted (possibly existing U.S. procedure) for determining the amount and priority of all claims.

Thus, we suppose that the judge's deliberations will lead to the identification of n classes of creditors who were owed (in total) the amounts $D_1, \ldots, D_n$, respectively, with class 1 having the most senior claim, class 2 the next most senior claim, and so on. The firm's shareholders form the $(n + 1)^{\text{th}}$ class, with a claim junior to all others.

Having identified these classes, the judge can proceed to allocate rights to shares in the new (all-equity) firm. If the "true" value, V, of the firm were publicly known (i.e., were verifiable), then it would be easy to figure out the total (monetary) amount S_i each class i should get, based on absolute priority. The most senior creditors, class 1, should receive the smaller of the amount they are owed, D_1 and the total amount available, V; that is,

$$S_1 = \min(D_1, V).$$

Class i ($i = 2, \ldots, n$) should receive the smaller of the total amount they are owed, D_i, and the total amount available after class $(i - 1)$ has been paid off; that is,

$$S_i = \min(D_i, V - S_1 - S_2 - \ldots - S_{i-1}).$$

Finally, the equityholders should receive anything that is left over; that is,

$$S_{n+1} = V - (S_1 + \ldots + S_n).$$

[27] For a good discussion, see Baird and Jackson (1985).

Unfortunately, V is typically not known. However, Bebchuk (1988) has constructed a scheme that achieves absolute priority in spite of this drawback. Note that, although Bebchuk's scheme is ingenious, it may be regarded as too complicated in some circumstances. In section 16.5, we describe some simpler alternatives.

Bebchuk's scheme works as follows. The most senior class (class 1) is allocated 100 percent of the firm's equity (so, if an individual creditor in that class is owed d_1, he receives a fraction d_1/D_1 of the firm's shares); however, the firm has the right to "redeem" this claim (i.e., buy back the equity) at a price of D_1 per 100 percent—that is, for the amount this class is owed. Investors in the next most senior class (class 2) are given the *option* to buy equity at a price of D_1 per 100 percent; however, the firm has the right to redeem this claim at a price of D_2 per 100 percent—that is, for the amount this class is owed.[28] More generally, class i investors ($3 \leq i \leq n$) have the option to buy equity at a price of $(D_1 + D_2 + \ldots + D_{i-1})$ per 100 percent, but the firm can redeem this right at a price of D_i per 100 percent. Finally, shareholders (class $[n + 1]$) are given the option to buy equity at a price of $(D_1 + \ldots + \mathrm{D}_n)$ per 100 percent.[29]

This completes the judge's second task, task B.

Once the three months are up, the judge reveals the bids arising from task A, and everyone can make an assessment of their worth (possibly with the help of some outside expert, such as an investment bank [see n. 35 below]). At this point, optionholders are given some period of time—a further month, say—to exercise their options. (During this period, there can be trade in equity and options, although the process does not depend on this.) At the end of this fourth month, some options will have been exercised, and others will not. The firm (i.e., the judge) uses the receipts from the options exercised to make redemptions—starting with the most senior claimants and working down the seniority until the receipts have been used up. These redemptions balance the options exercised in such a way that exactly 100 percent of the firm's equity is allocated at all times.[30]

The final step in the process is that the firm's equityholders (i.e., those people who hold equity in the firm at the end of month 4) vote on which of the

[28] Shortly, we will explain when these options, and buyback rights, can be exercised.

[29] For example, let $n = 2$, $D_1 = \$100$, $D_2 = \$200$; i.e., there are two classes of creditors who were owed \$100 and \$200, respectively. Let there be 100 people in each class and also 100 shareholders and 100 shares of the firm outstanding. Then the first class of creditors is given one share each, each member of the second class is given the option to buy one share for $D_1/100 =$ \$1.00, and each shareholder is given the option to buy a share for $(D_1 + D_2)/100 =$ \$3.00.

[30] To continue our example from n. 29, suppose that, on the basis of the bids announced by the judge, the firm is generally perceived to be worth between \$100 and \$300. Then no shareholders will exercise their options, but all junior creditors will exercise theirs. The judge takes the receipts of \$100 and uses the money to redeem the senior creditors' rights for \$1.00 each, transferring their shares to the junior creditors. At the end of the process, all the equity is in the junior creditors' hands, and all the senior creditors have been fully paid off. The shareholders neither pay nor receive anything.

It should be clear from this example that Bebchuk's scheme preserves absolute priority in the following sense. If class i creditors ($1 \leq i \leq n$) are (fully) paid off, then this must mean that some lower class exercised their options. But then all creditors senior to class i are also (fully) paid off.

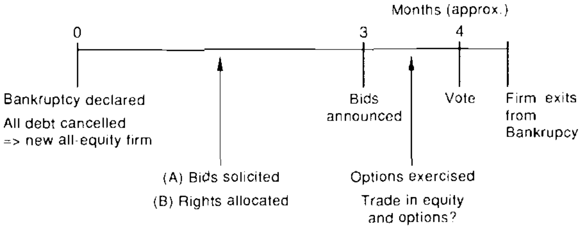

Fig. 15.1 Bankruptcy: Sequence of events

various cash and noncash bids to select. (Voting is on the basis of one share, one vote; in sec. 16.6.6, we discuss the voting procedure further.) Once the vote is completed, the firm emerges from the bankruptcy process.[31]

The sequence of events is summarized in figure 15.1.

