ARTICLE

A THEORY OF CORPORATE INSOLVENCY

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Modern scholarship on corporate bankruptcy works from the premise that investors are willing to expend resources identifying and saving insolvent firms that can continue efficiently. In this Article, Professor Adler argues that this premise may be faulty, at least for multiple-creditor firms. Viewed properly, from an ex ante perspective, investors may wish to design initial capital structures that will produce few insolvent but viable firms. Consequently, in a world of unimpeded contractual choice, investors might forgo any collective insolvency process directed primarily at the preservation of going concerns. Professor Adler argues, accordingly, that corporate bankruptcy law and proposals for its replacement may be ill-advised for large firms, not because these firms could efficiently continue post insolvency without bankruptcy reorganization or some substitute, but because it may be appropriate that these firms not continue. In the process of making this argument, Professor Adler offers new interpretations of three puzzling phenomena: asset-based finance; the failure of investors to contractually avoid the seemingly expensive American bankruptcy reorganization process; and common equity's residual interest in a firm that fails to pay dividends on preferred stock.

INTRODUCTION

In essence, there are two approaches to corporate insolvency. A system structured according to the ex post approach provides for a court-supervised examination of a firm after it has become unable to pay its debts. If this examination reveals the firm to be viable despite its financial distress, the firm is reorganized and continues. Otherwise the firm is liquidated. Corporate bankruptcy laws in the United States and in many other countries adopt this approach. A system structured under an alternative, ex ante approach, in contrast, would have investors abide by the consequences of predictions made at the time of

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investment about a firm's likely quality should it become unable to pay its debts. Unless initial investment contracts provided otherwise, a firm's failure to make good on its obligations would trigger a liquidation without any after-the-fact attempt to determine whether the firm were economically viable. If an ex ante insolvency process thus provided for liquidation upon default, viable firms surely would be liquidated. Nonetheless, and despite contrary intuition, I argue here that such an ex ante approach may be optimal.

A misapprehension of financial economics gives rise to the intuition that a proper insolvency system must screen firms that should live from those that should die. It is an axiom of finance theory that a firm's financial health—its ability to pay its debts—is not synonymous with the firm's economic health—its ability efficiently to provide goods or services. It is commonly observed, therefore, that a debt-laden firm can suffer financial distress while maintaining economic viability. Thus, if insolvency provided no clue as to a firm's viability, legal rules that permitted a firm's immediate dismemberment at the hands of unconstrained creditors might waste much value. But a firm's insolvency, as signaled by the firm's default on its debt, may provide a *strong* clue as to the firm's viability. Financial distress need not randomly befall good and bad firms alike. Because investors *choose* an initial capital structure, they may adopt a debt component that renders unlikely the simultaneous occurrence of insolvency and viability. Consequently, investors might well prefer insolvency rules that channel few resources into distinguishing firms that should continue from those that should liquidate, even if the result is routine liquidation.

In this Article, I provide detail for and defend this theory of efficient nonprotection, which applies primarily to publicly held firms. Within the details, I offer new interpretations of three corporate puzzles. The first of these puzzles is asset-based finance. The second is that investors seem to acquiesce in American bankruptcy rules despite the apparent inefficiency of these rules. The third is common equity's residual interest in a firm that fails to pay dividends on preferred stock.

Part I briefly describes the scholarship that seeks to explain bankruptcy law as a means to protect insolvent but viable firms from dispersed creditors who cannot coordinate their collection efforts. This Part also briefly describes the scholarship that proposes bankruptcy alternatives directed toward the same goal.

Part II then explains how the uncritical incentive for continuation on the part of management and preinsolvency equity imbue with potentially significant social costs any process for firm protection.

Part III provides a theory of corporate insolvency that integrates investors' capital structure and insolvency rule decisions. It explains that, in principle, a combination of preferred equity and debt allows dispersed investors to enjoy the advantages of fixed obligations without fear of liquidation while a firm is likely to be viable, and permits these investors to benefit from liquidation through creditor competition for assets when the firm is likely to be inviable. Bankruptcy law interferes with this design by protecting even those firms that should not continue. Alternatives that would protect insolvent firms could similarly interfere. Bankruptcy law or an alternative means of firm protection may save firms that are viable ex post, despite the ex ante likelihood of inviability. But the cost of screening must be borne by investors in *all* insolvent firms. The occasional successful rescue of a viable firm may not justify this ubiquitous cost.

Part IV examines whether this Article's speculation that investors prefer ex ante solutions, in principle, comports with investor practices in the United States. This examination offers new vantages for some puzzles of those practices. First, much has been written on the desirability of asset-based finance. A possible supplement to other explanations of this phenomenon is that investors have an incentive to parcel property interests in specific groups of assets. Packaging of assets can preserve any synergy value among assets within a parcel should insolvency result in individual creditor collection and a termination of management's control over a firm's operations. Second, commentators have wondered why investors do not contract to avoid bankruptcy law given the law's seeming inefficiency. A partial answer may be that although investors may bargain around bankruptcy law if they substitute a collective alternative for continuation of a firm, the law impedes any preordained attempt at liquidation, no matter that investors might prefer liquidation to bankruptcy. Third, it is a common practice in the United States for preferred stockholders to obtain representation on the board of, but not the full residual interest in, a firm that has failed to pay scheduled preferred-stock dividends. An explanation of this separation of influence from residual interest may be that investors wish to constrain but not discontinue a firm that has only mildly disappointed initial expectations. And while consideration of initial expectations cannot adequately explain why holders of preferred interests in default seldom get *control* of a firm's board, such consideration does change the nature of the puzzle.

