COMMENTARY

A NEW APPROACH TO VALUING SECURED CLAIMS IN BANKRUPTCY

Lucian Arye Bebchuk and Jesse M. Fried

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Lucian Arye Bebchuk[*] *and Jesse M. Fried*[**]

In a business bankruptcy in which the firm is to be preserved as a going concern, one of the most difficult and important problems is valuing the assets that serve as collateral for secured creditors. The value of a secured creditor's collateral is important because it affects the payout that must be made to the creditor at the end of the proceeding. Valuing such assets is generally thought to require either litigation or bargaining among the parties, both of which give rise to uncertainty, delay, and deviations from parties' entitlements. We propose a new approach to valuing collateral that involves neither bargaining nor litigation. Under this approach, a market-based mechanism determines the value of collateral in a way that gives no participant in the bankruptcy reason to complain that secured creditors are either over- or undercompensated. Our approach would considerably improve the performance of business bankruptcy and could constitute an important element of any proposal for bankruptcy reform.

I. INTRODUCTION

One of the most difficult problems in business bankruptcies is valuing the individual assets that serve as collateral for a firm's secured creditors. The valuation of these assets is necessary to determine the entitlements of secured creditors — and therefore the amounts paid to them at the end of the bankruptcy proceeding. Such valuation is thought to require either litigation or bargaining, the current methods of valuing collateral. However, litigation and bargaining give rise to uncertainty, deviations from parties' bankruptcy entitlements, and significant transaction costs.

We propose a new market-based approach to valuing collateral, one that does not require litigation or bargaining during the proceeding. The proposed mechanism determines secured claims in a way that gives no participant a basis for complaining that secured creditors are

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either over- or undercompensated. This mechanism could considerably improve the performance of Chapter 11 as well as any other business bankruptcy system, including the various market-based systems that have been suggested as alternatives to Chapter 11.

Creditors frequently take security interests in their borrowers' assets.[1] If a borrower files for bankruptcy, one of the most important tasks in the ensuing proceeding is valuing the assets that serve as collateral for the borrower's secured loans.[2] Determining the collateral's value is essential because bankruptcy law gives a secured creditor a "secured claim" equal to the value of its collateral — up to the amount owed[3] — which must be paid in full.[4] The creditor also receives an "unsecured claim" for any deficiency, for which the creditor will rarely be paid in full.[5] Thus, the higher the value of the collateral, the higher the payout to the secured creditor at the end of the proceeding.[6] And because higher payouts to secured creditors mean lower payouts to unsecured creditors (creditors whose claims are not backed by any collateral), the valuation of collateral is critical for unsecured creditors as well.

The problem of valuing collateral arises in a business bankruptcy whenever the debtor firm is sold as a going concern, either in Chapter 7 or in Chapter 11, as well as whenever the firm is reorganized under

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[1] The available data suggest that a substantial amount of U.S. business debt is secured. *See, e.g.*, John D. Leeth & Jonathan A. Scott, *The Incidence of Secured Debt: Evidence from the Small Business Community*, 24 J. FIN. & QUANTITATIVE ANALYSIS 379, 379 (1989) (reporting that a 1982 study of the Interagency Task Force on Small Business Finance revealed that almost 80% of the dollar volume of large- and small-business loans was secured and that a 1983 study of the National Federation of Independent Business found that 78% of the total volume of small-business loans was secured). As of January 2001, commercial banks held $1.7 trillion in loans secured by real estate. *See* Federal Reserve Board of Governors, H.8 Release, *Real Estate Loans at All Commercial Banks Seasonally Adjusted*, http://www.stls.frb.org/fred/data/loans/realln.

[2] *See, e.g.*, JAMES J. WHITE & RAYMOND T. NIMMER, CASES AND MATERIALS ON BANKRUPTCY 171 (3d ed. 1996) (noting that valuation of assets in Chapter 11 is "critical"); Charles D. Booth, *The Cramdown on Secured Creditors: An Impetus Toward Settlement*, 60 AM. BANKR. L.J. 69, 101 (1986) (noting that valuation of collateral is "one of the most important" issues in Chapter 11); Darrell G. Waas, *Letting the Lender Have It: Satisfaction of Secured Claims by Abandoning a Portion of the Collateral*, 62 AM. BANKR. L.J. 97, 106 (1988) (same).

[3] *See* 11 U.S.C. § 506 (1994).

[4] *See infra* section II.A.2(b), pp. 2397–98.

[5] In the United States, payouts for unsecured claims in business bankruptcies are, on average, less than fifty cents on the dollar. *See* Lynn M. LoPucki & William C. Whitford, *Bargaining over Equity's Share in the Bankruptcy Reorganization of Large, Publicly Held Companies*, 139 U. PA. L. REV. 125, 142 tbl.3 (1990) (noting that the average payout promised — but not necessarily paid — to holders of general unsecured claims in forty-three reorganization cases filed after October 1, 1979, and confirmed by March 31, 1988, was about thirty-two cents per dollar and that even in successful Chapter 11 reorganizations of large, publicly traded corporations with relatively little secured debt, the average payout to holders of general unsecured claims was less than fifty cents on the dollar).

[6] *See* DAVID G. EPSTEIN, STEVE H. NICKLES & JAMES J. WHITE, BANKRUPTCY §§ 10-23 to -27, at 769–79 (1993).

Chapter 11.[7] Outside bankruptcy, or in a bankruptcy in which the borrower's assets are sold piecemeal, the value of each asset serving as collateral can be objectively and verifiably determined by auctioning the assets individually.[8] However, in a bankruptcy in which the business is reorganized or sold as a going concern to a third party,[9] there is no auction of individual assets to determine their value. Another method must be used.

Currently, the value of collateral is determined through either litigation or bargaining in the shadow of litigation.[10] Using these methods to value the debtor's assets may lead to deviations from the parties' bankruptcy entitlements either in favor of or against the secured creditor.[11] Litigation and bargaining are also likely to prolong the bankruptcy proceeding and increase its attendant costs.

The collateral valuation problem would also arise under the two market-based approaches that have been suggested as alternatives to Chapter 11: the auctions approach[12] and the options approach.[13] In

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[7] *See* ELIZABETH WARREN, FED. JUDICIAL CTR., BUSINESS BANKRUPTCY 140–41 (1993).

[8] *See* DOUGLAS G. BAIRD, THE HIDDEN VIRTUES OF CHAPTER 11: AN OVERVIEW OF THE LAW AND ECONOMICS OF FINANCIALLY DISTRESSED FIRMS 6 (Chi. Working Papers in Law and Econ., 2d ser., Working Paper No. 30, 1997).

[9] In bankruptcies of publicly traded firms, approximately seventy-eight percent of debtors emerge as going concerns. *See* Lynn M. LoPucki & Sara D. Kalin, *The Failure of Public Company Bankruptcies in Delaware and New York: Empirical Evidence of a "Race to the Bottom"*, 54 VAND. L. REV. 231, 237 (2001).

[10] *See* EPSTEIN, NICKLES & WHITE, *supra* note 6, §§ 10-1 to -7, at 732–45. There are two types of assets whose value can be determined without litigation or extensive bargaining. The first type consists of publicly traded securities and commodities. Publicly traded assets have an easily ascertainable and objective market value. The second type consists of assets whose highest plausible value is so small that it is not worth the parties' time or money to bargain over their value. The parties should quickly be able to reach an agreement about the value of these two types of assets. We focus here on assets whose values cannot be easily and objectively established by their trading prices in a public market and whose plausible values are high enough that the parties will be willing to invest resources litigating and bargaining over them.

[11] *See id.* § 3-27 (b), at 143–44.

[12] The auctions approach was put forward in Douglas G. Baird, *The Uneasy Case for Corporate Reorganizations*, 15 J. LEGAL STUD. 127, 128 (1986); and in THOMAS H. JACKSON, THE LOGIC AND LIMITS OF BANKRUPTCY LAW 221–24 (1986). Their proposals for mandatory auctions in Chapter 11 followed an earlier proposal by Mark Roe to establish the value of a debtor by auctioning ten percent of the reorganized firm's securities. *See* Mark J. Roe, *Bankruptcy and Debt: A New Model for Corporate Reorganization*, 83 COLUM. L. REV. 527 (1983). Roe noted the possibility of selling the firm as a whole but, concerned that a lack of buyers able to purchase the entire firm would lead to undervaluation, he opted for a ten-percent sale to investors. The auctions approach was subsequently advocated in Michael C. Jensen, *Corporate Control and the Politics of Finance*, 4 J. APPLIED CORP. FIN. 13, 31–32 (1991). For a more detailed discussion of the auctions approach, see *infra* section II.D.1, pp. 2406–07.

[13] The options approach was first put forward in Lucian A. Bebchuk, *A New Approach to Corporate Reorganizations*, 101 HARV. L. REV. 775 (1988) [hereinafter Bebchuk, *Options Approach*]. This approach was subsequently endorsed and adopted as the basis for bankruptcy reform in Philippe Aghion, Oliver Hart & John Moore, *The Economics of Bankruptcy Reform*, 8

fact, this problem has been considered a major obstacle to the effectiveness of either proposal.[14]

We propose a market-based solution to the problem of valuing collateral. The proposal is based on a new conceptualization of a secured creditor's claim. It is well known that a secured creditor's claim is composed of two parts: the fully secured part (the "secured claim") — which is the lesser of the amount owed and the value of the collateral — and the unsecured part (the "unsecured claim") — which is simply the excess of the amount owed over the secured claim. The insight underlying our proposal is that the amount of the secured claim can be thought of as equivalent to the value of a nonrecourse loan[15] that has a face amount equal to the secured creditor's claim and that is backed by the secured creditor's collateral. Thus, the problem of dividing the claim into a fully secured claim and an unsecured claim translates into the problem of valuing such a nonrecourse loan.

We show how such a nonrecourse loan can be valued during a bankruptcy proceeding in a way that would neither disrupt the proceeding, reduce the going concern value of the firm's assets, nor give any party a basis for complaining that it is undercompensated. Under our proposal, at the very end of the bankruptcy proceeding there would be an auction of a nonrecourse note with a face amount equal to the secured creditor's claim, backed by the asset serving as the creditor's collateral. The winner of the auction — the "noteholder" — would have the right to collect the face amount of the note from the debtor immediately after the end of the bankruptcy proceeding but with recourse only to the collateral. At that point, the noteholder would be able to use the note to obtain from the debtor the value of the collateral, up to the amount of the note.

Because the nonrecourse note would be resolved shortly after the auction, bidders should be willing to buy the note for the value of the collateral, up to the amount of the secured creditor's claim. The price the note fetches at the auction would thus determine the amount of the

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J.L. ECON. & ORG. 523, 532–36 (1992); and OLIVER HART, FIRMS, CONTRACTS, AND FINANCIAL STRUCTURE 156–57, 169–85 (1995). For a recent account of the options approach, see Lucian Arye Bebchuk, *Using Options To Divide Value in Corporate Bankruptcy*, 44 EUR. ECON. REV. 829 (2000) [hereinafter Bebchuk, *Using Options*]. For a more detailed discussion of the options approach, see *infra* section II.D.2, pp. 2408–09. For a comparison of the options and auctions approaches, see Lucian Arye Bebchuk, *Chapter 11*, *in* 1 THE NEW PALGRAVE DICTIONARY OF ECONOMICS AND THE LAW 221–23 (Peter Newman ed., 1998) [hereinafter Bebchuk, *Chapter 11*].

[14] *See* MARK J. ROE, CORPORATE REORGANIZATION AND BANKRUPTCY: LEGAL AND FINANCIAL MATERIALS 602 (2000) (discussing the problem of valuation in the context of the options approach).

[15] A nonrecourse loan is a secured loan under which, in the event of a default, the lender's remedies are limited to seizing and selling the collateral. For a more detailed description of nonrecourse loans, see *infra* section III.A, pp. 2410–11.

creditor's secured claim. The proceeds of the auction would be used to pay that claim in full. The excess of the creditor's claim over the auction price, if any, would constitute the unsecured claim of the creditor and be pooled with other unsecured claims.

We would like to emphasize that our proposal does not entail any foreclosure on collateral during the course of the bankruptcy proceeding. Were such a foreclosure to take place, the debtor might not have the cash necessary to participate in the subsequent auction of the collateral; the asset's going concern value, if any, could be destroyed.[16] The proposed mechanism would avoid this problem by postponing the possibility of foreclosure until after the end of the bankruptcy proceeding, when the debtor is solvent. At that time, the debtor should have the financial ability and incentive to retain any collateral that has going concern value.

We show how the proposed mechanism would — in addition to preserving assets' going concern value — facilitate the valuation of collateral in a way that does not involve costly and time-consuming litigation and bargaining. We also demonstrate how the procedure could be designed to ensure that secured creditors are neither over- nor undercompensated. We then show that this procedure could be combined with the existing Chapter 11 regime as well as with the two market-based reform proposals that have been suggested as alternatives to Chapter 11.

We also offer for consideration an alternative, "auctionless" version of our mechanism that could be employed whenever the firm is sold for cash at the end of the proceeding. As under the first version of the procedure, the secured claim would be converted into a nonrecourse note due immediately after the end of the bankruptcy proceeding. However, the note would not be auctioned. Instead, the secured creditor would keep the note and enforce it immediately after the conclusion of the bankruptcy proceeding. To the extent that the resolution of the note after the bankruptcy proceeding leaves the secured creditor with a deficiency claim, that claim would need to be paid at the same rate as similar unsecured claims were paid at the end of the proceeding. We suggest two methods to ensure that such deficiency claims would indeed receive the same treatment.

Finally, we consider the possibility of using this mechanism to implement a rule of partial priority. As noted above, bankruptcy law currently entitles secured creditors to be paid in full for their secured claim, which is the value of the collateral, up to the amount owed. However, as we have emphasized in previous work, the case for according secured claims full priority is not compelling, and there are

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[16] *See infra* section II.A.2(a), pp. 2396–97.

reasons to consider as alternatives partial priority regimes under which secured creditors are entitled to less than full priority in their collateral.[17] We show that our mechanism could be modified to provide secured creditors with their entitlements under partial priority rules just as easily as it could under full priority.

Our work builds on the literature exploring market-based approaches to bankruptcy. In the past two decades, bankruptcy scholars seeking alternatives to the bargaining approach of Chapter 11 have suggested market mechanisms based on the use of auctions or options.[18] Our work is very much in the spirit of this larger project. However, as we note above, researchers investigating market-based mechanisms have thus far been unable to develop a market-based mechanism for valuing secured claims. They have abstracted from this issue, assuming implicitly or explicitly that the value of collateral in bankruptcies either will be known or will be determined, as it is now, by bargaining and litigation. Our contribution is to provide a market-based mechanism that addresses this essential element of a bankruptcy proceeding. In doing so, we build on ideas from both the auction and options approaches.[19]

The analysis is organized as follows: Part II describes the fundamental challenge posed by the need to value collateral in going concern bankruptcies. It also discusses the inescapable shortcomings of the existing methods of valuation — litigation and bargaining. Part III presents our approach to valuing assets serving as collateral. Part IV concludes that this approach could significantly improve the performance of business bankruptcy.

