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Introduction

When corporations file for bankruptcy, they choose whether to enter Chapter 7 or Chapter 11. Under Chapter 7, the firm is liquidated: its assets are sold off, and the proceeds are distributed to creditors roughly in order of priority. Under Chapter 11, the firm is reorganized, which means that some or all of the existing creditors and equityholders yield their contractual rights to receive transfers from the firm, and receive new and usually less valuable rights in the new entity. The two chapters serve the same bankruptcy purpose of maximizing the payments to interest holders while respecting contractual entitlements as much as possible. The difference is that Chapter 7 is intended to prevail when the firm is worth more in pieces than as a going concern, and Chapter 11 is intended to prevail when the firm is worth more as a going concern.

Despite these similarities, the procedures under Chapter 7 and Chapter 11 are quite different. In Chapter 7, a disinterested trustee takes control of the firm, marshals its assets, sells them, and distributes the proceeds. When a firm files under Chapter 11, its managers have the exclusive right to propose a plan of reorganization, which gives creditors cash, assets, or rights to payment streams from the reorganized firm. Creditors and other interested parties have no right to propose an alternative plan. The exclusivity period terminates after 120 days but the deadline is routinely extended by bankruptcy courts. When the exclusivity period ends, plans may be proposed both by the debtor and by any creditor. A reorganization plan generally divides creditors into classes, usually on the basis of the similarity of their claims, and must

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give everyone in a class the same rights. Each class votes on the plan, and is deemed to accept the plan if a majority of the members of the class votes for the plan, and members whose claims aggregate to at least 2/3 of all claims vote for the plan. If every class votes in favor of the plan, a court will generally confirm the plan. If a class does not vote in favor of the plan, the plan may be confirmed over its objection, but only if the creditors in the class are paid off in full or no class of junior priority receives any value under the plan. In addition, such a plan may be confirmed only if there is at least one impaired class that votes in favor of the plan, and if every nonconsenting creditor does as well as it would if the firm were liquidated under Chapter 7.

Chapter 11’s rules are idiosyncratic—they bear only passing relation to the insolvency procedures used in other countries—and difficult to understand. Yet the literature on these rules is sparse. A few scholars have looked at elements of the system, but no one has tried to understand how all the voting rules fit together. The most relevant papers are by Baird and Picker and Bebchuk and Chang, which model bargaining between the debtor (or its manager) and a single creditor under perfect information, and focus on the exclusivity period. Although these papers illuminate small corners of the Chapter 11 system, they do not shed light on the system as a whole. The reasons for this are that Chapter 11 is essentially about distributing value among many interests, not just two; that information problems are pervasive in bankruptcy; and that all of the voting rules work together, so that a focus on one or two is misleading.


This Article is the first comprehensive analysis of the voting rules in Chapter 11. It differs from the prior literature in three ways. First, we expand existing models to consider bargaining with multiple creditors. Second, we pay more attention to imperfect information. Third, we analyze all the voting rules in Chapter 11, not just two or three.

Our inquiry is important for several reasons. The current system has been in place for twenty years and, despite much dissatisfaction, has so far been resistant to reform. Although some have concluded from the stability of Chapter 11 that it is likely efficient, several scholars have argued influentially that it should be replaced with a system that avoids voting and relies instead on a more market-driven valuation of the bankrupt firm, such as an auction system. But before one endorses such a reform, one must be sure that one understands how the existing system operates. Auctions and similar mechanisms have their own costs, and these costs must be compared with the costs of a voting system. In addition, the voting system may have benefits that auctions lack: for example, it might induce creditors to reveal information about the firm’s value even in the presence of imperfect capital markets.

This Article sheds light on these questions by analyzing the operation of the voting rules in Chapter 11. These voting rules can be characterized in the following stylized way. (1) Debtor’s exclusivity period; (2) distribution floors (the chapter 7 liquidation value); (3) the absolute priority rule (higher priority creditors are paid before other creditors); (4) bicameralism (referring to the coexistence

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4 Frank H. Easterbrook, Is Corporate Bankruptcy Efficient?, 27 J. FIN. ECON. 411 (1990) (concluding that corporate bankruptcy offers little in the way of transfers to interest groups, and hence efficiency must explain its durability).

5 Douglas G. Baird, The Uneasy Case for Corporate Reorganizations, 15 J.L. STUD. 127 (1986). Bebchuk has argued that Chapter 11 should be replaced by a system in which the creditors are granted options to buy shares of the reorganized debtor. Lucian A. Bebchuk, A New Approach to Corporate Reorganization, 101 HARV. L. REV. 775 (1988). Creditors who exercise their options would need to pay higher-priority creditors in full; if no options are exercised the secured creditors receive the equity in the reorganized firm.

6 E.g., Barry E. Adler, Financial and Political Theories of American Corporate Bankruptcy, 45 STAN. L. REV. 311, 320-21 (1993); Easterbrook, supra note __, at 415.
of two voting schemes: creditor-based voting and claim-based voting), and majority and supermajority rule; (5) classification and equal treatment. Part I describes the conceptual framework that is used to analyze these rules, and Parts II-V provide the analysis of each rule. Throughout, we assume that managers act in the interest of shareholders and that creditors cannot buy and sell claims. Part VI relaxes these assumptions. A brief conclusion discusses the implications of the analysis for reform of Chapter 11.

I. Modeling Chapter 11 Proceedings

A. The Purpose of Chapter 11

We assume that the purpose of Chapter 11 is to minimize the cost of credit. We put aside arguments that Chapter 11 has broader functions, such as to redistribute wealth or provide a safety net. For now, we focus on whether the specific voting rules of Chapter 11 can plausibly be said to minimize the cost of credit.

In a typical credit contract, the creditor receives payments of principal and interest as long as the debtor is solvent, and obtains a claim against the debtor's assets if the debtor defaults. The interest rate must compensate the creditor, in the aggregate, for its expected losses from default. This means that the interest rate increases as the probability of default increases, as the assets available to the creditor

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7 This means to minimize interest rates, consistent with allocational efficiency. If, for example, certain risks or costs can be borne more cheaply by creditors than by debtors, those costs should be assigned to creditors even though that will result in a somewhat higher interest rate.


9 There may be public choice reasons for thinking that the rules are efficient or not. On the one hand, creditors as a group gain nothing from inefficient rules that favor them over debtors, since they must pass these gains back to debtors in the form of lower interest rates. On the other hand, certain kinds of creditors, and other parties, such as attorneys, might gain from inefficient rules. See Eric A. Posner, The Political Economy of the Bankruptcy Reform Act of 1978, 96 MICH. L. REV. 47, 111-12 (1997) (discussing lawyers' lobbying in favor of fee-generating reorganization rules).
upon default decline in value, and as the cost of collection increases.

The standard justification for a bankruptcy system is that it maximizes the value of the debtor's assets in case of default. In the absence of a bankruptcy system, creditors would exercise their state court remedies individually, and this would result in the debtor being liquidated in piecemeal fashion although sometimes value would be maximized if the debtor's assets were sold together or the debtor were reorganized.\textsuperscript{10} The last point is our concern. If the liquidation value exceeds the going concern value, the firm should be liquidated; otherwise the firm should be reorganized. The optimal system of corporate reorganization captures the going concern surplus, if any, and distributes the firm's value to the creditors in the form of money or securities (without at the same time increasing the probability of bankruptcy or causing other ex ante distortions\textsuperscript{11}).

How might a system of reorganization maximize the going concern surplus? It must ensure that information is aggregated properly. The debtor, the creditors, and independent parties like examiners and trustees will generally have incomplete and only partly overlapping information about the value of the firm. If they can be forced to reveal their information, the latter can be used to determine whether the firm should be liquidated or reorganized, and if reorganized, how. However, information aggregation is costly: it is costly both to analyze a firm's finances and to endure delay while information is gathered and disclosed. So the optimal system of


\textsuperscript{11} We will for the most part ignore the problem of prebankruptcy incentives, including equity's incentive to fail to maximize the value of the firm in anticipation of bankruptcy, see Jeremy I. Bulow & John B. Shoven, The Bankruptcy Decision, \textit{9 Bell J. Econ.} 437 (1978). It is sufficient to note that because the voting rules give the debtor a return in bankruptcy even if a risky project results in bankruptcy, and the debtor enjoys the upside of any risky project, the debtor has an incentive to overinvest in risky projects in anticipation of bankruptcy (the "overinvestment" problem). Creditors faced with this overinvestment risk might demand high interest rates that would drive out even positive net present value projects. Schwartz, supra note __. The optimal bankruptcy law thus might balance the goal of maximizing going concern value subject to prebankruptcy entitlements, with the goal of ensuring desirable near bankruptcy incentives, but we will not address this complication.
corporate reorganization balances the gain from information aggregation against the cost. The total payout to all parties should be maximized, and this is done by choosing an optimal capital structure as expeditiously as possible. When we refer to the goal of “maximizing going concern surplus,” we mean to include the time value as well as the absolute value.

Bankruptcy law should not merely maximize going concern surplus. If the law maximized the going concern value of firms but gave the entire value to the debtor, then creditors would anticipate receiving no value in bankruptcy and charge very high interest rates. Thus, bankruptcy law must also respect credit contracts, which establish “prebankruptcy entitlements.” Although there is some controversy over this issue, we assume that creditors and debtors should have the power to determine in their prebankruptcy credit contracts the creditors’ rights in bankruptcy. Creditors and debtors sometimes prefer low-risk credit, which gives the creditor high priority in bankruptcy and the debtor a low interest rate, and they sometimes prefer high-risk credit, which gives the creditor low priority in bankruptcy and the debtor a high interest rate. These arrangements are obtained through security agreements, debt covenants, and other contracts. Respecting these arrangements will be referred to as “respecting prebankruptcy entitlements.”

The two goals of bankruptcy law—maximizing firm value ex post and respecting prebankruptcy entitlements—are often in tension. On the one hand, the law could easily maximize firm value ex post by giving all value to the debtor, but then because the creditors would anticipate no value, they would charge high interest rates and the cost of credit would not be minimized. On the other hand, if the law fully respected prebankruptcy entitlements, it may be impossible to create the proper incentives to maximize firm value. In addition, because many postbankruptcy events are non-contractible, prebankruptcy arrangements will be incomplete and will fail to provide for optimal ex ante incentives. For example, the firm’s liquidation value might be 100, and its going-concern value only 95.

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but trade creditors might receive a return of 10 if the firm is reorganized rather than liquidated, or workers might avoid 10 in dislocation costs, whereas banks with identical prebankruptcy claims would not receive these postbankruptcy returns. If the trade creditors' or workers' interests cannot be contracted about ex ante, a bankruptcy law that failed to recognize them would result in inefficient plans. The dual goals of maximizing the firm's value and respecting prebankruptcy entitlements could be attained if the firm is reorganized but creditors without a postbankruptcy interest do at least as well as they would in liquidation.

How does Chapter 11 resolve the tension between maximizing firm value ex post and respecting prebankruptcy entitlements, if indeed it does? The next sections address this question.

B. Modeling Chapter 11 Bargaining

To analyze bargaining in Chapter 11, one must distinguish the goal of information aggregation and the problem of opportunistic behavior. If parties always acted sincerely, then the optimal Chapter 11 would simply be the solution to the problem of how to gather information from the parties and aggregate this information in the proper way. Because parties do not act sincerely, however, one must analyze how reorganization rules affect parties' incentives to engage in strategic behavior. This task requires two more distinctions. First, we distinguish between two-party bargaining and multi-party bargaining. Second, we distinguish between bargaining under perfect information and bargaining under imperfect information. These distinctions produce four models: two-party bargaining with and without perfect information, and multi-party bargaining with and without perfect information. Each model highlights aspects of the bankruptcy bargaining problem, and these aspects will be summarized at the conclusion of the discussion.

1. Sincere Voting and Information Pooling

If bankruptcy courts had perfect information, they could impose a plan that both maximized going concern value and paid creditors in a manner that respected prebankruptcy entitlements. Therefore, voting rules would be unnecessary. The existence of voting rules assumes that the judge has imperfect information and that creditors collectively have better information. But Chapter 11 does not assume
that the judge has no information. It combines creditor voting and judicial oversight. The judge must have enough information to determine the liquidation value of the firm and, of course, to administer the voting rules, which requires, among other things, the capacity to verify the identity of claimants and the value of claims. Accordingly, we initially assume that the court has such information, but in later sections we will modify these assumptions and address the problem of judicial error.

Why might voting rules make sense from the perspective of information aggregation? Suppose that a single plan is proposed, and creditors vote either for the plan or for liquidation. Assume that every creditor has an equal probability of voting correctly, and that probability is greater than 0.5. The latter assumption seems reasonable: a completely uninformed creditor who flipped a coin would vote correctly with a probability of 0.5; so if a creditor has any information, its probability will exceed 0.5. The Condorcet Jury Theorem shows that if probabilities are independent (that is, all creditors are not mislead in the same way) then as the number of creditors increases, the probability of the correct decision being made increases rapidly, and approaches 100%. The significance of this result is that even if each creditor has relatively little information, and is barely better than a flip of the coin, a large enough group can make quite a good estimate. This result can be extended straightforwardly to cases where \( p \) varies among creditors. If some creditors are more competent than others, then the group will be more competent than the average creditor, and in some cases will be more competent than the most competent creditor.14

13 Let \( p \) represent the probability that a creditor votes correctly, with \( 0 \leq p \leq 1 \), and let \( q = 1 - p \). There are \( n \) creditors. We assume that \( n \) is an odd number for expository clarity; nothing turns on this assumption. Let \( x = (n+1)/2 \). If \( P_n \) is the probability that a majority of the creditors vote correctly, then

\[
P_n = \sum_{x=0}^{n} \binom{n}{x} p^x q^{n-x}.
\]

For example, if \( p = 0.6 \), and \( n = 15 \), \( P_n = 0.7854 \). See Nicholas R. Miller, Information, Electorates, and Democracy: Some Extensions and Interpretations of the Condorcet Jury Theorem, in Bernhard Grofman & Guillermo Owen, Information Pooling and Group Decision Making 175-77 (1986).

14 See id.
The Condorcet Jury Theorem presents the best argument for voting in Chapter 11 reorganizations. Suppose that instead a judge decided by himself whether to reorganize or liquidate a firm. It is highly unlikely that the judge has better competence than the average creditor, and even more unlikely that the judge has better competence than the most competent creditor. If creditors vote honestly, then they are much more likely as a group to vote correctly than is a single judge. Similarly, if creditors submitted sealed bids in an auction, it is less likely that the firm would be correctly liquidated or reorganized than if sincere voting occurs.\(^\text{15}\)

If creditors have different competences, then the optimal voting system will give more weight to creditors with greater competence.\(^\text{16}\) If competence increases with the value of a claim, larger creditors should have disproportionate voting power in reorganization proceedings. A small creditor that knows nothing about the firm (\(p = 0.5\)) should have no voting power (weighting equals 0), while a large bank with intimate knowledge about the firm (\(p\) approaches 1), should have a great deal of voting power. Similarly, if the debtor has a great deal of private information about the optimal reorganization, it should have disproportionate voting power.

2. Strategic Voting with Two Parties and Perfect Information

The previous section assumes that the parties do not act strategically. If a creditor believes that a firm is worth more as going concern than as a pile of assets, it votes in favor of reorganization, even if it would receive a higher payout under Chapter 7 than under Chapter 11. But such behavior is not rational. Henceforth, we assume that the parties act strategically. We describe four models of strategic behavior in Chapter 11. In these models we assume that the parties have perfect information with respect to the optimal reorganization of the firm, and discuss bargaining among two or more parties, and bargaining when parties have perfect or imperfect

\(^\text{15}\) However, auctions can be designed to enable pooling of information. For example, if each creditor bids after observing a bid by another creditor, some information pooling will occur. See Donald Wittman, Information Pooling in Auctions, in Grofman & Owen, supra note ___.

\(^\text{16}\) See Bernard Grofman & Guillermo Owen, Review Essay: Condorcet M odds and Avenues for Future Research, in Grofman & Owen, supra, note __, at 95.
information with respect to other parties’ valuations of the reorganized firm. We start with a model of bargaining between two parties with perfect information about each other’s valuations.

The players are equity (E) and creditor (H), one creditor or (more helpfully) a hypothetical representative of multiple creditors. Bargaining occurs over T rounds; the firm is liquidated in round T if E and H have not reached agreement on a reorganization plan. H has a claim, c, against E. In each round E can either propose a plan that offers p(t), or decline to make an offer. If E makes an offer, H can accept the offer or reject the offer. If H rejects the offer in round t, E then has the choice to make an offer or not in round t+1. The liquidation value, v, and the going concern value, s, remain constant.\(^\text{17}\) For convenience, s \(\geq v\); if s=v, the firm has no going concern surplus. We assume \(c>s\). Parties have equal discount factors, \(d\), per round.\(^\text{18}\) Parties have complete and perfect information, and common knowledge is assumed.

To solve the game, we use backward induction. Consider the parties’ expectations at round T-1. If H rejects E’s offer, H will receive \(v\) in round T, which is worth \(dv\) in round T-1. To prevent H from rejecting the offer, E must make a penultimate-round offer of

\(^{17}\) We make this assumption for expository simplicity; realistically, s declines steadily during the bankruptcy because of the costs of reorganization, although it might also fluctuate up or down as a result of market changes. One could model these influences formally, see Bebchuk & Chang, supra note __, at 265-66; however, for simplicity we exclude these influences. As we discuss below, they do not change our qualitative results. For now, one might imagine that the firm remains viable as a going concern until \(t=T\), when the judge converts the case to a Chapter 7 liquidation because the parties have failed to reach agreement in a reasonable time.

\(^{18}\) Because s remains constant until \(t=T\), a reorganization that occurs at round 0 does not technically generate greater going concern value than a reorganization that occurs at round 1. In both cases, going concern value is s. However, as noted above, what we care about is payout, not going concern value, and payout is a function both of going concern value and of time value. So a reorganization in round 0 produces a larger payout than a reorganization in round 1, a fact represented by discount factors. Alternatively, d can be interpreted as a decay value of s, so that d\(^{-1}\) is the going concern value of the firm at round t. But this interpretation would not allow us to assign different discount factors to different creditors, as we do later in this analysis, so we will not use it. Our assumption of a common d can be understood as assuming well-functioning capital markets, an assumption we relax subsequently.
an amount $p(T-1) \geq dv$. To avoid excess notation, we assume that H will accept an offer if the payoff from acceptance is no less than the payoff from rejection. Thus, to maximize its own payoff, E offers $p(T-1) = dv$. E retains for itself $s - dv$. At round $T-2$, if H rejects E's offer, H will receive $d^2v$. So E offers $p(T-2) = d^3v$, retaining for itself $s - d^2v$. At round $T-3$, E offers and H accepts the amount, $d^3v$. Continuing in this vein, H will demand (in round 0) and receive $p(0) = d^4v$. E retains $s - d^3v$, the going concern value minus the discounted liquidation value. So payoffs are $\{s-d^3v, d^4v\}$ for $\{E, H\}$.