Part V discusses bankruptcy reorganization evidence from Canada that can be construed directly to support the nonprotection hypothesis of this Article, and notes that further comparative evidence could either support or refute that hypothesis.

The Article concludes that corporate bankruptcy law and proposed alternative collective procedures remain without certain justification. This is so because creditor inability to act collectively may not be a problem, but a solution.

I
PROTECTION OF THE INSOLVENT FIRM

There are a number of possible means to protect an insolvent but potentially viable firm from liquidation. These include current American bankruptcy reorganization law, which is shared in essence with a number of countries, market alternatives as reform of current bankruptcy reorganization law, and purely contractual alternatives to bankruptcy law.

A. Bankruptcy Reorganization

The now classic account of American bankruptcy law is given by Thomas Jackson.[1] He notes:

> The grab rules of nonbankruptcy law and their allocation of assets on the basis of first-come, first-served create an incentive on the part of the individual creditors, when they sense that a debtor may have more liabilities than assets, to get in line today (by, for example, getting a sheriff to execute on the debtor's equipment), because if they do not, they run the risk of getting nothing. This decision by numerous individual creditors, however, may be the wrong decision for the creditors as a group. Even though the debtor is insolvent, they might be better off if they held the assets together. . . . Bankruptcy provides a way to make these diverse individuals act as one, by imposing a *collective* and *compulsory* proceeding on them.[2]

Thus, the argument goes, if a debtor firm is more valuable as a going concern than in piecemeal liquidation, bankruptcy law is beneficial to the extent it protects a debtor from dismemberment.[3]

For corporate debtors, the particular collective and compulsory proceeding Jackson describes is bankruptcy reorganization, known as Chapter 11 in the United States.[4] In a typical bankruptcy reorganiza-

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[1] See Thomas H. Jackson, The Logic and Limits of Bankruptcy Law (1986).

[2] Id. at 12-13.

[3] See generally id. at 7-19.

[4] See 11 U.S.C. §§ 1101-1174 (1994). Other countries have similar regimes—the United Kingdom, for example. See Insolvency Rules, S.I. 1986, No. 1925, as amended by Insolvency (Amendment) Rules, S.I. 1987, No. 1919 and Insolvency (Amendment) Rules, S.I. 1989, No. 397; see also Nick Segal, An Overview of Recent Developments and Future Prospects in the United Kingdom, in Current Developments in International and Comparative Corporate Insolvency Law 5, 5 (Jacob S. Ziegel ed., 1994) (describing Chapter 11 as "guiding light" for many countries).

tion, an automatic stay eliminates individual creditor collection,[5] and a court supervises a structured negotiation among creditors and shareholders while management continues to operate the firm. All parties might agree on a settlement of old claims and interests in exchange for new.[6] Even if the parties cannot reach unanimous agreement, a court may confirm a reorganization plan, but ordinarily some creditors must consent,[7] and the court must be satisfied that the dissenters are to receive under the plan an amount commensurate with their entitlements measured by priorities established under substantive nonbankruptcy law.[8]

B. Market-Based Reform

Structured negotiation is not the only conceivable bankruptcy process. The simplest alternative is for a court to conduct a cash auction of a firm that seeks bankruptcy protection. Holders of the firm's prebankruptcy claims and interests would divide the proceeds of the auction. The highest bidder for the firm could continue the firm or liquidate it, as it saw fit. There could be problems assessing the relative priority of asset-based lenders, because serious bids might come in only for the firm as a whole, and not for particular assets that serve as collateral. But these problems might be relatively insignificant because the valuation of specific assets, which may often be fungible with assets traded elsewhere, could be a relatively simple matter when compared with the difficulty in the valuation of a firm as a going concern, the latter valuation being essential to a Chapter 11 determination of whether dissenting holders of claims or interests are to receive their due under a reorganization plan.[9] Thus, the insolvent firm auc-

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[5] See 11 U.S.C. § 362 (1994).

[6] In bankruptcy parlance a "claim" is a debt obligation while an "interest" is a right to a residual after claims are satisfied. Preferred stock includes an interest inferior to debt but entitled to fixed priority over common equity, which is purely a residual interest (though in finance parlance is sometimes a "residual claim").

[7] See 11 U.S.C. § 1129(a)(10) (1994).

[8] It is possible to be more precise. If a dissenter is in a class of claims or interests that as a class accepts the plan, a court must be satisfied that a dissenter will receive property under the plan worth at least as much as it would have received in a liquidation. See id. § 1129(a)(7). If a dissenter is in a class of claims or interests that as a class fails to accept the plan, a court must be satisfied that the dissenter will receive property under the plan worth an amount equal to full satisfaction of its claim or an amount equal to its by-class ratable portion of the residual interest in the value of the firm after higher priority claims or interests are satisfied in full. See id. § 1129(b)(2); see also discussion infra notes 63-69 and accompanying text.

[9] For a related discussion, see infra Part IV.A.

tion, an idea developed by and associated with Douglas Baird,[10] provides a seemingly attractive alternative to bankruptcy reorganization.