II. THE VALUATION PROBLEM

This Part examines the problem of valuing collateral in business bankruptcy. Section A describes the basic rights of a secured creditor both outside and inside bankruptcy. Section B explains the necessity of valuing collateral and then discusses the fundamental problem of valuing collateral in any bankruptcy in which the assets are worth more as part of a going concern — the lack of an objective, verifiable

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[17] *See* Lucian Arye Bebchuk & Jesse M. Fried, *The Uneasy Case for the Priority of Secured Claims in Bankruptcy*, 105 YALE L.J. 857, 862 (1996) [hereinafter Bebchuk & Fried, *Uneasy Case*]; Lucian Arye Bebchuk & Jesse M. Fried, *The Uneasy Case for the Priority of Secured Claims in Bankruptcy: Further Thoughts and a Reply to Critics*, 82 CORNELL L. REV. 1279 (1997) [hereinafter Bebchuk & Fried, *Reply to Critics*]; Jesse M. Fried, *Taking the Costs of Priority Seriously*, 51 CONSUMER FIN. L.Q. REP. 328 (1997).

[18] *See infra* section II.D, pp. 2406–09.

[19] As the analysis in Part III makes clear, the auction of the nonrecourse loan under our mechanism is in the spirit of the auctions approach, and our attempt to ensure that no one has reason to complain about the outcome — by giving participants a number of ways to take part in the auction, both directly and indirectly — is in the spirit of the options approach.

value for the collateral. Section C briefly considers how collateral is currently valued in Chapter 11 — through litigation and bargaining — and describes the deficiencies of these methods. Section D shows that the problem of valuing collateral arises not only in Chapter 11 reorganizations, but also in connection with the two market-based mechanisms — options and auctions — that have been offered as alternatives to Chapter 11.

A. The Secured Creditor's Rights Outside and Inside Bankruptcy

1. Rights Outside Bankruptcy. — Outside bankruptcy, under state debtor-creditor law, a secured creditor whose borrower (the "debtor") has defaulted may seize the collateral, sell it at auction, and keep the proceeds of the sale up to the amount owed.[20] If the proceeds exceed the amount owed, the creditor must return the surplus to the debtor.[21] If the proceeds fall short of the amount owed, the secured creditor may attempt to collect the deficiency from the debtor using the remedies available to unsecured creditors.[22]

In some cases, the debtor may be willing and able to pay the creditor not to repossess and sell the asset so that the debtor can continue to enjoy its use. Thus, the secured creditor may be able to use the threat of repossession to collect payment without conducting an auction. The result is the same as if the debtor had purchased the asset at auction — except that the parties incur fewer transaction costs and the debtor's use of the asset is not disrupted. If the payment is less than the amount owed, the secured creditor would have an unsecured claim for the deficiency.[23]

For ease of exposition, we introduce here the term "foreclosure value," which we define as the proceeds of auctioning an asset or,

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[20] *See generally* U.C.C. §§ 9-601 to -628 (1999 & Supp. 2000); LAWRENCE P. KING & MICHAEL L. COOK, CREDITORS' RIGHTS, DEBTORS' PROTECTION AND BANKRUPTCY §§ 3.01–.14, at 107–64 (1997). To the extent the secured creditor incurs transaction costs in repossessing and selling the collateral, the creditor may generally offset them against auction proceeds before applying the remainder of the proceeds to reduce the amount owed. *See, e.g.*, U.C.C. § 9-615(a). From now on, we use the term "proceeds" to mean the sale proceeds net of these transaction costs. For ease of exposition we also assume that transaction costs are zero and therefore that the net proceeds of the sale equal the sale price. Altering this assumption would not affect any of our conclusions.

[21] *See* JAMES J. WHITE & ROBERT S. SUMMERS, UNIFORM COMMERCIAL CODE § 25-10, at 919–20 (4th ed. 1995).

[22] *Id.* If the loan were nonrecourse, the secured creditor would have no right to collect the deficiency. Every loan is assumed to be nonrecourse unless we indicate otherwise.

[23] At the time the debtor pays the creditor to allow the debtor to retain the asset, the debtor might be willing to pay an additional amount to settle the entire debt. If the creditor were to agree, such an arrangement would cancel the creditor's deficiency claim. For ease of exposition, however, we assume that the parties do not enter such an agreement. Thus, if the amount paid the secured creditor falls short of the amount owed, the creditor will have a deficiency claim.

when an auction is avoided, the amount the debtor pays the secured creditor not to repossess and sell the asset. Thus, outside bankruptcy, the secured creditor is entitled to the foreclosure value of the collateral, up to the amount owed, and is an unsecured creditor for any deficiency.[24]

For example, suppose that Creditor extends a $100 loan to Debtor. The loan is secured; a machine serves as the collateral. Debtor later defaults on the loan. Creditor seizes the machine and sells it at auction. The sale price is $\$X$. Creditor may keep the machine's foreclosure value — the sale proceeds of the auction, $\$X$, up to the amount owed, $100. If $\$X$ is less than $100, Debtor remains obligated to pay Creditor the difference, $100 – $\$X$. Creditor can thus sue Debtor (as an unsecured creditor) for this deficiency.

2. Rights Inside Bankruptcy. — One of the most important consequences of a bankruptcy filing is the automatic stay.[25] The automatic stay, described in more detail below, generally prohibits creditors from initiating or continuing collection efforts against the debtor.[26] Thus, when a defaulting borrower files for bankruptcy, the automatic stay usually prevents a secured creditor from seizing the collateral, selling it, and keeping the proceeds.[27]

However, it is a basic tenet of bankruptcy law that the secured creditor has the right to receive the value of its collateral (up to the amount owed).[28] Thus, at the end of a bankruptcy proceeding, the creditor is paid in full for that amount.[29] The creditor also receives an unsecured claim for any deficiency, which is almost never paid in full.[30] Before considering in more detail secured creditors' entitlements at the end of a bankruptcy proceeding, however, it is important to consider the purpose and operation of the automatic stay.

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[24] *See* WHITE & SUMMERS, *supra* note 21, § 25-10, at 919–20. The debtor, if willing and able, can settle the entire debt by paying the amount owed. Thus, when the debtor pays the creditor directly to prevent disruption to the use of the collateral, foreclosure value will never exceed the amount owed.

[25] *See* EPSTEIN, NICKLES & WHITE, *supra* note 6, § 3-1, at 59–64.

[26] *See* 11 U.S.C. § 362 (1994 & Supp. IV 1998). *See generally* EPSTEIN, NICKLES, & WHITE, *supra* note 6, §§ 3-1 to -7, at 59–80.

[27] *See* 11 U.S.C. § 362(a) (1994); DOUGLAS G. BAIRD & THOMAS H. JACKSON, CASES, PROBLEMS, AND MATERIALS ON SECURITY INTERESTS IN PERSONAL PROPERTY 481 (2d ed. 1987).

[28] *See* Bebchuk & Fried, *Uneasy Case*, *supra* note 17, at 862. Secured claims are treated similarly in other bankruptcy regimes. *See* INTERNATIONAL CORPORATE INSOLVENCY LAW (Dennis Campbell ed., 1992) (surveying insolvency laws of various countries).

[29] *See infra* section II.A.2(b), pp. 2397–98.

[30] *See* Bebchuk & Fried, *Uneasy Case*, *supra* note 17, at 862.

(a) The Automatic Stay. — When a debtor files for bankruptcy, the automatic stay stops all collection activities against the debtor.[31] Thus, the secured creditor may not, as outside bankruptcy, seize the collateral from the defaulting debtor and sell it at auction.[32] Nor may the secured creditor pursue the debtor as an unsecured creditor for any part of its claim.[33]

The economic goal of the automatic stay is to protect assets that have "going concern value." For present purposes, assets have going concern value for a particular firm if they are worth more to that firm as part of a going concern than they would be if sold piecemeal.[34] Were it not for the automatic stay, the debtor's secured creditors might seize these assets, destroying their going concern value.[35] The assets would be sold for less than their going concern value, and participants in the bankruptcy (as a group) would get less than if the assets had remained with the debtor.

An asset that has going concern value for the debtor would, by definition, be worth more to the debtor itself than to any other bidder at auction. As a result, if the secured creditor were to seize the collateral, we might expect the debtor to be the highest bidder for the asset at auction, or to prevent the auction altogether by paying the creditor what it expects to get at auction. Thus, the automatic stay might seem unnecessary to preserve the asset's going concern value.

The debtor, however, is likely to be liquidity-constrained for much of the bankruptcy proceeding. If a secured creditor could seize its collateral, the debtor might not be able to compete in an auction or to prevent the auction even when the debtor valued the asset more than

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31 *See* 3 COLLIER ON BANKRUPTCY ¶ 362.01 (Lawrence P. King ed., 15th rev. ed. 1996 & Supp. 1998) [hereinafter COLLIER]; EPSTEIN, NICKLES & WHITE, *supra* note 6, § 3-6, at 69–70.

32 There are two exceptions to the automatic stay. First, the stay may be lifted if the debtor has no equity in the collateral and if the collateral is not necessary for the reorganization of the debtor as a going concern. *See* 11 U.S.C. §§ 361–362 (1994 & Supp. IV 1998). Second, the stay may be lifted if the secured creditor's interest in the debtor's property is not "adequately protected." *See id.* §§ 361–364. A secured creditor's interest in the collateral is considered adequately protected if the debtor compensates the secured creditor (with cash or additional collateral) for any decrease in the amount of the secured claim resulting from a decline in the value of the original collateral. *See* EPSTEIN, NICKLES & WHITE, *supra* note 6, § 3-27(c), at 146. We assume throughout that the secured creditor is adequately protected and that the collateral is necessary for the debtor's reorganization. Therefore, neither of the exceptions to the automatic stay applies, and the collateral remains with the debtor during the course of the bankruptcy proceeding.

33 *See* 3 COLLIER, *supra* note 31, ¶ 362.01.

34 When assets are sold piecemeal, they are usually bought and used by another going concern. Thus, an asset is considered to have going concern value as part of a firm if and only if the asset is worth more to that firm than it is to any other firm that might buy it.

35 MARK S. SCARBERRY, KENNETH N. KLEE, GRANT W. NEWTON & STEVE H. NICKLES, BUSINESS REORGANIZATION IN BANKRUPTCY: CASES AND MATERIALS 119–23 (1996).

any other party. As a result, the going concern value of the collateral might be lost were it not for the automatic stay.

(b) The Secured Creditor's Rights at the End of the Proceeding. — The automatic stay deprives the secured creditor of the right to seize and sell the collateral during the bankruptcy proceeding.[36] However, bankruptcy law attempts to preserve the secured creditor's other most important right: priority in the collateral. It is a fundamental principle of bankruptcy law that a secured creditor has a right to receive the value of its collateral, up to the amount owed.[37] The principle is implemented by giving the secured creditor a "secured claim" equal to the value of the collateral, up to the amount owed, which must be paid in full at the end of the proceeding.[38]

In addition, bankruptcy law gives the secured creditor the rights of an unsecured creditor to the extent that the value of the collateral falls short of the amount owed.[39] Thus, the law gives the creditor an "unsecured claim" for any deficiency.[40] Unsecured claims are generally not paid in full; indeed they are often paid only a small fraction of their face value.

As explained in section II.A.1, outside bankruptcy the secured creditor has a right to the collateral's "foreclosure value" (defined either as the asset's sale price at auction or as the amount the debtor pays the creditor not to repossess and auction the asset), up to the amount owed. The secured creditor also has an unsecured claim for any deficiency. We assume that bankruptcy law intends to give a secured creditor that same entitlement. That is, the secured creditor in bankruptcy has a right to the "foreclosure value" of the collateral, up to the amount owed, as well as an unsecured claim for any deficiency. It is worth noting that, as a descriptive matter, bankruptcy entitlements tend to reflect nonbankruptcy entitlements.[41] There is also an

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[36] *See* 3 COLLIER, *supra* note 31, ¶ 362.01.

[37] *See* Bebchuk & Fried, *Uneasy Case*, *supra* note 17, at 862. We question in that article and in other work whether secured creditors should have full priority in their collateral. *See* Bebchuk & Fried, *Reply to Critics*, *supra* note 17; Fried, *supra* note 17. However, for present purposes we take the principle of full priority as given. As section III.H explains, the mechanism we propose can be used to implement not only full priority but also a rule of partial priority.

[38] 11 U.S.C. § 506 (1994). The secured claim may be paid in full with cash or with a note whose value is at least the amount of the secured claim.

[39] *See* 4 COLLIER, *supra* note 31, ¶ 506.03[4] (1996 & Supp. 2000).

[40] 11 U.S.C. § 506; WARREN, *supra* note 7, at 59–60.

[41] *See* Thomas H. Jackson, *Bankruptcy, Non-Bankruptcy Entitlements, and the Creditors' Bargain*, 91 YALE L.J. 857, 859 (1982). As a matter of positive law, it is not entirely clear what a secured creditor is entitled to get for its secured claim. The Supreme Court recently decided that in appraising assets, the standard is the "replacement value" of the asset. *See* Assocs. Commercial Corp. v. Rash, 520 U.S. 953, 965 & n.6 (1997). However, the Supreme Court has not provided clear guidance to lower courts regarding how "replacement value" should be determined. *See* Jean Braucher, *Getting It for You Wholesale: Making Sense of Bankruptcy Valuation of Collateral After* Rash, 102 DICK. L. REV. 763, 764 (1998). As a result, there is still considerable ambiguity

important line of bankruptcy scholarship suggesting that, as a normative matter, creditors' bankruptcy entitlements should mirror their nonbankruptcy entitlements as closely as possible.[42]

In our example, in bankruptcy Creditor would have a secured claim for the foreclosure value of the machine, $\$X$, up to the amount owed, $100. Creditor thus would have a secured claim for $\$X$ or $100, whichever is less. This claim would be paid in full. If $\$X$ is less than $100, Creditor would be considered an unsecured creditor for the deficiency, $100 – $\$X$, and would receive an unsecured claim for that amount.[43]

B. The Problem of Valuing Collateral

1. The Necessity of Valuing Collateral. — One of the most important functions of bankruptcy is to allocate the value of the bankruptcy pie — the debtor's assets — according to the amount of each participant's claim and that claim's priority ranking.[44] The bankruptcy proceeding cannot be completed until each participant receives at least the minimum to which it is entitled under the applicable distribution rules.

As we explain in section A, a secured creditor is entitled to full payment of its secured claim and has an unsecured claim for any deficiency. In Chapter 11, this rule is implemented by the "fair and equitable" requirement.[45] If a secured creditor challenges the distribution plan and the judge finds that it is not fair and equitable, the judge will not permit the firm to emerge from bankruptcy.[46] Thus, whether a Chapter 11 plan is considered fair and equitable — and therefore whether the proceeding can conclude — will depend in part on the value of the secured creditor's collateral.

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about how collateral should be valued in bankruptcy. *See generally* Gary Klein, *Opinion Raises More Questions Than It Answers*, AM. BANKR. INST. J., July/Aug. 1997, at 18; Chris Lenhart, *Toward a Midpoint Valuation Standard in Cram Down: Ointment for the* Rash *Decision*, 83 CORNELL L. REV. 1821 (1998); Kenneth L. Reich, *Continuing the Litigation of Collateral Valuation in Bankruptcy:* Associates Commercial Corp. v. Rash, 26 PEPP. L. REV. 655 (1999); Edie Walters, Note, *An Ambiguous Answer: The Effect of* Associates Commercial Corporation v. Rash *on Chapter 11 and Chapter 13 Collateral Valuation*, 35 HOUS. L. REV. 953 (1998).