There are two main points of interest. First, going concern value is maximized because agreement always occurs on the first round. Second, prebankruptcy entitlements are violated. There is an important connection between these two outcomes. Going concern value is maximized precisely because E is allowed to violate prebankruptcy entitlements. If E were not allowed to retain any value for itself, it would not expend any effort to propose the plan (since $c > s$, by assumption). The violation of prebankruptcy entitlements is substantial. E obtains not only the going concern surplus ($s - v$), but a portion of the undiscounted liquidation value as well ($v(1-d^4)$). Notice that H's payoff is independent of $c$.

Some complications should be noted. First, the exclusivity period, $e$, may lapse before bargaining ends. In our model, we assumed that $e = T$. This assumption is reasonable under certain circumstances. It means that (i) the parties discount the future

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19 This is the basic Rubinstein bargaining model with perfect information, which is also used by Baird & Picker, supra note __, and Bebchuk & Chang, supra note __. Baird and Picker, however, use an alternating offer version of the model, on which see below.

20 As noted earlier, “maximization of going concern value” in this context refers both to the fact that $s$ is captured (when it would not if agreement fails and the firm is liquidated at $t=T$) and that agreement occurs in round 0 rather than a later round, given that parties discount future payoffs.

21 One might argue that the court would reject such a plan, because it gives the creditor in round 0 the discounted liquidation value, rather than actual liquidation value, as required by the Code. However, the Code also provides that the court should not enforce the liquidation floor if there is unanimous consent to a plan. Ironically, the creditor's power to waive its right to actual liquidation value injures its interests when the debtor has all the bargaining power. We discuss these issues in greater detail in Part III.
heavily, (ii) going concern value declines rapidly, or (iii) the creditors do not expect to be able to confirm their own plan post-exclusivity (on which see below)—so that, on average, bargaining would not continue beyond round e if the parties could not agree in earlier rounds. However, under plausible conditions, e<T, which means that after round e, H is entitled to make a counteroffer. A model of alternating offers at t>e implies that H and E would divide the surplus that is saved by agreeing at e rather than T.\(^{22}\)

The analysis is difficult because it is not clear how much the existence of cram down, which is monitored by the judge, affects relative bargaining power. However, we can identify the two extreme results which bracket the range of possible outcomes. First, suppose that at any time after the exclusivity period H can cram down a plan that pays it before E. At round e, E will have to offer s (assuming for simplicity that e<s) and H will accept. Thus, in the first round E will offer d's. E retains s-d's. Notice that if e=T, then E will offer d*T (as in the basic model), because at time T, H can obtain only v, not s.

Second, suppose that H has no cram down power. At round e, the going concern value is s, and the discounted liquidation value at time T is d*T-v. If E and H have identical discount factors, then E will offer about \((1/2)(s-dT-v)^{23}\) at round e, and H will accept rather than reject and make a counteroffer. Thus, in the first round E will offer d*(1/2)(s-dT-v) and H will accept. E retains s-d*(1/2)(s-dT-v).

Since cram down is not always practicable,\(^{24}\) the analysis gives us

\(^{22}\) See Bebchuk & Chang, supra note __, at 267.

\(^{23}\) I.e., H and E split the surplus \((s-dT-v)\) available at round e, and H still receives the present value of v in round e \((dT-v)\), so H receives \(1/2(s-dT-v)+dT-v\).

Technically, the split in the surplus would not be 1/2, but rather the party who made the first offer would offer the other party \(d/(1+d)\). ROBERT GIBBONS, GAME THEORY FOR APPLIED ECONOMISTS 68-71 (1992). That is, if the discount factor is .95, the offer will be to give the other party .95/1.95 = 48.7% of the savings. The offeree would accept this, since he cannot make a counter-offer that will be accepted and that gives him more. However, if, by assumption, E and H are equally likely to make the first offer, 1/2 the time they would receive 48.7% and 1/2 the time 51.3%, which averages out to an equal division of the surplus.

\(^{24}\) The reason for this ambiguity is that cram down requires judicial confirmation and the court may make errors. For example, if the court incorrectly believes that e<s, it will erroneously refuse to confirm a cram down, depriving H of cram down power that it ought to have.
a range of possible divisions of value. \( H \) receives \([d'(1/2)(s+d^{T-t}v), \]
\( d'^s] \); \( E \) receives \([s-d'(1/2)(s+d^{T-t}v), (1-d')s] \). Note that \( E \) always obtains a portion of the going concern surplus, an advantage attributable to its agenda control during the exclusivity period. \( H \) might receive a portion of the going concern surplus. For example, with cram down \( H \) receives \( d's \), which could be, though is not necessarily, greater than \( v \).

Second, the value of \( s \) and \( v \) can vary. On average, \( s \) might decline because a firm’s resources are diverted to expenses associated with the reorganization process and because during reorganization managers might have poor incentives to maximize the value of the firm. This, however, does not affect our analysis when \( e=T \), because \( E \) always gives \( H \) slightly more than discounted liquidation value, which \( H \) will always accept, and \( s \) plays no role in the bargaining. When \( e<T \), \( H \) expects \( d's \) when it has the cram down power, in which case the possibility that \( s \) will decline reduces the amount that \( H \) will accept in the first round. The value, \( s \), may also fluctuate with exogenous changes in the market. Again, this does not affect our analysis when \( e=T \), because \( H \) will never accept less than its discounted liquidation value. When \( e<T \), the possibility of fluctuation benefits \( E \), because a sharp spike upward (after round \( e \)) can result in \( H \) being paid off in full and \( E \) receiving the entire residual (we assume no cram down power here), whereas a sharp decline is shared. The asymmetry gives \( E \) an option value from delay.\(^{25}\) In addition, \( v \) might decline (or increase) for either of these reasons, but further discussion of these complications would take us too far afield.

Neither complication alters the qualitative conclusions of the basic model. Agreement occurs immediately, so delay costs are avoided and going concern value is maximized; and the debtor obtains more value than it would if prebankruptcy entitlements were respected.

3. Strategic Voting with Two Parties and Imperfect Information

\( E, H \), or both parties might have private information. \( E \) might have private information about its liquidation or going concern value, because its managers specialize in understanding the firm and

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\(^{25}\) See Bebchuk & Chang, supra note __, at 264.
its market sector. H might have private information about its valuation of a reorganized firm, which we call its “postbankruptcy interest.” For example, trade creditors or employees might obtain value from dealing with a reorganized version of the debtor, which cannot occur if the debtor is sold off in pieces. And both E and H might have private information about their discount factors (if imperfections in the capital market prevent them from engaging in optimal borrowing, such that discount rates vary).

For the moment, assume that only E has private information about its value, \( E_1 \) or \( E_h \), and that each firm, \( E_i \), has liquidation value \( v_i \) and going concern value \( s_i \). A firm has low value with a probability of \( q_l \) and high value with a probability of \( q_h \). Because of the exclusivity period, \( E_i \) has the power to make an offer immediately or to delay before making an offer. It might choose to delay in order to signal that its value is low. The game continues for \( t = T \) rounds, and then ends with the liquidation of \( E_i \) if an offer has not been accepted. \( E_i \)'s payoff is its going concern value (\( s_i \), high or low, minus the value of the offer accepted at round \( t \), discounted to present value: \( d^t(s_i - p(t)) \). H 's payoff is \( d^t(p(t)) \).

Two kinds of equilibrium can result: separating or pooling. In a separating equilibrium, \( E_h \) offers \( d^t(v_h) \) in round 0; \( E_i \) delays and offers \( d^{t-i}(v_i) \) in round \( t \); H accepts either offer; and H believes that a first-round offer of \( d^t(v_h) \) can only be from \( E_h \), and that an offer following a delay can only be from \( E_i \). Thus, if the firm is high value \( H \) receives \( d^t v_h \) and \( E \) retains \( s_i - d^t v_h \). If the firm is low value \( H \) receives \( d^t(v_i) \) (which equals \( d^t v_h \)) and \( E \) retains \( d^t(s_i - d^t v_i) \). The explanation for this result is that delay can signal that the firm is low-value, because a high-value firm loses more from delay than a low-value firm does. Note first that \( E_h \) must make a first-round offer greater than or equal to \( H \)'s discounted liquidation value, \( d^t(v_h) \), in order to deter \( H \) from rejecting the offer, assuming \( H \) believes first-round offerors are high-value. If \( H \) believes that anyone who delays is low value, \( H \) will accept an offer delayed to round \( t \) so long as it

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26 This model is a slightly modified version of John Kennan & Robert Wilson, Bargaining With Private Information, 31 J. ECON. LIT. 45, 63 (1993) (discussing screening, rather than signaling, and making some other assumptions); Anat R. Admati & Motty Perry, Strategic Delay in Bargaining, 46 REV. ECON. STUD. 345, 360 (1987).
equals $d^{t-t'}(v_i)$, by similar reasoning. To understand why $H$ would have these beliefs, note that $H$ must consider the possibility that $E_h$ would mimic $E_l$ and delay before making an offer. If both types delayed until round $t$, then $H$ would accept only if the offer equaled the expected liquidation value, which is $d^{t-t'}v_o$, where $v_o=q_hv_h+q_lv_l$. Thus, $E_s$'s expected payoff from pooling would be $d'(s_t-v_o)$. Therefore, the separating equilibrium can be sustained only if: $s_t-d'v_h > d'(s_t-v_o)$, for all $0<t<T$, that is, if $E_h$ maximizes its share by revealing itself in the first round to be a high-value firm. Finally, $E_l$ prefers to delay until round $t$, if $d'(s_t-d'v_l) > s_t-d'v_h$. These conditions are met, as long as there is a sufficient difference between $v_h$ and $v_l$ and between $s_t$ and $s$, $q_i$ is not too small or large, the relevant bargaining period ($T$) is sufficiently long, and discounting is not too high or low.

Otherwise, pooling will occur. With pooling, $E_i$ would make a first-round offer of $d'v_o$, and $H$ would accept it. $E$ retains $s-d'v_o$.

The model shows that if $E_i$ has private information about its liquidation value, it may delay in order to signal that it has a low valuation. $E_h$ and $H$ agree in the first round, with $E_h$ obtaining the entire going concern surplus plus a portion of the initial liquidation value (just as in the perfect information model), and going concern value is not lost. But $E_l$ and $H$ do not agree until round $t$, with the result that some going concern value is lost. The average cost of delay is $q(s-d's)$. Note that this loss is borne entirely by $E$, which receives $d's-d'v_l$, rather than the $s_t-d'v_l$ it would receive if there were no private information and agreement occurred in the first round. $H$ receives $d'v_l$ in either case. If there is no spread between $v_h$ and $v_l$, or (formally the same) $q_h$ is 0 or 1, there is no private information, and parties agree immediately as in the perfect information model. It would be more realistic to assume that $E_i$ cannot engage in obvious delay, since that might provoke a court to end the exclusivity period or appoint a trustee. But the same result would obtain if one

27 This equilibrium might seem plausible only if $d'(s_t-d'v_l) > s_t-d'v_o$. If it is not, then both types of $E$ do better in the pooling equilibrium, where they make a first round offer of $d'v_o$ and $H$ accepts. See Douglas G. Baird et al., Game Theory and the Law 255, 307 (1994). Still, given a separating equilibrium for which this inequality is not true, no debtor will be the first to deviate. They face a collective action problem, because each would be better off only if both deviate.
assumed that \( E \) made very low offers in early rounds, which \( H \) rejected in the expectation of obtaining a higher offer in a later round, high enough to offset discounting. (The low offers in early rounds cannot be high enough for \( H \) to accept, because then \( E \) would mimic.)

The model also shows that prebankruptcy entitlements are violated even under the assumption of imperfect information. To be sure, \( E \) absorbs the cost of delay, \( q(s - d's) \), and in this sense violation of prebankruptcy entitlements are slightly less extreme than in the first model, holding all else equal. But it remains the case that \( E \) is likely to obtain substantial value, even when \( c>s \).

Some complications should be noted. As in the perfect information model, assuming a limited exclusivity period and an option value for delay does not change the basic conclusions. Nor would the more realistic assumption that \( E \) can make an offer along a continuum. Nor (we think) would the more realistic assumption that \( E \)'s type lies along a continuum rather than taking one of two discrete values. In this situation we would have multiple equilibria, but the qualitative conclusion (a likelihood of delay) would remain unchanged. Finally, the conclusions would not change if we assumed that \( E \)'s private information concerned its discount factor or other relevant parameters rather than the firm's liquidation value.

It should also be mentioned that \( H \), rather than (or in addition to) \( E \), might have private information. \( H \) might have private information about its discount factor if capital markets are poor, as might be the case if \( H \) consists of employees, warranty holders, and other small creditors. \( H \) might also have private information about returns it might realize from a reorganized debtor. If \( H \) consists of trade creditors, for example, they may prefer reorganization because they expect future business with the reorganized entity. Call \( H \) a high value creditor if it either has an interest in the reorganized entity or a low discount factor. In a model in which only \( H \) has private information and \( E \) moves first, delay will occur due to screening rather than signaling. \( E \) will initially offer an ungenerous plan that only the high value \( H \) accepts, and if rejected will delay and then offer a more generous plan that the low value \( H \) accepts. If both \( E \) and \( H \) have private information, \( E_h \) will make an immediate offer and \( H_h \) will accept immediately; \( E_l \) will delay and \( H_h \) will accept.
immediately after the delayed offer; $E_h$ will make an immediate offer and $H_1$ will delay before accepting; and $E_1$ will delay, and then $H_1$ will delay further.\footnote{See Kennan & Wilson, supra note __, at 65-66, 79-80 (“attrition” model).}

Finally, note that (with $e=T$) signaling is possible only because prebankruptcy entitlements are respected in liquidation at round $T$. If $H$ were not entitled to a share of the liquidation value of the firm, $H$ would have to accept 0 (or $e$) from either type of $E$ at round $T-1$, and hence on the first round. This means that $E$ retains its entire going concern value, regardless of its type. But if both types of $E$ retain their entire going concern surplus, the low type gains nothing by delaying before making an offer to $H$. Instead, the low type would simply lose the time value of its going concern surplus between rounds 0 and $t$. Hence, the low type would not delay, a separating equilibrium is impossible, and going concern value would be maximized. This is another example of our claim about the tension between maximizing going concern value and respecting prebankruptcy entitlements.

4. Strategic Voting with More Than Two Voters and Perfect Information

The assumption that $E$ bargains with a single hypothetical creditor is quite unrealistic. Debtors rarely have only one creditor and creditor interests are not perfectly aligned. Unfortunately, it is difficult to model bargaining among more than two parties, and we have found no such models that can be straightforwardly applied to Chapter 11. The following passages describe somewhat impressionistically how the results of the first two models might change if the assumption of a single creditor is relaxed.

One might begin by assuming that $E$ faces two creditors, $C_1$ and $C_2$, with claims $c_1$ and $c_2$. Let $\alpha_1 = c_1/(c_1 + c_2)$ and $\alpha_2 = c_2/(c_1 + c_2)$, so that $\alpha_1 + \alpha_2 = 1$. (For $n$ creditors, $\sum_{i=1}^{n} \alpha_i = 1$.) In round $t$, $E$ makes an offer, and the two creditors simultaneously vote yes or no. If either creditor votes no, we move to round $t+1$; in round $e=T$ the debtor is liquidated and each creditor receives its pro rata share, $\alpha_i$ of the liquidation value, $v$. The round $T$ liquidation payoffs to $(E, C_1, C_2)$ are $(0, \alpha_1 v, \alpha_2 v)$. In round $T-1$, $E$ would propose $(s-dv, d\alpha_1 v, d\alpha_2 v)$. Continuing in this vein, $E$ would propose $(s-d'v, d'\alpha_1 v, d'\alpha_2 v)$ in...
the first round, and the creditors would accept. Notice that our qualitative results do not change: delay is avoided so going concern value is maximized, and prebankruptcy entitlements are violated.29

An advantage of relaxing the assumption of a single hypothetical creditor is that it allows us to consider the possibility that creditors might have different interests. Suppose, for example, that C2 has a postbankruptcy interest in reorganization, because it expects to have valuable continuing business with the reorganized debtor; C1 does not. Represent this by an amount, h. The round T liquidation payoffs to (E, C1, C2) are (0, α1v, α2v-h). In the first round E would propose (s-dTv, dTα1v, dT(α2v-h)), and the creditors would accept. Alternatively, if the creditors differ with respect to their discount factors, payoffs will reflect this difference. E will propose (s-(d1Tv+d2Tv), d1Tv, d2Tv). Under both alternatives, E’s agenda control enables it not only to obtain value in violation of prebankruptcy entitlements (as in the other models), but also to treat differently creditors with the same prebankruptcy entitlements.

A more difficult and interesting problem arises when we assume that ε<T, so that each creditor acquires an opportunity to propose its own plan at t>ε. Suppose that at round ε+1, the debtor and each creditor has a 1/3 chance of proposing a plan. The non-proposers must vote for the plan. If either votes against the plan, then the debtor and each creditor again has a 1/3 chance of proposing a plan at round ε+2, and so on. The logic of the two-party alternating offers model would seem to extend to this bargaining problem, so that payoffs at round ε are {1/3(s-dTv), 1/3(s-dTv)+α1dTv, 1/3(s-dTv)+α2dTv}. At round 0, the payoffs are: {s-(2/3dTv)+dTv, 1/3dTv, 1/3dTv+α1dTv, 1/3dTv+α2dTv}. Notice that discounted liquidation value is distributed in conformity with prebankruptcy entitlements, whereas going concern surplus is distributed based on the relative bargaining power created by the voting rules.30

29 Unfortunately, there are many other equilibria. See Martin J. Osborne & Ariel Rubinstein, Bargaining and Markets (1990). We think that the outcome in the text is most plausible in the aggregate, and we will use it henceforth for the purpose of analysis.

30 This implies that a creditor C_i could receive more than c_i. One might argue that the judge would not allow this, so that a creditor’s payoff is truncated by the size of
The debtor might not realistically have a chance to propose a plan at round \( t > e \); on the one hand, creditors formally have the right to cram down a plan that gives nothing to the debtor; on the other hand, the debtor might waste its own assets or take negative net present value risks unless it expects to receive value from the reorganization. In the first case, the debtor does not really have a \( 1/3 \) chance of proposing a plan, and thus would not receive a \( 1/3 \) share of the round \( e \) surplus, \( s - d^{T - e} v \). Similarly, a small or unsophisticated or uninterested creditor is unlikely to participate actively in bargaining after round \( e \), and thus would not expect its share of the round \( e \) surplus; it would receive instead its share of the discounted liquidation value, and the payout to the other potential bargainers after round \( e \) would correspondingly increase.

An important difference between two-party and multi-party models arises from the choice of voting rules. In a two-party model, the voting rule is always implicitly unanimity: both parties must consent to a plan. In a multi-party model, an alternative that must be considered is majority rule. In fact, we will see that a unanimity rule can present serious problems, and so a majority rule can be quite attractive. But under majority rule, the analysis in the preceding paragraph changes.