There are other market-based alternatives. Mark Roe suggests that bankruptcy law provide not for the sale of the entire firm, but for the sale of a small portion of new interests in the firm.[11] The purchase price from such a sale would serve as the basis for the issuance of additional new interests in exchange for prebankruptcy claims and interests. A full-scale auction would be unnecessary.

Lucian Bebchuk extends Roe's issue-of-securities market valuation solution.[12] He proposes a bankruptcy process in which each holder of a claim or interest would be granted a conditional option, exercisable in ascending order of priority. The option would entitle the holder to buy a ratable portion of all higher priority claims or interests at face value unless a holder of a lower priority claim or interest exercised its option to purchase the holder's own claim or interest.[13] If any set of options were exercised, the firm would emerge from this process subject to the new residual interest, or claims and interests, of those who so exercised their options. If no one exercised an option, the highest priority prebankruptcy claims ratably would share all new interests in and any claims against the firm.[14] An essential element to the Bebchuk proposal is that individual investors, who may not have the resources to exercise even a valuable option, could sell their options to a purchaser or purchasers with sufficient resources.[15]

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[10] See Douglas G. Baird, Revisiting Auctions in Chapter 11, 36 J.L. & Econ. 633 (1993) [hereinafter Baird, Revisiting Auctions] (comparing costs associated with existing and proposed legal regimes under Chapter 11 to those under mandatory early auction regime); Douglas G. Baird, The Uneasy Case for Corporate Reorganizations, 15 J. Legal Stud. 127 (1986) (arguing that investors of publicly traded firms would almost always prefer going concern liquidation over corporate reorganization). The idea was also mentioned in William H. Meckling, Financial Markets, Default, and Bankruptcy: The Role of the State, 41 Law & Contemp. Probs. 13, 37-38 (1977).

[11] See Mark J. Roe, Bankruptcy and Debt: A New Model for Corporate Reorganization, 83 Colum. L. Rev. 527, 559 (1983) (arguing for "market based approach" that would "slash through the tangled bankruptcy knots of valuation, distributional conflicts, and recapitalization").

[12] See Lucian A. Bebchuk, A New Approach to Corporate Reorganizations, 101 Harv. L. Rev. 775 (1988).

[13] See id. at 785-88. Satisfaction of an "interest" at "face value" refers to satisfaction of preferred-stock dividends in arrears or a preferred-stock liquidation preference.

[14] Cf. Robert C. Merton, The Financial System and Economic Performance, 4 J. Fin. Servs. Res. 5, 25-27 (1990) (discussing alternative approach that includes options).

[15] See Bebchuk, supra note 12, at 796. Bebchuk's proposal does not require a uniform decision within a class of claims or interests. He does note, however, that because each option either will or will not be valuable at the time to exercise, one should expect a uniform decision. See id. at 787-88.

It is significant that Bebchuk's proposal would permit the new owners of a firm, whoever they might be, to obtain from the process both debt claims and equity interests, not necessarily only equity interests. Debt may be valuable, not only in the United States where tax law treats debt more favorably than equity,[16] but generally because debt subjects a firm to fixed obligations. A firm financed with fixed obligations as well as equity may permit managers to own a significant portion of a firm's residual equity interest. Managers would then have a powerful incentive to increase the firm's value. Moreover, as Stephen Ross,[17] Sanford Grossman and Oliver Hart,[18] and Michael Jensen[19] explain or support in varying respects, a firm's need continually to meet fixed obligations disciplines managers, who have to produce revenues or return to the capital market for funds owed. If poor performance leads to revenue shortfall, the scrutiny of potential capital providers could reveal poor management and lead to the managers' ouster.[20]

Given the flexibility of the Bebchuk proposal to include debt, his proposal could provide for an efficient capital reorganization. However, Philippe Aghion, Oliver Hart, and John Moore are not sanguine about the replacement of the bankruptcy reorganization process with a market valuation. They argue that a traditional, court-supervised bankruptcy process can, in principle, do more than correct a firm's capital structure. In their view, bankruptcy can also facilitate the replacement of management or the combination of the debtor with another firm. Bebchuk's proposed regime would sacrifice this facilitation role. Consequently, Aghion, Hart, and Moore (AHM) offer an elaboration of Bebchuk's proposal, one that would include judi-

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16 See I.R.C. § 163 (1996), which allows "all interest paid or accrued within the taxable year on indebtedness" to be deducted from the taxable income of the payer corporation. There is no similar general provision for deductions of payments to holders of equity interests.

17 See Stephen A. Ross, The Determination of Financial Structure: The Incentive Signaling Approach, 8 Bell J. Econ. 23 (1977) (describing debt as signal of firm quality).

18 See Sanford J. Grossman & Oliver D. Hart, Corporate Financial Structure and Managerial Incentives, in The Economics of Information and Uncertainty 107 (John J. McCall ed., 1982) (arguing that debt forces managers to be profit maximizing or risk losing benefits of their positions upon bankruptcy).

19 See Michael C. Jensen, Agency Costs of Free Cash Flow, Corporate Finance, and Takeovers, 76 Am. Econ. Rev. 323, 324 (1986) (propounding "control hypothesis" of debt creation).