15.4 An Assessment

In our view, one of the strengths of our proposal is that, in a precise sense, it embraces all the options currently available within both Chapter 7 and Chapter 11. In a Chapter 7 auction, anyone is free to make a cash bid for the firm; that is, liquidation and sale are both feasible. Our mechanism admits such outcomes too. Chapter 11 allows for the formulation of a reorganization/recapitalization plan. Any such plan is allowed for in our mechanism too because it can always be expressed in the form of a noncash bid. Thus, minimally, everything that is feasible within either Chapter 7 or Chapter 11 is also feasible within our proposal.

We believe that our procedure *improves* on Chapters 7 and 11. In section 15.2.1, we highlighted two problems with a cash-only auction like Chapter 7: the *financing problem* and the *lack-of-competition problem*. The major advantage of our proposal is that, by permitting noncash bids, it reduces (or even eliminates) the financing problem. The reason is that a bidder who is cash constrained or who does not want to bear the risk of holding a large fraction of the company shares himself, even in the short term, can share risks with the old claimants by offering them securities in the new company directly. In con-

[31] Note that old claimants who become new shareholders in the firm do not have to remain as such. For example, a former trade creditor who becomes a shareholder can sell his shares once a market develops (and can vote with this prospect in mind).

Our procedure differs in an important way from the recent bankruptcy proposal of Bradley and Rosenzweig (1992). They suggest that, in the event of bankruptcy, the firm's equity should be transferred to creditors (unless the equityholders are prepared to buy out the creditors for what is owed), but they do not discuss how this leads to better management (or liquidation) of the firm. That is, they do not explain how a (possibly dispersed) group of creditors goes about replacing management. By contrast, in our scheme, the solicitation of cash and noncash bids, together with an automatic vote, provides a mechanism by which management can be removed. (For more on this, see sec. 15.4.)

trast, Chapter 7 requires an extra step: the bidder must raise *cash* from one group (the new investors) in order to pay another group (the old claimants).[32]

Our procedure does not deal directly with the lack-of-competition problem. However, allowing noncash bids is likely to mitigate it. Parties may be deterred from bidding given the cost of financing a bid. Noncash bids will help indirectly by reducing these costs. This is likely to raise the number of eventual bidders and therefore also to increase the competitiveness of the auction and the value of the winning bid.

Our procedure also improves on a structured bargaining procedure like Chapter 11 in a number of ways. Principally, we have substituted a simple vote by shareholders (whose interests are aligned) for protracted and complex bargaining among different claimant groups (whose interests typically conflict).[33] Also, agency costs are much reduced: our procedure leaves little or no discretionary power in the hands of the judge, management, or creditor/shareholder representatives.[34]

It is worth comparing our procedure to the automatic financial restructuring proposal discussed in section 15.2.4, whereby a firm's debts are canceled and market forces determine whether it should be liquidated. Such a proposal would leave incumbent management in place, unless and until it is removed. Our procedure is quite different. In our scheme, no one has the right of incumbency until specifically voted in by the shareholders: this is the prime purpose of having an obligatory vote.

We think that this feature of our scheme is crucial. In the course of normal business (*outside* bankruptcy), management is constrained in various ways. Aside from direct incentive schemes, managers (more precisely, directors) are subject to removal by a proxy fight or a takeover bid. As we mentioned earlier (see n. 23 above), both these mechanisms are—perhaps with reason—biased in favor of incumbent management. We think that, to maintain the bonding

[32] Note that, in the main version of our proposal described in sec. 15.3, the old claimants are treated equally in the sense that each is offered (rights to) the same package of securities in the new company (some combination of equity, cash, and bonds, say). This is not essential, however. For example, one of the firm's previous creditors might be a large bank, which has a comparative advantage in monitoring the lower tail of the firm's cash earnings. It may be very inefficient for this creditor to be allocated a large amount of equity in the new company. There is a simple way round this problem, however. Management could propose a reorganization plan in which the bank agrees to become a large creditor of the firm, in return for selling back its equity to the firm. The only difficulty with this is that it can raise a conflict of interest: the bank, as a former creditor, will be able to vote on a deal from which it may well be benefiting substantially. We discuss ways of dealing with this kind of conflict in sec. 15.6.2.

[33] It would be too strong to say that our procedure eliminates *all* conflicts of interest among claimants. Some claimants may be workers or other firms that have contractual relations with the bankrupt firm. These parties will be interested in more than just the market value of their equity and hence may have goals different from those of the average shareholder. We suspect that the resultant conflicts of interest are likely to be small relative to those between shareholders and creditors or among creditors in a standard Chapter 11 proceeding.