To see why, imagine bargaining after round \( e \), and assume that 3 creditors bargain over a plan that will give the debtor 0. At round \( T \), all creditors receive their share of liquidation value. At round \( T - 1 > e \), one might assume that one creditor, \( C_1 \), has the power to propose a plan. \( C_1 \) will give \( C_2 \) and \( C_3 \) their discounted liquidation value and retain the surplus \( s - d^{T - e} (\alpha_2 + \alpha_3) v \) for itself. At round \( T - 2 \), another creditor, \( C_2 \), has the power to propose a plan. Now \( C_2 \) does not know whether it, \( C_1 \), or \( C_3 \) will have agenda power at round \( T - 1 \), so it will offer \( C_1 \) and \( C_3 \) a third of what they would obtain at \( T - 1 \) if they had agenda control plus two thirds of what they would obtain if they lacked agenda control. Thus, this model suggests that, at round \( e - 1 \), each of \( n \) creditors expects to receive, at round \( e \), \( 1/n \) times the

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his claim. For example, \( C_1 \)'s payoff is \( \min (1/3d^e (s - d^{T - e} v) + \alpha_2 d^{T - e} v, c_1) \). However, since by assumption the judge does not know \( s \), it is not clear how the judge could prevent the overcompensation of creditors if payments under the plan are not in the form of cash. To simplify exposition, we assume that \( 1/3d^e (s - d^{T - e} v) + \alpha_2 d^{T - e} v < c_i \), except when otherwise noted.
difference between $s$ and $d^{T-v}$ (plus its share of $d^{T-v}$). What the debtor will offer the creditors at round 0 is a more complicated matter, which we will discuss in later sections. The point for present purposes is that a model of alternating offers produces an intuitive result of equal sharing of the surplus over discounted liquidation value.

The problem with this model of majority rule is that it imposes more structure on post-exclusivity bargaining than seems to exist in reality. To see why, suppose that at round $e$ the debtor proposes a plan that divides the remaining surplus between it, $C_1$ and $C_2$: $(1/3(s - d^{T-v}), 1/3(s - d^{T-v}) + a_1d^{T-v}, 1/3(s - d^{T-v}) + a_2d^{T-v}, a_3d^{T-v})$. (We assume that the assent of two of the three creditors is necessary for plan confirmation.) In response, $C_3$ might try to bribe $C_1$ to depart from the winning coalition and form a new coalition with $C_3$. Such a bribe might be: $(0, s/2, 0, s/2)$. The debtor might counter by proposing a new coalition to $C_1$ and $C_2$: $(s/4, s/2 + a, s/4 - a, 0)$, where $a$ is some small amount. Then $C_2$ might respond with $(0, 0, s/2, s/2)$, and so on. In principle, cycling could occur indefinitely, while in the meantime the going concern value is depleted. Indeed, the parties might rationally invest in bargaining so as to deplete discounted liquidation value as well. If the creditors anticipate costly post-exclusivity bargaining, the debtor can reduce its offer in round 0 accordingly. We will discuss these possibilities in greater detail in Part II.

For now, it is sufficient to point out that while both the non-cycling result and the cycling result play an important role in explaining Chapter 11’s voting rules, both models have defects and the literature on these issues is not particularly helpful. Thus, problems of multi-party bargaining must be approached with circumspection.

5. Strategic Voting with More Than Two Creditors and Imperfect Information

With multiple creditors and imperfect information, delay can result for the same reason as in the E/H imperfect information model. Again, the debtor may have private information about its value, and low-value debtors will delay in order to signal their type. If the creditors have private information then the low-value creditors may engage in delay, by voting against E’s early offers, in order to
signal that they have high discount factors and/or do not obtain non-plan returns from reorganization. This problem is more serious than in the two-party model, because any creditor with veto power potentially has an incentive to cause delay. In the two-party model when only the creditor (and not the debtor) has private information, the probability of delay cannot be more than the probability that the creditor has a low valuation, \( q \). (It can be less, because pooling can occur.) Suppose that \( q = 0.2 \). In the two-party model, the probability of delay cannot be more than 0.2. Now imagine that the debtor has 10 creditors. If the probability that any one creditor is low-value is 0.2, then the probability that at least one creditor will engage in delay could be as high as .89. Whether the probability would actually be that high in any given case depends on a variety of factors, including the distribution of types, the order of play, and the values of the other parameters. In addition, if—as in the attrition model—creditors take turns delaying, then as the number of creditors increases, so will the length of delay. But the overall conclusion is again similar to E/H with imperfect information: pre-bankruptcy entitlements are violated and going concern value may be depleted through delay.

6. Summary

The Condorcet Jury Theorem implies that voting is a powerful mechanism for information pooling, which is desirable because information pooling enables maximization of the ex post value of the firm. But the models of strategic voting show that parties can exploit voting rules in order to violate prebankruptcy entitlements. The most striking example is the exclusivity period, which is highly favorable to the debtor.\(^3\) If the debtor's bargaining power is reduced (for

example, a reduction in the length of the exclusivity period), the creditor obtains more value. But one cannot generalize from this to the proposition that equalizing bargaining power increases the respect for prebankruptcy entitlements. The creditor’s share of the surplus is unrelated to the size of its claim. This is clear in the multi-party model: creditors receive an amount in proportion to their bargaining power (which is a function of discount factors and postbankruptcy interests, as well as the voting system), so that creditors with equal claims can receive different amounts and creditors with different prebankruptcy entitlements can receive the same amount. If one reduced the debtor’s bargaining power by reducing the exclusivity period, creditors’ positions would improve by an equal amount per creditor, without regard to the size of a creditor’s claim.

In both perfect information models, going concern value is maximized because delay cannot occur. By introducing imperfect information, we see that parties will delay in order to signal their type.\textsuperscript{32} Delay can occur only when parties share bargaining power. When one party (such as the debtor) has all the bargaining power, that party has no reason to delay the plan and the other party has no power to delay the plan. If the only goal of bankruptcy law were to maximize the payouts based on going concern value, we would want to give all the bargaining power to one party. The reason that we do not do this is that the party with all the bargaining power would not respect prebankruptcy entitlements.

So there is a tension. On the one hand, respect for prebankruptcy entitlements implies division of bargaining power in a manner that reflects those entitlements. On the other hand, maximization of going concern value implies concentration of bargaining power in one party. We will see this tension—between exploitation costs and bargaining costs—recur in our analysis of all the voting rules in

\textsuperscript{32} Empirical studies confirm that Chapter 11 proceedings can be lengthy. E.g., Lynn M. LoPucki, \textit{The Debtor in Full Control—Systems Failure Under Chapter 11 of the Bankruptcy Code?}, Part II, \textit{57 Am. Bankr. L. Rev.} 247, 269 (1983) (median of 9.5 months and mean of 10.4 months to plan confirmation in sample containing many small firms); Franks & Torous, supra note __, at 753 tbl. II (mean of 2.57 years among 15 large firms filing after Chapter 11’s effective date of 10/1/79); Weiss, supra note __, at 288 (mean of 2.5 years among sample of publicly-traded firms).
Chapter 11.

We will also see that one way to relieve this tension is to give a prominent role to the court. If the court has good information, it can enforce prebankruptcy entitlements without interfering with reorganization. However, if it has bad information, its attempt to enforce prebankruptcy entitlements will result in their violation, in delay, and in a failure to maximize going concern value.

II. Exclusivity Period

Chapter 11 grants the debtor a 120 day period during which to propose a reorganization plan and an additional 60 day period during which to have its plan accepted. Only after the expiration of this 180 day period may creditors submit their own reorganization plans. This “exclusivity period” may be lengthened or shortened “for cause,” and the period ends prematurely if a trustee is appointed. The exclusivity period is routinely extended, especially in large, complex cases.

The Bankruptcy Code’s approach reflects a compromise between the different approaches taken under the Bankruptcy Act of 1898. Chapter XI had given the debtor an unlimited exclusivity period; Chapters X, while affording some primacy to the trustee if one were appointed, allowed other parties to file competing plans.

The debtor’s exclusivity period is one of the most controversial voting rules. As the two-party perfect information model shows, the

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37 5 COLLIER ON BANKRUPTCY para. 1121.02 (Lawrence P. King ed., 15th ed. rev. 1997). In Chapter X the trustee had an exclusivity period of sorts in which only it could propose a plan, but before confirmation the debtor or creditors could propose an alternate plan. Rule 10-301(c)(1) (superceded); reprinted in 13A COLLIER ON BANKRUPTCY (14th ed. 1977). See generally KENNETH A. ROSEN & ANGEL R. RODRIGUEZ, SECTION 1121 AND NON-DEBTOR PLANS OF REORGANIZATION, 56 AM. BANKR. L.J. 349 (1982). Chapter X was criticized for being time-consuming and frequently unsuccessful. 124 Cong. Rec., Remarks of Congressman Don Edwards, at 32405 (Sep. 28, 1978) (reporting on 991 chapter X filings, of which only 664 had been “terminated” and only 140 had resulted in the confirmation of a plan).
right to control the agenda gives the debtor a great deal of bargaining power. If $e=T$, the creditor will accept a plan that gives it only the discounted value of the liquidation value at round $T$. As a result, the debtor obtains not only the going concern surplus, but also the difference between the round 0 liquidation value and the discounted round $T$ liquidation value. If $e<T$, the creditor may still be forced to accept a plan that gives it less than actual liquidation value at the time of bankruptcy, and no more than a discounted portion of the going concern value at round $e$. These results are substantial violations of prebankruptcy entitlements, according to which (so long as $c<s$) a creditor should obtain the entire going concern value of an insolvent debtor.

It might be argued that the creditor in the two-party model would announce in round 0 that it would refuse to accept an offer that did not give it some or all of the going concern value. Because the debtor offers only discounted liquidation value, the creditor does no worse by delaying. But if the debtor offered the creditor just slightly more than discounted liquidation value, the creditor would accept on the first round, because the debtor’s threat to the creditors $(d'v + \epsilon)$ would be credible, and the creditors’ threat (to reject the debtor’s plan) would not be credible. This is because once the debtor actually proposes a plan giving the creditors discounted liquidation value, the debtor has committed not to give the creditors more than that amount. The creditor, despite any pre-proposal ultimatums, would be faced with accepting the debtor’s offer or waiting and receiving even less. The debtor’s

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38 This assumes the debtor can only prepare, propose, and have balloting on one plan during the exclusivity period. Proposing multiple plans can be difficult, especially because the disclosure statement hearing will be held at least 25 days after the disclosure statement is filed. 11 U.S.C. §1125; F.R.B.P. 3017(a). The analysis does not change significantly if we assume that the debtor has time to propose several plans during the exclusivity period.

39 Baird & Picker argue that the exclusivity period has no effect on debtor-creditor negotiations because it affects only who must formally propose a plan, so that the parties can informally negotiate back and forth. They therefore model debtor-creditor bargaining as consisting of alternating offers and counteroffers. Baird & Picker, supra note __, at 321-22, 329. It is true that during the exclusivity period creditors can communicate with the debtor and other creditors, and even propose (informally) their own plans. Century Glove, Inc. v. First Amer. Bank of N.Y.,
The exclusivity period gives it a decisive advantage; it allows the debtor to transform a bilateral bargaining game into an ultimatum game. Given the one-iteration nature of the reorganization, the creditors would rationally accept the offer.\footnote{The debtor's share might be smaller if it were uncertain of the creditors' return from voting no, or of the creditors' rationality. For example, some creditors might have a high probability of being creditors in future bankruptcies, and hence might invest in a reputation for insisting on a greater respect for their pre-bankruptcy entitlements by voting against a proposal of \( d'v \). Since the debtor would likely receive little or nothing if a plan were not confirmed during the exclusivity period it might increase its proposed payout to creditors in order to insure acceptance. Cf. David M. Kreps et al., Rational Cooperation in the Finitely Repeated Prisoners' Dilemma, 27 J. Econ. Theory 245, 246-47 & n.3 (1982) (players may cooperate in Prisoners' Dilemma if uncertain as to other player's payoffs and/or rationality).}

The question is, then, why the Bankruptcy Code would give such an advantage to the debtor. This question can be divided into two further questions: why should there be an exclusivity period, and, if there should be an exclusivity period, why should it be given to the debtor rather than to a creditor or another party.

To answer the first question, suppose that no one enjoyed the exclusivity period. Suppose, for example, that \( E \) or \( H \) could propose a plan and both would vote on whatever plans are proposed. If one modeled this bargaining problem as alternating offers, the going concern surplus would be roughly split between \( E \) and \( H \).\footnote{See our discussion above, note \_\_\_.} If \( E \) does not have much bargaining power, as would be the case if \( H \) can cram down a plan at any time, then \( H \) will receive most of the going concern surplus. In sum, if the debtor did not enjoy an exclusivity period, the debtor would receive less value, and given that the debtor has no prebankruptcy entitlement to value, this result would respect prebankruptcy entitlements without affecting the maximization of going concern value.

With imperfect information, the analysis does not change much.

\footnote{860 F.2d 94, 101 (3d Cir. 1988). But since plans are cumbersome to draft, disclose, and vote upon, the debtor's plan has a credible take-it-or-leave it aspect that the creditors' oral counteroffers lack. See Bebchuk & Chang, supra note \_\_, at 257, 271-72 ("bargaining in the reorganization context differs from that in other contexts, in which each round of bargaining . . . can take a very short period of time").}
If no one had an exclusivity period, but instead E or H could propose a plan at any time, then again one could model this problem as alternating offers. Suppose that E has private information about its type and H does not have private information. If E moves first and is a low type, it might delay or make an unacceptable offer in order to signal its type. Either the delay is adequate to signal E’s type, or, if not, H might screen by making an aggressive demand that only a high type E would accept. If H moves first, it would screen by making an aggressive demand that only a high type E would accept, and, again, a low E would turn down this offer and might even delay further in order to signal its type. This result is not qualitatively different from our result when the exclusivity period exists, because although the exclusivity period creates a less equal distribution of bargaining power, it gives enough bargaining power to both parties to make delay worthwhile. As noted above, delay could be avoided only if H had no bargaining power at all, in which case E would receive the entire going concern value.

With multiple creditors, the analysis becomes more complex. Our three-party model, with alternating offers, implies that payoffs will be \( \{ \frac{1}{3}(s-d-T-ev), \frac{1}{3}(s-d-T-ev)+a_1dT-ev, \frac{1}{3}(s-d-T-ev)+a_2dT-ev \} \) when an exclusivity period exists. If no exclusivity period exists (\( e=T \)), payoffs are \( \{ \frac{1}{3}(s-dTv), \frac{1}{3}(s-dTv)+a_1dT-ev, \frac{1}{3}(s-dTv)+a_2dT-ev \} \); the plan proponent offers to split the surplus in round 0. As the number of creditors increases, the debtor’s share becomes smaller, which is desirable, but the creditors gain equally rather than pro rata, which is inconsistent with prebankruptcy entitlements.

In practice, obtaining unanimous consent to a plan would seem to be quite costly, especially when many creditors have claims and when parties make errors about the value of the firm. Parties who erroneously overvalue firms will resist plans that make small payouts. As a result, some creditors might expect that their bargaining costs would exceed the share of the surplus they expect to obtain, and rationally refrain from bargaining. Sophisticated creditors, with lower bargaining costs, would remain disproportionately involved, as would large creditors. (The larger a creditor’s claim is, the more cost-effective its monitoring the debtor would be before bankruptcy, and hence it would likely have better information about the debtor.)

In any event, Chapter 11 provides for a combination of
majoritarian and supermajoritarian voting, not unanimity. We explore the reasons for this in Part IV. For now, assume that the unanimity rule produces insurmountable difficulties and that instead a simple creditor-based majority voting rule is in place.

As we saw in Part I.B.3., it is possible that cycling occurs under majority rule. During the negotiation and voting stage, each creditor will invest in proposing a plan or joining a coalition that will propose a plan— a cost which we will call k, the costs of negotiating with other creditors and the debtor, serving on a creditors’ committee, monitoring the debtor, and so on. Suppose that creditors not in the winning coalition could be frozen out, receiving nothing. Then each creditor would invest up to its possible payout in bargaining costs if that would guarantee membership in the winning coalition. Thus, the firm’s value would be completely depleted by these strategic costs.

For example, suppose that there are 10 unsecured creditors with \( c = 100 \) each, \( v = 250 \), \( s = 500 \), and \( d = 1 \). Six creditors could form a coalition that gives each member $83 and each non-member $0. Each creditor would spend up to $83 to avoid being excluded from the coalition. In the aggregate they would spend $830, thus dissipating (and in fact exceeding) the entire amount of \( s \). One might argue that each creditor would discount its investment by the probability that the investment would pay off (.6, assuming it expected the other creditors to invest as well), and thus each would spend no more than $49.80 to obtain membership in the winning coalition. Even then, \( s \) would be virtually depleted. Moreover, the creditors might continue to spend money even after they had made

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42 If not, the non-cycling model suggests a division of value between all parties. The analysis is the same as the analysis of bargaining under the unanimity rule, above.


44 That is, here we abstract away from the liquidation floor discussed in Part III.

45 From this perspective, 11 U.S.C. § 503(b)(3)(D), which allows the recovery of plan preparation costs in certain circumstances, has the perverse effect of increasing strategic behavior. Doubtless conceived as a way to overcome the “free-rider” problem and allow small creditors to afford plan preparation costs, it allows a creditor to externalize strategic behavior costs and thus could induce a creditor to spend more than its anticipated share.
their initially-calculated expenditures, because they would not necessarily reach agreement after the initial expenditures. It would continue to be rational to invest in bargaining, as long as \( s > 0 \); the initial expenditures would be sunk costs. In theory, cycling between options, or more generally the destabilization of a potential winning coalition by a counterproposal from those left out of the coalition to a subset of the coalition, can continue forever, so creditors could spend an indefinitely large amount of money and never approve a plan. We refer to these costs as the costs of “intrigue,” or rent-seeking costs.

To prevent cycling, the judge might intervene and impose a voting method such as a run-off that would produce a “winning” plan (or the judge might select a plan and cram it down). However, the plan that emerged victorious from such a method would necessarily be arbitrary (i.e., sensitive to the order in which plans were voted on) and thus would not reflect the preferences of creditors as a whole in any meaningful sense.\(^{46}\) Section 1129(c) allows the judge to confirm a plan from among those that meet the consensual requirements of 1129(a) or the cram down requirements of 1129(b) and directs the judge to “consider the preferences of creditors” in choosing between plans. It does not, however, require that the judge consider those preferences in any systematic way.\(^{47}\)

The exclusivity period, however, provides a possible solution to this problem. The cost of intrigue and the depletion of value that results from delay caused by cycling can be eliminated if one party is

\(^{46}\) See, e.g., William A. Riker, Liberalism Against Populism 65, 141-43 (1982).

\(^{47}\) Epstein, supra note __, at §11-20 (1992) (“None of [the questions about what voting methods would be adopted on multiple plans] has yet been answered.”). Nor does §1129(c) necessarily require the judge to follow the creditors’ preferences, so long as he or she considers them. See In re Rolling Green Country Club, 26 B.R. 729, 735 (Bankr. D. Minn. 1982) (“the court is of course free to make its own determination [as to which plan to confirm] having taken into account such preference [of the creditors]”).

F.R.B.P. 3018(c) directs the parties to utilize the “appropriate Official Form” in accepting or rejecting a plan or plans; Official Form 14, “Ballot for Accepting or Rejecting Plan,” provides creditors with space to identify their first and second choices in case “more than one plan is accepted.” The use of certain voting methods (e.g., Condorcet or Borda) would require some modification of the Official Form, but it seems likely that a judge might do so in an appropriate case.
given agenda control and allowed to exercise that power over a long enough exclusivity period that it is in no one's interest to incur the costs of creating and breaking coalitions. Because the party with agenda control bears the cost of delay (as in Part I.B.2, supra), it has a strong incentive to avoid delay. But this reduction in intrigue and delay, which helps to maximize the value of the firm, comes at a cost. The party granted the exclusivity period receives with it the power to violate prebankruptcy entitlements in its favor. At the extreme, a debtor with complete bargaining power (for example, if the creditors were entitled to no liquidation value or if they expected to gain nothing post-exclusivity because of cycling) would offer the creditors nothing.