20 See, e.g., Barry E. Adler, An Equity-Agency Solution to the Bankruptcy-Priority Puzzle, 22 J. Legal Stud. 73, 92 (1993) (suggesting that signal of possible mismanagement "could lead to further investigation and ultimately to a beneficial change in corporate control"); Frank H. Easterbrook, Two Agency-Cost Explanations of Dividends, 74 Am. Econ. Rev. 650, 654 (1984) (stating that "the contributors of capital are very good monitors of managers").

cial supervision. After holders of claims or interests exercised or failed to exercise their Bebchuk options, the AHM regime would have the resulting equity class vote on, or choose among, reorganization plans tendered during the bankruptcy case.[21] The AHM regime would permit anyone to offer a plan, which could include any capital structure, management team, or combination with another firm. Although Aghion, Hart, and Moore recognize that a pure equity firm under prebankruptcy management can, in principle, accomplish any similar restructuring *after* bankruptcy, they see an advantage of judicial influence, both through injunction (to force opening of corporate books, for example) and through advice provided by court-appointed experts.[22]

The chief advantage of the Baird, Roe, Bebchuk, and AHM proposals over Chapter 11 is that with any of these proposals, the market, rather than a negotiated settlement or a court, would be responsible for valuing the debtor. In Chapter 11, the period legally reserved for negotiation among holders of claims and interests of varying priorities[23] and the specter of litigation over a firm's true value can impose substantial direct and indirect costs.[24] For one sample, Edward

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[21] See Philippe Aghion et al., The Economics of Bankruptcy Reform, 8 J.L. Econ. & Org. 523 (1992) [hereinafter Aghion et al., Economics]; Philippe Aghion et al., Improving Bankruptcy Procedure, 72 Wash. U. L.Q. 849, 850 (1994) ("In our scheme, debt claims are converted into equity, and the decision about whether to reorganize or liquidate is then put to a vote.").

[22] There are other proposals to combine elements of different regimes. Robert Hansen and Randall Thomas, for example, have suggested a structured negotiation for a limited period followed, if necessary, by an auction. See Robert G. Hansen & Randall S. Thomas, Auctions in Bankruptcy: Theoretical Analysis and Practical Guidance 35 (1994) (unpublished manuscript, on file with author). George Triantis ascribes essentially this process to current Canadian bankruptcy law. See George G. Triantis, The Interplay Between Liquidation and Reorganization in Bankruptcy: The Role of Screens, Gatekeepers, and Guillotines, 16 Int'l Rev. L. & Econ. 101, 108-14 (1996). Detailed discussion of combined elements would not contribute significantly to the analysis in this Article.

[23] See 11 U.S.C. § 1121 (1994) (subject to adjustment by court, providing debtor exclusively 120 days to prepare reorganization plan, and 60 additional days of exclusivity to gain acceptance). A court generally will not terminate the reorganization process *at least* until expiration of debtor's exclusive period.

[24] See, e.g., Edward I. Altman, A Further Empirical Investigation of the Bankruptcy Cost Question, 39 J. Fin. 1067, 1077 (1984) (estimating total bankruptcy cost for sample of 18 firms of various sizes at 16.7% of firm value in year of bankruptcy); Sanjai Bhagat et al., The Costs of Inefficient Bargaining and Financial Distress: Evidence from Corporate Lawsuits, 35 J. Fin. Econ. 221 (1994) (describing costs from interfirm litigation); Tim C. Opler & Sheridan Titman, Financial Distress and Corporate Performance, 49 J. Fin. 1015 (1994) (describing costs from loss of sales); Lawrence A. Weiss, Bankruptcy Resolution: Direct Costs and Violation of Priority of Claims, 27 J. Fin. Econ. 285, 289 (1990) (finding for sample of publicly traded firms' direct costs alone average about 3% of firm value); Lynn M. LoPucki, The Death of Liability, 106 Yale L.J. 1, 50-51 nn.217-18 (1996) (collecting studies on direct and indirect costs of bankruptcy). But see, e.g., Gregor Andrade & Steven N. Kaplan, How Costly Is Financial (Not Economic) Distress? Evidence from

Altman estimated these combined costs to be more than 15% of a firm's value at the time of bankruptcy, though these costs are difficult to separate from economic, rather than financial, distress.[25]

C. *Contractual Alternatives*

Although, in principle, any of the market-based alternatives to bankruptcy could be contractually adopted, each is stated as a proposal to reform or replace, not avoid, government regulation of insolvency. This fact reflects an apparent acceptance by each proposal's proponent of a collective action problem that, as Tom Jackson has argued, apparently creates the need for bankruptcy's compulsive collective proceeding. It is not clear, however, that a collective proceeding is required. Building on the work of others,[26] I have argued before that the collective action problem is largely illusory.[27] Each investor in a firm—creditor and equity holder alike—bargains with an entrepreneur or a firm's managers, who can, in principle, impose on the investors any set of rules to provide for a return of investment and for the contingency of insolvency. Such a bargain could not include nonconsensual creditors, but the law could treat nonconsensual claims separately.[28] There would be no need for general bankruptcy rules.

The prospect of an ex ante consensual arrangement to eliminate a collective action problem raises the possibility of an ex ante solution

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Highly Leveraged Transactions that Became Distressed (Nov. 3, 1996) (unpublished manuscript, on file with author) (distinguishing financial distress costs from economic distress costs); Douglas G. Baird, The Hidden Virtues of Chapter 11: An Overview of the Law and Economics of Financially Distressed Firms 14-17 (July 31, 1995) (unpublished manuscript, on file with author) (arguing and collecting studies that suggest costs may be overstated).

[25] See Altman, supra note 24, at 1077. The cases in Altman's sample predate the current bankruptcy code, but the law in place at the time imposed a similar bargaining structure. Altman's result, therefore, remains relevant as a rough estimate.