[34] Except, of course, for the crucial role of the bankruptcy judge in deciding who is owed what and the relative seniorities of these claims.

role of debt, it is essential that incumbent management is not favored *within* bankruptcy. That is why the vote is important. The vote establishes a playing field that is at most flat and, we suspect, more typically, tilted in favor of outsiders. Incumbent managers have to persuade their shareholders to vote them back into office, probably against competition from a *cash* buyer. Shareholders, choosing between cash in hand and a noncash offer (of uncertain value) from the very management team that has just brought the firm to its knees, may well vote for the cash.[35] That is, except when it is clear that the bankruptcy was due to events outside management's control, incumbent management is quite likely to be booted out.[36]

There is a further aspect of the treatment of management that we should address. It might be argued that penalizing management harshly in bankruptcy is counterproductive since it will cause managers of financially distressed firms to delay filing for bankruptcy or to "go for broke"—that is, to engage in risky, but inefficient, behavior to stave off bankruptcy. People who take this position often go on to advocate a soft procedure like Chapter 11, which treats management relatively well. We are not persuaded by this argument. If the state-provided bankruptcy mechanism is harsh, it seems relatively easy for a firm to soften it ex ante. If those people choosing the corporation's financial structure wish to protect managers from the unpleasantness of bankruptcy, they can do so by choosing a low debt-equity ratio or by issuing senior debt to managers so that they receive something in bankruptcy states (a form of "golden parachute").[37]

In contrast, it is much more difficult for a firm to harden a soft bankruptcy procedure. Suppose, for example, that the statutory procedure specifies that incumbent management should be left in place for a minimum period of time. Consider some firm that wants to ensure that its own managers will be removed

[35] This raises a more general issue. It may be unreasonable to expect (possibly quite small) shareholders to have the knowledge or incentive to assess noncash offers. One solution would be for the judge to hire an investment bank to value the various offers. The investment bank could also check whether the financing for each proposal is secure. (The bank's fees might be in the form of securities in the postbankruptcy firm.)

[36] Note that the process of comparing cash and noncash bids that we have advocated is not completely unfamiliar in the corporate context. Firms that are undergoing leveraged buyouts (LBOs) face something similar. There the incumbent management team typically makes a bid to take the firm private. Other groups often show an interest too, and a subset of the board's disinterested (or independent) directors is charged with conducting an auction. At the end of this auction, the disinterested directors will approve one of the bids or decide that the status quo is better for shareholders (i.e., that the company should remain public).

The major difference between the LBO process and the one advocated here is that, in the LBO case, the bids are decided on by shareholder representatives while, in our case, they are decided on by the shareholders directly. (Even in an LBO, a decision to take the company private would have to be ratified by shareholders.)

[37] Also, if a "harsh" procedure causes management to delay filing for bankruptcy for too long, then this problem can be mitigated by making it easier for creditors to push a firm into bankruptcy of their own accord—e.g., debt could have stronger covenants attached to it (which are more likely to be violated).

quickly in bankruptcy. The firm cannot achieve this by merely fine-tuning the existing procedure, since any attempt to remove management will, by assumption, not be respected by the courts. Instead, the firm will have to opt out of the statutory (soft) procedure and write its own private (hard) procedure; but, as we have argued in section 15.1, this may be very costly. Given this asymmetry—it is easier to soften a hard mechanism than to harden a soft one—our conclusion is that the state's bankruptcy procedure should err on the hard side rather than the soft.[38]

15.5 Simpler Methods of Allocating Equity

We have advocated using Bebchuk's relatively sophisticated—although conceptually not at all difficult—mechanism for allocating equity. Some people may argue that this mechanism is too complicated for practical purposes and that a simpler scheme should be found.

A useful way to explore this matter further is to begin by considering what happens in Bebchuk's mechanism if junior claimants (either junior creditors or shareholders) are cash constrained—so that they are unable to exercise their options when they perceive that the firm is valuable and the market for options is sufficiently underdeveloped that they cannot easily sell them. (This is likely to be a particular problem in Eastern Europe.)

At first glance, this may not appear to be a serious problem. For instance, if a junior securityholder (say, an old equityholder) has the option to buy equity at a price below what he considers it is worth but does not have the cash on hand to do so, then he could always borrow short term, offering the equity as collateral for the loan, and then sell the equity (at a profit) once the firm emerges from bankruptcy. However, this argument overlooks the fact that his perception of the future value of the firm's equity may not be shared by his potential creditors; if they are less optimistic than he is and he cannot offer them anything else by way of collateral, then he will not be able to borrow the cash needed to exercise his option.

But does it matter if options cannot be exercised? The net effect of a failure in the options "market" is to leave more equity in the hands of senior creditors than is warranted by the face value of their debt. Arguably, this redistribution of the firm's value (disproportionately into the hands of senior creditors) does not matter since claims have still been homogenized so as to remove the scope for ex post bargaining, and the new equityholders (mainly the old senior creditors) should therefore still vote for the best bid. Of course, there would appear to be some unfairness. But in principle this potential transfer of wealth from

[38] However, as we argued at the start of sec. 15.3, a good bankruptcy procedure should strike a balance between penalizing management (in order to preserve the bonding role of debt) and maximizing the ex post value of the firm. That is why we do not advocate as harsh a procedure as Chapter 7. Our procedure is "softer" on management than Chapter 7 because management (along with anyone else) is free to make a noncash bid.

junior to senior claimants would be priced in the ex ante securities markets anyway, so the "unfairness" is more apparent than real.