The next puzzle is why the Code tolerates this harmful result by giving the exclusivity period to the debtor, rather than to one of the creditors or to a third party, such as the trustee—practices that existed under the common law and prior bankruptcy statutes.48

To see the problem with such an approach, imagine that a single creditor, chosen randomly or perhaps on the basis of size or familiarity with the debtor, is given an exclusivity period at the onset of bankruptcy. In the two-party model, the result seems unobjectionable: the creditor retains more value than it would with a debtor exclusivity period, consistent with prebankruptcy entitlements. In the multi-party model, however, the creditor with power during the exclusivity period would give the other creditors only their discounted liquidation value (with \( e=T \)), retaining for itself the going concern surplus plus its share of the discounted liquidation value (as in Part I.B.1., the results would change quantitatively but not qualitatively with \( e<T \)). Thus, although the debtor receives its prebankruptcy entitlement (zero, when \( c=s \)), a single creditor likely

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48 An exclusivity period in which two parties can propose plans would not lead to qualitatively different results from the single party exclusivity period or no exclusivity period alternatives discussed in the text. Imagine that the debtor (E) and largest creditor (C1) were given the power to propose plans, and that there is one other creditor (C2). If C2 has veto power over any plan, E and C1 would collude against C2 by agreeing to a plan that divides between themselves the benefit E would obtain in the traditional exclusivity period model, leaving nothing for C2. Alternatively, if C2 lacks veto power and the support of two of the three parties is necessary for plan confirmation, bargaining costs might be incurred in an attempt to form a winning coalition.
receives more than its prebankruptcy entitlement, and the violation of the remaining creditors’ prebankruptcy entitlements is unchanged as compared to the debtor exclusivity period. There is an improvement only in the sense that, ex ante, creditors—not knowing whether they will be lucky or not ex post—on average receive more value than when the debtor enjoys exclusivity.49

It is not clear, then, that giving the exclusivity period to a creditor would result in greater respect for prebankruptcy entitlements. In addition, there is no reason to believe that such a rule would reduce the likelihood of delay. A possible reason for giving the exclusivity period to the debtor, however, emerges if one relaxes the implicit assumption that all parties have identical information about the optimal capital structure (which would maximize $s$).

E might have better information than any creditor about $s$ because the managers have more information (and cheaper access to additional information) about the firm and the market than the creditors do. Thus, E would propose a plan that better exploited business conditions than would a plan proposed by H. E’s disproportionate power is consistent with the Condorcet Jury Theorem’s implication that parties with better information should enjoy weighted votes. One might argue that if H had the exclusivity period, it could simply pay E for its superior information. However, the sale of private information is highly inefficient, because the possessor of the information cannot easily reveal its value without also revealing its content. H would not know how much it had to pay E in order to induce the proper level of information generation, nor would H be able to determine whether E is honest. If H offered E a portion of the reorganized firm’s equity, E would have some incentive to gather and reveal information about the firm’s value. But that incentive would be less than if E had agenda control, in which case since E retains much or all of the going concern surplus it has a significant incentive to choose the optimal capital structure.

Thus, there is a tradeoff: on the one hand, E likely has an information advantage. On the other hand, E has perverse incentives. But, as we have seen, so does the creditor. So on balance,

49 In addition, giving power to a creditor during the exclusivity period can make sense when other rules, such as the equal treatment rule, are in place. See Part V.A.
debtor exclusivity might make sense. A third alternative would be to appoint a trustee and give the trustee an exclusive right to propose the plan. As plan proponent the trustee, unlike the debtor or a creditor, has no incentive to violate prebankruptcy entitlements, but it is likely to have inferior information and incentives to propose a value-maximizing plan as compared to the two alternatives.

Although our analysis shows that an exclusivity period is a good idea, the argument in favor of giving agenda control to the debtor remains more ambiguous. Only experience can show which agent should have agenda control, and historical variation suggests there is no obviously correct answer.

III. The Liquidation Value Floor and Absolute Priority

A. The Liquidation Value Floor

In Chapter 11 a plan will not be approved if any creditor who objects to the plan receives less than it would under Chapter 7. Chapter 7 thus sets a floor on the amount that a creditor can receive in Chapter 11. Creditors at the same level of priority must receive at least as much as they would under the pro rata sharing rules in Chapter 7, but they do not have to share pro rata in Chapter 11. Creditors with high priority must receive at least as much as they would in Chapter 7, but junior creditors may receive value as well in Chapter 11.

Assume that courts can determine \( v \) without error. We will relax this assumption subsequently. Initially, assume that no floor exists. In the two-party perfect information model, with \( e = T \), the payoffs for \((E, H)\) are \((s - d'Tv, d'Tv)\) in round 0. The reason is that at every round \( E \) must offer \( H \) at least as much as the discounted value of the firm if it were liquidated at round \( T \). Now, assume that the liquidation floor exists. One might think that the court would strike
down a plan that offered $H$ only $d^T v$, because this amount is less than the actual first-round liquidation value of the firm, $v$; and therefore, in order to avoid this result, the debtor would offer $(s - v, v)$. The problem with this argument is that the Bankruptcy Code requires the judge to enforce the liquidation floor only if a creditor objects to the plan. But $H$ would not object to the plan, because if it objected, it would never be offered more than $E$’s initial offer, receiving instead $d^{T-1} v$ in subsequent rounds. For example, in the second round $E$ would offer $d^{T-1} v$, and the present value of that amount in the first round is $d(d^{T-1}) v = d^T v$. Accordingly, the liquidation floor does not guarantee $H$ the undiscounted $v$. Indeed, the liquidation floor has no effect in the two-party perfect information model. It would have an effect— it would benefit the creditor— only if the judge were required to enforce it against the creditor’s wishes!

In the model with two parties and imperfect information, the liquidation floor similarly has no effect on behavior. Recall from the discussion of this model that $E$ will offer $H$ at least as much as $H$ can expect in the succeeding round. If $E$ has low value, it may delay before it makes an offer to $H$, but the fact that $E$ has private information does not change its strategy of always offering $H$ just discounted liquidation value. Introduction of the liquidation floor does not change this result. $H$ will, in effect, waive its right to undiscounted liquidation value, because if it refuses to accept $E$’s offer of discounted liquidation value, a round is lost and with it the time value of the offered payment, and in the next round $E$ will simply renew its offer of discounted liquidation value. This result holds even if $H$ has private information, or both parties have private information, or if alternating offers occur at the expiration of the exclusivity period.

These irrelevance results show the inadequacy of two-party models. In the multiple party model with $e = T$, the influence of the liquidation floor can finally be seen. Initially, note that under a unanimity rule any creditor can defeat a plan by voting against it; to

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54 This assumes that if the creditor objects and the plan fails, the debtor keeps agenda control and proposes another plan. If $H$ could convince the judge to convert the case to Chapter 7, then $H$ would object, since it would then receive $v$ more quickly and hence with less discounting.
prevent a creditor from voting against it, the debtor must offer the creditor at least as much as the discounted value of its payoff in round $T$. Whether or not a liquidation floor exists, the creditor would receive at least its discounted share of the liquidation value. However, Chapter 11 does not require that plans receive unanimous consent, and we will see that there are good reasons for approving plans which some creditors oppose. Suppose, then, that plans can be approved by a simple majority rule and that no liquidation floor exists. At any round the proponent of the plan will select a majority of the creditors and offer them their share of the discounted liquidation value; creditors outside the coalition would receive 0. The insiders would vote in favor of the plan, the outsiders would vote against the plan, and the plan would be approved. Payoffs for $E$ and, say, 3 creditors would be $(s - (\alpha_1 + \alpha_2)d^Tv, \alpha_1d^Tv, \alpha_2d^Tv, 0)$. This result violates prebankruptcy entitlements in two ways. Creditors at the same level of priority are paid different amounts, and the debtor (if the proponent during the exclusivity period) obtains the going concern surplus plus a portion of the liquidation value.

Now suppose that the liquidation floor is introduced. If the proponent offers 0 to creditors outside the coalition, those creditors would vote against the plan, and the plan would be rejected since dissenting creditors receive less than their share of $v$. Anticipating this, the proponent would offer all creditors their share of the discounted liquidation value. If a creditor voted against the plan, it would fail and delay would result, so each creditor would vote yes for the same reason $H$ accepts $d^Tv$ in the $H/E$ game. Payoffs would be $(s - d^Tv, \alpha_1d^Tv, \alpha_2d^Tv, \alpha_3d^Tv)$. Prebankruptcy entitlements are more fully respected both because creditors are treated equally and because the debtor (if the proponent during the exclusivity period) receives less (by $\alpha_3d^Tv$) than without the liquidation floor. Note that, as in the two-party model, the liquidation floor does not ensure that the creditors obtain their share of the liquidation value, only that the creditors obtain their discounted share of the liquidation value.

In the imperfect information model with multiple creditors, it is difficult to predict precisely how the debtor would react, but it seems on balance that the liquidation floor will increase the chance of delay. Imagine that there are three creditors with equal claims and with discount factors $d_i > d_m > d_l$. $E$ does not know the discount factors
of the creditors, so it might delay in order to screen. The cost of delaying is that E obtains its payoff later than if it does not delay. E’s payoff is on average lower with the liquidation floor (since it must give something to the creditor outside the coalition), so the per-period cost of delay (d times E’s payoff) to E is lower. This would tend to increase the likelihood of delay. But what is the benefit to E of screening? It is difficult to predict E’s optimal strategy, but the following logic is possible. In the absence of the floor, E could offer \(1/3d_i v\) to two of the creditors, who would be certain to vote in favor of the plan, and so the plan would be approved in the first round. Alternatively, E could offer one creditor \(1/3d_i v\) and the other \(1/3d_l v\). If these two creditors are the medium discount factor and low discount factor creditors, respectively, they will accept immediately, enabling E to obtain a higher payoff. This additional benefit from screening would be \(2/3d_h v - 1/3d_m v - 1/3d_l v\). With the liquidation floor, E could ensure no delay by offering all three creditors \(1/3d_i v\). Alternatively, it could pay one creditor \(1/3d_i v\), one \(1/3d_m v\) and the third \(1/3d_l v\). If these are the high, medium, and low discount factor creditors, respectively, they will accept. The difference would again be \(2/3d_h v - 1/3d_m v - 1/3d_l v\). So at least in this situation, the cost of delay would be lower, and the benefit the same, so delay would be more likely. However, it is difficult to generalize. E might trade off the risk of delay and the gain from a stingy plan in different ways.

We have assumed so far that the judge determines \(v\) accurately; more realistically, judges estimate \(v\) with some error. Call this estimate \(\hat{v}\). If all creditors are offered the discounted value of their share of the liquidation value and vote in favor of the plan, the fact that \(\hat{v}\) diverges from \(v\) does not matter (even if \(\hat{v} > v\)). Under §1129(a)(7)(A)(i) the judge must confirm a plan that all creditors approve, even if some creditors receive less than their pro rata share of \(v\). However, if E can anticipate \(\hat{v}\) and \(\hat{v} < v\), it will offer creditors outside the winning coalition \(a_i \hat{v}\) if \(a_i \hat{v} < \alpha d_i v\). Those creditors will vote against the plan but the judge will approve the plan over their objections. Thus, if predictable error occurs, the liquidation floor’s protection of prebankruptcy entitlements will be reduced. Because our imperfect information model does not produce clear predictions, we cannot say what effect error would have on the parties’ incentive
One might wonder how well the judge can estimate \( v \). If the court's estimate of \( v \) is precise, then why not have it estimate \( s \) as well and decide on a reorganization plan? If it can determine liquidation value accurately, perhaps it can also determine the optimal capital structure of the reorganized entity. We cannot answer this question, but it is worth pondering whether it is reasonable to suppose that courts have the right information to determine the liquidation value of a firm but not good enough information to determine its going concern value. It is possible that a judge can rely sufficiently on market comparisons when valuing individual assets but not when valuing an entire firm, which requires the evaluation of synergies and the projection of demand into the future. But since liquidation can involve the sale of lines of business or even the entire firm as a going concern, one cannot clearly distinguish "liquidation" value and "reorganization" value. It is possible that judges tend to underestimate liquidation value in Chapter 11 proceedings, because if they think liquidation value includes the going concern surplus, they would have converted the case to Chapter 7. If this is true, judges systematically underestimate liquidation value in Chapter 11, with the result that the liquidation floor provides less protection of prebankruptcy entitlements than it would if judges actually knew the liquidation value. We will return to this issue when we discuss cram down.

B. The Absolute Priority Rule and Cram Down

The "absolute priority rule" refers to a general principle that junior creditors should not receive value unless senior creditors are paid in full. The principle is reflected in two sections in Chapter 11. First, section 1129(a)(7)(A)(ii), which provides that every individual objecting creditor must receive as much as it would in Chapter 7, provides more protection to a senior creditor than to a junior creditor but does not guarantee that the senior creditor will be paid in full before the junior creditor is paid. To see why, imagine that \( v=100 \) and \( s=200 \), and that \( C_1 \) has a senior claim worth 120 and \( C_2 \) has a junior claim worth 120. Section 1129(a)(7)(A)(ii) ensures that \( C_1 \) will receive 100 if it objects, because in Chapter 7 the absolute priority rule ensures that it would be paid before \( C_2 \) received any
value. But this means that in Chapter 11 C2 could receive as much as 100, even though C1 would not be paid in full.

Second, section 1129(b) provides that if a senior class objects to a plan and is not paid in full, a junior class will not receive any value. This means that if a few creditors in a class object to the plan and are not paid in full, but the class votes in favor of the plan, junior creditors could be paid despite the fact that some objecting senior creditors are not paid in full. “Cram down” means that as long as a plan satisfies this requirement and the other rules of Chapter 11, a plan can be approved even though one or more classes vote against it, as long as at least one impaired class votes in favor of it.

Note that section 1129(b) does not prevent a plan from paying two classes at the same priority level different amounts—for example, 50 cents on the dollar to a class of unsecured trade creditors and 90 cents on the dollar to a class of unsecured workers—although a judge would need to find that the plan “does not discriminate unfairly.”

In our two-party perfect information model, the APR accounts for our continuing assumption that H can cram down a plan but that E cannot. H can, in principle, propose a plan at round $e$ that pays $(0, s)$ and confirm it (that is, cram it down) against E’s objection, because E is junior to H. But E cannot in any round propose and obtain confirmation of a plan that pays any amount to E unless H consents. Thus, in our two-party perfect information model, E can obtain value only because of its ability to use its power to delay in order to extract concessions from H.

However, this argument assumes that the court can properly enforce the APR. Suppose that in round $e$, H proposes an all-equity plan that provides for $(0$ shares, $100$ shares). H’s claim is $c=100$, and H argues correctly that $s=100$. E objects to the plan, claiming that $s=200$ and that therefore, because H’s prebankruptcy entitlement is limited to the satisfaction of $c$, H should receive only $50$ shares. How can the judge evaluate this claim? If the judge cannot make an accurate estimate of $s$, then he or she simply cannot determine when cram down is appropriate. However, if the judge can make an accurate estimate of $s$, what is the purpose of the Chapter 11 voting

\[55 \text{11 U.S.C. §§725, 726.}\]
rules? After all, if the judge can estimate, he or she can reorganize the firm. The conclusion is inescapable that either judges should determine the new capital structure by themselves (which seems implausible) or that judges should never cram down a plan that pays in the form of securities rather than cash.56 Judicially-sanctioned cram down might also raise concerns if one assumed that bankruptcy judges, lacking Article III status, might in some cases be biased towards reorganization and against liquidation in an effort to save local jobs.

A problem with the absolute priority rule is that sometimes equity or junior creditors are willing to make loans to the reorganized debtor and imperfect capital markets prevent third party lenders from making such loans. It is possible that the going concern surplus is maximized if such loans are made, that the junior interest will make the loans only if they receive a share of the reorganized firm, and that strict application of the absolute priority rule would interfere with a plan that compensated the junior interest for this contribution because a class of senior creditors object to the plan. Although there is some controversy, case law suggests that there exists a “new value exception” that prevents such interference.57 Under this exception, a junior class can receive a share of the reorganization so long as it contributes “new value” to the reorganized firm. New value usually is in the form of capital or service.

This raises again the judicial information problem discussed above. Application of the new value exception requires a judge to determine the value of the junior interest’s contribution and its compensation in the form of securities in the reorganized firm, so that it can confirm that the compensation is justified by the contribution. The contribution may be easy to evaluate, especially if it is a straightforward capital investment. But the compensation, if in

56 If a plan is all-cash, cram down would still be puzzling: why not simply have the judge distribute the cash according to the APR; as noted above, cram down does not require respect for prebankruptcy entitlements among creditors at the same priority level.

57 E.g., In re 203 N. LaSalle St. P’ship, 126 F.3d 955 (7th Cir. 1997), cert. granted 118 S.Ct. 1674 (1998). For an analysis, see Baird & Picker, supra note __, at 325-28.
securities, is a function of $s$; and by hypothesis the judge does not know what $s$ is. So the new value exception, like the cram down power itself, depends on the negative of the assumption—judicial information problems— that motivate the Chapter 11 voting rules.

IV. Majority and Supermajority Rules, and Bicameralism

In Chapter 11 the proponent of the plan (usually the debtor) divides the creditors into classes. Each class votes on the plan separately. A class accepts a plan if (1) a majority of the claims in the class are voted in favor of the plan; and (2) two thirds of the amount of the claims in the class are voted in favor of the plan.\(^5^8\) It is convenient to think of this system as bicameral, with a “creditors house” in which each creditor holds one vote, and a “claims house” in which each creditor has a vote for each dollar of its claim. Both houses must approve the plan. We discuss the division into classes (as opposed to having no classes) in Part V. Here we assume that all creditors are in a single class and ask: why voting is bicameral, and why use a majority requirement for creditors and a supermajority requirement for claims.

A. Majority and Supermajority Rules

There is a continuum of possible voting rules, from dictatorship to unanimity, with majority and supermajority rules in between. If voters are sincere and voting costs are zero, the benefit of information pooling increases as the inclusiveness of the voting rule increases. This result argues for majority, supermajority, or unanimity rules, as opposed to the dictatorship rule. Because the benefit of information pooling increases with the number of voters at a decreasing rate, the gain from moving to a high supermajority rule to a unanimity rule will be small. Accordingly, if voting is costly, a supermajority or majority rule is superior to the unanimity rule.

If voters act strategically, the benefit of more inclusive rules is that it becomes more difficult to exclude parties from a winning coalition and to approve a plan that transfers value from them to which they are otherwise entitled. Thus, the more inclusive voting rule reduces “exploitation costs.” However, as the inclusiveness of the

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\(^{5^8}\) 11 U.S.C. §1126(c).
rule increases and more parties must agree, bargaining costs increase. Buchanan and Tullock argue that the optimal voting rule reflects a tradeoff between bargaining costs and exploitation costs. Buchanan and Tullock argue that the optimal voting rule reflects a tradeoff between bargaining costs and exploitation costs. Dictatorship minimizes bargaining costs, but maximizes exploitation costs. Unanimity minimizes exploitation costs, but maximizes bargaining costs. Below, we analyze in more detail these strategic problems.