[42] *See* JACKSON, *supra* note 12, at 20–33; Douglas G. Baird, *Bankruptcy's Uncontested Axioms*, 108 YALE L.J. 573 (1998); Baird, *supra* note 12.

[43] If $\$X$ is greater than $100, 11 U.S.C. § 506(b) would also give Creditor the right to full payment of post-petition interest and certain costs incurred in connection with the loan. *See* 11 U.S.C. § 506(b). For ease of exposition, we assume that § 506(b) does not apply. This assumption does not affect any part of the analysis.

[44] *See* JACKSON, *supra* note 12, at 1–5.

[45] 11 U.S.C. § 1129(b)(1), (b)(2)(A). Chapter 7 does not specify what a secured creditor must receive if its collateral is sold as part of a going concern. However, in such a case the judge would likely give the secured creditor the value of the collateral, up to the amount owed.

[46] *See* 7 COLLIER, *supra* note 31, ¶ 1129.04[4] (1996 & Supp. 2000).

2. The Absence of a Verifiable Figure. — As noted earlier, the value of assets serving as collateral must be determined by the end of the Chapter 11 proceeding. The problem, however, is that without a piecemeal liquidation there is no objective value for an asset serving as collateral.

If the assets could be individually auctioned during the proceeding, that procedure would yield an objective, verifiable amount for the value of each asset. Each secured creditor would receive the proceeds from the sale of its collateral, up to the amount owed. No one could complain about the value of the assets. If unsecured creditors believed that the auction price was too low, they could bid for the asset and then resell it at the higher, "true" price. And even if for some reason the auction did not yield the highest possible price for the asset, there would still be no question about how to convert the secured creditor's claim into secured and unsecured claims.

However, in any business bankruptcy in which the assets are to remain part of a going concern, the automatic stay prevents secured creditors from seizing and auctioning their collateral. In the absence of such a sale, there is no objective, verifiable value for the collateral. And inevitably, the lack of such a value leads to disagreement among the parties.

There may be both genuine and strategic reasons for that disagreement. Genuine disagreement may arise when estimates of an asset's value differ. Returning to our example, Creditor might truly believe that the machine serving as its collateral is worth $120 and therefore that Creditor is entitled to the full $100. Another party might sincerely believe that the machine is worth $80 and therefore that Creditor is entitled to only $80 for its secured claim. This divergence could arise from differences in information or in parties' valuation capabilities.

Even in the absence of genuine disagreement about the collateral's value, the parties may have strategic reasons to advance different estimates. The secured creditor generally benefits from a high estimate and will thus have an incentive to advance such an estimate in negotiations or in litigation.[47] Unsecured creditors and equityholders generally benefit from a low estimate because it reduces the payout to the secured creditor and thus leaves more of the bankruptcy pie for them.

To illustrate this point, consider a case in which a secured creditor has a $100 claim and unsecured creditors have claims totaling $200. Suppose all of the assets are sold as a going concern for $150, and sup-

[47] Occasionally, the secured creditor may benefit from having a deficiency claim that enables such creditor to vote against — and prevent confirmation of — a plan it does not like. In this situation, the secured creditor would benefit from a valuation that is lower than the amount of the creditor's claim. In most cases, however, the secured creditor will prefer a high valuation.

pose that everyone knows that the collateral backing the secured loan has a value of $75. In this case, the proper division of the assets would be based on the secured creditor's having a secured claim of $75 and a deficiency claim of $25, which is to be pooled with the other $200 in unsecured claims. The deficiency claim and all other unsecured claims would be paid pro rata out of the $75 that remain after payment of the secured claim; the unsecured creditors thus would get 33% of their claims paid.

However, the parties have clear incentives to offer valuations that they know to be higher or lower than the actual value of the collateral. The secured creditor might assert that the asset is worth $100, as the creditor would then receive $100 for its secured claim (leaving no unsecured claim); the remaining $50 would be shared by the unsecured creditors, who would now have only 25% of their claims paid. In contrast, the unsecured creditors would have an incentive to claim that the collateral is worth only, say, $50, for then the secured creditor would get only $50 for its secured claim, leaving it with an unsecured claim of $50. In such a case, $100 would remain after payment of the secured claim, and unsecured claims would total $250. Consequently, the unsecured creditors would be paid 40% of their claims.

When we present our mechanism in Part III, we consider the situation in which the parties disagree about the value of the collateral. We show that our mechanism works well even when there is disagreement, whether that disagreement is genuine or strategic. No participant, whatever its estimate of the collateral's value, would have a good basis for complaining that the collateral is under- or overvalued.

3. Comparison to the Problem of Valuing the Debtor as a Whole. — The problem of valuing collateral is similar to the problem of valuing the debtor as a whole at the end of Chapter 11 when the debtor is not sold for cash. Both valuations affect the division of value among the participants in the bankruptcy proceeding, and in both cases participants have incentives to advance self-serving valuations.

When there is an actual cash sale of the debtor in Chapter 11 to an outsider, that sale places a value on the debtor.[48] The liquidation results in an exchange of the debtor's assets for cash. Whether or not this cash represents the "true" value of the assets, there is no question about the total value available for distribution and the proper payout to each class. The payout to each class is determined by priority. Creditors with the highest priority receive payment until either no money remains or their claims are paid in full; if the highest priority creditors are paid in full and money is left, the next-highest-ranking creditors receive payment until no money remains or their claims are

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[48] *See* JACKSON, *supra* note 12, at 211–12.

paid in full, and so on. If all of the creditors are paid in full, any remaining cash is distributed to equityholders.

When a debtor in Chapter 11 is not sold for cash, however, a fundamental problem of valuation arises.[49] At the end of the proceeding, at least some of the participants will receive securities in the reorganized corporation.[50] The value of those securities will depend on the value of the debtor as a whole. But without a cash sale to a third party, there is no verifiable, objective figure for the value of the reorganized firm. As a result, it will be difficult to reach agreement about the reorganization value of the debtor. And a clear conflict of interest among the participants makes agreement all the more difficult.

To illustrate this problem, suppose that a firm has two classes of unsecured creditors — "senior creditors" and "junior creditors" (whose claims are subordinate to those of the senior creditors) — and that the only other participants in the bankruptcy proceeding are the old equityholders. Suppose further that post-bankruptcy the firm will have an all-equity capital structure and that all claims will be paid with equity in the reorganized firm.

The senior creditors have an incentive to argue for a low valuation of the firm because it would entitle them to a larger fraction of the reorganized firm's equity. In contrast, the junior creditors have an incentive to advance a higher valuation, so that the senior creditors receive a smaller fraction of the equity, leaving more for the junior creditors. The junior creditors will not, however, advance a value so high that it would force them to share the equity with the old equityholders. Old equityholders, in turn, will advance the highest valuation, one that would entitle them to at least some of the equity.

4. The Separate Problem of Delay. — The absence of a verifiable and objective figure for the value of collateral is not the only problem currently facing secured creditors in bankruptcy. Chapter 11 proceedings often last two or three years.[51] During this time, secured creditors are not always paid interest on their loans.[52] In addition, the value of their collateral may decline, and courts may fail to enforce the adequate protection provisions.[53] Thus, even if the problem of valuing collateral did not exist — that is, even if the value of the collateral could always be accurately determined at the end of the proceeding —

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[49] *See* Bebchuk, *Chapter 11*, *supra* note 13, at 220; Bebchuk, *Options Approach*, *supra* note 13, at 778.

[50] *See* EPSTEIN, NICKLES & WHITE, *supra* note 6, §§ 10-20 to -21, at 762–67.

[51] *See infra* p. 2405.

[52] Secured creditors are entitled to post-petition interest only to the extent that they are oversecured. *See* 11 U.S.C. § 506b (1994).

[53] *See* Shalom L. Kohn, *Recoupment Re-Examined*, 73 AM. BANKR. L.J. 353, 367 (1999).

the length of the proceeding might still lead to systematic underpayment of secured claims.

Our analysis and proposal do not attempt to address the problems of potential undercompensation of secured creditors resulting from the length of the bankruptcy proceeding.[54] Instead, our focus is on the problem of valuing collateral at the end of the proceeding, when the division of value must take place. Our mechanism would place the parties in the same position they would be in if a court had determined the collateral's value accurately and costlessly at the end of the proceeding. The problem of delay would still remain and would need to be resolved in some other manner.[55]

C. Existing Methods of Valuing Collateral

This section explains how collateral is currently valued when a firm is reorganized under Chapter 11 — namely, through litigation and bargaining — and explores the problems with these approaches.

1. Litigation and Bargaining. — Today, almost all business bankruptcies in which the firm is preserved as a going concern take the form of a reorganization under Chapter 11.[56] In such a reorganization, the old debt and equity of the firm are canceled, and creditors (and sometimes equityholders) are given cash, debt, and equity in the firm that emerges from bankruptcy.[57]

The payouts to creditors at the end of Chapter 11 are made according to a "plan" of reorganization that divides creditors' claims into "classes."[58] Each class consists of substantially similar claims. A secured creditor's secured claim will usually be placed in its own class.[59] If the secured creditor also has an unsecured claim, that claim may be placed in a class with other unsecured claims.[60] The payout to this

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54 However, to the extent that our mechanism reduces the length of the bankruptcy proceeding by shortening the collateral valuation process, it would also tend to reduce the delay-related valuation problems of secured creditors.

55 Substantially reducing the problem of delay for secured creditors would require either replacing Chapter 11 with a much faster bankruptcy procedure, such as one based on the options or auctions alternatives, or adopting a scheme that compensates secured creditors for losses arising from delay.

56 Managers interested in preserving the going concern value of the firm prefer Chapter 11 to Chapter 7 because Chapter 11 allows them to retain control of the firm as a debtor-in-possession, whereas Chapter 7, by requiring appointment of a trustee, does not. *See* 11 U.S.C. §§ 701–704, 1107 (1994); *see also* Baird, *supra* note 12, at 139 (observing that there are very few sales of going concerns in Chapter 7).

57 EPSTEIN, NICKLES & WHITE, *supra* note 6, § 10-15, at 756–58.

58 11 U.S.C. § 1122(a).

59 *See* WARREN, *supra* note 7, at 128.

60 Unsecured claims may be grouped together or separated into different classes. *See* 11 U.S.C. § 1123(a)(1).

unsecured class is distributed pro rata.[61] The proceeding ends when the bankruptcy judge "confirms" the plan.[62]

Before the plan can be confirmed, creditors and equityholders vote on the plan. If a sufficient number of creditors (or equityholders) in a class vote in favor of it, that class is deemed to accept the plan.[63] Confirmation does not require that all classes vote in favor of the plan. As we explain in more detail shortly, if one or more classes object, the plan can be "crammed down" over their objections.

However, an objecting secured creditor — whose secured claim forms its own class — can block a cram down by showing that the plan is not "fair and equitable" with respect to the secured claim.[64] As noted above, a plan does not meet this standard if the payout for the secured claim is less than the amount of the secured claim.[65] Thus, the secured creditor that has voted against the plan can attempt to block confirmation by arguing that its secured claim is greater than the value of the payout it will receive on account of that claim.

Resolving this challenge usually requires the court to conduct a valuation of the collateral.[66] Each side offers one or more experts to testify about the asset's value, and each expert presents a view that favors his client. The judge considers the testimony and reaches her own conclusion about the value of the collateral.

However, litigation over the value of an asset is costly and time consuming for the parties. It is also risky for those who have the most at stake — the secured creditor and the plan proponent — because the court could arrive at a valuation that is considerably lower or higher than what they believe to be the "true" value. Thus, the parties will almost always first attempt to reach an agreement on the value of the collateral through bargaining.[67]

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[61] *Id.* § 1123(a)(4). A creditor may consent to being treated worse than other class members. *Id.*

[62] *Id.* § 1128.

[63] A class of creditor claims is considered to accept the plan if creditors holding at least two-thirds of the claims in amount and more than one-half of the claims in number vote for it. *Id.* § 1126(c).

[64] CHARLES JORDAN TABB, THE LAW OF BANKRUPTCY 868 (1997).

[65] To be fair and equitable, a plan giving deferred cash payments on account of a secured claim must also permit the secured creditor to retain its lien on either the collateral or an adequate substitute. 11 U.S.C. § 1129(b)(2)(A)(i)(I). A plan may also be considered fair and equitable with respect to the secured creditor if such creditor receives something of the "indubitable equivalent" value as the secured claim. *Id.* § 1129(b)(2)(A)(iii).

[66] If the parties also disagree on the value of the note the secured creditor is to receive, then the court must assess the value of the note as well.

[67] Commentators have argued that the expense of conducting valuations through litigation is desirable because it encourages negotiation. *See* Steven L. Schwarcz, *Sovereign Debt Restructuring: A Bankruptcy Reorganization Approach*, 85 CORNELL L. REV. 956, 1007 (2000). But as we explain shortly, negotiations are not costless. In particular, they increase the length of the proceedings, which in turn increases the direct and indirect costs associated with bankruptcy.

The bargaining may be successful. If the secured creditor believes that it is being offered at least as much as it would get in litigation (discounting for time, litigation expense, and risk), it may agree to vote for the plan rather than challenge it under the fair and equitable standard. In this situation, everything else being equal, bargaining will shorten the length of the reorganization.

The bargaining may not, however, ultimately lead to an agreement. In such a case, after the bargaining fails, the parties will still need to litigate the value of the collateral. As a result, bargaining may actually prolong a Chapter 11 proceeding.[68]

2. The Shortcomings of Litigation and Bargaining. — There are two problems with using litigation and bargaining to value collateral in bankruptcy. First, these methods are likely to lead to deviations from parties' bankruptcy entitlements.[69] If litigation continues

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[68] In a recent paper, Barry Adler presents an intriguing proposal for improving the process of bargaining over collateral value in Chapter 11. *See* Barry E. Adler, A Simple Game-Theoretic Solution to the Tension Between Cramdown and Holdup in Corporate Reorganization (Feb. 9, 2000) [hereinafter A Simple Game-Theoretic Solution] (unpublished manuscript, on file with the Harvard Law School Library). Under Adler's proposal, the proponent of a Chapter 11 plan would make simultaneous take-it-or-leave-it offers to all of the secured creditors for their secured claims. The offers could be in cash, securities, or both. If all of the secured creditors whose collateral is necessary for reorganization accept the offer, the debtor would keep those assets and reorganize. If one or more of these secured creditors refuse the offer, the debtor would turn all the assets over to the secured creditors and liquidate.