This is an intriguing argument because it raises the larger question, Why should one bother using Bebchuk's mechanism when an even simpler rule could be used? Some possible alternatives are the following:

1. Once the bids (both cash and noncash) have been assembled, one or more outside investment banks could be employed to assess them and to estimate the value, V^e, of the best one. Shares could then be allocated according to absolute priority, taking V^e, *as if* it were the true value of the firm (i.e., as in Chapter 7, except that it is equity, not cash, that is being distributed). Shareholders would then vote to choose what *they* consider to be the best bid, just as in section 15.3.

2. As in alternative 1, except that the highest *cash* bid, V^c—which is an objective amount—is used in lieu of V^e as a basis for distributing equity.

3. Equity might be allocated in proportion to the *face* value of claims—with, say, x percent reserved for old equityholders, where $x \geq 0$ is some prespecified number.

4. An even cruder rule than 3 would be to allocate all the equity to senior creditors, regardless of the face value of their claims (indeed, this would be the outcome of our proposed scheme in the extreme case where no options were exercised because of cash constraints).

These four alternative rules are consistent with the basic features of our proposal: first, noncash as well as cash bids are allowed so that reorganization is given a fair chance; second, a homogeneous group of new equityholders is created who get to vote on the future of the firm; and, third, the old management faces the discipline of having to bid to keep their jobs. The sense in which these simple rules are inferior to our proposed scheme is that they may fail to preserve absolute priority: they typically give either too much or too little to junior claimants relative to senior. (In 1, e.g., V^e may overestimate the true value, V, of the firm, in which case junior claimants receive too much. In 2, V^c may be well below the value, V, of the best noncash bid, in which case junior claimants receive too little.) If cash constraints are not a problem, the strength of the Bebchuk scheme is that it is a market-based mechanism that preserves absolute priority. But, if one suspects that in practice the scheme would not work (and hence fail to respect absolute priority), then it may be better to opt for something simpler, along the lines of one of the above alternatives.[39]

[39] Even if one were to opt for one of the alternative rules 1–4, there would be a strong argument for supplementing it with Bebchuk options: i.e., class 2 creditors could be given the right to buy out the most senior (class 1) creditors at price D_1; class 3 could be given the right to buy out both classes 1 and 2 at price $D_1 + D_2$; etc. This would at least give some power of redress to aggrieved individual junior claimants who feel that senior claimants are getting more than they are owed.

Readers may wonder why the preservation of absolute priority is important at all. Aside from the basic point that, ceteris paribus, it is always better to respect the provisions of private contracts, there are at least two other arguments. First, any discrepancy between what a class of claimants gets inside bankruptcy and what it gets outside bankruptcy could lead to inefficient rent seeking

15.6 Further Considerations

Of course many details of our proposal remain to be sorted out. In this section, we briefly raise some ancillary issues. We should stress that we do not have definite answers to a number of questions. There may be room for several answers, depending on the circumstances of the firm: indeed, one can imagine firms opting for different choices ex ante.

15.6.1 Claim Disputes

We have taken the view that a judge could fairly quickly decide on who is owed what and with what priority—say within three months. This may be too optimistic.[40] It can be argued that one advantage of a Chapter 7 sell-off is that the receipts can be safely held in some (interest-bearing) escrow account until such time as the conflicting claims have been resolved. By contrast, if the firm is to survive as a going concern, such delays could be fatal.

In practice, it matters just how big a slice of the pie is in dispute. If, for example, 90 percent of the prior claims can be decided on within three months, then the judge could proceed in the manner we have suggested, with these 90 percent of claimants being allocated equity/options (as if the disputed 10 percent do not exist). The 90 percent then vote.[41] Any *cash* that is generated—either as part of the winning bid or in the form of subsequent debt repayments/dividends—is held in an escrow account by the judge pending a resolution of the outstanding 10 percent of claims. Once resolved, successful claimants could be issued fresh equity in the firm according to the seniority and value of their claims (that is, the equity holdings of the original 90 percent would be diluted), and the cash held in the escrow account could be distributed appropriately. In short, the fact that certain claims are in dispute need not hold up the bankruptcy proceeding.

15.6.2 Dominant Voters

Left as it is, our proposal would be vulnerable to exploitation of the minority by a dominant shareholder. Suppose that, just prior to the vote being taken, someone ended up with more than half the shares. There are a number of ways in which this person could abuse his voting power. For example, he could vote to accept an artificially low cash offer from a second firm in which he has a

ex post—with some people bribing management into deliberately precipitating bankruptcy and other people attempting to forestall bankruptcy. Second, as shown in Hart and Moore (1990), the seniority structure of a firm's capital provides an important instrument for constraining management's ability to raise fresh capital; any arbitrary tampering with seniority rules within bankruptcy will typically reduce the flexibility of this instrument.

[40] Douglas Baird (1992) suggests that much of a lengthy Chapter 11 proceeding can in fact be devoted to this issue.

[41] There is no reason to suppose that the vote of the remaining 10 percent would be systematically different, given that they have the same objective: value maximization.

large stake. Or he could vote himself into control and sell the firm's assets cheaply to the second firm.