In our two-party models, the voting rule is not an issue: either both parties must consent, in which case a unanimity rule prevails, or one party can cram down the plan, in which case dictatorship prevails.

To understand the role of voting rules, we must turn to our multi-party models. Initially, assume perfect information. Suppose that n creditors have claims of varying proportion, $a_i$, and varying discount factors, $d_i$. At each round a plan can be confirmed only if the voting rule is satisfied. We assume that the liquidation floor is in effect, and that $e=T$.

Let us start with a dictatorship rule. One creditor, $C_d$, is given the exclusive right to approve or reject the plan. Because of the liquidation floor, the plan is approved if the dictator votes yes and any creditor voting no receives at least its share of the liquidation value. Each creditor obtains $a_id_iTv$ and E retains the balance, which, under normal assumptions about discount factors, will be at least the entire going concern surplus. Despite the dictatorship, each creditor receives the same amount, and all non-creditors vote in favor of the plan. The reason is that E has all the bargaining power and will give dictator and non-dictator alike just enough to obtain their assent—that is, the discounted liquidation value. If E tried to give the non-dictator less value, it would object to the plan (preferring liquidation at round $T$), the liquidation floor would prevent confirmation, and E would be forced to offer the higher amount in

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60 Dictatorship could work in many ways. The dictator could be selected randomly from the pool of creditors, or from a subset comprising the larger or more sophisticated creditors; or the dictator could be determined by rule, for example, always the largest creditor; or the dictator could be selected by the judge using some standard of appropriateness.
order to obtain the time value of its return.

Compare a unanimity rule. Using backward induction, E will reason that it must give each creditor enough every round in order to deter it from rejecting the offer with the expectation of eventually obtaining a share of the liquidation value. Therefore, each creditor will receive $a_d v$ and E will receive the balance. This is the same as the result obtained under the dictatorship rule. Surprisingly, then, unanimity and dictatorship produce the same distribution of value among the parties—as would, by the same logic, any intermediate rule such as majority or supermajority.

Let us now ask which rule produces the least delay. In the perfect information model, no delay occurs. However, the unanimity rule produces this result whether or not the liquidation floor exists, whereas the majority and dictatorship rules would result in a payoff of 0 to creditors outside the winning coalition in the absence of the liquidation floor. To see why, recall that if a creditor votes no under the unanimity regime, the firm is actually liquidated, and all the parties can anticipate what the yield will be. If a creditor votes no under dictatorship or majority rule, then the proponent can obtain confirmation by persuading the judge that the dissenting creditor receives liquidation value. Thus, the judge can err, and the parties can anticipate the judge (unlike the auction) can err. Of course, with perfect information the debtor and creditors can anticipate error and it will be reflected in the plan. But in the real world, this likelihood of judicial error would create uncertainty that is likely to be costly. Therefore, the unanimity rule would seem to dominate these other rules along the dimension of judicial error cost.61

Now suppose that parties have private information about their valuations. Under the unanimity rule, the debtor and every creditor with relatively low valuations may signal, resulting in possibly substantial delay. Under the dictatorship rule with the liquidation floor, any creditor can also cause delay by voting against a plan that gives the creditor average discounted liquidation value. Thus, there is

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61 Other assumptions yield different results. For example, if some small creditors were likely to vote no due to error or inattention, plan confirmation would be difficult under a unanimity rule, while under a majority rule the debtor could give small creditors their actual liquidation value and the plan could be confirmed even if those creditors voted against the plan.
no reason to believe that either rule (or majority rule) produces less delay. However, one might argue that—as above—judicial error might change this result. The difference between unanimity and dictatorship (and majority) is that if a creditor votes no under unanimity the bargaining proceeds to the next round, whereas if a creditor votes no under dictatorship the plan will be confirmed if the judge errs and concludes that the liquidation floor requirement has been met. It might thus appear that delay will occur less often under dictatorship (and majority) than under unanimity. However, it is possible that anticipating judicial error, the parties may, under any of the rules, modify their strategies in ways that we have not considered.

Let us assume now that \( e < T \), with perfect information. The dictator would obtain the benefit of agenda control beginning in round \( e \), \( s - d^{1-e}v \), and it and the other creditors would obtain \( \alpha d^{1-e}v \). Thus, the first-round payoffs to debtor, dictator, and \( n-1 \) other creditors would be \( (s+vd^e, d'(s-d^{1-e}v+\alpha d^{1-e}v), \alpha d^{1-e}v) \), with the last term referring to the payoff for each of the other creditors. By contrast, under the unanimity rule we suppose that any creditor would have an equal chance to propose the plan at any given round \( t > e \), and thus the creditors would have equal expected payoffs: \( (s+vd^e, d'(1/n(s-d^{1-e}v)+\alpha d^{1-e}v)) \). The last term reflects the fact that each creditor receives a \( 1/n \) share of the surplus at round \( e \), plus its discounted share of the liquidation value at round \( e \). Notice that (i) the debtor receives the same payoff under both rules; (ii) the creditors share more equally under the unanimity rule than under the dictatorship rule, but that these shares reflect not prebankruptcy entitlements but rather relative bargaining power. So although the rules produce different distributions, there is no basis for preferring one rule over the other—except again the unanimity rule alone does not require the parties to anticipate a possibly erroneous judicial determination of liquidation value.

One might think that majority rule would produce distributions that lie between those produced by unanimity and dictatorship, but this is not the case. To see why, imagine a creditor-based system. Suppose there are 3 creditors, and assume away cycling. At round \( e \), each creditor has a \( 1/3 \) chance (regardless of the size of its prebankruptcy entitlement) of proposing a plan that would include
one other creditor in a coalition and exclude the third. This means that at round \( e \), each creditor has a 2/3 chance of being in a winning coalition. If a creditor is in a winning coalition, it divides the round \( e \) surplus with the single other creditor in that coalition. All creditors, whether or not in the coalition, receive their discounted liquidation value. Therefore, each creditor expects at round \( e \) to receive 
\[
\frac{2}{3}(1/2)(s-d^T \cdot v) + \alpha d^T \cdot v.
\] Each creditor would thus vote in favor of a plan at round 0 that offered it \((1/3)d^s \cdot (1/3)d^T \cdot v_t + \alpha d^T \cdot v_t\). The debtor must pay this amount to two creditors, but not necessarily to the third. The debtor has a choice. It can either pay this amount to the third creditor as well, or give that creditor its actual liquidation value. If it gives the third creditor its share of the surplus, the third creditor will vote in favor of the plan, and the plan will be approved unanimously even though only a majority is needed. If the debtor gives actual liquidation value to the creditor, the creditor will vote against the plan, but the plan will be approved anyway because the creditor receives actual (not discounted) liquidation value and a majority approves the plan. To maximize its own share, the debtor pays the third creditor \(\min\{(1/3)d^s \cdot (1/3)d^T \cdot v + \alpha d^T \cdot v, \alpha v\}\). The third creditor can be any of the three creditors, so the debtor will choose which creditor to exclude in a manner that minimizes the total payout to the three creditors. On average (as long as sometimes a minority of creditors do worse if they receive their share of actual liquidation value) the debtor is made better off under majority rule than under dictatorship or unanimity rule, and creditors are treated less equally than under these two alternatives. This result is counterintuitive in light of the Buchanan and Tullock hypothesis, but it follows from the fact that the debtor has more bargaining power when it can play creditors against each other, than when it must bargain with a single creditor (under dictatorship) or all the creditors equally (under unanimity).

Suppose that information is imperfect. For dictatorship and unanimity, as is the case when \( e = T \), there is no reason to believe that the rules would produce differences in the amount of delay. Under both rules, all \( n \) creditors have an incentive to signal—in order to persuade the debtor and other creditors that they attach a high value to their liquidation share, and the debtor needs everyone's votes—due to the voting rule under unanimity and in order to
prevent the judge from striking down a plan on the ground that it violates the liquidation value floor under dictatorship. Thus, all creditors have the power to prevent plan confirmation, and therefore the ability to signal, although the point about judicial error for non-unanimity voting rules remains valid. But with a majority rule delay may be less likely. If the debtor excludes some creditors and pays them their actual liquidation value, they cannot signal even if they wish to do so—the judge will confirm a plan over their objection.

Now let us consider the possibility of cycling, which can occur after the exclusivity period terminates, under both perfect and imperfect information. Cycling will not occur under any voting rule when \( e = T \), so we confine our attention to the case when \( e < T \). If the dictatorship rule prevails, cycling will not occur. The reason is that in round \( e \) the dictator makes a take it or leave it offer, and the other creditors accept it. If the unanimity rule prevails, cycling is not technically possible (since a winning coalition includes everyone, it cannot be destabilized), but it seems reasonable to believe that delay is more likely to occur than under dictatorship. The reason is not that the dictatorship rule results in less voting than the unanimity rule. As we have seen, even under the dictatorship rule everyone will eventually vote in favor of the plan. But if we relax our assumptions slightly, and note that in reality under the unanimity rule many creditors may submit a blizzard of plans simultaneously, whereas under dictatorship a single plan will be proposed, we see that in practice a dictatorship rule should result in less delay than a unanimity rule. Even more delay is likely if the majority rule prevails, because actual cycling is possible. The greater the likelihood of delay in this sense, the less the debtor needs to offer to creditors when \( e < T \), since the creditors cannot immediately capture \( s \) in round \( e \).

One final point: some creditors, especially those with small claims, might opt not to vote. Under §1126(c), the voting thresholds must be met only among those creditors who cast ballots for or against the plan. Thus, the debtor might be expected to curry favor with larger creditors since they would be a larger percentage of voting creditors than of all creditors. However, the debtor cannot disfavor smaller creditors simply because most may not vote: even a single negative vote from a small creditor could derail a plan, because a dissenting creditor is protected by the liquidation floor.
We conclude that majority rule protects prebankruptcy entitlements less effectively than unanimity and dictatorship. However, because under majority rule members outside of the coalition who receive actual liquidation value cannot signal and cause delay, signaling and hence delay may be reduced relative to the other rules. The unanimity rule and the dictatorship rule do not appear to produce differences with respect to prebankruptcy entitlements or delay, but the unanimity rule avoids uncertainty that results from the parties’ anticipation of a possible erroneous determination of liquidation value by a court.

B. Bicameralism

One might think that the optimal voting rule, whatever it is, lies somewhere on the continuum between dictatorship or unanimity, its precise location depending on the optimal tradeoff among the factors mentioned above. The drafters of the Code could have taken their best guess, and left it at that. Instead, they added another layer of complexity. The Code provides for a bicameral system, under which the creditors vote, in effect, twice: once based on the principle of one-creditor-one-vote, and once based on the principle of one-dollar-one-vote.

To analyze this bicameral system of creditor-based and claim-based voting, we will use unicameral claim-based voting as the baseline, because that is the system typically used by corporations outside of bankruptcy. We then ask, what is gained by requiring creditor-based voting as well?

Initially, we note that bicameralism has an effect only under majority or supermajority rule. Under a dictatorship rule, the single creditor with the decisive vote in one house has control in both houses, so the outcome does not change when a second house is added. Under unanimity, if all the creditors agree in one house there is necessarily agreement in the second house as well, in spite of the fact that relative voting strength (nominally) differs between the houses. For simplicity, we ignore supermajority rule, and, accordingly, we confine our attention to majority rule.

Bicameralism influences voting outcomes only when there are multiple creditors, so we set aside our two-party models. For the sake of brevity we confine our analysis to bargaining under perfect information. We assume $e < T$, because when $e = T$ bicameralism
produces the same outcome as unilateralism: with all the bargaining power, the debtor gives each creditor its discounted liquidation value.62

Assume n creditors with claims, c. Under the creditor-based majority rule, a majority coalition consists of any group of w creditors, such that w/n > 1/2. Under the claims-based majority rule, a majority coalition consists of any group of w creditors, such that $\sum_{i=1}^{n} \frac{c_i}{\sum_{i=1}^{n} c} > 1/2$. If all creditors have the same claim, such that $c = c$, then the second formula becomes $w/c = w/n > 1/2$: the outcome under creditor-based majority rule and claims-based majority rule is the same. Thus, bicameralism cannot be explained if one assumes that claims are homogenous.

Suppose, then, that claims are heterogeneous. It is immediately clear that as the average size of claims in the winning coalition rises, the first inequality can be violated while the second inequality holds. In the extreme, a single creditor with a claim of $1000 can defeat 99 creditors with claims of $10 in the claims house while losing in the creditors house. At first sight, then, one might argue that by adding creditor-based voting to a baseline represented by claim-based voting, the bicameral system of the Bankruptcy Code reduces the power of large creditors but only when claims are heterogeneous. The reality, however, is more complex.

To see why, we need to analyze the problem more rigorously. Recall our discussion of majority rule in Section IV.A., which assumed that each creditor has one vote. Recall that each of three creditors expects at round e to receive $2/3(1/2)(s - d^{-\alpha}v) + \alpha d^{-\alpha}v$. Generalizing, let $r_i$ be a creditor's probability of being in the winning coalition. Then, each creditor expects at round e to receive $(r_i/w)(s - d^{-\alpha}v) + \alpha d^{-\alpha}v$. The debtor must pay the excluded creditors $(\min\{r_i/w\}(s - d^{-\alpha}v) + \alpha d^{-\alpha}v, \alpha v\})$. At round 0, payoffs for the included and excluded creditors are $(d'[(r_i/w)(s - d^{-\alpha}v) + \alpha d^{-\alpha}v], (\min\{d'[(r_i/w)(s - d^{-\alpha}v) + \alpha d^{-\alpha}v], \alpha v\})$. The debtor will receive $s - \sum_{i=1}^{n} d'[(r_i/w)(s - d^{-\alpha}v) + \alpha d^{-\alpha}v] - \Sigma_{i=1}^{n}\alpha\min\{d'[(r_i/w)(s - d^{-\alpha}v) + \alpha d^{-\alpha}v], \alpha v\}]$. To determine the relative effects of the creditors and claims systems, we need to examine their effects on $r$ and $w$.

How is $r$ determined? To answer this question, one must

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62 See text accompanying supra note __.
imagine how creditors bargain beginning at round e. Each creditor has an equal 1/n chance of proposing the plan, so the ability to propose cannot account for differences in r. Instead, what matters is whether a creditor, as the proponent, can persuade other creditors to vote for its plan and whether this creditor is likely to be selected by other proponents. Consider the following five possible distributions (1-5) for five creditors, A - E.

<table>
<thead>
<tr>
<th></th>
<th>A (r)</th>
<th>B (r)</th>
<th>C (r)</th>
<th>D (r)</th>
<th>E (r)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>10(0.6)</td>
<td>10(0.6)</td>
<td>10(0.6)</td>
<td>10(0.6)</td>
<td>10(0.6)</td>
</tr>
<tr>
<td>2</td>
<td>10(0.75)</td>
<td>10(0.75)</td>
<td>10(0.75)</td>
<td>10(0.75)</td>
<td>10(0)</td>
</tr>
<tr>
<td>3</td>
<td>10(1)</td>
<td>10(1)</td>
<td>10(1)</td>
<td>10(0)</td>
<td>10(0)</td>
</tr>
<tr>
<td>4</td>
<td>10(1)</td>
<td>10(1)</td>
<td>1(0.33)</td>
<td>1(0.33)</td>
<td>1(0.33)</td>
</tr>
<tr>
<td>5</td>
<td>10(1)</td>
<td>1(0.5)</td>
<td>1(0.5)</td>
<td>1(0.5)</td>
<td>1(0.5)</td>
</tr>
</tbody>
</table>

In distribution 1, the proponent (which is each creditor with probability 1/5) is indifferent about which other two creditors join in a winning coalition. Because a coalition must have three creditors, each creditor has a three in five chance of being selected. Therefore, r = 0.6. In distribution 2, one might also think that for each creditor r = 0.6, but this is false. If the proponent is a large creditor (A - D), it will prefer adding other large creditors to its coalition rather than small creditors. The reason is that the plan must pay excluded creditors their discounted liquidation value, and large creditors have higher liquidation values than small creditors (assuming a constant discount factor); and the plan must pay included creditors a portion of the surplus, but this amount is invariant with respect to the size of a claim. So a proponent always does better by including the larger creditors and excluding the smaller creditors. Accordingly, r = 0.75 for the large creditors but r = 0 for E.

63 If a large creditor's discount factor is high enough, it might be replaced in the winning coalition by a relatively small creditor whose discount factor is low.

64 One might argue that r = 0.2 for E, because E would include itself in the winning coalition when it is the plan proponent. In that case r for A - D would be 0.75(0.8) + 0.5(1.2) = 0.9. Note that this changes only the magnitude, but not the direction, of the effect of the size of a creditor's claim on r.

For simplicity, however, we ignore this possibility, noting that smaller creditors likely have less information than larger creditors about maximizing s, and thus their plans might be taken less seriously by the group of creditors as a whole.
This does not mean that small creditors never have voting power. In distribution 4 the small creditors have \( r = 0.33 \) because three creditors are necessary to form the winning coalition; each small creditor has a 1/3 probability of being selected. But one would not observe a coalition of, say, A, C, and D, because A prefers to join B in order to avoid paying B’s high discounted liquidation value.

As to \( w \), \( w \) is the smallest integer such that \( w \geq n/2 \).

In the claims house, \( r \) will differ under certain conditions (as italicized).

<table>
<thead>
<tr>
<th></th>
<th>A (r)</th>
<th>B (r)</th>
<th>C (r)</th>
<th>D (r)</th>
<th>E (r)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>10 (.6)</td>
<td>10 (.6)</td>
<td>10 (.6)</td>
<td>10 (.6)</td>
<td>10 (.6)</td>
</tr>
<tr>
<td>2</td>
<td>10 (.75)</td>
<td>10 (.75)</td>
<td>10 (.75)</td>
<td>10 (.75)</td>
<td>1 (0)</td>
</tr>
<tr>
<td>3</td>
<td>10 (.67)</td>
<td>10 (.67)</td>
<td>10 (.67)</td>
<td>1 (0)</td>
<td>1 (0)</td>
</tr>
<tr>
<td>4</td>
<td>10 (1)</td>
<td>1 (0)</td>
<td>1 (0)</td>
<td>1 (0)</td>
<td>1 (0)</td>
</tr>
<tr>
<td>5</td>
<td>10 (1)</td>
<td>1 (0)</td>
<td>1 (0)</td>
<td>1 (0)</td>
<td>1 (0)</td>
</tr>
</tbody>
</table>

In distribution 3, A would never choose D or E for the reasons given above, and now a 2-party coalition is sufficient, rather than the 3-party coalition needed under the creditors system. This also explains the difference in 4. As to \( w \), \( w \) can now be as low as 1, if a single creditor has a claim larger than half of the aggregate claims.