Although Adler's proposal would reduce the time spent bargaining over the value of collateral, it is unclear whether it would lead to an overall improvement in the Chapter 11 bargaining process. The faster resolution might come at the expense of a significant amount of inefficient liquidation in Chapter 11. As Adler himself recognizes, inefficient liquidation could result from parties having different estimates of the collateral's value. *See* Adler, A Simple Game-Theoretic Solution, *supra*, at 31–33. Consider the case in which continuation would be efficient and one of the firm's secured creditors overestimates the liquidation value of its collateral (or, alternatively, the plan proponent underestimates it). In such a case, the plan proponent might offer a price that the proponent believes is above the liquidation value of the asset but that the creditor believes is below that value. The secured creditor would then reject the offer. If the asset is necessary for the firm's ongoing operation, the rejection of the offer could force the entire firm to liquidate inefficiently before the end of the Chapter 11 proceeding. The very finality of the take-it-or-leave-it mechanism at the heart of Adler's proposal would make it impossible to correct such a mistake. (It is worth noting in this context that, as Part III shows, our valuation mechanism does not lead to inefficient liquidation or the destruction of any value when bankruptcy participants have different valuations for the collateral.) In our view it is unclear whether Adler's proposal would reduce or increase the problems associated with Chapter 11 bargaining. In either case, however, there would still be substantial costs associated with Chapter 11 bargaining.

For an earlier discussion by Adler of the problem of secured debt, see Barry E. Adler, *A World Without Debt*, 72 WASH. U. L.Q. 811, 819–21 (1994). In the context of discussing his Chameleon equity approach, Adler noted the possibility of creating Chameleon equity contracts that would provide that each secured creditor could call for a cash auction open to all, including the debtor. *Id.*

[69] By "entitlement" we mean the amount the secured creditor is entitled to get for its secured claim at the end of the proceeding — which we assume is the foreclosure value — up to the amount owed. We abstract from the fact that, because of the length of the proceeding and the

through judgment, the court's estimate of the collateral's value is likely to be either too high or too low. If there is successful bargaining, the outcome may depend not only on the parties' entitlements, but also on the relative strengths of their bargaining positions. For example, if the secured creditor has more to lose from delay, it may be forced to accept a valuation that is too low.[70] Or, if the parties expect that the judge will overvalue the collateral, the secured creditor can force the other parties to accept a valuation that is too high.

Second, litigation and bargaining increase costs by prolonging the bankruptcy. Under the existing rules, the reorganization process takes substantial time.[71] Some Chapter 11 reorganizations last two, three, or even more years.[72] Although most of this delay is not attributable to litigation or bargaining over the value of collateral, both add to the length of the reorganization proceeding.

Prolonging the proceeding increases the total direct costs of bankruptcy. These direct costs include administrative costs, such as the fees paid to bankruptcy lawyers, accountants, and other professionals.[73] For a large public company, such direct costs can reach 1.5% to 6% of total firm value.[74] As a result, the costs can run from several million dollars to hundreds of millions of dollars.[75]

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time value of money, the secured creditor gets less than what it may have been entitled to at the beginning of the proceeding. *See supra* section II.B.4, pp. 2401–02.

[70] There is substantial evidence that equityholders are able to use the threat of delay to extract value from creditors. Even though under the absolute priority rule equityholders are not to be paid unless the creditors are first paid in full, in many reorganizations equityholders receive value even though creditors are not paid in full. *See* Lawrence A. Weiss, *The Bankruptcy Code and Violations of Absolute Priority*, 4 J. APPLIED CORP. FIN. 71, 73, 75–76 (1991).

[71] *See, e.g.*, Robert Gertner & David Scharfstein, *A Theory of Workouts and the Effects of Reorganization Law*, 46 J. FIN. 1189, 1212–15 (1991); LoPucki & Whitford, *supra* note 5; Lawrence A. Weiss, *Bankruptcy Resolution: Direct Costs and Violation of Priority of Claims*, 27 J. FIN. ECON. 285 (1990).

[72] *See* Lynn M. LoPucki, *The Trouble with Chapter 11*, 1993 WIS. L. REV. 729, 740–44.

[73] These administrative costs are even higher when there is litigation over the value of collateral.

[74] *See* Edward I. Altman, *A Further Empirical Investigation of the Bankruptcy Cost Question*, 39 J. FIN. 1067, 1078 tbl.III (1984) (finding that direct costs average 6.2% of asset value); Stephen P. Ferris & Robert M. Lawless, *The Expenses of Financial Distress: The Direct Costs of Chapter 11*, 61 U. PITT. L. REV. 629, 662, 665 (2000) (finding median direct costs of 4.7% of distributions to creditors in a sample of 118 Chapter 11s that were initiated throughout the United States from 1986 to 1993); Weiss, *supra* note 71, at 286–87 (finding that the mean direct cost in bankruptcy reorganizations of thirty-seven NYSE and AMEX firms from November 1979 to December 1986 was 3.1% of the book value of debt plus the market value of equity). Even prepackaged bankruptcies are costly. *See* Elizabeth Tashjian, Ronald C. Lease & John J. McConnell, *Prepacks: An Empirical Analysis of Prepackaged Bankruptcies*, 40 J. FIN. ECON. 135, 144 tbl.2 (1996) (finding that the mean cost of prepackaged bankruptcy reorganizations of forty-nine public companies from October 1986 to June 1992 was 1.85% of the total book value of assets).

[75] *See, e.g.*, Lynn M. LoPucki, *Cooperation in International Bankruptcy: A Post-Universalist Approach*, 84 CORNELL L. REV. 696, 713 n.87 (1999) (noting a fee of $200 million paid to the English liquidators of BCCI).

More importantly, the reorganizing company is likely to incur considerable "indirect" costs from functioning inefficiently during the reorganization process.[76] For example, management's incentives during the bankruptcy proceeding are often not well aligned with the maximization of reorganization value. Thus, management decisionmaking during the process is likely to be distorted.[77] In addition, because of the insolvency cloud hovering over the company, potential business partners may be reluctant to invest in developing long-term relationships with the firm. The more that litigation and bargaining prolong the proceeding, the greater these indirect costs, which are believed to be much higher than the direct costs.[78]

D. The Valuation Problem Under Market-Based Reforms

Because Chapter 11 reorganization proceedings generally produce deviations from parties' entitlements as well as costly delays, two types of market-based alternatives to Chapter 11 have been suggested: the auctions approach and the options approach.[79] As we explain below, each of these alternatives eliminates the problem of valuing the debtor as a whole, which we describe in section B. As a result, each of these alternatives might decrease the length of bankruptcy proceedings and better align the division of value with parties' entitlements. However, neither of these alternatives solves (or was intended to solve) the problem of valuing collateral. Both approaches still require that the amount of each secured claim be determined. And it has thus far been thought that even under such market-based reforms, collateral value would inevitably continue to be determined the way it is now — through time consuming and costly litigation and bargaining. On this score, the proposals have been regarded by their own proponents as no better — although also no worse — than Chapter 11.

1. The Auctions Approach. — Under the auctions approach, put forward by Douglas Baird and Thomas Jackson,[80] the debtor's assets would always be put on the block and auctioned off for cash. Cur-

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[76] *See* David A. Skeel, Jr., *Markets, Courts, and the Brave New World of Bankruptcy Theory*, 1993 WIS. L. REV. 465, 472.

[77] *See* Lynn M. LoPucki & William C. Whitford, *Corporate Governance in the Bankruptcy Reorganization of Large, Publicly Held Companies*, 141 U. PA. L. REV. 669 (1993).

[78] *See* LoPucki & Kalin, *supra* note 9, at 236.

[79] Bebchuk, *Chapter 11*, *supra* note 13, at 221–23.

[80] *See* Baird, *supra* note 12 (arguing that bankrupt firms should be liquidated or sold as going concerns to prevent opportunistic behavior by the parties and to avoid the potential distortions resulting from a fictive valuation of the firm); JACKSON, *supra* note 12, at 210–11, 223–24; *see also* Michael C. Jensen, *Corporate Control and the Politics of Finance*, 4 J. APPLIED CORP. FIN. 13, 31–32 (1991) (advocating auctions in bankruptcy as a more efficient way of determining the value of bankrupt firms as going concerns and of solving the problems of information asymmetry and the perverse incentives of various claimants).

rently, in a small number of Chapter 11 bankruptcies, firms are sold for cash as going concerns rather than reorganized.[81] The auctions approach would eliminate the possibility of financial reorganization and require that all businesses be either sold for cash as going concerns or liquidated piecemeal.[82] The auctions approach can thus be regarded as suggesting a drastic change in the rules of Chapter 11 or as suggesting the elimination of Chapter 11 altogether and effecting sales of bankrupt firms through the rules of Chapter 7.

Under the auctions approach, once the auctioneer receives the cash, it becomes available for distribution to the participants according to the ranking of their priorities. In contrast to a reorganization, in which part or all of the payout is in the form of stock, under this approach it is immediately apparent to all of the participants how much value is available for distribution to them and how much value each creditor is to receive. Thus, in contrast to a noncash reorganization, there is no need to litigate or negotiate the value of the debtor to determine the value of the debtor's securities.

However, the auctions approach does require an initial determination of the composition of the various classes to establish the ranking of priorities according to which the money will be distributed. Under the principle of full priority, secured creditors are entitled to the value of their collateral, up to the amount of their claim;[83] if there is a deficiency, the secured creditor will have an unsecured claim that shares pro rata with other unsecured claims.[84] Thus, as under Chapter 11, the auctions approach requires valuing each secured creditor's collateral before the end of the proceeding.

In the absence of any market-based procedure for valuing collateral, then, an auctions regime would require the use of existing methods to determine the value of the collateral before the division of the auction proceeds. In other words, any auctions regime would be forced to rely on litigation and bargaining to perform this essential valuation function. Indeed, believing that no market-based approach to valuing collateral was possible, a prominent proponent of the auctions approach had viewed the problem of collateral valuation as one of the main obstacles to implementing market-based reforms in bankruptcy.[85]

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[81] Although in principle Chapter 7 could be used to sell the debtor as a going concern, it rarely is. *See* Baird, *supra* note 12, at 139.

[82] *See id.* at 128, 133–34.

[83] *See* Bebchuk & Fried, *Uneasy Case*, *supra* note 17, at 862.

[84] *See* 11 U.S.C. § 506 (1994).

[85] *See* BAIRD, *supra* note 8, at 13–14. Mark Roe, an early advocate of making certain use of auctions, expressed a similar view. *See* Roe, *supra* note 12, at 594.

2. The Options Approach. — The other market-based alternative to Chapter 11, proposed by one of us in earlier work, is the "options approach."[86] Under the options approach, the participants in a reorganization receive options on securities in the reorganized firm according to their priority rankings. The class consisting of the highest-ranked claimants initially receives 100% of the equity of the reorganized firm. However, the next-highest-ranked claimants have the right to buy these equity interests by paying the claims of the highest-ranked claimants in full, and so on.

For example, suppose (as in our earlier example) that there are three types of participants in the bankruptcy proceeding: senior (unsecured) creditors, junior (unsecured) creditors, and old equityholders. Under our approach, senior creditors would initially receive 100% of the equity; junior creditors, however, would have the right to buy the equity by paying the senior creditors' claims in full. Old equityholders would have the right to buy the equity in the reorganized firm by paying off both the junior and senior creditors' claims. The call options distributed to the junior creditors and the equityholders would be distributed pro rata. Thus, for example, an equityholder who owned 5% of the pre-bankruptcy equity would have an option to buy 5% of the post-bankruptcy equity. It would exercise the option by paying in full 5% of the junior claims and 5% of the senior claims.

Because the division of value among the classes, and among individual creditors, results from the participants' own decisions concerning the exercise of these options, under the options approach no participant has reason to complain that it is being treated unfairly.[87] As under the auctions approach, there is no need to value the payout to each creditor class to ensure that priority is respected. Thus, there is no need to value the debtor. In contrast to the auctions approach, however, the options approach does not require the existence of a party that could pay cash for the entire firm.

Although the options approach obviates the need to value the debtor as a whole, it does not eliminate the need to value collateral. Like the auctions approach, the options approach requires that each

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[86] *See* Bebchuk, *Options Approach*, *supra* note 13, and other works cited *supra* note 13.

[87] For example, if the senior creditors were to end up with 100% of the equity, a junior creditor could not argue that the equity was worth more than the senior creditors' claims and, consequently, that the senior creditors were overpaid while the junior creditors were underpaid. If a junior creditor owning, for example, 5% of the junior debt believed that the equity was worth more than the senior creditors' claims, it could buy 5% of the equity by paying in full 5% of the senior creditors' claims. The junior creditor would thereby get its entitlement: namely, its pro rata share of the amount by which the reorganization value exceeds senior claims, up to the amount owed the junior creditor.

participating claim be ranked relative to all other claims.[88] A secured creditor's claim has priority over all other claims only to the extent that it is secured; the remainder is an unsecured claim that ranks equally with other unsecured claims.[89] Thus, a secured creditor's claim must first be divided into a (fully) secured claim and an unsecured claim. As a result, the options approach cannot be implemented until the value of collateral is determined.

Earlier accounts of the options proposal noted explicitly that collateral would need to be valued before allocation of the options, and expressed the belief that the valuation would be done using existing methods.[90] That is, the options proposal offered to do no better on this score — though of course no worse — than Chapter 11.

3. The Valuation Problem as an Impediment to Market-Based Reforms. — Much of the scholarly interest in bankruptcy in the last fifteen years has focused on attempts to devise market-based reforms that would eliminate the need for litigation and bargaining over the value of the firm.[91] But as some of the participants in this enterprise have recognized, these reforms cannot eliminate litigation and bargaining altogether as long as these methods remain necessary to value collateral.[92] And because the use of these methods to value collateral has appeared unavoidable, it has seemed that market-based reform could not completely eliminate litigation and bargaining.

Thus, a method of valuing collateral without resorting to litigation or bargaining, such as the method we propose, would contribute to attaining the aspirations of the literature seeking market-based reforms. Indeed, because we also show that it is possible to combine our valuation mechanism with either the auctions or the options approach, this mechanism could become a significant element in any market-based reform of bankruptcy.

III. THE PROPOSED APPROACH

This Part introduces our proposed approach to valuing collateral in bankruptcy. Section A introduces the reconceptualization of a secured creditor's claim that underlies our approach. We explain why the amount of the creditor's claim that is (fully) secured — its secured

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[88] *See* Bebchuk, *Options Approach*, *supra* note 13, at 802 (noting that the options approach requires that secured creditors' claims first be divided into secured and unsecured claims); Skeel, *supra* note 76, at 481.

[89] *See supra* section II.A.2(b), pp. 2397–98.

[90] *See* Aghion, Hart & Moore, *supra* note 13, at 542 (making such observations); Bebchuk, *Options Approach*, *supra* note 13, at 802–03 (same).

[91] *See, e.g.*, Baird, *supra* note 12, at 128; Bebchuk, *Options Approach*, *supra* note 13, at 776; Roe, *supra* note 12, at 528.

[92] *See, e.g.*, ROE, *supra* note 14, at 600–02; Roe, *supra* note 12, at 594.

claim — is equal to the value of a nonrecourse note, backed by the collateral, for the amount of the creditor's total claim. Section B provides a brief introduction to the proposed mechanism for valuing the secured claim and the mechanism's three basic stages. Section C describes the first stage, which is an auction of a nonrecourse note that takes place shortly before the end of the bankruptcy proceeding. That auction determines the value of the nonrecourse note and therefore the amount of the secured claim. Section D focuses on the second stage, which is the subsequent division of the bankruptcy pie based on the information generated in the first stage. This distribution completes the bankruptcy proceeding. Section E considers the third and final stage, which is the resolution of the nonrecourse note immediately after the end of the proceeding.