This problem is, of course, not new. It is a potential problem for any publicly traded company, and there exist laws to protect minority shareholders (boards of directors have fiduciary responsibilities). Indeed, under Chapter 11, minority creditors (within a class) need protection, in the form of equal treatment. However, it seems clear that existing law would not be able to protect minority interests under our bankruptcy procedure. The procedure would need to be amended in various ways—for example, to disallow voting by someone who has an interest in a bidder's firm. Another possibility would be (1) to grant a suitably sized minority of the shareholders the power to veto any winning bid that is a *noncash* bid (this would help prevent a dominant shareholder from voting in a bad noncash bid) and (2) to insist that a *cash* bid can be accepted only if it is the highest cash bid (this would help prevent a dominant shareholder from voting in a bad cash bid).

15.6.3 Secured Creditors

The issue here is the following: in bankruptcy, should the secured creditors of a firm be allowed to seize collateralized property? At present, U.S. bankruptcy law basically prevents such seizure, and we would not favor it either because it could lead to an inefficient dismantlement of the firm's assets through a "me-first" grab.[42]

We envisage that, in our proposal, a secured creditor might be treated much as he would be under present U.S. bankruptcy law. Namely, the value of the collateral is appraised; let this amount be $\$S$. Suppose that the level of secured debt is $\$D$. On the one hand, if the debt is oversecured ($S > D$), then the creditor is granted his full $\$D$ in senior debt. On the other hand, if the debt is undersecured ($S < D$), then the creditor is given only $\$S$ of senior debt; the remainder, $\$(D - S)$, is treated as unsecured (junior) debt.

15.6.4 Debtor-in-Possession Financing

The viability of certain kinds of bankrupt firms (such as retail stores) can depend crucially on management being granted debtor-in-possession financing, whereby suppliers' credit is placed ahead of existing (unsecured) senior debt. (This is often mentioned as an important role played by Chapter 11.) There is no reason why a comparable arrangement could not be used during the "four months" of our proposed bankruptcy process, with the judge's approval. In addition, for the sake of continuity, it is probably desirable to allow management to run the company during the bankruptcy process, under the supervision of the judge (again, as in Chapter 11).

[42] Under present U.S. law, a secured creditor *may* be able to seize his collateral if he can demonstrate that the property is not necessary for the firm's reorganization and that it is worth less than the amount he is owed (see Baird 1992, sec. 8C). A comparable rule could be adopted under our procedure.

15.6.5 Partial Bids

We have tacitly assumed that the bids received are for the *entire* firm. In fact, bids may be for parts of the firm. The problem then arises as to how to deal with overlapping/inconsistent bids. Before a vote can be taken, a menu of coherent options has to be assembled.

We think that there is no alternative but to leave the matter of assembling "whole" bids in the hands of the judge and his or her appointed agents. It may well be necessary to solicit supplementary bids for parts of the firm, in order to package a whole bid. Although this seems messy, it should be noted that a similar difficulty is faced in a Chapter 7 proceeding: how to bundle/unbundle the assets of the firm so as to maximize cash receipts.

15.6.6 Voting Procedures

Another issue concerns the voting procedure per se. If there are only two bids, it seems natural to have a simple vote between them. However, with more than two bids, there are many possibilities. Shareholders could cast their votes for their most preferred plan, with the plan with the most votes being the winner; or shareholders could rank the plans, with the plan with the highest total ranking being the winner; or there could be two rounds, where shareholders rank the plans in the first round and there is a runoff between the two highest-ranked plans in the second round. One point to note is that thorny issues in voting theory (such as the Condorcet paradox) are less likely to arise in the present context, given that shareholders have a common objective: value maximization.

15.7 Implementing the Proposed Procedure in Eastern Europe

In this section, we raise some basic questions concerning the implementation of the above scheme in the context of Eastern Europe. Let us stress the following: we envisage that our procedure would apply primarily to the case of the (subsequent) bankruptcy of *new private* or *newly privatized* firms.[43]

A first source of difficulty in implementing our (or any other) bankruptcy procedure in East European countries lies in the insufficient number of qualified lawyers and judges. However, unlike both Chapter 11 and other systems outside the United States, our procedure attempts to minimize the need for lawyers by reducing the role of the courts to mainly supervisory functions. No decision or arbitration concerning a firm's future needs to be made by the courts as long as the bankruptcy procedure is followed by the firm's creditors and shareholders, and therefore no particular expertise in the firm's operations is required from either judges or lawyers.

In this respect, our procedure has the advantage of being potentially enforce-

[43] Nevertheless, elements of our proposal might be of use for the purpose of debt restructuring and privatization of large state-owned enterprises (see van Wijnbergen 1992).

able using the existing judiciary system—that is, without having to introduce bankruptcy courts run by specialized judges. But it should be noted that the judge (or administrator) will need accounting skills in order to determine who had what claims, and of what seniority, in the insolvent firm. One solution during the transition phase could be for a well-established accounting firm not only to perform this task but also to allocate shares and options (Task B) and to supervise the process of exercising options. Foreign accounting firms that already operate in Eastern Europe could be used for this purpose.

As we have already suggested in note 35, outside experts could also be employed to evaluate competing bids on behalf of shareholders/voters. This may be particularly important in Eastern Europe, where, in the absence of smoothly operating capital markets, shareholders may have no other means of assessing noncash bids. Without outside evaluations, incumbent management would enjoy a considerable advantage in being able to "sell" their own bids to shareholders. Incumbent management would have more difficulty preventing a nominated team of outside accountants from gathering information about the firm's assets than it would concealing the information from individual shareholders. Accountants could also have an important role in ensuring that outside bidders have access to information about the firm. And of course there is very little that management can do to stop third parties from putting up cash or noncash bids.