To compare the two systems, focus on the debtor’s payoff function, and in particular the term, \( \sum_{i=1}^{w} \left[ d^\phi (r_i/w) (s-d^t-v) + c d^t v \right] \), which the debtor wants to minimize. We saw above that both \( r \) and \( w \) are on average smaller in the claims system than in the creditor system. The reason is that under the claims system fewer creditors will be in the coalition \( w \) and thus each creditor has on average a smaller chance of being in the coalition \( r \). The reduction in \( r \) as one moves from creditors voting to claims voting straightforwardly reduces the value of this expression, making the debtor better off. The reduction in \( w \), however, has an ambiguous effect. On the one hand, it reduces the number of terms in the expression, and therefore, because all terms are positive, it reduces the aggregate. On the other hand, it increases the value of each term, and therefore it increases the aggregate. There is thus no reason to believe that on average moving from creditors voting to claims voting increases (or decreases) the payoff to the debtor.
As an example, consider distribution 5. Under the creditor system, A would be in the coalition with a probability of 1, and B-E would be in the coalition with a probability of 0.5; \( w = 3 \). Assume \( d = 0.9, e = 2, T = 3, s = 10, v = 4 \). A must be paid \( (0.81)((1/3)(10-(0.9)(4))+(10/14)(0.9)(4)) = 3.81 \). Suppose the debtor chooses to include B and C. Then B and C each receive \( (0.81)((0.5/3)(10-(0.9)(4))+(1/14)(0.9)(4)) = 1.07 \). D and E each receive \( \min((0.81)((0.5/3)(10-(0.9)(4))+(1/14)(0.9)(4), (1/14)(4)) = 0.29 \). Thus, the debtor retains \( 10 - 3.81 - 2(1.07) - 2(0.29) = 3.47 \).

Under the claims system, A would be in the coalition with probability of 1, and the small creditors would be in the coalition with probability 0; \( w = 1 \). A must be paid \( (0.81)((1)(10-(0.9)(4))+(10/14)(0.9)(4)) = 7.27 \). The four small creditors receive their discounted liquidation value, 0.21. (They have a 0 probability of being in the winning coalition, and thus would vote in favor of this offer—unlike a creditor with \( r > 0 \) they do not suffer from being excluded.) Thus, the debtor retains \( 10 - 7.27 - 4(0.21) = 1.89 < 3.47 \). In this example, the creditors receive higher payouts under claims voting than under creditors voting, but—as we said above—one cannot generalize.

Against this rather confusing background one can evaluate bicameralism. If the bicameral system required a majority of creditors and a majority of claims, it would produce an outcome identical to that of a unicameral creditor system. The reason is that under creditor majority rule, the plan proponent prefers to include the largest creditors in the coalition; therefore, any coalition that obtains a majority under creditor majority rule will also contain a majority of claim value. Thus, the comparison between majority bicameralism and the claim system is the same as the comparison between the creditor system and the claim system.

Chapter 11's bicameralism, however, provides that the claim house must approve the plan by a 2/3 supermajority. To see the effect of this requirement, consider Table 1.

Bicameralism affects the outcome under creditor majority rule only when claims are relatively homogenous. The reason is that when claims are heterogeneous, the coalition under creditor majority rule includes the largest creditors, so their claims frequently aggregate to greater than two thirds of the total claim value. Only
when claims are more homogenous must the proponent add creditors to the coalition so that claim value reaches two thirds. But we observed earlier that the creditor system and the claim system produce the same outcome when claims are homogenous. The difference in row 1 above, then, arises because in Chapter 11’s bicameral system the claims house requires a 2/3 supermajority while the creditor house requires only majority. So Chapter 11’s bicameral system is basically the same as a majority creditor system except that it requires a supermajority when claims are homogenous. We see no normative justification for this result.

Table 1: Winning Coalitions Under Different Voting Regimes

<table>
<thead>
<tr>
<th># of creditors (claim value)</th>
<th>Total value of claims</th>
<th>Claim 2/3 rule: # of creditors (claim values)</th>
<th>Creditor majority rule: # of creditors (claim values)</th>
<th>Bicameral: # of creditors (claim values)</th>
</tr>
</thead>
<tbody>
<tr>
<td>9 (1)</td>
<td>9</td>
<td>6 (1)</td>
<td>5 (1)</td>
<td>6 (1)</td>
</tr>
<tr>
<td>1 (10), 8 (1)</td>
<td>18</td>
<td>3 (10,1,1)</td>
<td>5 (10,1,1,1,1)</td>
<td>5 (10,1,1,1,1)</td>
</tr>
<tr>
<td>2 (5), 7 (1)</td>
<td>17</td>
<td>4 (5,5,11)</td>
<td>5 (5,5,1,1,1)</td>
<td>5 (5,5,1,1,1)</td>
</tr>
<tr>
<td>3 (4), 6 (1)</td>
<td>18</td>
<td>3 (4)</td>
<td>5 (4,4,4,1,1)</td>
<td>5 (4,4,4,1,1)</td>
</tr>
<tr>
<td>5 (2), 4 (1)</td>
<td>14</td>
<td>5 (2)</td>
<td>5 (2,2,2,2,2)</td>
<td>5 (2,2,2,2,2)</td>
</tr>
</tbody>
</table>

To summarize, distinguish the competition over value between the debtor and the creditors as a group, and the competition over value among creditors. In the first competition, the relative merits of the claims system and the creditors system are ambiguous. In the second competition, small creditors do better under the creditors system than under the claims system, because under the former system small creditors are more likely to be included in the winning coalition. The bicameral system does not affect these results, except by requiring a supermajority when claims are homogenous—a puzzling requirement.

One might argue that for the purpose of information pooling, the claim system dominates the creditor system. If larger creditors have more information about a firm then their votes are entitled to greater weight under the Condorcet Jury Theorem. Indeed, small and uninformed creditors like trade creditors, warranty holders, and
workers might have no information about the value of the firm.\textsuperscript{65} If, for them, $p=0.5$, their vote should have no weight. Thus, the goal of information pooling implies reliance on claim voting, while the goal of avoiding exploitation does not clearly favor one system over the other. We leave open the question how these competing goals can be reconciled, but see no reason to believe that requiring both kinds of voting in a bicameral system is the solution.

\section*{V. Classification and the Equal Treatment Rule}

Chapter 11 requires that a reorganization plan divide creditors and other interest-holders into classes\textsuperscript{66} and states that claims placed in a given class must be “substantially similar” to one another.\textsuperscript{67} The statute does not forbid the division of similar claims into different classes, but the case law tends to disapprove of this practice. For the moment, we assume that this practice is forbidden. The Code also requires that all members of a class be treated equally.\textsuperscript{68} The question we address now is why the Code would permit and require the division of claims into classes, rather than having a single class consisting of all the claims. We start by discussing equal treatment, then move on to classification.

\subsection*{A. Equal Treatment}

Because classification and equal treatment are issues only if there is more than one creditor, we cannot rely on our two-party models. Instead, we must use the multi-creditor models. Begin by assuming that the equal treatment rule prevails but that classification is not

\textsuperscript{65} The correlation between claim size and information need not always be positive. For example, two banks might have identical size loans to the debtor, but the bank with better information might have the smaller claim in bankruptcy, if it used its information to accelerate part of its loan before the preference period, or to decline to renew part of the loan. See George G. Triantis & Ronald J. Daniels, The Role of Debt in Interactive Corporate Governance, 83 Calif. L. Rev. 1073, 1094-95 (1995) (describing insolvency debtor requirement in definition of a preference as creating incentive for banks to accelerate loans pre-insolvency, in turn signaling other creditors of impending problems).

\textsuperscript{66} 11 U.S.C. §1123(a).

\textsuperscript{67} 11 U.S.C. §1122(a).

\textsuperscript{68} 11 U.S.C. §1123(a)(4).
permitted. This would mean that the debtor must give every creditor the same number of cents on the dollar. Suppose that there are n creditors with claims of $c_i$, and $e < T$. Recall the payoffs under the dictatorship, unanimity, and majority rules:

<table>
<thead>
<tr>
<th>Dictor/ Coalition</th>
<th>Other creditors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dict. $s - d's$</td>
<td>$d'(s - d^{T-v} + \alpha d^{T-v})$</td>
</tr>
<tr>
<td>Unan. $s - d's$</td>
<td>...</td>
</tr>
<tr>
<td>Maj. $s - x$</td>
<td>$d'[r/w](s - d^{T-v}) + \alpha d^{T-v}$</td>
</tr>
</tbody>
</table>

where $x = \sum_{i=1}^{n} w_i [d'[r/w](s - d^{T-v}) + \alpha d^{T-v}] + \sum_{i=n+1}^{n} [\min\{d'[r/w](s - d^{T-v}) + \alpha d^{T-v}\}, \alpha v\}]$.

The equal treatment rule changes these payoffs in significant ways. Consider first dictatorship. At round $e$, the dictator knows that it cannot insist on a plan that treats it better than the other creditors. If it did, a court would strike down the plan even if the other creditors agreed to it. Thus, the dictator must propose a plan that divides the round $e$ surplus equally, giving each creditor (including itself) $\alpha s$. Accordingly, in round 0 the debtor will propose to pay each creditor $d'\alpha s$. All creditors, including the dictator, will consent, because $d'\alpha s > \alpha d^{T-v}$. Thus, the equal treatment rule transfers value from the dictator to other creditors without affecting the debtor’s payoff, and it ensures greater respect for prebankruptcy entitlements of the creditors, because their share is less discounted and because it reflects $s$ rather than $v$.

We have assumed that each creditor has the same discount factor, $d$. If discount factors vary, then payoffs under dictatorship without the equal treatment rule are $(s - d's)(s - d^{T-v} + \alpha d^{T-v}) - \sum_{i=1}^{n-1} \alpha d^{T-v}$, $d'[s - d^{T-v} + \alpha d^{T-v} + \alpha d^{T-v}]$, $\alpha d^{T-v})$. The equal treatment rules requires payoffs of $(s - d's, d''\alpha s)$, where $d''$ is the highest discount factor of any creditor.\(^{69}\) Because $d'' \geq d$, the debtor’s payout is likely

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\(^{69}\) If creditors were instead offered only $d''\alpha s$, any creditor with a discount factor greater than the dictator’s would vote against the plan. If the dictator were a large financial institution, its discount factor might tend to be on the high end of the
reduced by the equal treatment requirement, and between-creditor payments also more fully reflect prebankruptcy entitlements (since the latter are not dependent on \(d\)). The results are the same under the unanimity and majority rules.

Notice that with equal treatment the majority rule loses the disadvantage discussed in an earlier section, namely, that the debtor can, by exploiting creditors' fear of being excluded from the winning coalition, give each creditor less than what it would receive under unanimity and dictatorship. With equal treatment, each creditor obtains the same payoff whether or not included in the majority coalition. Thus, the debtor cannot use the threat to exclude creditors from the coalition in order to obtain more than \(s\)-\(d\)'s.

However, the equal treatment rule can create problems when creditors differ with respect to their postbankruptcy interests. Suppose that \(n\) creditors have identical claims worth \(c\), but that \(m < n\) creditors (trade creditors or workers, for example) have a postbankruptcy interest worth \(h\). Note that \(h\) must be included in the social value of the firm, so even if \(s = v\), the firm should be reorganized: its social value is \(v + mh\). For simplicity, suppose that \(d = 1\). Suppose the debtor proposes a plan that gives each creditor \(s/n\), where \(s < v\), but \(s' + mh > v\). The ordinary creditors would vote against the plan, because \(s/n < v/n\), and the trade creditors would vote in favor of the plan, because \(s'/n + h > v/n\). Under a unanimity rule, or a majority rule if \(m < n/2\), the socially valuable plan would not be confirmed if equal treatment is required. If equal treatment is not required, however, the debtor would offer the banks \(v/n\) and the trade creditors \(v/n - h\); the plan would be confirmed. Thus, equal treatment prevents desirable reorganizations.

The equal treatment rule makes majority rule as attractive as dictatorship and unanimity, and it improves the results under all three rules by reducing the debtor's payoff, increasing the creditors' payoffs, and producing payoffs that more closely track prebankruptcy range of creditors' discount factors. If a small creditor had the highest discount factor, the debtor might give it \(c_v\), and then pay the rest of the creditors their share of liquidation value discounted by the next-highest discount factor.

70 To be sure, the trade creditors might voluntarily give up some of their cash, see 11 U.S.C. §1123(a)(4), but bargaining and coordination costs might interfere with this result.
entitlements. However, the equal treatment rule has a significant disadvantage. It interferes with confirmation of plans where creditors have different postbankruptcy interests, and these postbankruptcy interests summed with the going concern value of the firm exceed its liquidation value.

B. Classification

Classification is best understood against the backdrop of the equal treatment rule. As we saw above, the equal treatment rule is advantageous when creditors have different discount factors and/or when majority rule is used, but disadvantageous when creditors have differing postbankruptcy interests. Without the equal treatment rule, the debtor would not exercise its classification power (unless compelled by a court), because classification could only make it more difficult for a plan to be approved (setting aside cram down). If the debtor did not have the support of a majority of creditors and 2/3 of claims from among all the creditors, it could not obtain approval of the plan from all the classes produced by any possible division of creditors into subsets. If the plan would pass if presented to the creditors grouped in a single class, it might fail once multiple classes are formed, since a minority that lacked veto power in a single class might have veto power as part of a smaller class. Put another way, the greater the number of classes, the more creditors whose assent is necessary for plan approval, which would reduce exploitation and increase bargaining costs, both to the disadvantage of the debtor.

Thus, the debtor's power to classify can be seen as a response to the rigidity created by the equal treatment rule. As illustrated above, the equal treatment rule interferes with reorganization when creditors have different postbankruptcy interests. Recall the

71 Thus, since Canadian reorganization rules utilize class-based voting but lack equal treatment or cram down, we would expect to see most classification disputes feature creditors arguing they should be classified separately, in order to increase their bargaining power, while in the U.S. the picture would be more mixed, since separate classification increases a creditors' voting power but deprives it of equal treatment protection and raises the threat of cram down even if it votes no.


73 Other examples of extra-plan returns that could be captured only through unequal treatment include workers avoiding job dislocation costs or a restriction in
example above, where the equal treatment rule prevented the debtor from obtaining support for an optimal plan by giving the trade creditors less than the banks. With the power to classify, the debtor can place the banks in one class and give them $s/n$ each in cash or securities, and the trade creditors in another class and give them $s/n$ each. Because each trade creditor expects an additional $h$, and $s/n + h > v/n$, all creditors would approve the plan.

However, while classification mitigates the postbankruptcy interest problem, it creates a new problem. The debtor can use the classification power to gerrymander; that is, to create classes opportunistically in order to maximize its return at the expense of the creditors (as compared to one class with the equal treatment rule in effect). There are at least three forms of gerrymandering. First, if each creditor $i$ has a different discount factor, $d_i$, then the debtor would want to make a different offer to each creditor, such that $p_i(0) = d_i v$. The debtor avoids the equal treatment rule by placing impatient creditors in a separate class, and offering them less than patient creditors with identical prebankruptcy interests. If gerrymandering were unrestricted, the debtor could put every creditor in its own class and pay it a different share, thus completely undermining the effect of the equal treatment rule. Indeed, the debtor could go further and form classes in which impatient creditors can outvote a minority of patient creditors, and approve plans that discriminate against the latter.

Second, even if courts can strike down schemes that too

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74 Admittedly, this analysis raises the puzzle of why creditors who would seem to have postbankruptcy interests are sometimes offered more by the debtor than creditors who seem not to have such interests. E.g., In re Chateaugay Corp., 89 F.3d 942 (2d Cir. 1996) (workers' compensation claims held by workers classified separately and paid more than such claims held by surety). Perhaps the postbankruptcy interest is reciprocal—i.e., the firm needs the workers in order to maximize its value much as the workers need a reorganization to maximize their payout.

75 This kind of opportunism is possible only when $e < T$ and the outvoted, more patient creditors would need to receive at least their share of actual liquidation value, given the protection of the liquidation floor.
obviously classify creditors by discount factor, debtors can gerrymander in more subtle ways. One such way is to divide a creditor’s claim among several classes (“overlap”). This practice is not necessarily undesirable, because sometimes creditors have different kinds of claims and therefore different interests; for example, a secured and an unsecured claim. It is common to divide secured and unsecured claims of a single creditor into two classes. But if the debtor has this power, it can also classify creditors in an exploitative way. For example, suppose that the intra-class voting rule is bicameral, requiring a majority of claims and of creditors, and that the equal treatment rule is in effect. Also assume that \( e < T \), so that creditors expect to obtain more than \( d^T v \). The debtor has three creditors, who have claims worth 401, 401, and 300 respectively. Respect for prebankruptcy entitlements requires the creditors to receive roughly \( 4/11, 4/11, 3/11 \). If the distribution of bargaining power is such that creditors will receive 100 in the aggregate, the creditors should receive 36, 36, and 27 respectively, and they would in a single class with equal treatment. Suppose now that the debtor divides the creditors into the following classes:

<table>
<thead>
<tr>
<th></th>
<th>C1</th>
<th>C2</th>
<th>C3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class 1</td>
<td>300</td>
<td>300</td>
<td>100</td>
</tr>
<tr>
<td>Class 2</td>
<td>101</td>
<td>101</td>
<td>200</td>
</tr>
</tbody>
</table>

The debtor can obtain majorities of claims and creditors in both classes by attracting the votes of C1 and C2; C3 can be outvoted in both classes. By assumption, C1 and C2 will vote in favor of a plan that offers them a payout of 36. The debtor can thus obtain their assent by offering a payout of 84 to Class 1 and a payout of 1 to Class 2. To see why, observe that C1 and C2 each have a share of \( 3/7 \) in class 1. Thus, given the intra-class equal sharing rule, they each receive \( 3/7 \) of 84, or 36. C3 receives only 12. The debtor’s total payout is only 85, versus the 100 it would need to pay with a single class. Thus, debtor’s classification power allows it to violate prebankruptcy entitlements while still respecting the (intra-class) equal treatment rule.

\( ^76 \) 11 U.S.C. §§506(a), 1111(b).
In a third form of gerrymandering, if cram down is available, the debtor can treat one class well enough that it votes in favor of the plan, but treat other classes poorly, and then cram down the plan on the basis of one class having assented. If this were too obviously unfair, the debtor might propose an all-equity plan, overvaluing the reorganized firm’s equity. This would give lower-priority classes (including shareholders) a greater payout than if the absolute priority rule were followed. More senior classes might vote against such a plan because their payout (in equity) is too low given the true value of the reorganized firm. But a class of junior creditors might vote yes, since the payment “in full” of senior creditors with over-valued shares could leave junior creditors with a greater share of the equity, and hence a higher real payout, than would a more accurate valuation.