[26] See generally Robert A. Haugen & Lemma W. Senbet, Bankruptcy and Agency Costs: Their Significance to the Theory of Optimal Capital Structure, 23 J. Fin. & Quantitative Analysis 27, 29-31 (1988) (arguing that impediments to restructuring are easily eliminated through inclusion of simple provisions in corporate charters and bond indentures); Merton, supra note 14 (suggesting that options could eliminate need for bankruptcy); Randal C. Picker, Security Interests, Misbehavior, and Common Pools, 59 U. Chi. L. Rev. 645 (1992) (arguing that secured credit mitigates the collective action problem); Mark J. Roe, The Voting Prohibition in Bond Workouts, 97 Yale L.J. 232 (1987) (arguing that prohibition under Section 316(b) of Trust Indenture Act restricts contractual resolution of financial distress).

[27] See Barry E. Adler, Financial and Political Theories of American Corporate Bankruptcy, 45 Stan. L. Rev. 311, 313-15 (1993).

[28] With intervention far short of a bankruptcy process, law can mandate that nonconsensual creditors receive highest priority subject to collection terms as favorable as, but no more favorable than, any granted to an investor. See id. at 340 (arguing that law should prevent tort victims from exercising individual collection rights but permit them to retain their status as highest-priority claimants).

to the valuation question, which is at the heart of bankruptcy reorganization and the proposed revisions of bankruptcy law. In earlier work, I argued that a firm could, in principle, issue a form of preferred equity instead of debt.[29] This substitution would create what I call a "Chameleon Equity" firm. Such a firm would retain the benefits of fixed obligations, but would avoid any negative consequences of creditor coordination failure—most notably post default liquidation of a viable firm—through the elimination of individual creditor collection. In the simplest Chameleon Equity firm, if insolvency—defined untraditionally as asset value less than fixed obligations[30]—led to an uncured default on the preferred equity obligations, such default would eliminate the preinsolvency common-equity class and would convert the lowest-priority preferred-equity class to common equity. Any remaining preferred-equity class would survive. There would be no acceleration of surviving obligations.[31] At any given time, management would represent the then-current common-equity class, which could continue or liquidate the firm, retain or replace management, at its will.[32] A determination of proper course would not be costless, but would be free of conflict over the firm's value. Chameleon Equity

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29 See id. at 323-33.

30 Insolvency is ordinarily defined as asset value less than debt obligations. See 11 U.S.C. § 101(32)(A) (1994). For the ordinary definition, fixed obligations of preferred equity are not counted among debt obligations.

31 A more sophisticated model of a Chameleon Equity firm would account for preferential payments and variety in maturity of obligations. If, for example, a firm's default triggered a Chameleon Equity transformation, managers could be required to reclaim payments made to the extinguished class within a specified period before the transformation. This, combined with dividend restrictions, could provide surviving claims with a reliable equity cushion as a substitute for acceleration. Cf. infra note 34. Moreover, a more sophisticated model could account for disputed claims without altering the fundamental point here. See Barry E. Adler, A World Without Debt, 72 Wash. U. L.Q. 811, 824-25 (1994).

32 This proposal ostensibly resembles that in Michael Bradley & Michael Rosenzweig, The Untenable Case for Chapter 11, 101 Yale L.J. 1043, 1078-88 (1992) [hereinafter Bradley & Rosenzweig, Untenable Case], prepared contemporaneously with my original paper on the subject. However, the Bradley and Rosenzweig proposal fails to solve the collective action problem among creditors and for that reason is not a plausible alternative to bankruptcy's preservation of an insolvent but viable firm. Moreover, as Bradley and Rosenzweig make clear, their proposal does not anticipate a prohibition on acceleration of high-priority claims. See Michael Bradley & Michael Rosenzweig, In Defense of Abolishing Chapter 11, at 45-46 (Nov. 1995) (unpublished manuscript, on file with author). For reasons discussed below, this difference would render the Bradley and Rosenzweig proposal less effective than Chameleon Equity in avoiding restructuring costs. As this section of this Article suggests, both my proposal and that of Bradley and Rosenzweig build on earlier recommendations for bankruptcy alternatives that would transform fixed obligations into residual interests. See Bebchuk, supra note 12 (proposing grant of options for holders of claims of varying priority); Merton, supra note 14, at 25-27 (proposing "no-fault default" alternative); Note, Distress-Contingent Convertible Bonds: A Proposed Solution to the Excess Debt Problem, 104 Harv. L. Rev. 1857 (1991) (proposing contractual conversion of debt to equity in times of distress).

would not necessarily satisfy the ideals of financial reorganization, to honor investor priority and to restore solvency. A Chameleon Equity firm could default while it was solvent,[33] or not until it slipped insolvent through more than one priority class.[34] But design of default cure periods, of class size within capital structure, of variance in obligation maturities, and of cross-default clauses could balance and mitigate these concerns.

The contractual, Chameleon Equity structure has an important potential advantage over current bankruptcy reorganization law. Automatic conversion of the lowest-priority fixed-obligation class to common equity, and the survival of higher-priority classes, would accomplish a reorganization of an insolvent firm without the expensive imbroglio that is often a consequence of the current bankruptcy reorganization process.