In section 15.5, we discussed some simpler alternatives to Bebchuk's scheme for allocating equity. In Eastern Europe, it might be highly desirable to dispense with using Bebchuk's options, given the poor capital markets. Our first alternative may be especially attractive: namely, once the bids have been assembled, an outside expert (again, a foreign accounting firm?) assesses them and estimates the value, V^e, of the best one; shares are then allocated according to absolute priority, taking V^e as if it were the true value of the firm; and, finally, a vote is taken among shareholders to decide which bid to accept.

One concern about the adoption of our procedure in Eastern Europe is that the scope for making noncash offers might facilitate collusion among managers of mutually indebted firms. This is a particular worry in the current context, where interenterprise credits have substantially proliferated since 1988. In such a context, one could easily imagine the possibility of several firms, with sizable mutual debt obligations, becoming simultaneously insolvent. The managers of these firms could collude by making (and then voting in) noncash offers that maintain the status quo—thereby precluding potentially more efficient investors or management teams from winning. Incumbent managers would thus keep their jobs without any monetary transfer being made, in particular to compensate minority securityholders. (The drawback here relative to a straight liquidation procedure like Chapter 7 is that, in the latter, managers would have to be party to a successful *cash* bid in order to keep their jobs. But, as we have argued, Chapter 7 has serious limitations.) The kinds of devices that we put forward in section 16.6.1 to reduce the power of majority voters—for example, not allowing doubly interested parties to participate in the vote, or allowing noncash offers to be vetoed by a suitably sized minority of shareholders—may help eliminate collusion, too.

A further concern with implementing our procedure in the current environment of Eastern Europe is that it would burden state banks (which are the main creditors of most large enterprises in the East) with responsibilities in the reorganized companies, which they could hardly assume given their bureaucratic management structures and methods. (State banks are often unable to perform such operations as taking deposits, giving account balances, transferring money, etc., let alone evaluating projects and monitoring enterprises' managers.) We have little to say on this score. The commercialization and/or privatization of state banks would, of course, help, as would the setting up of adequate supervising institutions, such as banking commissions. (These changes are urgently required as part of the transition reform package anyway.) In addition, state banks could be obliged to sell the bulk of their equity to the private sector within a limited time period—say, five years—in order to avoid the possibility that the implementation of our procedure in the case of newly privatized firms with large state-bank creditors would lead merely to renationalization.

Appendix

In this appendix, we briefly look at what is happening now in two of the countries of Eastern Europe—Hungary and Poland. Unfortunately, we think that the bankruptcy procedures that these two countries have adopted are vulnerable to many of the criticisms that we have leveled against structured bargaining procedures like the U.S. Chapter 11 (see sec. 15.2.2). That is, bargaining among heterogeneous creditors is unlikely to be efficient, the creditors' representatives may not have the correct incentives, the procedure may be too soft on incumbent management, and judges and officials can abuse discretionary powers.

Hungary

The new Hungarian bankruptcy law (enacted in September 1991) obliges the leadership of an insolvent company to design a rehabilitation program for restoring solvency. In the case of state-owned enterprises, the leadership may consist of the general assembly of employees or the founding organization. In the case of private enterprises, it consists of the membership of the partnership or the general assembly of shareholders.

Within sixty days from the beginning of the bankruptcy proceedings, the debtor must convene a "compromise negotiation" meeting among representatives of the company's creditors. These representatives form a board of creditors, which ultimately decides either to accept or to reject the compromise agreement. Approval by *all* members of the board who are present is required for the rehabilitation plan to be approved and then ratified by the court. In the absence of any agreement within fifteen days, the court starts a liquidation procedure that is similar to the U.S. Chapter 7.

Poland

Whereas the Hungarian procedure provides a unified framework for dealing with state-owned and private companies, in Poland there exist several procedures to deal with insolvent firms.

The Law of State Enterprises (enacted in 1990) prescribed that, if a state-owned enterprise incurred a substantial loss that exceeded its reserve fund and, at the same time, the main creditor bank refused to extend credit, then the state owner/founding organization (local government, branch ministry, etc.) could either liquidate the enterprise or appoint a new compulsory management. This new management is given two years to rehabilitate the enterprise and thereby avoid its liquidation. Note that such a procedure clearly discriminates against claimholders (banks, trade creditors, etc.) who do not control the enterprise's parent agency. Also, the criteria for deciding between liquidation and appointing new management are left unspecified.

A modification of this procedure for insolvent state-owned enterprises has been adopted recently by the Polish Parliament, allowing the enterprise itself to initiate a process whereby the creditors would decide (only by unanimous agreement) whether to restructure/reschedule the enterprise's debt or to let the enterprise be liquidated.

In addition to the procedures outlined above, the new Polish privatization law enacted in July 1990 provides for "liquidations" that amount to the state leasing the insolvent enterprise's assets to new companies.

For insolvent private firms, the Polish authorities have rehabilitated the old Commercial Code of 1934. On declaring the firm insolvent, the relevant court appoints a trustee who supervises the property and management of the firm and also conducts settlement proceedings. To be enforceable, any settlement must be approved both by the court and by a majority of creditors representing at least two-thirds of the firm's debt obligations.