The debtor’s gerrymandering power is not unrestrained. Gerrymandering to produce an assenting class (in order to then seek cram down) is constrained by case law. Overvaluation can be

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77 That is, give them less than their bargaining power would otherwise require. For example, creditors classified separately but at the same priority level could be offered different payouts. This again assumes that creditors have enough bargaining power to obtain more than $d'v (e<T)$, since creditors in a “poorly” treated class who vote against a plan receive the protection of the liquidation floor.
79 Cram down requires the judge to find that the plan is “fair and equitable” and “does not discriminate unfairly.” 11 U.S.C. §1129(b).
80 See Stuart C. Gilson et al., Valuation of Bankrupt Firms 22-23 (Aug. ’97 draft).
81 E.g., In re Greystone III Joint Venture, 995 F.2d 1274, 1279 (5th Cir. 1992) (“thou shalt not classify similar claims differently in order to gerrymander an affirmative vote on a reorganization plan”); In re Boston Post Road Ltd. P’ship, 21 F.3d 477 (2d Cir. 1994). But a plan proponent may still offer a legitimate business reason to justify a classification having that effect. Id.
On this note, the elimination of §1124(3) in 1994 seems difficult to justify. Section 1124(3) stated that a class paid the allowed amount of its claims in cash on the effective date of a plan was unimpaired (and hence deemed to vote yes). With its elimination, a class paid 100 cents on the dollar in cash and that voted in favor of the plan would provide the vote of an “impaired” class and meet the §1129(a)(10) requirement for cramdown even though another class or classes might be the true residual claimants under the plan. The subsection was eliminated in reaction to In re New Valley Corp., 168 B.R. 73 (Bankr. D.N.J. 1994), in which an unsecured class was paid in full but not given postpetition
constrained by a judge who is alert to voting patterns that suggest misvaluation. But given the judge's imperfect information about the value of the firm (which, recall, motivates the voting rules), the real difficulty of predicting its future (reorganized) profitability, and the fact that different plans will in fact differ in value, depending upon how effectively they deploy the firm's assets, it will be difficult for a judge to police strategic misvaluation. And if courts err when evaluating classification schemes, they will sometimes strike down a desirable plan that discriminates among creditors in order to solve the problem of differing postbankruptcy interests.

The "substantial similarity" requirement constrains the ability of the debtor to sneak some patient creditors into an impatient class, but it does not prevent the creation of impatient classes. Presumably, this is because creditors with low discount factors (those who face credit rationing or otherwise less competitive credit markets) might also be those who have some particular interest in a reorganized debtor (e.g., workers or trade creditors) and thus may need to be classified separately in order to maximize the value of the reorganized debtor. Separate classification on the basis of postbankruptcy interest in the reorganized debtor has been upheld in the case law.83

Gerrymandering that creates or exploits "overlap" situations could be reduced through a more rigorous application of the "substantial similarity" requirement. That is, in terms of the example given above, the judge could require that C3's claims be classified separately (say, as 1A and 2A) on the basis that, given its different proportional overlap, C3's claims are not substantially similar to the claims of C1 and C2. However, given that overlap gerrymandering occurs only when creditors have enough bargaining power to obtain more than $dTv$, the more rigorous the enforcement of the substantial similarity requirement, and hence the more fine-grained the classification, the greater will be bargaining costs (since more

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82 Gilson, supra note __, at 16. There may be reasons other than intra-creditor redistribution for misstating a firm's value in a plan, such as overstating value to gain greater future depreciation or other tax advantages. Id. at 12.

creditors have veto power) and thus the greater the likelihood of costly delay. In addition, the nature of the “substantial similarity” requirement is such that attempts by the judge to prevent exploitative classification without in effect requiring complete similarity would be difficult or impossible. This is because creditors can be substantially similar to each other in non-transitive ways.84 Thus, we could imagine a situation in which C4 and C5 are substantially similar to each other, but not to C6, in terms of having a postbankruptcy interest in the reorganized debtor, while C5 and C6 are substantially similar to each other, but not to C4, in terms of having a chance to collect from a third party guarantor as well as from the debtor.85 One solution would be to require separate classification of all three creditors, but if that is a requirement of “complete” similarity, and in practice “substantial similarity” is the standard then considerable latitude as to how to classify will rest with the plan proponent. The latter could be expected to classify C5 with either C4 or C6 by looking to its own advantage.

However, one might argue that if the judge can accurately police gerrymandering in this way, then he must have enough information to determine the optimal plan by himself. In all of these cases, the judge can strike down a plan only if he can tell whether the plan classifies in order to transfer value to the debtor, or in order to maximize plan value. But he can only make this determination, it appears, if he can estimate plan value. If the rules for policing gerrymander are mechanical, then either the debtor can anticipate the rule and work around it to his own benefit, or the rule will interfere with the flexibility needed to ensure that value is maximized. It is possible, however, that the judge can obtain sufficient information from voting patterns in order to make an educated guess about whether gerrymandering is present.

Let us summarize the argument so far. The equal treatment rule can reduce exploitation against impatient creditors and allow the

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85 A distinction recognized as significant for classification purposes in In re Johnston, 21 F.3d 323, 328 (9th Cir. 1994) (Steelcase is situated differently from other unsecured creditors. . . . its claim. . . . is partially secured by collateral of . . . the primary obligor”).
choice of a voting rule that reduces bargaining costs (though here dictatorship would seem to dominate majority or supermajority rules, especially since it also eliminates cycling concerns). This tends to protect prebankruptcy entitlements and capture going concern value. But equal treatment also interferes with plans that can prevail only if creditors with postbankruptcy interests can trade the value to which they are entitled in bankruptcy to a debtor who would otherwise prefer liquidation. Classification enables the debtor to escape this problem by allowing it to classify such creditors separately. But unlimited classification enables the debtor to avoid the equal treatment rule, returning us to the initial problem of exploitation. The classification power makes sense only if courts can prevent the debtor from using that power opportunistically, but it is not clear that courts have this ability.

C. Uncertainty about the Firm's Value

We suggested in Part II that Chapter 11 might assign agenda control to the debtor because it has, on average, the best information about the bankrupt firm: that is, about whether there is a going concern surplus (rather than \( v \geq s \)) and about which reorganization plan maximizes \( s \). However, often a creditor or creditors\(^{86}\) will have better information than the debtor, or the best information might come from a combination of the debtor's and creditors' information. One possible role of classification\(^{87}\) is to enable the debtor to give creditors an incentive to invest in information about \( s \).

Imagine that there are 10 tort creditors (each with a claim of 10) and 1 bank creditor (with a claim of 50); \( v = 110 \), and \( d = 1 \). Given current information about the firm's prospects in its volatile market sector, the debtor and the creditors estimate that \( s \) is 2/3 likely to be

\(^{86}\) Certain creditors likely have better information, and/or cheaper access to additional information, about the firm's value. Tort claimants or taxing authorities, for example, might have less access to valuation information than banks. See *Thomas H. Jackson, The Logic and Limits of Bankruptcy Law* 218 (1986).


\(^{88}\) Ideally, the debtor would classify in such a way that equalizes \( p_i \) for each creditor. See Miller, supra note __, at 187.
50 and 1/3 likely to be 200. The expected value of $s=100$. Assume further that the bank, at a cost of 1, could gather enough information to resolve the uncertainty about $s$, but that the debtor and the creditors cannot, and that the bank cannot credibly convey information to the tort creditors or the debtor. If the debtor creates a single class, the class will reject any reorganization plan, because the expected value of the plan to each tort creditor (6.7) is less than the expected value of its share of liquidation (7.3). The bank will not bother to invest 1 in determining the true value of $s$, because even if it discovers that $s=200$, no one will believe it. The debtor, then, gains nothing by proposing a plan. The bank, lacking veto power, will not incur the cost of gathering the additional information.

By classifying the bank separately, however, the debtor could induce the bank to make the investment in additional information, and that investment would be socially valuable. If the bank does not make the investment, it will receive its one-third share of the firm's liquidation value, 36.3. In contrast, if the bank makes the investment, it is 33% likely to learn that $s=200$. In that case, the bank prefers reorganization to liquidation. It could induce the debtor to amend the proposed payouts under the plan so that the tort creditors would vote in favor of the plan. The tort creditors expect their share of a liquidation to be 2/3 of 110, or 73.33. They would thus vote in favor of a plan giving them 74% of the reorganized firm's equity (which they estimate to be worth 100). The bank would receive the remaining 26% of the equity; but because the bank knows the firm has a value of 200, it values that stake at 52. Thus, if it makes its investment of one in additional information, the bank is one-third

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89 If the bank could communicate the additional information to the tort claimants, it would gather it. The information's private value to the bank is ten (the product of its one-third share of the greater value in reorganization (200 - 110) times the likelihood of finding that the firm is in fact worth more in reorganization, one third) while its cost is one. But note that the bank's incentive to invest is suboptimal, because the social value of the information is thirty (the greater value in reorganization, ninety, times the likelihood of getting it if the investment is made, one third).

90 This assumes the debtor prefers reorganization to liquidation, an issue discussed in Part VI.A., infra.

91 With more than one bank, the separate bank class would face its own collective action problem in gathering additional information, although this would be
likely to be able to obtain an additional payment worth $15.7 \ (52 - 36.3)$; so the bank will make the investment. Separate classification produces socially valuable information that causes the firm to be reorganized rather than inefficiently liquidated. A similar example (with $v=90$) would show that separate classification can, for analogous reasons, prevent a firm from being inefficiently reorganized.

However, it is not the case that the debtor will always use the power in a socially valuable way. This follows directly from the earlier discussion of the debtor’s incentives to gerrymander. If, for example, $v=60$ the bank would gather the information, but it would only be privately, rather than socially, beneficial because the debtor could “bribe” the bank to accept reorganization (at the expense of the tort claimants). With one class, tort claimants vote for reorganization (it has an expected value of 100). With two classes, if the bank makes its investment in additional information, it is $2/3$ likely to learn that $s=50$. If it learns this, it will be unwilling to accept less than its one-third share in liquidation, or 20, from a reorganization plan. The debtor could therefore offer the bank a return of 21 in order to gain its assent. Since the bank knows that the firm has a value of 50, the debtor must offer the bank 42% of the reorganized firm’s equity. This leaves only 58% of the equity for the tort class. But because the tort class continues to estimate $s=100$, it will vote for reorganization because its expected return is 58, vs. 40 in liquidation. Even though liquidation is more efficient than reorganization, the firm will be reorganized. The bank’s investment in information merely allows it to gain a greater share of $s$ at the expense of the tort claimants: the bank’s investment in information is privately, but not socially, valuable.92

Such concerns might underlie the otherwise-puzzling practice of requiring that each secured claim be placed in a separate class, unless it shares the same collateral and priority level as another secured

\[92 \text{The value of the investment to the bank is 2.89 (the product of the likelihood the information will be useful, two-thirds, times the difference between the bank's return with the information, 21, and the bank's return without the information (one-third of 50)).} \]

mitigated to the extent that the judge appointed a bank creditors’ committee, §1102(a), and allowed its expenses as an administrative expense, §503(b)(3)(F).
This greatly increases the number of classes, which might increase bargaining costs. However, an offsetting benefit may be that, because separate classification makes an individual claimant’s vote more significant, it induces secured creditors to gather additional information about the firm. Classification practice with respect to secured creditors, to some degree, makes distinctions in a manner related to creditors’ information-gathering capacity. A secured creditor with a floating lien in the debtor’s inventory and/or receipts is, because of pre-bankruptcy incentives and specialization, likely to be able to gather information about the firm’s value at a lower cost than other creditors. On the other hand, a creditor with a security interest in the debtor’s trucks does not seem particularly better-situated to gather information about the firm than a creditor secured by the debtor’s office equipment (yet the latter two will be classified separately). Even if a secured creditor is to be paid in full under a plan, it has an incentive to gather additional information so long as it is not paid immediately, in cash. If the secured creditor is receiving equity in the reorganized firm, that equity’s value is of obvious importance. So too if the creditor is receiving deferred cash payments: the future prospects of the reorganized firm are important to determining whether the discount factor being applied to the cash stream is advantageously high or disadvantageously low.

That inducing the production of socially valuable information is one of the goals behind requiring classification gains some additional support from the Code’s waiver, for small claims, of the prohibition against classifying dissimilar claims together. Small claimants are unlikely to have much information about the debtor, and would find the cost of gathering additional information high (relative to their small potential benefit, given the small size of their claims).

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93 E.g., In re Commercial Western Fin. Corp., 761 F.2d 1329, 1338 (9th Cir. 1985).
94 This suggests that Canadian practice, in which secured creditors can be classified together even if their underlying collateral differs, Triantis, supra note __, at 290, favors the reduction in bargaining costs that occurs if the truck and office equipment creditors are classified together, although at the risk of judicial error resulting in the inventory creditor being classified with other secured creditors.
95 11 U.S.C. § 1122(b).
96 At least in the usual case where obtaining such information had some cost.
To summarize, the debtor's classification power may enable it to give creditors incentives to invest in information or share information that they already have. The debtor could place a creditor it thought had better access to information in its own class. This would give it veto power and hence an incentive to gather additional information. At the same time, classification may give creditors a perverse incentive to invest in information that affects only intra-creditor distribution and that does so in a manner that does not reflect prebankruptcy entitlements.

VI. Agency Costs and Vote-Buying

A. Debtors and Managers

Earlier sections assumed an identity of interest between the firm's managers and its equity-holders. As the agency cost literature shows, however, managers' interests typically diverge from those who have the right to the residual value of the firm. This problem raises the question whether the voting rules in Chapter 11 properly deal with managerial incentives.

Managers' interests diverge from those of equity for several reasons. In particular, managers rarely own all the equity of the firm. When they own little equity, they usually receive less variable returns than equity, such as salaries and other benefits. To the extent regular salaries compensate the managers, they have a strong incentive to avoid risk (relative to equity's interest) and to keep the firm in business even after it is no longer viable. In closely held corporations (most Chapter 11 filings are by closely held firms) managers typically own considerable equity and hence are more likely to seek to maximize its value than are managers of public corporations. However, such managers still may prefer private benefits to increases in equity value which must be shared with other shareholders. The larger Chapter 11 cases, and those most likely to lead to the confirmation of a reorganization plan, involve primarily large,
publicly-held corporations. In such a firm the managers were initially selected by the equity-holders or their representatives (the directors), but the managers typically hold only a small portion of the firm’s equity.

In the perfect information model without agency costs, delay does not occur. With agency costs, managers may strategically cause delay in order to maintain their position as long as possible. This might explain why reorganizations of public corporations take longer than reorganizations of closely held corporations, whose managers usually own a substantial amount of equity.\(^{100}\) Also, in the perfect information model, the distribution of value will no longer depend on the relative bargaining power of the firm and the creditors, but also on the manager’s outside options. A manager with more valuable outside options can more credibly threaten departure than a manager with fewer valuable outside options, and thus obtain greater concessions from creditors.\(^{101}\)

The introduction of agency costs in the imperfect information model might increase the amount of delay in equilibrium. Some managers will engage in delay solely to save their jobs. Even managers who act loyally will have to delay if they control a low value firm, because they must persuade creditors that the delay reflects the firm’s valuation, not their independent interests.

An important normative implication of managers’ tendency to engage in socially costly delay is that the incentive to delay may justify violation of prebankruptcy entitlements.\(^{102}\) One way to discourage managers from delaying is to give them more value in bankruptcy than they would otherwise be entitled to. This could be in the form of more value to the debtor to the extent that the manager has equity, or more value to the managers directly via side payments.

A countervailing force might arise from managers’ desires to

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\(^{100}\) In general, publicly-traded corporations are larger and more complex; this might also explain their greater time to reorganization.

\(^{101}\) See Baird and Picker, supra note __, at 319.

\(^{102}\) See Bebchuk & Picker, unpublished manuscript.
maintain good reputations. They might avoid delay and other forms of strategic behavior so as to avoid bad reputation. Creditors could do better than we concluded in preceding sections if they can induce management to favor creditors over equity-holders by threatening the managers with replacement if the managers did not adopt a more pro-creditor plan. If the managers' plan paid creditors in stock, rather than with cash, management might fear replacement after the plan is approved. Even in such a situation, however, they might include long-term employment contracts for themselves as part of the plan, or they might prefer obtaining benefits now (see below) to retaining their jobs post-reorganization. The creditors could also petition the court for appointment of a trustee, which would result in the removal of at least some of the current managers, but such an appointment is difficult to obtain in the absence of outright fraud or incompetence by the managers. More important, creditors might

103 Replacing the managers would be a “threat” if the managers earn more in their present jobs than they could elsewhere. This might be especially true in the Chapter 11 context, since the bankruptcy of their firm would likely damage the managers’ reputations. See Baird & Picker, supra note __, at 320 n.23, 334 n.50; Stuart C. Gilson, Management Turnover and Financial Distress, 25 J. Fin. Econ. 241, 253-56 (1989) (presenting evidence that managers leaving financially distressed firms suffer lost earnings). If the threat of being fired were not enough to cause managers to hew to a more pro-creditor line, the creditors could simply follow through on their threat, although this might come at some cost to creditors if new managers would manage the firm less efficiently for a time.

104 Seemingly contemplated by 11 U.S.C. §1129(a)(5). Note that long-term contracts for incumbent managers might lower the value of the firm, as they could be expected to increase agency costs; thus “golden handshake” agreements in which managers received generous termination benefits might be advantageous for both managers and creditors.

105 See, e.g., In re Aardvark, Inc., 1997 WL 129346 *3 (D.Del.) (“appointment of a trustee is seen as an extraordinary remedy”). Courts feel that liberal appointment of trustees would undercut Chapter 11’s seeming commitment to the operation of bankrupt firms by pre-bankruptcy management (the “debtor in possession”), presumably based on the idea that the current management has better knowledge of how to operate the firm.

If managers seek to divert funds from creditors to equity-holders, it would be difficult to reconcile their removal with 11 U.S.C. §1104(a)(2), which sanctions removal if it “is in the best interests of the creditors, any equity security holders, and other interests of the estate” (emphasis added) rather than simply in the interests of creditors.
refrain from seeking the removal of managers because the appointment of a trustee ends the exclusivity period, and initiates multi-creditor bargaining with its attendant dangers of cycling and rent-seeking.

Agency costs could also manifest themselves in the managers, rather than simply seeking to preserve their salaries, attempting to seize for themselves the benefits of agenda control. In such a situation the debtor’s agenda control may harm both creditors and equity-holders, because the managers introduce a self-interested plan that is in the interest of neither creditors nor (non-management) shareholders. In essence, the managers may submit a plan that offers creditors \( \Delta V \), non-management equity-holders \( 0 \), and management \( s^d \Delta V \).\(^{107}\) Of course, such a plan awards more to management equity-holders than to non-management equity-holders,\(^{108}\) but the managers could argue that they were not similarly situated to the other equity-holders, since they were contributing “new value” to the firm in agreeing to continue to work for the firm during (and after) the reorganization.

To the extent shareholders can threaten to remove managers during the pendency of the bankruptcy proceedings, the situation would more closely resemble the analysis presented in preceding sections, where managers act on behalf of equity-holders. During a bankruptcy, shareholders can meet and remove the firm’s management unless doing so constitutes a “clear abuse.”\(^{109}\) It might seem surprising that shareholders would be allowed to control a firm’s managers during bankruptcy, as they could use this power to disadvantage creditors and benefit themselves. Yet the case law

\(^{106}\) 11 U.S.C. §1121(c)(1).


\(^{108}\) In terms of prebankruptcy incentives, see supra note __, such a return would mitigate the underinvestment problem caused by “debt overhang,” see George G. Triantis, A Free-Cash-Flow Theory of Secured Debt and Creditor Priorities, 80 VA. L. REV. 2155, 2162 (1994), in which managers will neglect to make low risk but positive return investments whose gains will be realized only by debtholders.