We then present extensions, generalizations, and an alternative version of the mechanism. In our initial exposition of the mechanism, we assume, for simplicity, that the second stage — the division of the bankruptcy pie — takes place under an auctions regime in which the debtor is sold as a going concern for cash. Section F therefore explains how our mechanism can also be used under the other two regimes for dividing the bankruptcy pie — bargaining (Chapter 11) and options. Section G presents an alternative version of our mechanism that does not rely on an auction of the nonrecourse note. Instead, the secured creditor receives the nonrecourse note in satisfaction of its secured claim and bargains with the debtor after the bankruptcy proceeding. Section H shows how our mechanism could be used to implement partial priority if such a rule were ever adopted.

A. Reconceptualizing the Secured Creditor's Claim

As we saw in section II.A, a secured creditor's bankruptcy claim is divided into two components: a secured claim and if the value of the collateral is less than the amount owed, an unsecured claim. The secured claim is for the foreclosure value of the collateral. It must be paid in full at the end of the bankruptcy proceeding.[93] In our example, in which Creditor has extended a loan for $100 collateralized by a machine with a foreclosure value of $\$X$, Creditor has a secured claim for $\$X$ or $100, whichever is less. The unsecured claim is simply the amount owed less the secured claim. Thus if $\$X$ is less than $100, Creditor has both a secured claim of $\$X$ and an unsecured claim of $\$100 - \$X$.

Now consider a secured loan whose terms forbid the lender from collecting the deficiency from the defaulting debtor when the amount

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[93] As was explained above, *supra* note 38, payment may be in the form of cash or a note, secured by the collateral, whose value is at least the amount of the secured claim.

owed exceeds the value of the collateral. Such a loan is usually called a nonrecourse loan because the lender has no recourse against the debtor other than seizing the collateral.[94] Essentially, the debtor has the ability to settle the debt by turning the collateral over to the lender. In our example, the $100 loan would be a nonrecourse loan if Creditor could satisfy its $100 claim only by seizing and selling the collateral. If Creditor could satisfy its $100 claim only in that way and if $\$X$ is less than $100, that nonrecourse loan (if due immediately) would be valued at $\$X$ because that is the most Creditor could get in satisfaction of the loan. If $\$X$ is more than $100, the nonrecourse loan would be worth $100 because were Creditor to seize and sell the collateral, Creditor would receive the full amount owed him, returning the excess proceeds to Debtor. Thus, the loan would have a value of the lesser of $\$X$ and $100: the value of the collateral, up to the amount owed.[95]

Therefore, if Creditor had lent to Debtor on a nonrecourse basis, the value of the nonrecourse note (if due immediately) would equal the amount of Creditor's secured claim. Creditor's secured claim, then, can be thought of as the value of a $100 nonrecourse loan secured by the machine.

The equivalence between the amount of a secured claim and the value of a nonrecourse loan is, of course, not limited to this particular example. Any secured claim can be thought of as the value of a nonrecourse note for the amount owed the creditor, backed by the same collateral.

And because the unsecured claim (if any) of a secured creditor is simply the amount owed less the secured claim, this unsecured claim can be understood as the amount owed the creditor less the value of the corresponding nonrecourse loan. In our example, Creditor's $100 claim is thus equivalent to a secured claim equal to the value of a $100 nonrecourse loan secured by the machine together with an unsecured claim equal to $100 minus the value of that nonrecourse loan.

The following diagram illustrates our reconceptualization:

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[94] *See* Steven L. Schwarcz, *The Easy Case for the Priority of Secured Claims in Bankruptcy*, 47 DUKE L.J. 425, 462–63 (1997). For a description of the various types of nonrecourse loans, see Gregory M. Stein, *Nonrecourse Loans*, *in* 2 COMMERCIAL REAL ESTATE FINANCING: WHAT BORROWERS AND LENDERS NEED TO KNOW 1999, at 793 (PLI Real Estate Law & Prac., Course Handbook Series No. N-442, 1999).

[95] We assume the loan is due immediately. loan were not due immediately, its value would be discounted to reflect the time value of money.

TABLE 1. RECONCEPTUALIZATION OF A $100 CLAIM SECURED BY A MACHINE WORTH $X

	Legal Definition	Equivalent Representation
Amount of Secured Claim	Lesser of $\$X$ and $100	Value of nonrecourse note for $100, backed by machine worth $\$X$
Amount of Unsecured Claim	Excess of $100 over amount of secured claim	Excess of $100 over value of nonrecourse note

B. The Mechanism and Its Three Stages

We start by outlining the three main elements of the mechanism. Although we discuss each of these elements in more detail below, it is useful to provide an overview of the entire mechanism first. As section A explains, the amount of a secured claim is simply the value of a nonrecourse note (for the amount owed the secured creditor) secured by the collateral. If the debtor firm were solvent, we could determine the value of the nonrecourse note by treating it as due immediately and observing how much the debtor firm would pay to keep the collateral. Resolution of the nonrecourse note would not result in a loss of going concern value: if the collateral were worth more to the debtor than to other parties, the debtor would "buy" the asset from the noteholder.

During a bankruptcy proceeding, however, the debtor may not be financially able to redeem the collateral. As a result, making the note payable immediately could force the debtor to relinquish the asset even though it has going concern value for the debtor. This forced relinquishment, in turn, would generate a social cost and diminish the pie available to all of the debtor's investors.

Our mechanism addresses this problem by temporally separating the valuation of the nonrecourse note from the resolution of the note. In particular, we propose to defer the resolution of the nonrecourse loan until *after* the debtor firm has emerged from the bankruptcy proceeding as a solvent firm. At that time, resolution of the note should lead to an efficient outcome because the debtor will be able to "buy" the collateral if it has going concern value. However, the valuation of the note would have taken place through an auction of the nonrecourse note *before* the completion of the bankruptcy proceeding. As we explain in more detail below, this auction provides the information needed to divide a secured creditor's claim into a secured claim and an unsecured claim. The bankruptcy pie can then be divided and the

bankruptcy brought to an end.[96] The timeline takes the following form:

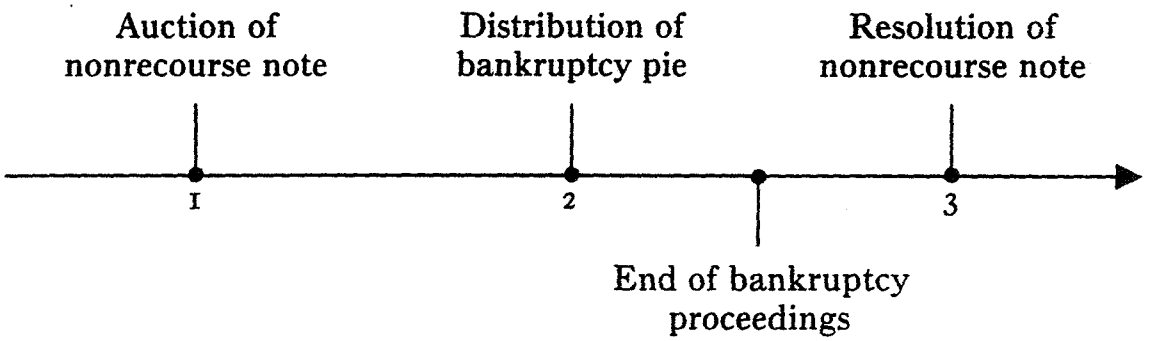

FIGURE 1. SEQUENCE OF EVENTS

In the first stage, which takes place shortly before the end of the bankruptcy proceeding, the nonrecourse note is auctioned. As we explain in section C below, anyone — including both bankruptcy participants and outsiders — can participate in the auction. The winning bid establishes the value of the nonrecourse note and thereby determines the amounts of both the creditor's secured and unsecured claims. As we show, the auction price will reflect the foreclosure value of the collateral, up to the amount owed the secured creditor. The cash raised is set aside to pay the secured claim at the end of the proceeding when all other claims are paid.

In the second stage, the bankruptcy pie is divided and distributed based on the information generated by the auction. Although our mechanism for valuing secured claims could be used under any method for dividing the bankruptcy pie — Chapter 11, auctions, or options — for purposes of illustration we describe how our mechanism operates when the bankruptcy pie consists of the proceeds of a cash sale of the debtor as a going concern. As section D explains, the firm is sold subject to the nonrecourse note.[97] The proceeds from the auction of the nonrecourse note held in the first stage are used to pay the secured creditor's secured claim. The proceeds from the sale of the debtor firm are then used to pay the creditor's unsecured claim, if any.

The third and final stage is the resolution of the nonrecourse note, which takes place immediately after the debtor firm has emerged from

[96] When we put forward the alternative, non-auction version of the mechanism in section III.G, pp. 2429–33, below, we explain how, when the firm is sold for cash, both the valuation of the note and the resolution of the note can be effected simultaneously after the end of the bankruptcy proceeding.

[97] If there are other assets serving as collateral, the firm that is sold would be subject to other nonrecourse notes as well.

bankruptcy. After bankruptcy the holder of the nonrecourse note — the highest bidder at the auction — has the right to seize the asset, sell it at auction, and keep the proceeds up to the face value of the note. As we explain in section E, the note may be resolved in a number of different ways, depending on the value of the asset to the debtor and to other parties and on the relationship between the asset's foreclosure value and the face amount of the note. In every case, however, the noteholder gets the foreclosure value of the asset, up to the face amount of the note. And the debtor firm retains the asset if and only if it is the highest valuing user — in other words, the resolution of the nonrecourse note will be efficient.

C. First Stage: The Auction of the Nonrecourse Note

1. The Conduct of the Auction. — The purpose of the auction is to establish a value for the nonrecourse note corresponding to the secured creditor's secured claim. As explained above, this value indicates the amount of the secured claim and thereby permits the division of the secured creditor's claim into its secured and unsecured components.

For each secured creditor whose collateral requires valuation, a note would be drafted entitling the holder to receive from the debtor the amount owed the secured creditor. The note would be due shortly after the end of the bankruptcy proceeding, and the noteholder would have recourse only to the secured creditor's collateral.

The auction of the nonrecourse note would take place just before the completion of the bankruptcy proceeding. As we discuss in more detail in section D, at the end of the bankruptcy proceeding, when all other claims are paid, the proceeds from the auction would be used to pay in full the secured creditor's secured claim. In the very brief period between the auction of the nonrecourse note and payment to the secured creditor, the cash received for the nonrecourse note would be held in a separate, interest-bearing account.[98]

The auction would be open to any claim- or interest-holder (or group of claim- or interest-holders) in the bankruptcy proceeding. For example, secured and unsecured creditors, the unsecured creditors' committee, and equityholders could all participate. In addition, the debtor itself (through its managers acting as debtor-in-possession or through a trustee) could bid on the note. Finally, the auction would be open to all outside parties.

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[98] As we explain shortly, the interest generated by the funds would be given to the winning bidder at the end of the proceeding. This interest compensates the bidder for the time value of its money during the short period between the auction of the nonrecourse note and its resolution. *See infra* note 102.

Auction participants would be required to make cash bids. The cash would be deposited in an interest-bearing escrow account and used to pay off the corresponding secured claim upon completion of the bankruptcy proceeding. However, the cash-only rule would not apply to the secured creditor or the debtor. In non-bankruptcy foreclosure sales of repossessed collateral, a secured creditor is generally permitted to "bid-in" without tendering cash because a cash bid by the secured creditor would be the equivalent of moving money from one pocket to another.[99] Likewise, our mechanism would permit a secured creditor to participate in the auction of the nonrecourse note simply by specifying the amount of its bid. As we explain below, permitting the secured creditor to bid-in would not distort the outcome of the auction. In addition, the debtor could bid with a note that is due immediately after the end of the bankruptcy proceeding. Because the debtor would be solvent at that point, it should have no difficulty paying this note.

2. The Value of the Auctioned Note. — In sections III.C.3 and III.C.4, we explain why providing each participant in the bankruptcy proceeding with the opportunity to participate in the auction ensures an outcome that is largely consistent with parties' entitlements — even if very few knowledgeable parties bid at the auction. However, there is every reason to expect that these auctions would attract the participation of many liquid and fully-informed bidders. Because the nonrecourse note yields the winning bidder either cash or the collateral shortly after the bankruptcy proceeding, a bidder would have no more difficulty estimating the value of the note than estimating the value of the collateral. Knowledgeable parties are relatively skilled at estimating the value of and liquidating the kinds of assets that are commonly used as collateral — real estate, vehicles, equipment, and accounts receivable.[100] Auctions of nonrecourse notes should therefore attract the same types of bidders that have the cash and information to participate in auctions of these kinds of assets inside and outside bankruptcy.

The auctions are likely to draw many of the creditors involved in the bankruptcy proceeding — such as banks, finance companies, and suppliers — that have sufficient capital and, because they lend in the firm's industry, the ability to value the collateral. When the collateral is sufficiently valuable, outside bidders will likely participate in the

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[99] *See* Bill B. Caraway, Note, *Unwrapping the Wraparound Mortgage Foreclosure Process*, 47 WASH. & LEE L. REV. 1025, 1038 (1990) (noting that noncash bids are allowed in foreclosures on mortgages).

[100] For example, real estate investors might bid on nonrecourse notes backed by land and buildings.

auctions of the nonrecourse notes as well.[101] Short-term credit, perhaps secured by the nonrecourse note, should be readily available to bidders who wish to purchase the nonrecourse note at auction and convert it into cash shortly thereafter. The availability of such credit, in turn, should increase the number of knowledgeable parties that are able to participate in the bidding.

When well informed bidders participate in the auction, the note should fetch a price that reflects the value of the note to its holder. As section E discusses, the buyer of the nonrecourse note can expect to receive, shortly after the end of the bankruptcy proceeding, the foreclosure value of the collateral, up to the face amount of the loan (which is, again, the amount of the secured creditor's original claim). Because the auction takes place just before the completion of the bankruptcy proceeding, and thus not long before the resolution of the nonrecourse note, the auction price of the note should "reflect" quite accurately the amount that the noteholder is expected to get — that is, the foreclosure value of the collateral, up to the amount owed.[102]

Accordingly, the auction price can be used to determine the amount of the secured creditor's secured claim, and the auction proceeds can be used to pay the secured creditor in full for that claim. By determining the amount of the secured claim, the auction also determines the amount of the secured creditor's unsecured claim, if any.

In our example, the auction of the nonrecourse loan backed by the machine should fetch the lesser of $\$X$ and \$100. Upon payment of all claims, the amount paid by the winning bidder will be given to Credi-

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[101] The Internet will enable an even larger number of bidders to participate in the auctions of the nonrecourse notes. *Cf.* Michael Korybut, *Online Auctions of Repossessed Collateral Under Article 9*, 31 RUTGERS L.J. 29, 29 (1999) (explaining how the Internet, by allowing remote bidding, increases the number of bidders in foreclosure sales outside bankruptcy). If the value of the collateral exceeds the amount owed, the nonrecourse note will essentially be equivalent to a no-risk loan about to become due. Auctions of such notes should also attract arbitrageurs hoping to profit from slight disparities between the auction price and the face amount of the loan.

[102] By "reflect" we do not mean that the auction price will perfectly match the expected value of the note to the noteholder. There will tend to be a slight discount that provides the bidder with whatever small profit is necessary to compensate for the risk of a decrease in the value of the collateral during the time between the auction and the resolution of the nonrecourse note. But because this period will be very short, the discount should be quite small.