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Comment Jeremy C. Stein

I found this to be a very interesting paper. I am not sure that I agree with the specific proposal the authors put forward, but I certainly agree with the premise—that one can do better than current Western bankruptcy procedures, particularly those associated with Chapter 7 and Chapter 11 in the United States. And I thought that the paper was extremely helpful in laying out the key issues that one must confront in trying to design a better system.

What the authors do is put forth some desirable properties of a bankruptcy system, measure Chapter 7– and Chapter 11–type procedures against these properties, and find them lacking. They then go on to try to strike a better balance. I will organize my comments in a similar way—I will start with the desirable properties. There are basically two types of criteria by which one might judge a bankruptcy system:

1. *Allocational efficiency.* This is obviously important—you want the right management team to end up running the firm after all the smoke clears. You do not want the firm to be liquidated if it is more valuable as an ongoing concern. And you also want a minimum of value destruction during the workout process.

2. *Distributional properties.* This in turn can be divided into two pieces:

(a) Is absolute priority observed? Many people, including the authors, seem to think that it is important to follow absolute priority. Why? First, it may be a good idea simply to uphold contracts, in order to remove a source of (idiosyncratic) risk and thereby make the securities ex ante more attractive. Second, deviations from absolute priority are likely to be associated with allocational inefficiencies—for example, once we are in Chapter 11, people may waste resources haggling over the allocation of the spoils. But it is not clear to me that observing absolute priority is an unmixed blessing. It can have costs, too, to which I will come back.

(b) Nobody should be able to buy companies at "fire-sale" prices, even if they are the best managers. This is particularly important in the East Europe context since it is unlikely to be a closed system—one must worry about the possibility that deep-pocket foreigners are the buyers, which is a welfare loss to the country and could have adverse political consequences. Although it is not really emphasized by the authors, I would worry about this criterion a lot.

So we have three things to keep in mind when evaluating a bankruptcy system: efficient allocation of resources, absolute priority, and the possibility for fire sales. Essentially, what Aghion, Hart, and Moore do is ask, How do Chapter 7 and Chapter 11 measure up against these sorts of criteria, and can we find anything that does better? However, before we make this comparison, there is a critical point to note: a large fraction of distressed firms never go into formal bankruptcy—they restructure out of court. In Gilson, John, and Lang's (1990) sample of U.S. firms, this fraction is about 50 percent. And the percentage of firms restructuring outside formal bankruptcy may be much higher in other financial systems—for example, in the Japanese or German systems, where there tends to be more closely held debt. Why is this critical? If out-of-court restructuring is pretty efficient, it is important to encourage it, and the incidence of such restructuring may be very sensitive to the rules of the game in the courts. Take a concrete example. Suppose that out-of-court restructuring involves deadweight costs of $1.00 and current Chapter 11 procedures entail costs of $10.00. Now suppose that we improve in-court procedures so that the costs are down to $8.00 but incentives are changed so that twice as many people wind up in court. As I will argue in a moment, this is not a totally improbable example, and it relates to the issue of absolute priority.

The basic problem that Aghion, Hart, and Moore see with Chapter 7 is a bias toward liquidation. They recognize that, owing to shallow pockets, information costs, etc., the auction mechanism is far from perfect. I agree and would just add my fire-sale-to-deep-pocket-foreigners concern. The good thing about Chapter 7 in their view is that it tends to observe absolute priority.

In contrast, Chapter 11 may have the (sometimes) good feature of preserving the business on an ongoing basis, but there are also serious problems. First, there may be an *excessive* bias in the direction of preservation of the business under current management—in a sense, not enough liquidation. Second, Chapter 11 appears to involve enormous costs of time and haggling. Another bad thing about Chapter 11 in Aghion, Hart, and Moore's view is that it is typically associated with large deviations from absolute priority.

Although I share their concern about costs and destruction of value, I am less sure that deviations from absolute priority per se are all bad. It is important to recognize that the potential for deviations from absolute priority will affect the restructuring behavior of a firm before it lands in court. From this ex ante perspective, deviations may be a good thing—metaphorically, a less sharp break between junior and senior claimants may help align interests and facilitate "good" behavior at the restructuring phase. For example, recent work by Asquith, Gertner, and Scharfstein (1992) shows that, when bank lenders are better secured, there is a greater likelihood that out-of-court restructuring will fail and the firm will wind up in Chapter 11. Essentially, when banks' priority status is well observed in Chapter 11, they do not seem to take any steps to avoid Chapter 11. Thus, the possibility of deviations may get banks to the bargaining table.

One can interpret Aghion, Hart, and Moore's proposal as an attempt to have the timeliness, reduced haggling, and absolute priority benefits of Chapter 7 while at the same time removing some of the bias toward liquidation. On a spectrum between the two, it strikes me overall as much closer to Chapter 7—basically, it is still an auction of the firm, with the one key difference being the noncash offers. (The Bebchuck allocation scheme is just a way of implementing absolute priority when there are "hard-to-value" noncash bids.) The idea of these noncash bids seems to be to overcome the bias toward liquidation—even if incumbent managers do not have deep pockets, Aghion, Hart, and Moore suggest that they can retain control with a noncash bid if they really are the best team for the job.