\(^{109}\) E.g., Lynn M. LoPucki & William C. Whitford, Corporate Governance in the Bankruptcy Reorganization of Large, Publicly Held Companies, 141 U. PENN. L. REV. 669, 695 & n. 94 (1993).
suggests that shareholders' replacement of management in order to improve the bargaining position of shareholders as against creditors is not a "clear abuse." There are two answers to this puzzle. The first is that use of Chapter 11 does not require insolvency, so shareholders may continue to be the residual claimants during bankruptcy, and thus should be allowed to control the firm's decision-making. This would nonetheless suggest that the "clear abuse" standard should prevent shareholders from replacing management if the firm is in fact insolvent. While there is some dicta in the case law suggesting this result, it is not a major theme of the cases, and insolvency can be difficult to prove in any event, given the difficulty of a court's verifying the firm's value. So the better explanation may be that given the limited ability of creditors to control the firm's management, it is not clear whether shareholder control is worse for creditors (shareholders likely tend towards excessive risk-taking) than is allowing the firm's managers to operate as principal-less agents who can arrogate the exclusivity-

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111 11 U.S.C. §109. Instead, a firm may, for example, face cash-flow problems and attempt to hold off foreclosure by a secured creditor. Such foreclosure might harm unsecured creditors and/or equity-holders by interfering with the firm's operations.

112 In re Johns-Manville, 801 F.2d at 65 n.6.

113 E.g., Saxon Industries, Inc. v. NKF W Partners, 488 A.2d 1298, 1300 (Del. 1985) ("insolvency alone, irrespective of degree, does not divest the stockholders of a Delaware corporation of their right to exercise the powers of corporate democracy"). Indeed, in Johns-M anville, the bankruptcy court, while not conducting a formal analysis, had stated that the assertion that the debtor was solvent "fails to accept reality," In re Johns-Manville Corp., 52 B.R. 879, 885 (Bankr. S.D.N.Y. 1985), but the Second Circuit declined to take account of that fact on procedural grounds, In re Johns-M anville, 801 F.2d at 65 n.6.

114 Some of which may be controllable by the court. E.g., 11 U.S.C. §363(b)(1).
period benefits to themselves.

Even apart from the potential ability of shareholders to force managers to act on their behalf in formulating an exclusivity-period plan, there are limitations on how far incumbent managers can take advantage of their control in order to appropriate $s_d$ and $v$. The first is that, in spite of the difficulty of a court's verifying the firm's value, there may be practical constraints on the absolute size of the stake that managers can allocate to themselves before a plan appears to be plainly abusive (at least in its treatment of managers vis-à-vis other shareholders). A second, and related, point, is that, in bankruptcy, a firm's directors and managers owe fiduciary duties to creditors as well as to shareholders. Thus, to the extent any violations of such duties are verifiable by a court, managers would be constrained by the fear of creditor suits.

B. Claim Buying

Creditors sometimes purchase the claims of other creditors in anticipation of bankruptcy or during bankruptcy. Because a creditor's voting power in the claims house depends on the size of its claim, the creditor that purchases claims expands its voting power during reorganization. Some judges and commentators criticize this practice, arguing that creditors should not be permitted to "buy votes." The precise nature of their criticism, however, is unclear. The purchase of votes in political elections is illegal, and the trading of votes, or logrolling, in legislatures is often considered undesirable. But the institutional context is much different in Chapter 11. This section briefly evaluates concerns about claim buying in Chapter 11 in light of the analysis in prior sections, where claim buying was assumed not to occur.


116 CFTC v. Weintraub, 471 U.S. 343, 355 (1985). That shareholders are owed a fiduciary duty in bankruptcy when the corporation is insolvent is somewhat anomalous: certainly the firm's stock has some option value, but under non-bankruptcy law that option value would accrue to creditors if they took possession of the firm's assets when it became insolvent.

It will be helpful to begin by explaining why vote buying and logrolling raise general concerns. Consider the following example.\(^\text{118}\)

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<tr>
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</tr>
<tr>
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</tbody>
</table>

The table displays the utilities that four projects (A-D) confer on three voters (1-3). Suppose voters 1, 2, and 3 must vote separately on whether to approve project A and project B. A project is approved if it receives a majority of the votes. If vote trading is not possible, neither A nor B will be approved under majority rule. If vote trading is possible, voter 1 will vote for B in return for voter 2's promise to vote for A, and both projects will be approved. In this example, the trade enhances aggregate welfare. Suppose, however, that the voters are supposed to vote to approve project C and project D. The projects will be approved only if vote trading is possible, but approval of the projects this time reduces aggregate welfare. The conclusion is that vote trading does not necessarily improve or reduce aggregate welfare.

Claim buying in Chapter 11 is different from vote trading in this example, because creditors actually pay money for claims, rather than trading votes. One might believe that vote buying (as opposed to vote trading) is desirable, because it allows voter 1 to pay $2 to voter 2 in order to obtain majority approval of welfare-enhancing project A. But vote buying also allows voter 1 to pay $4 to voter 2 in order to obtain majority approval of welfare-reducing project C. In general, vote buying under a system of majority rule enables a coalition to form and exploit a minority. It can also lead to cycling. Note, however, that vote buying under a system of unanimity results in the approval only of welfare-enhancing projects.

Claim buying in Chapter 11 is also different from vote buying. Because of the bicameral voting system, a creditor who buys a claim

obtains more power in the claims house than in the creditors house. Indeed, although a creditor can relatively easily obtain veto power through its vote in the claims house, a creditor cannot obtain the sole power to approve or reject a plan unless it buys all outstanding claims.

To see why, suppose that C1 and C2 each has a claim of 50, and 100 small creditors each has a claim of 1. C1 can obtain veto power by purchasing C2’s claim or by purchasing the claims of 17 small creditors. But even if C1 purchases the claims of C2 and 99 small creditors, C1 still will not have the sole power to approve or reject. It ties in the creditors house with the one remaining small creditor. Thus, the creditors house prevents any single creditor from obtaining the power to control the response to the debtor’s proposal unless that creditor buys out all other creditors.

Let us now focus on the question whether, given the current voting rules of Chapter 11, claim buying should be permitted. Initially, it should be clear that we need a multi-party model. With a single hypothetical creditor, no claim buying can occur. We will focus on examples with perfect information, imperfect information with respect to the creditor’s type, and imperfect information with respect to optimal capital structure.

Perfect information. Suppose that two creditors C_i, i=1,2, have claims with liquidation value v_i and discount factors of d_i. If T < e, the debtor’s plan will transfer d_i^T(v_i) to each. If d_1 = d_2, then the creditors have no reason to buy or sell claims. But supposing, say, d_1 < d_2, we obtain a different result. C_1 will sell its claim to C_2 and C_2 can demand from the debtor a larger share than could C_1 and C_2 in the aggregate.

A numerical example will clarify the argument. Let s=100, v=100, c_1=c_2=100, d_1=0.1, d_2=0.2, T=2. Without claim buying the payoffs for (E, C_1, C_2) are (70, 10, 20). If claim buying is permitted, C_2 will buy C_1’s claim for some amount between 10 and 20, say, 15. Then the debtor must give 40 to C_2, and the final payoffs will be (60, 15, 25). This result is an improvement over the regime without claim buying, because exploitation is reduced while going concern value is not affected.

Let us now add a third creditor, C_3, with a liquidation claim equal to c_3 and a discount factor of d_3, with d_1 < d_2 < d_3; and assume T > e.
Recall that if $T > e$, the creditors will collectively obtain some amount greater than their share of liquidation value. In the two-party model, the hypothetical creditor would receive an amount between $d_t(1/2)(s - d_t^{-1}v)$ and $d_t s$, depending on the effectiveness of cram down. Denote this amount as $a$. Assume that with three creditors, each creditor expects, at round $e$, to receive $a/3$. Suppose that $c_1 = c_2 = c_3$. $C_3$ will give $C_1$ a sum equal to $d_t^1(a/3)$ in return for $C_1$’s claim. Then $C_3$ can demand from $E$, at round $e$, $d_t^1v + da$, or, at round 1, $d_t^1v + da$. Although the liquidation floor guarantees that $C_2$ will receive $d_t^2v$, $C_2$ does not obtain its share of $a$. $C_2$ will not vote against the plan, because a vote would just cause delay and it could not obtain better than liquidation value at a later round. This result—which assumes that $C_1$ and $C_2$ can be classified separately—is a violation of prebankruptcy entitlements. $C_1$’s purchase of $C_3$’s claim allows it to exploit $C_2$. However, this result is not necessarily worse than the result without claim buying. Because of cycling and differing bargaining strengths among creditors, prebankruptcy entitlements will not usually be respected.

In sum, in the perfect information model claim-buying produces efficiency improvements to the extent it enables creditors to aggregate their bargaining power against the debtor. Given that the debtor already obtains too large a portion of the surplus, an increase in the bargaining power of the creditors is a desirable result, as it reduces the debtor’s power to violate prebankruptcy entitlements. And because the more patient creditor must pay the less patient creditor for its claim, no creditor is made worse off by the availability of claim buying. At the same time, claim buying enables one creditor to exploit a second creditor by purchasing the claim of a third. But there does not seem to be any reason to believe that exploitation here is any worse than in the regime without claim buying, in which the debtor will choose a plan that prefers some creditors to others on the basis of their bargaining power, rather than their prebankruptcy entitlements, or in which a dominant creditor exercises its bargaining power after the exclusivity period expires.

Imperfect Information with Respect To Type. We noted earlier that as the number of creditors increases beyond one, the problem of delay becomes increasingly severe. Any creditor with veto power and either a high discount factor or a small postbankruptcy interest has
an incentive to delay in order to reveal its type. Supposing that half the creditors have low valuations, a reorganization involving just one creditor will involve delay only half the time. But a reorganization involving ten creditors will involve delay 99.9% of the time \((1-\left(\frac{1}{2}\right)^{10})\), and delay will be longer if creditors take turns signaling their type, as illustrated (for two parties) by the attrition model.

This problem raises the possibility that claim buying is desirable, because if a single creditor purchases the claims of most or all of the remaining creditors, fewer creditors will have an opportunity to engage in delay. Intuitively, we expect bargaining costs—including both delay caused by strategic behavior and the sheer time-consuming nature of haggling with many people—to decline when the number of bargainers declines.

The problem with this analysis is that claim buying does not eliminate bargaining among multiple parties; it just moves it to an earlier stage. Rather than the debtor bargaining with multiple creditors, the creditors must bargain with each other. Each creditor might know as little about the valuations of other creditors as the debtor knows. Without claim buying, the signaling or screening game takes place between the debtor and each creditor. With claim buying, the signaling or screening game takes place between each creditor. Low valuation creditors will hold out for higher prices, resulting in delay.

A possible countervailing force is that each creditor might fear that if it does not sell its claim, it will be left outside a coalition and with little bargaining power. Thus, creditors will not engage in delay but sell their claims eagerly. In addition, note that the most patient creditor will buy the claims of the less patient creditors, because the most patient creditor values the claims most and the less patient creditors value cash more. This means that after the most patient creditor buys up all the claims, E no longer has imperfect information about that creditor's type (or, at least, E's information about that creditor has improved: E knows that the remaining creditor is at or near the top of the distribution). Thus, it is possible that by revealing information about the remaining creditor, claim-buying eliminates the signaling problem between that creditor and the debtor, and the gain from prevention of delay offsets the cost of haggling among the creditors.
Imperfect Information with Respect To Optimal Capital Structure. Suppose that C_1 and C_2 have identical claims and discount factors, but that C_1 has more information about the debtor than C_2 does. C_1 might be, for example, the debtor’s regular bank, while C_2 is a tort creditor or a sometime trade creditor. If C_2 underestimates the value of the debtor as a going concern, C_2 might vote against a plan that would net C_1 and C_2 more than would liquidation. If C_1 merely informs C_2 that their shares would be maximized if they voted for the plan, C_2 might not believe C_1, thinking that C_1 has a postbankruptcy interest that renders even an inefficient liquidation privately advantageous to C_1. But if C_1 can purchase C_2’s claim, C_1 can ensure the plan is approved, and C_2 will do no worse than if it had voted against the plan. Thus, the availability of claim buying may enable creditors to exploit information advantages, resulting in maximization of going concern value. By the same token, a more informed creditor will obtain a larger share of the surplus than a less informed creditor will obtain, resulting in possibly greater violations of prebankruptcy entitlements.

The reader will notice that this analysis resembles the analysis of classification. The main difference is that the debtor uses its classification power in order to encourage creditors to exploit their information advantages, whereas creditors use the claim-buying power to exploit their information advantages. In both cases, one must balance the enhanced going concern value with the greater danger of violation of prebankruptcy entitlements.

Summary. We have only scratched the surface of a very complex problem. The availability of claim buying can sometimes increase efficiency and sometimes not. Whether it will in any particular case depends on a variety of parameters, which are probably not easily evaluated by a judge. Yet it is impossible to say whether the availability of the right to buy and sell claims is efficient overall. In addition, we have not compared the existing bankruptcy regime (with and without claim buying) to alternative regimes in which claim buying is available. For example, it might be argued that a unanimity rule with claim buying would be superior to the existing regime. Future research should consider these questions.
VII. Conclusion

Much work remains to be done before proposals for reform of Chapter 11 can be confidently asserted. We therefore start with some suggestions for future research, and then we draw some tentative normative conclusions from our analysis.

Future research. The most pressing problem is that of determining the proper way of modeling bargaining in Chapter 11. Only further theoretical and empirical research into bargaining problems can resolve this problem. A great deal of helpful empirical research already exists, as we have pointed out in passing, but more research could resolve such issues as the significance of delay and the violation of prebankruptcy entitlements, the importance of variation in creditors’ discount factors, the extent to which creditors have postbankruptcy interests, the success with which courts determine liquidation value, and so on. And our understanding of Chapter 11 will remain at only a preliminary stage until adequate formal models of multi-party bargaining are discovered.

The optimal bargaining procedure in Chapter 11. Although our work is too tentative to support normative proposals, we are reasonably confident about the following propositions. Agenda control makes sense, but it is possible that it should not be given to the debtor, but to a trustee or a significant creditor, and that the current exclusivity period is too short or too long. The liquidation value floor makes sense as long as judges can estimate liquidation value with sufficient accuracy. It is difficult to see the merits in the current bicameral structure, but it is also difficult to understand how it should be improved. If information pooling is important and large creditors have greater information about the debtor, claims voting is attractive. If strategic behavior is important and relative information advantages among creditors are relatively small, the relative advantages of claim and creditor voting are hard to determine. Cram down appears to rely on overly optimistic assumptions about courts’ ability to evaluate debtors. Dictatorship (with equal treatment) would be a surprisingly effective voting rule. But reliance on equal treatment will interfere with plans that exploit differences in postbankruptcy interests. Classification addresses this problem, but only if judges are able to prevent gerrymandering, which again seems doubtful given normal assumptions about judicial competence.
choice of voting rule is sensitive to one's assumptions about the costs of bargaining, the valuations of parties, and the importance of information pooling. Claim-buying seems to make sense, albeit perhaps with judicial review in order to deter abuse.

A recurring theme has been Chapter 11's inconsistent assumptions about judicial information. Chapter 11 assumes that the court does not have enough information to determine s, or indeed whether s>v, but has some information. In particular, the liquidation floor rule assumes that the court can determine v; the absolute priority rule assumes that the court can determine whether s>v for non-cash plans; the equal treatment rule assumes that the court can determine the relative value of claims; the classification rule assumes that the court can determine which claims are “alike” and “different,” although we suggested that this inquiry cannot be done in the abstract and ultimately assumes that the court can determine whether s>v under a particular plan; and so on. Many of these assumptions appear to be inconsistent.

Alternatives to Chapter 11. More market-driven, less bargaining-oriented corporate bankruptcy systems, such as the use of mandatory auctions mentioned in the introduction, have three virtues, their proponents argue. First, they straightforwardly respect prebankruptcy entitlements. Lower-priority creditors, and holders of equity interests, do not receive value unless higher-priority creditors are fully paid off. Second, they reduce bargaining costs. Third, the schemes avoid the danger of judicial error. The debtor will be valued by a market process rather than the judge, and the judge can also avoid approving classifications and making other substantive determinations; he or she simply ensures that all players abide by procedures.

Our analysis sheds light on several aspects of this debate. Initially, the proponents of alternative schemes tend to compare their favored (and idealized) scheme with the imperfect Chapter 11 bargaining procedure currently in place. However, as we have shown, some aspects of Chapter 11 seem arbitrary, or require additional analysis before they can be justified. The appropriate comparison for those who would jettison Chapter 11 is between a practical implementation of alternative schemes and the best version of
Nevertheless, it does seem true that alternative systems can respect prebankruptcy entitlements more effectively than Chapter 11 does. Any voting or bargaining system will divide the firm's value according to bargaining or voting power, rather than prebankruptcy entitlements. We saw this most starkly in Part IV A, where creditors shared the round surplus according to bargaining power rather than prebankruptcy entitlement. It might be argued that recent articles on secured transactions have cast doubt on the claim that prebankruptcy entitlements are efficient. If security interests and other contractual priorities transfer value from tort creditors, small contract creditors, and other nonadjusting creditors, then it may be inappropriate to respect them in bankruptcy. Additionally, it may be necessary to violate prebankruptcy entitlements in order to reduce agency costs. However, this does not justify Chapter 11's disregard of prebankruptcy entitlements: the auction or option approaches could be modified to provide any desired degree of respect for prebankruptcy entitlements, and presumably more systematically than a system that relies on, for example, creditor discount factors.

The main advantage of a bargaining system compared to an auction approach, if there is one, is flexibility. Bargaining enables parties to agree to a reorganization when parties have substantial non-contractible postbankruptcy interests. The auction approach does not allow the confirmation of such plans unless parties with postbankruptcy interests can borrow enough to purchase the firm or can buy the claims of other parties. However, the first possibility is not available when capital markets are imperfect, and the second possibility requires parties to bargain with each other, with all the attendant problems. Thus, if capital markets are imperfect, the auction system requires parties to bargain, just like in Chapter 11. The advantage of Chapter 11 is that bargaining is structured, and

120 See Michael Frierman & P.V. Viswanath, Agency Problems of Debt, Convertible Securities, and Deviation from Absolute Priority in Bankruptcy, 37 J.L. & Econ. 455 (1994).
121 Lucian A. Bebchuk, The Options Approach to Corporate Reorganization (draft, 3/98).
relies on judicial supervision. To the extent judicial expertise is exploited properly, it can be used to mitigate delay and violation of prebankruptcy entitlements.

The case for auctions, then, comes down to the claim that information is sufficiently available, and capital markets sufficiently robust, that the party with the greatest expertise can buy the distressed firm at the highest price. If this claim is not true, then structured bargaining might be superior to the extent that it forces parties to reveal information while enabling them to protect their entitlements. Whether the Chapter 11 system actually does this is a hard question, and essentially an empirical question, but our analysis is a step toward finding an answer.
13. J. Mark Ramseyer, Credibly Committing to Efficiency Wages: Cotton Spinning Cartels in Imperial Japan (March 1993).
17. J. Mark Ramseyer, Explicit Reasons for Implicit Contracts: The
34. J. Mark Ramseyer, Public Choice (November 1995).
60. John R. Lott, Jr. and Larry Kenny, How Dramatically Did Women’s Suffrage Change the Size and Scope of Government? (September 1998)