One might be concerned that the time value of money would create an additional discount. In particular, because a period of time will elapse between the auction and the resolution of the note, one might fear that the auction price will not equal the amount that the noteholder expects to get at the end of the proceeding, but rather the present value of that amount. However, as explained earlier, the cash paid by the highest bidder would remain in an interest-bearing escrow account until the end of the proceeding, at which point the interest would be returned to the bidder. Thus, the winning bidder would be compensated for the time value of its money and therefore would not discount its bid on that account. Even if interest were not paid to the bidder, the period of time between the auction and resolution is likely to be so short that any time value of money discount would be trivial.

tor on account of its secured claim. Thus, the auction will provide Creditor with the value of its secured claim. If $\$X$ is less than \$100, the deficiency (\$100 – $\$X$) will become an unsecured claim, which is treated like any other unsecured claim. If Creditor wins the auction of the note with a bid of $\$B$, Creditor will become the holder of the nonrecourse loan and will be regarded as having received $\$B$ for it. Any remainder (\$100 – $\$B$) will become an unsecured claim.

We wish to emphasize that the auction is intended to value the secured creditor's secured claim at the time of the auction, which takes place shortly before the end of the bankruptcy proceeding. As we note earlier, secured creditors are often hurt by delays in the bankruptcy proceeding, which tend to erode their entitlements.[103] Our mechanism is not, however, intended to address the problems arising from the length of the proceeding. It does not aim to place creditors in the positions they would be in were the bankruptcy proceeding concluded quickly. Doing so would require either substantially reducing the considerable delays that currently arise in bankruptcy proceedings by, for example, adopting one of the market-based bankruptcy reforms, or developing a method for compensating secured creditors for these delays. Rather, our mechanism is intended to address the problems that arise from difficulties in valuing the collateral at the end of the proceeding, when the bankruptcy pie is distributed according to participants' entitlements as determined at that time. Our mechanism thus aims to put creditors in the positions they would be in if collateral could be easily and accurately valued at the end of the proceeding.

3. Bidding by the Secured Creditor. — As explained, under our mechanism the secured creditor is permitted not only to participate in the auction of the nonrecourse note, but also to bid without paying cash. One might have concerns that the secured creditor's participation in the bidding, especially under these terms, would discourage other potential participants from bidding and thereby distort the outcome of the auction. We now address two such possible concerns.

The first concern relates to the possibility of informational disparities among the participants. One might argue that the secured creditor has an informational advantage over other potential bidders because of its familiarity with the collateral. This disparity may in turn discourage other bidders from participating and depress the final price.

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[103] *See supra* section II.B.4, pp. 2401–02. For example, secured creditors do not always receive interest on their loans during the course of the bankruptcy proceeding. In addition, the value of a secured creditor's collateral may suffer a decline for which the creditor does not receive proper compensation; this factor, in turn, might reduce the size of the secured claim by the end of the proceeding. To be sure, the value of the collateral may just as likely increase. But the value of the secured creditor's claim is capped at the amount of the debt. As a result, delay exposes a secured creditor to more downside risk than potential upside gain.

In reality, the secured creditor is unlikely to have a meaningful informational advantage in the auction. To start with, under our mechanism the secured creditor has no informational advantage over other bidders when the value of the collateral exceeds the face amount of the note and when even one other bidder knows it. For in such a case the value of the note being auctioned is simply its face amount.

Furthermore, whereas in a foreclosure auction outside bankruptcy the secured creditor is often the only "insider" because the dissolving firm's managers and owners usually cannot afford to participate, this is unlikely to be the case in a bankruptcy reorganization. In the context of a firm emerging from bankruptcy as a going concern, there are likely to be other insiders and well informed buyers in addition to the secured creditor participating in the auction — including the debtor itself and, in some cases, potential acquirers of the firm. These bidders are likely to know as much, if not more, about the value of the collateral as does the secured creditor.[104]

The second concern relates to the secured creditor's ability to bid without cash. One might argue that this ability to bid-in gives the secured creditor an unfair advantage over other participants, even when other potential bidders have sufficient funds to participate in the auction.[105] In particular, other bidders bid in real dollars that must be handed to the auction administrator at the conclusion of the auction and, therefore, cannot be used for any other purpose. In contrast, the secured creditor's bid does not tie up any of its cash. As a result, the secured creditor might be willing to make a higher bid for the note than other potential bidders. This fact, in turn, might discourage other parties from participating in the first instance.

In our view, this concern is not warranted. If another party wins the auction, the secured creditor receives the cash paid by the winning bidder in a short period of time. The secured creditor who bids-in and wins the auction therefore incurs an opportunity cost in giving up the cash that it otherwise would have received. Thus, the opportunity costs faced by the secured creditor and the cash bidder are practically the same.

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[104] It is also worth noting that because of the disclosure requirements bankruptcy imposes on the debtor, bankruptcy is likely to generate more information about the value of the firm's assets than would generally be available if they were liquidated piecemeal outside bankruptcy. Thus, even if the secured creditor were the only insider participating in the auction of the nonrecourse note, the information generated by the proceeding may nevertheless substantially erode any informational advantage a secured creditor might have over outsiders.

[105] If other potential bidders did not have enough cash to participate in the auction, the secured creditor's ability to bid without cash would surely be an advantage. We consider shortly the possibility that other potential bidders might be cash constrained. *See infra* section III.C.4(c), pp. 2421–23.

4. Would Any Participant Have a Basis for Complaining? — Thus far we have assumed the presence of liquid and fully informed bidders, whose participation would ensure that the auction price reflects the value of the nonrecourse note. Under these conditions, each participant could rely on the market to establish the correct value for the nonrecourse note and, therefore, the correct amount for the secured creditor's secured claim. As explained above, there is reason to believe that these conditions will usually obtain. Let us now consider the situation in which a participant does not believe that the market will yield the right price for the nonrecourse note. Perhaps the participant thinks that an insufficient number of people will enter the auction or that, even though there are many participants, all of them underestimate the value of the nonrecourse note and thus the auction price will be too low. Could such a participant claim that the auction will yield a price for the nonrecourse note that results in the participant's getting less than its entitlement?

An important advantage of our proposed mechanism is that none of the participants in the bankruptcy proceeding would have any basis for complaining about the value of the secured claim that is generated by the auction of the nonrecourse note. In particular, no secured or unsecured creditor would be able to complain that this determination results in the participant's getting less than that participant's entitlement.[106] We first consider whether any participant could complain that the auction price is too high, and then examine the possibility of complaints that the price is too low.[107]

(a) Complaining That the Price Is Too High. — Suppose the buyer of the nonrecourse note pays an amount that is too high in the eyes of a participant. In this case, the participant cannot complain because the participant will not receive less, and indeed will receive even more, than what the participant believes is its entitlement.

This outcome is easy to see if the participant is the secured creditor. The higher the auction price, the more the secured creditor will get for its secured claim and the greater its total recovery. Thus, if the se-

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[106] The determination of the value of the secured claim should not affect the position of equityholders. Under the principle of absolute priority, equityholders receive any value that remains if both secured and unsecured creditors are paid in full. *See* 11 U.S.C. § 1129(b)(2) (1994). The auction price does not determine the extent to which creditors as a group are paid. Rather, the auction price determines how the bankruptcy pie is to be divided among secured and unsecured creditors when there is not enough value to pay all creditors in full.

[107] If the participant were also the buyer of the note, it would have neither a basis to complain that the auction price was too high nor a basis to complain that it was too low. If the price were too high, the participant-buyer would not have purchased the note at that price. And the participant-buyer could not complain that the price was too low, because the participant-buyer benefits by purchasing the note at the lowest possible price. We therefore assume that the participant is not the buyer of the note.

cured creditor thinks the auction price is too high, it will think it is getting more than it deserves.

Nor can an unsecured creditor complain that the price is too high. A larger secured claim for the secured creditor means, by definition, a smaller unsecured claim for the secured creditor. A smaller unsecured claim for the secured creditor, in turn, enables unsecured creditors to capture a greater fraction of the amount that is available to pay unsecured claims. Thus, an unsecured creditor who believes that the auction price is too high cannot complain that it is getting less than it deserves for its claim.

In short, a higher auction price makes both the secured creditor and the unsecured creditors better off. The intuition is that when the buyer pays a higher price, it increases the size of the pie that is shared by all creditors.[108]

(b) Complaining That the Price Is Too Low. — Suppose that a participant believes that the auction price is too low. At first glance, it might appear that such a participant could complain about undercompensation. If the participant is the secured creditor, the complaint would be that the participant's secured claim is undervalued and therefore that the participant will receive too little for that portion of its claim. Although a smaller secured claim would mean a larger unsecured claim for the secured creditor, the unsecured claim, unlike the secured claim, would not be paid in full. Thus, a secured creditor who believes that the auction price is too low would complain that it is not getting its full entitlement.

If the participant is an unsecured creditor, the complaint would be that because the value of the nonrecourse note is too low, the amount of the secured creditor's secured claim is too small and therefore the amount of the secured creditor's unsecured claim is too large. A larger unsecured claim for the secured creditor means more competition for the assets available to pay the pool of unsecured claims and therefore a lower payout rate for unsecured claims. Thus, if the participant is an unsecured creditor, it would also believe that as a result of the low auction price it is getting too little for its claim. Essentially, if the nonrecourse note is purchased at a price below what the participant believes is its actual value, the buyer would appear to be getting a "bargain" at the expense of the total pie available for division among the participants in the bankruptcy. And a smaller total pie makes all those who share this pie worse off.

However, it would be inconsistent for any participant — whether it is the secured creditor or an unsecured creditor — to complain in this

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[108] The increase in the size of the pie comes at the expense of the buyer. However, the buyer cannot complain about the mechanism because no one forces it to bid for the note.

way because the auction would be open to all participants. If a participant believes that the price is too low, the participant can enter the auction, bid a slightly higher price, and make a profit equal to the difference between the auction price and the foreclosure value of the collateral, up to the amount owed. Thus, as long as a participant is sufficiently liquid to make a bid that is slightly higher than the winning bid, the participant has no basis for complaining that the auction price was too low.

(c) Liquidity Constraints. — Liquidity constraints, some might argue, prevent a participant who fears the auction will result in a low price from engaging in self-help by bidding. We now consider the likelihood that a participant will face liquidity constraints and whether, if the participant is liquidity-constrained, that participant might have a basis for complaining that the price is too low. Although the problem of liquidity constraints cannot be dismissed completely, there are reasons to believe that the magnitude of this problem is likely to be very small.

To begin, note that the secured creditor can never have a liquidity problem. As discussed above, our mechanism permits the secured creditor to bid for the nonrecourse note associated with its claim without cash. Because requiring the secured creditor to bid in cash would create a situation in which the secured creditor pays the cash back to itself, the creditor is allowed to participate simply by specifying the amount of its bid. Accordingly, a secured creditor would never have reason to complain that the auction generated too low a price for the nonrecourse note.

An unsecured creditor, however, must bid with cash. Liquidity constraints could therefore prevent the unsecured creditor from bidding, even when it believes that the auction price would otherwise be too low. Yet there is reason to believe that the problem of liquidity-constrained unsecured creditors would not be a serious one.

To start with, it is important to emphasize that many unsecured creditors will not face liquidity constraints. As noted earlier, many unsecured creditors in bankruptcy — banks, finance companies, suppliers, and others — will have sufficient funds to bid on the note. These unsecured creditors obviously could not complain that the price is too low.

Furthermore, if there are any unsecured creditors that lack enough of their own funds to bid, these creditors would likely have no difficulty borrowing the funds needed to bid for the short period of time between the auction of the note, which takes place at the end of the bankruptcy proceeding, and its resolution, which occurs immediately after the end of the proceeding. The loan could even be secured by the

nonrecourse note (and, indirectly, by the asset securing the note).[109] Consider a nonrecourse note that the market values at $80 but that the unsecured creditor believes is worth $100. The unsecured creditor should be able to borrow $80 using the note as collateral. Because no other bidder will be willing to bid over $80, the unsecured creditor should be able to purchase the note using only the borrowed funds.

To be sure, one cannot be certain that unsecured creditors unable to bid with their own funds will always be able to borrow money. However, any remaining concern that the problem of liquidity-constrained unsecured creditors could be a serious impediment to the proposed mechanism should be assuaged by the fact that the debtor itself, through its managers acting as a "debtor-in-possession" or through the trustee, may bid with a note (due immediately after the end of the proceeding). The managers, whether attempting to pursue the interests of old equityholders, unsecured creditors, or the new owners, are likely to have an interest in increasing the value of the debtor. The same is true for the trustee in the rare cases in which a trustee is managing a debtor that will emerge as a going concern.[110] By purchasing the nonrecourse note for a price that is less than its value — that is, the amount the noteholder will be able to obtain from the debtor post-bankruptcy — the managers or trustee would increase the value of the debtor.[111] As a result, the managers or trustee would, if permitted, have an incentive to enter the auction whenever they believe that they could buy the note for a price lower than its post-bankruptcy value.

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[109] Because the asset that is indirectly the subject of the auction served as collateral for the secured creditor's loan, it is likely to be acceptable also as collateral for a loan to a bidder at the auction of the note.

[110] The trustee has a duty to maximize the value of the estate and the payout for unsecured claims. *See* Commodity Futures Trading Comm'n v. Weintraub, 471 U.S. 343, 352–53 (1985); WARREN, *supra* note 7, at 26. Purchasing the nonrecourse note at a low price would increase the value of the estate by paying off a post-bankruptcy debt for less than the cost of extinguishing the debt after bankruptcy. This purchase would in turn make more money available for unsecured creditors. Thus, it would be consistent with the trustee's duties to enter the auction if the trustee believed that it could buy the note at a lower price than the foreclosure value of the asset, up to the amount owed.

[111] Earlier we noted that one of the indirect costs of bankruptcy is that the incentives of the debtor's managers may not be well aligned with value maximization. One might wonder why, if managers' incentives might be distorted, they should be permitted to bid on the nonrecourse note. The answer is that the bidding does not affect the ultimate disposition of the asset serving as collateral, but merely the identity of the person holding the nonrecourse note. The disposition of the collateral is not determined until after the end of the bankruptcy proceeding, when the debtor is solvent. At that point, the managers will have an incentive to keep the unencumbered asset if and only if the debtor values the asset more than other parties; otherwise the managers will sell it. This incentive is the same one managers would have if the nonrecourse note were not purchased by the debtor but rather by a third party. *See infra* section III.E.1, pp. 2424–26.

The debtor's purchase of the note for this lower price would, in turn, benefit unsecured creditors. For example, if the debtor is to be sold as a going concern for cash, the debtor's purchase of the note at a low price should increase the price the acquirer is willing to pay for the debtor and, therefore, the pool of funds available to pay unsecured claims. Thus, the debtor — whose interests are aligned with those of the unsecured creditors — will in effect act as an agent for these creditors. The debtor's participation in the auction should, then, further reduce the likelihood that any participant will complain that it is getting less than its entitlement because the auction price is too low.