The Chameleon Equity structure, moreover, would permit a firm to restructure without the expense of a market valuation that any of

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[33] Illiquidity can result in an uncured payment default that will trigger the applicable insolvency regime. This problem, however, may not be large because a solvent debtor can have an opportunity to refinance debt that will become due or, if there is a cure period, has become due, even if the debt holder insists on repayment. Indeed, even an *insolvent* debtor can refinance its obligations. See, e.g., Margot Wickam-Bennett, Earmarking in the Eighth Circuit, 79 Iowa L. Rev. 965 (1994) (collecting and discussing cases on "earmarking doctrine"). For a further discussion of the illiquidity problem, see Adler, supra note 31, at 822-23.

A related problem is that management of a solvent, liquid firm might choose not to have the firm pay its fixed obligations. Management might so behave if, for example, it received a side payment from the lowest-priority fixed-obligation class. Cf. infra notes 75-76 and accompanying text. But a Chameleon Equity structure could permit direct equity involvement in the decision to pay fixed obligations, an involvement necessary only if equity investors suspected management misbehavior. And the risk of such misbehavior might not be great. The firm could provide its managers with an equity interest and proscribe management ownership of any fixed obligation as well as any relationship between management and any holder of a fixed obligation. A side payment, then, could not be subtle, and would perhaps be criminal. Moreover, for a publicly traded Chameleon Equity firm, the charter could defeat the tactic of solvent-firm default if a provision required disgorgement by a posttransformation common-equity class with an aggregate value, based on immediately subsequent trades, above 100% of that class's pretransformation fixed claims. Such value comparison would be possible without requiring every holder of an in-the-money option to raise the exercise price, as would be the case in the Bebchuk or AHM regime described above.

[34] Implicit in the design of Chameleon Equity is the assumption that a firm's capital structure would permit eternal solvency, with cancellation of the pretransformation lowest-priority obligations sufficient to reverse any excess of obligations over asset value. This result is not certain, however. As I conceded in Adler, supra note 27, at 325, the possibility that a firm would slip insolvent through multiple classes is a potential weakness in the proposal. Nonetheless, as the text immediately below suggests, terms of Chameleon Equity contracts could minimize this risk. See also id. at 325-26. Cf. Hayne E. Leland & Klaus B. Toft, Optimal Capital Structure, Endogenous Bankruptcy, and the Term Structure of Credit Spreads, 51 J. Fin. 987, 991-95 (1996) (describing "endogenous bankruptcy").

the discussed reform proposals would to some extent impose. This expense can be substantial. For example, based on a study by Clifford Smith, even a large offering, over $100 million, of a publicly traded firm's additional common stock may cost about 4% of total proceeds in underwriters' compensation and other expenses.[35] A study by Jay Ritter suggests that this proportion may increase to about 20% in the case of an initial public offering less than $2 million.[36] Though these studies of securities sales are not studies of firms to be restructured after default, there is little reason to believe that the sale of an insolvent firm or options on that firm could yield a fair price free of the costs these studies report.

To understand why substantial underwriters' fees might be necessary to yield a fair sale price, it is helpful to first examine the problems that would confront sellers and potential purchasers of an insolvent firm. Firms to be sold because insolvency has led to default may often have a common value to potential purchasers, each of which could liquidate the firm or hire the best management team as it saw fit.[37] That is, there is no reason to believe that the assets of an insolvent firm would likely be a good source of unique synergy with the assets of another firm. Investigation by a potential purchaser, then, on the hope that it would discover a particularly efficient use for the firm or its assets, would likely be wasted. Yet, absent investigation, a potential purchaser might offer a price lower than its preinvestigation estimate. The low offer could be prompted by fear that if the firm were of higher value, the firm's initial investors would have arranged to sell it privately.[38] Therefore, unless potential purchasers possessed reliable substantial information about an insolvent firm's value, the firm's preinsolvency investors, as ultimate sellers, might invite investigation, despite its cost. Even if seller discretion were not a concern, a potential purchaser might investigate, regardless of seller interest, at least

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35 See Clifford W. Smith, Jr., Alternative Methods for Raising Capital: Rights Versus Underwritten Offerings, 5 J. Fin. Econ. 273, 277 (1977) (analyzing SEC data to compare underwriting costs with rights offerings costs).

36 See Jay R. Ritter, The Costs of Going Public, 19 J. Fin. Econ. 269, 272 (1987).

37 Compare Peter Cramton & Alan Schwartz, Using Auction Theory to Inform Takeover Regulation, 7 J.L. Econ. & Org. 27, 47 (1991), where the authors make essentially this point in describing tender offer targets.

38 Compare the discussion on public offerings and the "lemons" problem, for example, in Bernard S. Black, Is Corporate Law Trivial?: A Political and Economic Analysis, 84 Nw. U. L. Rev. 542, 570-72 (1990), Melvin A. Eisenberg, The Structure of Corporation Law, 89 Colum. L. Rev. 1461, 1515-24 (1989), and Marcel Kahan, The Qualified Case Against Mandatory Terms in Bonds, 89 Nw. U. L. Rev. 565, 580-83 (1995), each reviewing law and finance literature.

because it would value the opportunity to avoid an offer at its preinvestigation estimate if its investigation estimate proved lower.[39]