So what do I think? First, since I am less convinced about the merits of absolute priority, I am less drawn to the scheme—again, I am worrying about the ex ante effects of absolute priority on the ability to restructure out of court. Second, while I like the idea of a more flexible auction, I am unsure about how different it will be in practice. I have little in the way of evidence to go on here, but my instinct is that cash bids will have a pronounced edge in many cases, which brings us back to Chapter 7, and brings me back to my big concern about deep-pocket foreigners.

Let me attempt to be a bit more precise about this last point. We can ask the theoretical question, How does allowing a noncash bid enable us to accomplish anything that cannot already be accomplished with Chapter 7? Presumably, Chapter 7 is less than ideal because capital market imperfections make it difficult for certain cash-poor bidders to raise all the financing necessary to make an all-cash offer. In other words, because of incentive or information problems, the bidders cannot get anyone to accept the securities that they are offering in exchange for cash. Well, if this is the case, why will the current group of creditors be any different—why will they accept such securities instead of an all-cash bid?

Thus, if the shallow-pocket problem that plagues Chapter 7 is due to some real economic "blockage" (i.e., information or moral hazard problems), it is not clear to me exactly how Aghion, Hart, and Moore's proposal removes the blockage. So I see the proposal as effectively pretty close to Chapter 7, which troubles me a bit, particularly in the current context.

Is there a better option? Again, I agree with the basic premise that there ought to be something between Chapter 7 and Chapter 11 that does better. My own inclination would be to start working on the other end of the spectrum—to try to improve on the existing Chapter 11–type framework. Perhaps one might attempt to alter the rules of the road in Chapter 11 so that haggling costs and wastage of time are reduced. This might be accomplished by changing things in such a way as to reduce management's bargaining power, thereby forcing matters to a conclusion more rapidly. One concrete suggestion in this regard would be to reduce or remove the so-called exclusivity period of 180 days (in practice, it often winds up being much longer) when management alone has the right to make restructuring proposals.

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Discussion Summary

Oliver Hart and *John Moore* started the discussion round by responding to the comments of Stein. Hart said that the introduction of noncash bids in the proposed bankruptcy procedure makes more of a difference than Stein had acknowledged. Hart noted that noncash bids would be particularly valuable in the likely case that a firm's original investors/creditors want to continue their association with the firm but are unable to raise the funds to make a cash bid. Moore criticized Stein's conclusion that the proposed new procedure is very close to the Chapter 7 procedure. Moore emphasized that the new procedure adds the step of converting the bankrupt firm into an all-equity firm before a bid for the firm is selected. He said that converting all the claimants into equityholders gives them a common objective and that allowing them to vote for the winning bid streamlines the selection process.

Jan Winiecki suggested that the proposed bankruptcy scheme could not be implemented efficiently during the current period of rapid economic transition. He said that a third of all state-owned firms should be forced into bankruptcy, and he warned that the East European countries have only a fledgling financial sector and very few individuals with financial skills. He said the East European governments will have to rely on "short-cut" bankruptcy and antitrust procedures during the transition period. He suggested that more sophisticated bankruptcy procedures, like the proposed scheme, could only be implemented five or ten years from now.

Andrei Shleifer warned of a shortage of judges interested in or capable of working in the area of commercial law. Shleifer also noted that whoever oversees the bankruptcy procedure may be subject to corruption. He suggested that management might bribe local administrators to discourage bids that would compete with a noncash management bid. This would mean that the proposed bankruptcy scheme would effectively end up leading to too few liquidations.

In response to the comments of Winiecki and Shleifer, Moore said that the shortage of individuals with financial skills and the possibility for corruption would also present problems for existing procedures like Chapter 7 and Chapter 11. He said that the proposed new scheme actually had the advantage that it minimizes both the amount of discretion that is given to administrators and the amount of financial sophistication that administrators are required to have.

Inderjit Singh questioned whether it is useful to force firms into bankruptcy because they cannot repay debts that were originally incurred for nonmarket reasons. He suggested that the authors consider the alternative of canceling debts so that the firms do not have to enter bankruptcy proceedings in the first place.

Jeffrey Sachs questioned whether most claimants are currently capable of acting as equity interests. He said that state-owned claimants, like banks, may act as a "vague morass of bureaucratic interests" rather than wealth maximizers. He noted that an absence of claimants with a real interest in wealth maximization would increase the possibility that competitive bids would not be sought out.

Michael Dooley suggested that the authors had overemphasized the difficulty of achieving coordination among the creditors. He noted that, in almost all cases, the government will hold most of the claims. Dooley asked the authors to suggest administrative rules for the state-owned claimants to follow when they exercise their voting rights.

Philippe Aghion responded to some of the questions. He asked Winiecki how he proposed to deal with the third of Polish firms that Winiecki said would need to go bankrupt. Aghion emphasized that the current Polish bankruptcy procedure would lead to extreme bargaining inefficiencies because the rules that determine priority are vague. In response to Shleifer and Sachs, Aghion noted that the existence of corrupt administrators and claimants with weak incentives compromises the efficiency of all bankruptcy procedures, not just the new procedure. Aghion concluded that the privatization of the banking sector would make any bankruptcy procedure, including the new procedure, more effective.