D. Second Stage: Completion of the Bankruptcy Proceeding

The auction of the nonrecourse note would take place, as noted, shortly before the division of bankruptcy value and the end of the proceeding. For the purpose of describing our mechanism, we assume in this initial exposition that at the end of the proceeding the firm would be sold for cash as a going concern, subject to any nonrecourse debt. Thus, once the auction of the nonrecourse note has divided the secured creditor's claim into its secured and unsecured components, the bankruptcy proceeding could conclude with the sale of the firm. The firm would be sold for an amount equal to the going concern value of its assets, less the value of the nonrecourse debt.

The buyer would discount the price it was willing to pay for the firm by the amount of the nonrecourse debt because, as the new owner of the debtor firm, the buyer will be required to satisfy this debt right after the bankruptcy proceeding. The cash raised from the sale of the firm as a going concern would be distributed to pay unsecured claims (including the unsecured claim, if any, of the secured creditor). At that time, the proceeds from the auction would be used to satisfy the secured claim.

To be sure, the liability created by the nonrecourse note creates an additional factor that must be considered when a bidder decides how much to bid for the firm. However, there is no reason to believe that the existence of the nonrecourse note will disrupt bidding for the firm. Outside bankruptcy, acquirers frequently purchase firms that have at least some of their assets serving as collateral for secured debt. Although such debt reduces the price a buyer would be willing to pay for a firm, it does not generally deter the buyer from acquiring it.[112]

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[112] If a potential acquirer were nevertheless worried about the liability associated with the nonrecourse notes, the potential acquirer could negotiate conditional purchase agreements with key noteholders before bidding for the company as a whole. Under such an agreement, a potential acquirer would contract with each noteholder to buy its note for a specified price if and only if the acquirer were to win the bidding for the firm. Each noteholder could enter into similar agreements with other bidders if it wished. Bidders with such agreements would thus know the precise

E. Third Stage: Post-Bankruptcy Resolution of the Nonrecourse Note

The third stage of the mechanism is the resolution of the nonrecourse note after bankruptcy. We first describe the various ways in which the note could be resolved and then consider the possibility that the post-bankruptcy firm might be liquidity-constrained. As we will see, once the firm emerges from bankruptcy and functions properly, the nonrecourse note should be resolved in a way that provides the noteholder with the foreclosure value of the asset (up to the face amount of the note). The note should also be resolved without the loss of any going concern value — that is, the resolution should leave an asset serving as collateral with the firm if and only if the firm is the asset's highest valuing user.

1. Resolution of the Note. — Under our mechanism, the nonrecourse note sold at the auction would come due shortly after the debtor emerged from the bankruptcy proceeding. At that time, as is the case with any nonrecourse note that comes due, the noteholder would have the right to demand payment of the note's face amount (which corresponds to the amount owed the original secured creditor). If the debtor does not pay, the holder of the note would have the right to satisfy its claim only with the collateral — that is, to have the collateral sold at auction and to keep the proceeds (the foreclosure value) up to the amount owed.[113] Returning to our example, after the bankruptcy proceeding Debtor would have to pay Noteholder $100. If Debtor does not pay $100 and if Debtor and Noteholder do not reach some other accommodation, Noteholder would have the right to seize the machine, sell it at an auction, and keep the proceeds up to $100 (the face amount of the note).

As we explain in section II.A.2(a), above, the automatic stay generally prevents creditors from seizing the debtor's assets during the bankruptcy proceeding. In the absence of the stay, a liquidity-

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cost of paying off the nonrecourse debt to retain the collateral. If the noteholders believed that such agreements were necessary to induce bidding, they would have a strong incentive to enter into them. Otherwise, the firm might be liquidated piecemeal, and the noteholders would receive less from the sale of the collateral than they could get from an acquirer purchasing the firm as a going concern. And even if the noteholders did not believe that these arrangements were necessary to induce bidding, they might nevertheless be willing to enter into them to reduce ex post uncertainty and bargaining costs.

It should also be noted that our mechanism does not require that the sale of the firm be delayed until after the auction of the nonrecourse note. The firm could be sold subject to a nonrecourse note, with the holder of the note to be determined at its subsequent auction. If the sale of the firm as a whole were to precede the auction of the nonrecourse note, the buyer of the firm could easily avoid bargaining with nonrecourse noteholders by buying the nonrecourse note at the auction. Thus, if one were still concerned that the prospect of bargaining with noteholders would disrupt bidding for the firm, one could reverse the order of the auctions and hold the auction of the note(s) after the auction of the firm.

[113] The debtor would receive any remainder.

constrained, insolvent debtor would not be able to prevent creditors from seizing its assets, including those whose going concern value would be destroyed when taken from the debtor. The automatic stay thus preserves the going concern value, if any, of the debtor's assets.

At the end of the proceeding, however, after the debtor has undergone a financial reorganization, the debtor should generally be solvent. This would be the case not only when the debtor is sold to a buyer for cash, as we currently assume, but also when the bankruptcy pie is divided either by bargaining or under the options approach.[114] Consequently, after the end of the proceeding, an efficient resolution of the nonrecourse note — that is, one that ensures that the debtor keeps the collateral if and only if it is more valuable to the debtor than to other parties — would not be impeded by the debtor's insolvency.

To be sure, whether the asset will remain with the debtor and how much the note will provide the noteholder will depend in each case on the value the debtor places on the asset and the asset's value to other parties. In every situation, however, the debtor will retain the collateral if and only if it has going concern value for the debtor, and the noteholder will receive the foreclosure value of the collateral, up to the amount of the note.

When the collateral has going concern value for the debtor, the debtor will wish to pay off the note before an auction takes place so it can enjoy uninterrupted use of the asset. Unless the debtor pays the face amount of the note, both the debtor and the noteholder will need to agree on the payoff price. If the parties cannot reach an agreement, the noteholder will seize the asset and sell it at auction. However, the debtor, as the highest-valuing user, would outbid all other bidders. The excess of the sale price over the amount owed, if any, would be returned to the debtor. Thus, whether or not there is an auction, the asset will remain in the debtor's hands. Because foreclosure value is defined as the proceeds of the asset's sale at auction or as the amount the debtor pays to avoid an auction, the noteholder would in either case receive foreclosure value up to the amount owed.

When the collateral lacks going concern value, the debtor's course of action will depend on whether the asset's foreclosure value at auction is greater or less than the note's face value. If the foreclosure value at auction is less than the note's face value, the debtor will surrender the asset to the noteholder. The creditor will then sell the asset at auction and receive foreclosure value (which in this case is less than the amount owed). If the foreclosure value at auction exceeds the

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[114] In Chapter 11, one of the requirements for plan confirmation is that the plan be feasible — meaning that the post-bankruptcy business must be financially viable. *See* 11 U.S.C. § 1129(a)(11) (1994).

amount owed, however, the debtor will pay the note's face amount to the creditor to prevent the creditor from seizing and selling the asset. The debtor will then auction the asset itself and make a profit equal to the difference between the face amount and the foreclosure value at auction. In either case, the asset does not remain in the debtor's hands, and the creditor receives the lesser of the foreclosure value and the amount owed.

2 Post-Bankruptcy Liquidity Problems. — We now consider the possibility that the post-bankruptcy debtor firm might be liquidity-constrained and therefore unable to redeem the collateral for cash even when it values the collateral more than do other parties. This scenario is less likely to arise when, as we assume for purposes of this illustration, the debtor firm is sold as a going concern to a buyer for cash. Any buyer that has sufficient cash to purchase all of the firm's assets is likely to have sufficient cash to buy the firm subject to the nonrecourse notes and then to pay off these notes. Nevertheless, one might still be concerned that liquidity problems could arise under the other two methods of division — Chapter 11 bargaining and the options approach — that we discuss in section III.F, below.

Even under these two methods of division, however, post-bankruptcy liquidity is unlikely to be a problem. Although the note gives the noteholder the right to be paid in cash — a right it can enforce by seizing and auctioning the collateral — the noteholder is free to accept a noncash payment. Thus, if the debtor prefers not to use cash to pay off the nonrecourse note, it can offer to "pay" the note with equity, an unsecured note, or a new secured note (recourse or nonrecourse). And if the risk-adjusted value of the noncash offer were at least as high as the foreclosure value (up to the amount of the note) — which is what the noteholder would get from seizing and selling the asset — it would be in the noteholder's interest to accept such noncash consideration.

Under Chapter 11, the debtor may keep assets that served as collateral for pre-bankruptcy loans over the secured creditors' objections.[115] Under our mechanism, the noteholder's ability to repossess the collateral if the amount owed is not paid may therefore seem a departure from Chapter 11. Under existing Chapter 11 rules, however, the debtor may keep the collateral only if the debtor pays the creditor in full for its secured claim with either cash or a note, secured by the collateral, whose payments have a present value equal to the amount of the secured claim.[116] Our mechanism implements essentially the

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[115] *Id.* § 1129(b); *see also id.* § 1124 (allowing the debtor to reinstate a loan over the objection of the lender).

[116] *Id.* § 1129(b)(2)(A)(i).

same rule: Immediately after bankruptcy, a debtor wishing to retain the collateral must give the holder of the nonrecourse note cash or, if the noteholder agrees, noncash consideration of equal value. For its secured claim, the original secured creditor will receive either cash before the end of the proceeding or, if it wins the auction, cash or noncash consideration of equal value after the end of the proceeding.

Our mechanism does, however, differ in a significant way from Chapter 11's treatment of secured claims: Under Chapter 11 the secured creditor could be forced to accept a note that the court decides has a value equal to the amount of the creditor's secured claim, even when it in fact is worth less.[117] Under our mechanism, which entitles the noteholder to demand cash or the asset, the court cannot force the secured creditor to accept anything less than the amount of its secured claim. Thus, our approach better provides secured creditors with their entitlements than does current bankruptcy law.[118]

F. Incorporating the Mechanism into Bargaining-Based or Options-Based Bankruptcy

Until now we have considered our mechanism in the context of a sale of the debtor firm as a going concern. We now examine how our proposal would operate in the contexts of the other two basic approaches to valuing the debtor as a whole: bargaining and options.

Before proceeding, it is important to emphasize that the first stage of the mechanism — the auction of the nonrecourse loan — and the third and final stage of the mechanism — the post-bankruptcy resolution of the nonrecourse loan — would be identical under all three approaches. The only relevant difference lies in the second stage: the division of the bankruptcy pie. We thus focus on how the second stage of the mechanism would be implemented under the bargaining and options approaches.

1. Bargaining-Based Bankruptcy. — The bargaining approach is currently used in the United States, where it is implemented through Chapter 11.[119] Thus, to show how our proposed mechanism could be combined with the bargaining-based approach, we discuss its implementation in the context of Chapter 11.

As when the debtor is sold for cash, the auction of the nonrecourse note would divide a secured creditor's claim into secured and unsecured parts. Upon completion of the bankruptcy proceeding, the se-

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[117] *See* JACKSON, *supra* note 12, at 46–47.

[118] For criticisms of Chapter 11's failure to give full priority to secured creditors, see *id.* at 211–13. In section III.H, pp. 2433–35, below, we show that our mechanism could also easily implement a rule of partial priority if it were decided that a secured creditor should not be entitled to the full value of its collateral, up to the amount of its claim.

[119] *See* TABB, *supra* note 64, at 757–70.

cured claim would be paid in full with the proceeds from the auction of the nonrecourse note. Because the amount of the creditor's secured claim would, by definition, equal the price fetched by the nonrecourse note, the auction proceeds would be considered payment in full of the creditor's secured claim and would thus satisfy Chapter 11's fair and equitable standard.

The secured creditor's unsecured claim, if any, would be treated the same as any other unsecured claim under Chapter 11. It would be placed in a class with other unsecured claims. The creditor would then vote the claim in favor of or against the plan of reorganization, and if the plan is confirmed, the creditor would share pro rata in whatever consideration that class receives.[120]

As we explain in section II.C.1, above, under Chapter 11 each secured claim is put in its own class, and the secured creditor votes on the reorganization plan. For a plan to be confirmed, each secured creditor must either approve the plan or be paid an amount that satisfies the fair and equitable standard. Thus, under current rules, the plan participant must engage in bargaining — and perhaps litigation — with each secured creditor. Under our mechanism, however, there would be no need to bargain or litigate over the amount of each secured claim. Each secured claim would be considered paid in full with the proceeds from the auction of the nonrecourse note corresponding to that claim. The implementation of our mechanism in Chapter 11 would therefore considerably reduce the number of classes whose approval is required for plan confirmation and would thereby substantially facilitate bargaining in, and the resolution of, Chapter 11 cases.[121]

2. Options-Based Bankruptcy. — As we explain in section II.D.2, the options approach to dividing the bankruptcy pie involves allocating options on the debtor's value to the participants in the bankruptcy proceeding. The division of value results from the participants' own decisions to exercise the options they receive. The options are designed in such a way that no participant can complain that it has received less than its entitlement.

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[120] In a Chapter 11 reorganization, the plan may sometimes have more than one class for unsecured claims, with each class receiving a different amount or type of consideration. *See generally* EPSTEIN, NICKLES & WHITE, *supra* note 6, § 10-21, at 764–67.

[121] If at the time of the auction it is unknown whether the plan will be confirmed — that is, whether the bankruptcy proceeding is coming to an end and the nonrecourse loan will soon be resolved outside bankruptcy — then the auction price will be lower to reflect the possibility of delay. This discount will in turn tend to undermine the auction's effectiveness as a mechanism for determining the amount of the secured claim. Under these conditions, the bid could be conditioned on the plan's confirmation within a short period of time and could be payable at the end of the proceeding. This adjustment should eliminate the discount that would otherwise arise from the possibility of a delayed resolution.

As noted, however, to implement the options approach it is necessary to rank all of the participants' claims. This ranking, in turn, requires dividing secured creditors' claims into secured and unsecured parts. Our mechanism would use the auction of the nonrecourse note to effect this division.

The auction would occur just before the distribution of the options, and it would yield the information necessary to implement the options approach: the amount of the secured claim and the amount, if any, of the unsecured claim. The secured claim would be paid in full with the proceeds of the auction. For any unsecured claim, the secured creditor would receive an option of the type received by holders of unsecured claims. The participants would know that the firm emerging from Chapter 11 has the nonrecourse note outstanding against it. They would exercise their options according to their own estimates of the firm's value, taking this liability into account.

G. An Alternative Version of the Mechanism

Our approach is based on the insight that the amount of a secured creditor's secured claim is equivalent to the value of a nonrecourse note for the amount owed the creditor, backed by the creditor's collateral. The problem of determining the amount of the secured claim therefore translates into the problem of valuing such a nonrecourse note. We suggested earlier that the value of the note be determined through an auction shortly before the end of the bankruptcy proceeding. And we demonstrated that this method of valuing secured claims is viable under any of the three basic approaches to allocating the value of the bankruptcy pie — the sale of the debtor for cash (auctions), bargaining, and options.

In this section we advance an alternative version of our mechanism that could be used whenever the debtor firm as a whole is to be sold for cash and perhaps when other methods of division are used as well. This version is also based on recognition of the equivalence between the amount of a secured creditor's secured claim and the value of a corresponding nonrecourse note. Under this alternative, however, there would be no auction of the nonrecourse note. Instead, the secured creditor would simply keep the note and then capture its value after bankruptcy.