If potential purchasers investigated, a firm's preinsolvency investors, as sellers, would expect to bear the aggregate costs of such investigation, as each potential purchaser would prepare an offer only if its costs of preparation were no greater than its expected profit should its bid succeed, discounted by the probability of success. That is, each bidder would require an expected profit of at least zero. As a result, if each bidder incurred preparation expense, the seller would indirectly pay all such expense with a sale for an expected price less than value to the highest bidder, who, in essence, would win a lottery on a ticket paid for by its cost of preparation. This is a well-known result, explained by Kenneth French and Robert McCormick for a first-price, sealed-bid auction.[40]

If a firm or interests in a firm were sold in a setting that permitted potential purchasers to observe the offers of others and up their bids in response, initial investors might suffer more than aggregate investigation costs. Peter Cramton and Alan Schwartz apply auction theory to offers for publicly traded firms and, in the process, make an observation relevant to a rule that would provide for an auction or distribution of options on an insolvent firm. Under the assumption that the value of a firm is not only common to all potential purchasers but certain after investigation, Cramton and Schwartz demonstrate that after one potential purchaser publicly incurs a cost in preparation for an offer, no other potential purchaser will find it in its interest to duplicate this cost.[41] If a competitive bidder incurred the cost of making an offer, it would compete in the bidding contest with the original investigator, whose cost is sunk, so that the benefits of entry would accrue to the seller with the potential purchasers losing their offer

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[39] Kenneth French and Robert McCormick make essentially these points in describing negotiation as an alternative to an auction:

> Two conditions must be satisfied for this strategy to be successful. First, potential buyers must believe that the asset is randomly selected from the prior distribution. In other words, the owner cannot presort his assets, selling low-valued items at a fixed price . . . and using some other technique to sell the rest. Second, the potential buyers must be prevented from collecting any information. Without this restriction, buyers will only purchase the asset when their adjusted estimate of its value is above the price.

Kenneth R. French & Robert E. McCormick, Sealed Bids, Sunk Costs, and the Process of Competition, 57 J. Bus. 417, 431-32 (1984).

[40] See generally id. But see Victor P. Goldberg, The Gold Ring Problem 1, 5-10 (Sept. 26, 1996) (unpublished manuscript, on file with author) (questioning general applicability of French & McCormick result).

[41] See Cramton and Schwartz, supra note 37, at 33.

costs.[42] As a result, if the costs of making an offer are positive, an initial and sole bidder would purchase an auctioned firm for less than its value, unless the seller could cancel the auction and negotiate with a potential purchaser. The seller would suffer any loss or cost of negotiation.[43] The prospect of a loss, while merely a transfer ex post, could cause socially inefficient underinvestment in a firm ex ante.[44]

The use of an underwriter to sell interests in a firm combats a seller's problems. An underwriter can investigate a firm's value and report the results of such investigation to market investors. If the underwriter's reputation is valuable, potential investors will rely on the underwriter's investigation and treat its disclosed estimation as a reliable basis to form an offer, even absent the potential purchaser's own investigation. The underwriter will charge for this service, which may explain the costs of underwriting described by Smith and by Ritter.[45] These are, therefore, costs initial investors in an insolvent firm might endure should default lead to a sale of the firm.[46] Thus, the sale of an

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[42] In a footnote, Cramton and Schwartz claim that this result would hold even for a sealed-bid auction. It would be costly for a second bidder to enter, Cramton and Schwartz argue, and that cost would be sunk. They reason, therefore, that were there more than one bidder, the equilibrium bid for the firm would be its certain postinvestigation value, and the expected return to each bidder would be a loss of the entry costs. Thus, they conclude, there would be no second bidder and the first bidder could purchase the firm for an arbitrarily low price unless the auction were called off. See id. at 33 n.13. The one-bidder, low-price equilibrium Cramton and Schwartz describe, however, would exist only if no bidder could enter after the first bidder made its sealed bid.

The discussion in the text by no means exhausts analysis of potentially relevant auction types or theory. The discussion is intended to be merely illustrative of potential auction costs. For an extended general discussion of auctions, see, e.g., R. Preston McAfee and John McMillan, Auctions and Bidding, 25 J. Econ. Lit. 699 (1987); Paul Milgrom, Auctions and Bidding: A Primer, 3 J. Econ. Perspectives 3 (1989).

[43] Both Cramton & Schwartz, supra note 37, at 33-34, and French & McCormick, supra note 39, at 432-33, suggest that negotiation with a single potential purchaser, not an auction, could minimize the costs of selling common-value property. As Cramton and Schwartz explain, however, negotiation may not be ideal if the property to be sold is a firm on whose behalf unfaithful managers would negotiate. See Cramton & Schwartz, supra note 37, at 36. Inasmuch as one may expect managers to be unfaithful with respect to the continuation decision, see infra text accompanying note 58; infra notes 62-71 and accompanying text, sale negotiation may not be a good insolvency rule.

[44] Cf. Sanford J. Grossman & Oliver D. Hart, Takeover Bids, the Free-Rider Problem, and the Theory of the Corporation, 11 Bell J. Econ. 42, 56 (1982) ("Although permitting unlimited dilutions maximizes the social return *per unit* of investment, this entails diluting the property rights of initial shareholders by reducing the expected rate of return to them, which in turn reduces their incentive to invest.").

[45] See Smith, supra note 35; Ritter, supra note 36.