If after the completion of the bankruptcy proceeding the debtor buys the note from the secured creditor, whether for the note's face value or for a mutually acceptable lower amount, the purchase price would determine the amount of the creditor's secured claim and the payment to the creditor would be considered full satisfaction of the claim. If, instead, the secured creditor repossesses the collateral and sells it at auction, the sale price (up to the amount owed) would determine the amount of the secured claim and the proceeds received by the

creditor would be considered full payment of that claim. The resolution of the note would also determine the amount of the secured creditor's unsecured claim.[122] As under the auction version of the mechanism, the secured creditor would get the foreclosure value of the collateral, up to the amount owed, and the debtor would keep the asset if and only if the debtor is the highest-valuing user.

The advantage of this alternative version is that there would be no auction of the nonrecourse note. Although the transaction costs and delay associated with the auction of the note are likely to be minimal, the alternative version would impose no such costs or delay during the proceeding whatsoever.[123]

However, a complication arises if the secured creditor's unsecured claim must receive the same treatment accorded other unsecured claims. Under the auction version of our mechanism, the unsecured claim is determined by the auction before the end of the bankruptcy proceeding and thus can easily be accorded the same treatment as other unsecured claims in the proceeding. Under the non-auction version, however, the secured creditor's unsecured claim is not determined until after resolution of the note, which occurs after the bankruptcy proceeding. Thus, there is a problem of ensuring that the unsecured claim receives the same treatment as all the others even though its amount is determined after the end of the bankruptcy. As we discuss below, this problem can be solved, at least under the auction approach.[124]

Let us suppose that the debtor will be sold as a whole for cash, under either the existing rules or a new auctions regime. We offer two methods that could be used to ensure that, under the non-auction version of the mechanism, the secured creditor's unsecured claim, if any, will be accorded the same treatment as all other general unsecured claims.

One way to deal with the secured creditor's unsecured claim would be to delay distribution of the proceeds from the sale of the debtor firm until after the post-bankruptcy resolution of the nonrecourse note. Recall that when the auction version of our mechanism is used in the context of a cash sale of the debtor firm, in the second stage the firm is sold to the highest bidder and the proceeds of this auction are distrib-

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[122] For the amount of the unsecured claim to be determined, the secured creditor would have to pay in cash (rather than with another note or with equity) if it purchases the nonrecourse note.

[123] The alternative version might also appeal to those who worry that at auction the secured creditor might buy the nonrecourse note for less than its actual value, which in turn would leave it with too large an unsecured claim. Those concerned that asymmetric potentials for gain or loss might depress the price of the note under the auction-based procedure might also favor the non-auction alternative. *See supra* section III.C.3, pp. 2417–18.

[124] The extent to which the auctionless version of the mechanism could be used under other methods of division is a subject that we intend to address in future work.

uted together with the proceeds from the previous auction of the note. The bankruptcy proceeding is then brought to a close. The mechanism's third and final stage is the resolution of the nonrecourse note after the end of the bankruptcy proceeding.

Under the non-auction version, in the second stage the firm would also be auctioned for cash and would emerge as a solvent entity, bringing the bankruptcy proceeding to an end. However, the proceeds from the sale would be kept in escrow until the post-bankruptcy resolution of the nonrecourse note established the amount of the secured creditor's unsecured claim. That unsecured claim would then be pooled with other general unsecured claims and be paid pro rata. This approach would involve moving one element that was originally in the second stage — distribution of the proceeds from the firm's sale — to the third stage. Delaying the distribution of cash until after the end of the bankruptcy proceeding is unlikely to entail any significant administrative costs.

Consider the following example. Suppose that Debtor's value as a going concern is $200. Debtor owes $150 to unsecured creditors. In addition, Creditor has lent Debtor $100, secured by a machine with a foreclosure value of $50. Absent the machine, Debtor's value as a going concern is $140. In other words, the machine is worth $60 to the Debtor — more than to any other party. Creditor's secured claim is converted into a nonrecourse note with a face amount of $100, backed by the machine worth $50. At the time Debtor is put up for sale, the prospective buyers anticipate the necessity of paying Creditor $50 to settle the nonrecourse note (and thereby avoid surrendering the machine, which is worth $60 to Debtor). Thus, Debtor, which has a going concern value of $200, will be sold subject to a liability of $50. As a result, the purchase price will be $150 ($200 – $50).

After the sale, Debtor emerges as a solvent entity. The cash, here $150, is set aside in an escrow account pending resolution of the nonrecourse note, which will determine the amount of Creditor's unsecured claim. Subsequently, Debtor pays Creditor $50 for Creditor's nonrecourse note, and Creditor submits an unsecured claim of $50 to the administrator of the escrow account. There is thus a total of $200 in unsecured claims (Creditor's $50 plus another $150) that must be paid with the $150 in the escrow account. After the resolution of the note, the escrow administrator makes a pro rata distribution of the proceeds from the firm's sale to all participants holding unsecured claims, including Creditor. Each claim is accordingly paid seventy-five cents on the dollar.

We now consider a second method for dealing with unsecured claims that are determined after the end of the bankruptcy proceeding. Under this method, the post-bankruptcy debtor pays the secured creditor for its unsecured claim the amount the creditor would have received had its unsecured claim been pooled with other unsecured

claims.[125] For example, if the unsecured claim is determined to be $50 and the payout rate for unsecured claims at the end of the proceeding is seventy-five percent, the debtor will, after resolving the nonrecourse note, be required to pay the secured creditor $37.50 for its secured claim.

Under both the auction and the non-auction versions of the mechanism, the debtor will emerge from bankruptcy subject to one or more nonrecourse notes. Thus, a party who contemplates buying the debtor must consider the liability represented by these nonrecourse notes in deciding on its course of action. Under the non-auction version, the debtor will emerge from bankruptcy with the same nonrecourse liabilities. If under the non-auction version the post-bankruptcy debtor is also required to pay the secured creditor the amount the creditor would have recovered for its unsecured claim in the proceeding, the debtor will emerge from bankruptcy with additional unliquidated liabilities.

One might worry that these additional liabilities will make it more difficult for a prospective purchaser to value the debtor. This difficulty, in turn, could lead to fewer bids. However, a bidder could easily value the liabilities represented by these unpaid, unsecured claims. The amount of each unsecured claim is simply the amount owed the secured creditor, less the value of the nonrecourse note (a value the bidder would need to estimate in any event). The payout rate that will apply to unsecured claims at the end of the proceeding will depend on the total amount of unsecured claims presented by unsecured creditors, a figure that is easy to determine, and on the amount available for distribution at the end of the proceeding, which is simply the amount the prospective buyer will bid.

This second method for dealing with the unsecured claims of secured creditors — delaying the distribution of the proceeds from the sale of the debtor until after the end of the proceeding and requiring the debtor to pay the unsecured claim in part — yields the same correct result as the first method. Consider the outcome the secured method produces in the above example. Suppose that Debtor is to be sold for cash, subject to the nonrecourse note and to the requirement that Debtor pay Creditor's unsecured claim at the same rate as other unsecured claims are paid in the proceeding. A bidder is willing to pay $200 – $50 – ($50 * X) for Debtor, where X is the fraction of unsecured claims that will be paid at the end of the proceeding. However, is simply the amount the bidder would pay for Debtor divided by the

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[125] *Cf.* Frederick Tung, *Taking Future Claims Seriously: Future Claims and Successor Liability in Bankruptcy*, 49 CASE W. RES. L. REV. 435, 500 (1999) (suggesting a post-bankruptcy treatment of unmatured tort claims based on the payout rate for unsecured claims at the end of the bankruptcy proceeding).

total amount of unsecured claims (other than the unsecured claim of Creditor). Thus:

$$X = \frac{\$200 - \$50 - (\$50)X}{\$150} \qquad \text{or} \qquad X = 3/4$$

Because $X = 3/4$, the buyer pays $112.50 for Debtor. This $112.50 is distributed to pay the unsecured creditors, who get 75 cents on the dollar. The new owners of Debtor then pay Creditor $50 for the nonrecourse note, are presented by Creditor with an unsecured claim in the amount of $50, and pay $37.50 on account of that claim.

H. Using the Mechanism To Implement Partial Priority

As we explain in section II.A.2(b), above, it has been a fundamental principle of bankruptcy law that a secured creditor has a right to receive the full value of its collateral, up to the amount owed. Implementing this principle of "full priority"[126] requires the valuation of collateral. Currently, this valuation is effected through litigation and bargaining. We have shown that our mechanism could implement full priority — in a way that is quicker, less costly, and more consistent with participants' entitlements than the current approach.

However, as we have argued elsewhere, full priority might not be optimal from an efficiency perspective.[127] In particular, full priority may lead to distortions in the arrangements between borrowers and their creditors, including excessive use of security interests and insufficient monitoring of borrowers by secured creditors. We have therefore suggested that it might be more efficient to afford secured claims only partial priority. We have also demonstrated that partial priority would be consistent with fairness and with respect for the creditor's bargain.[128] In this section we show that our valuation mechanism can implement partial priority as easily as it can full priority.

Partial priority rules can usefully be divided into two categories. The first is that of "carve-out rules," which set aside for unsecured claims a certain fraction of a secured creditor's collateral before the amount of the creditor's secured claim is determined. The other category, which we call "claim-conversion rules," consists of rules that determine the secured claim in the same manner as under full priority but then convert a portion of the secured claim into an unsecured

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[126] *See* Bebchuk & Fried, *Uneasy Case*, *supra* note 17, at 859; Bebchuk & Fried, *Reply to Critics*, *supra* note 17, at 1281; Fried, *supra* note 17, at 328–29.

[127] *See* Bebchuk & Fried, *Uneasy Case*, *supra* note 17, at 859; Bebchuk & Fried, *Reply to Critics*, *supra* note 17, at 1283–84; Fried, *supra* note 17, at 329.

[128] *See* Bebchuk & Fried, *Uneasy Case*, *supra* note 17, at 931–32; Bebchuk & Fried, *Reply to Critics*, *supra* note 17, at 1290–91.

claim. Our mechanism could be used to implement either a carve-out or a claim-conversion rule without the need for bargaining or litigation.[129]

To start, consider carve-out rules, an example of which is the twenty-percent Article 9 carve-out proposed by Elizabeth Warren.[130] Under Professor Warren's proposal, up to twenty percent of a borrower's personal property serving as collateral for Article 9 security interests would be set aside to pay unsecured claims.

Such a carve-out rule could be implemented by modifying the third stage of our mechanism — resolution of the nonrecourse note after the bankruptcy proceeding. In particular, the nonrecourse note would not, as it does when the mechanism implements full priority, give the noteholder the right to seize the collateral, sell it at an auction, and keep the proceeds, up to the amount owed. Instead, if the post-bankruptcy debtor did not pay the amount owed, the noteholder would have the right to seize the collateral, sell it at an auction, and keep a specified fraction of the proceeds, up to the amount owed. The remainder of the proceeds would be returned to the debtor.

For example, under a twenty-percent carve-out rule, eighty percent of the proceeds from the post-bankruptcy auction of the asset would be given to the noteholder, up to the amount owed. Therefore, the amount the noteholder is willing to pay for the nonrecourse note auctioned before the end of the proceeding — which is the amount the secured creditor will receive for its secured claim — should be eighty percent of the foreclosure value of the asset, up to the amount owed. This amount is precisely the secured creditor's entitlement under a twenty-percent collateral carve-out rule. The excess, if any, of the amount owed over the amount paid for the secured claim would become an unsecured claim.

We now turn to claim-conversion rules. Under a claim-conversion regime, a secured creditor's secured and unsecured claims would first be determined in the same manner as under full priority, and a portion of the secured claim would then be converted to an unsecured claim and added to the creditor's original unsecured claim. Thus, in contrast to a carve-out rule, the secured creditor cannot be paid in full unless all creditors are paid in full. An example is the seventy-five-

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[129] We use the auction-based mechanism (rather than the alternative, non-auction version) to illustrate how partial priority would be implemented. It could, however, easily be shown that the alternative version can also implement partial priority.

[130] Elizabeth Warren, *An Article 9 Set-Aside for Unsecured Creditors*, 51 CONSUMER FIN. L.Q. REP. 323, 323 (1997). Warren's proposed set-aside would be applied under both state law (outside bankruptcy) and under federal bankruptcy law. Our procedure could be used to implement the set-aside in bankruptcy. For a comparison of Warren's proposal to partial-priority rules that apply to all collateral, but only in bankruptcy, see Bebchuk & Fried, *Reply to Critics*, *supra* note 17, at 1347–48.

percent fixed-fraction rule we put forward for consideration in earlier work.[131] Under this rule, a secured creditor would receive full payment for seventy-five percent of its secured claim; the remainder of the secured claim would be added to the creditor's unsecured claim.

A claim-conversion rule could be implemented by modifying the second stage of our mechanism — the division of value at the end of the bankruptcy proceeding. The nonrecourse note would give the noteholder the same rights as under the full-priority mechanism. Thus, the noteholder would expect to get one hundred percent of the foreclosure value of the collateral, up to the amount owed. However, the amount of the secured claim — as determined by the auction of the note — would be reduced by the amount specified by the partial-priority rule. For example, the seventy-five percent fixed-fraction regime would pay the secured creditor in full for seventy-five percent of its secured claim and convert the other twenty-five-percent of the secured claim into an unsecured claim.

IV. CONCLUSION

One of the more perplexing and seemingly insoluble problems in business bankruptcy is the problem of valuing assets serving as collateral when the assets have going concern value for the debtor. Determining the value of such an asset is essential because this value dictates the amount of the secured creditor's secured claim and, therefore, the amount the secured creditor receives at the end of the bankruptcy proceeding. Currently, assets in such cases are valued either by a court after litigation or through bargaining among the parties. These methods give rise to deviations from parties' bankruptcy entitlements, and they add costs, delay, and uncertainty to the bankruptcy proceeding. The problem of valuing collateral arises not only under Chapter 11, but also under the two market-based alternatives to Chapter 11 — auctions and options.

We have proposed a new approach to valuing collateral that can address the problem both as it arises under Chapter 11 and as it would arise under the two alternative, market-based regimes. This approach is based on reconceptualizing the amount of a secured creditor's secured claim as the value of a nonrecourse note. The part of the secured creditor's claim that is unsecured, if any, can then simply be thought of as the amount owed less the value of the nonrecourse note. This reconceptualization has enabled us to put forward a mechanism for dividing the secured creditor's claim into its secured and unsecured components.

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[131] Bebchuk & Fried, *Uneasy Case*, *supra* note 17, at 909–11.

The mechanism involves converting the secured claim into a nonrecourse note due immediately after the bankruptcy proceeding. The value of the note is determined by the price it fetches at an auction held shortly before the end of the proceeding. We also have put forward an alternative mechanism for determining the value of the note that can be used in any bankruptcy proceeding in which the firm is sold for cash. Under this alternative mechanism, the nonrecourse note is given to the secured creditor in satisfaction of its secured claim. The post-bankruptcy resolution of the note then determines its value.

We have shown that the proposed mechanism could produce outcomes that are consistent with participants' entitlements and ensure that no participant has any basis to complain that the secured creditor is over- or undercompensated. In addition, the mechanism would cause neither disruption nor loss of value during or after the bankruptcy proceeding. Finally, we have explained how our mechanism could be used to implement various kinds of partial-priority rules if it were decided that secured creditors should receive less than full priority in their collateral. We hope this new approach to valuing secured claims will contribute to the improvement of bankruptcy procedures.