[46] For further discussion of insolvent-firm auction costs, see Baird, Revisiting Auctions, supra note 10, at 641-47; Hansen & Thomas, supra note 22.

insolvent firm or options on such a firm may not be optimal for investors.[47]

The Chameleon Equity proposal could permit investors to escape the costs of sale in circumstances where the respective reform proposals of Baird, Roe, Bebchuk, and Aghion-Hart-Moore would impose such costs. A posttransformation Chameleon Equity firm might have sufficient internal funds to cure any default on surviving fixed obligations given that, as part of the Chameleon Equity structure, holders of such obligations would accept elimination of a lower class's fixed claim as a substitute for acceleration of amounts owed. The use of internal funds would permit the new common-equity class to maintain its full residual interest without need of external valuation. No-sale continuation would not be possible in an auction or securities sale, of course. The Bebchuk or the AHM proposal could accomplish no-sale continuation, but only if the new residual class were the highest pretransformation class, or if holders of the new residual class could exercise their options without external funds.

Chameleon Equity is not the only proposal for a contractual alternative that could potentially avoid reorganization and sale costs. Alan Schwartz has argued that investors might not want simply to pass an insolvent firm's equity interest up the priority hierarchy. Investors, Schwartz contends, might wish to provide preinsolvency for a postinsolvency distribution of claims and interests. That distribution would reflect the outcome of what would have been a postinsolvency negotiation.[48] Such a postinsolvency distribution, which need not eliminate the interest of preinsolvency equity, could provide equity with proper preinsolvency incentives for risk, could create any combination of debt or equity in the new capital structure, and would not require the costs of ex post strategic conflict or sale.[49]

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47 Mark Roe's proposal to sell only a small portion of an insolvent firm, see supra note 11 and accompanying text, would save those costs of sale that are proportional to the size of the claim or interest sold. But the sale of a small portion could be the source of other problems, such as an inflated bid by or on behalf of preinsolvency shareholders or junior creditors who could benefit at the expense of senior investors from an overvaluation of the firm. Moreover, elimination of an underwriter's investigation could induce an offsetting expenditure on the production of information by knowledgeable initial investors, whose interest in the sale price would extend beyond the sale proceeds, and who might fear that an information-deficient auction of interests in the firm would produce a low price. Cf. supra note 39 and accompanying text.

48 See Alan Schwartz, Bankruptcy Workouts and Debt Contracts, 36 J.L. & Econ. 595, 613-20 (1993).

49 I have argued elsewhere that investors would not wish to replicate the outcome of an avoided ex post negotiation, see Barry E. Adler, Finance's Theoretical Divide and the Proper Role of Insolvency Rules, 67 S. Cal. L. Rev. 1107, 1111-14 (1994), but this disagreement with Schwartz is not relevant here.

II

THE CONTINUATION DECISION

Another branch of the insolvency literature addresses the question of whether an insolvent firm should continue or liquidate. Beginning with Jeremy Bulow and John Shoven,[50] commentators have asked whether and under what circumstances managers or shareholders can negotiate with creditors to allow continuation of an insolvent firm without a bankruptcy process.[51] Recent scholarship has extended the discussion to address the continuation decision inside bankruptcy. Robert Gertner and Randal Picker, for example, have argued that the tendency of the bankruptcy process to moderately compensate equity interests of insolvent firms—such compensation being known as a breach of absolute priority—may induce an inviable firm's management, as equity or equity's agent, to liquidate the firm voluntarily in exchange for this modest compensation.[52] Managers of a viable firm, Gertner and Picker believe, decline the small liquidation payoff and, in essence, offer to purchase or have equity purchase the firm from the creditors. Thus, according to this theory, bankruptcy provides for efficient separation of viable from inviable firms. For an example in contrast, Michelle White has argued that, among other causes, government subsidies to firms that reorganize in Chapter 11 induce inefficient decisions to continue.[53]

Largely neglected in this scholarship is the connection between methods of insolvent firm protection and the continuation decision.[54]

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[50] See Jeremy I. Bulow & John B. Shoven, The Bankruptcy Decision, 9 Bell J. Econ. 437 (1978).

[51] For other work on this topic, see generally David T. Brown et al., The Information Content of Distressed Restructurings Involving Public and Private Debt Claims, 33 J. Fin. Econ. 93 (1993); Robert Gertner & David Scharfstein, A Theory of Workouts and the Effects of Reorganization Law, 46 J. Fin. 1189 (1991); Schwartz, supra note 48; Michelle J. White, Public Policy Toward Bankruptcy: Me-First and Other Priority Rules, 11 Bell J. Econ. 550 (1980).

[52] See Robert Gertner & Randal C. Picker, Bankruptcy and the Allocation of Control 17 (Feb. 16, 1992) (unpublished manuscript, on file with author). For related arguments on bankruptcy rules and managerial incentive, see also, e.g., David T. Brown, Claimholder Incentive Conflicts in Reorganization: The Role of Bankruptcy Law, 2 Rev. Fin. Stud. 109 (1989); Robert M. Mooradian, The Effect of Bankruptcy Protection on Investment: Chapter 11 as a Screening Device, 49 J. Fin. 1403 (1994).

[53] See Michelle J. White, Corporate Bankruptcy as a Filtering Device: Chapter 11 Reorganizations and Out-of-Court Debt Restructurings, 10 J.L. Econ. & Org. 268, 279 n.14, 282 (1994); Michelle J. White, Does Chapter 11 Save Economically Inefficient Firms?, 72 Wash. U. L.Q. 1319, 1332-34 (1994).

[54] Douglas Diamond also has lamented a lack of integration of corporate insolvency theories. See Douglas W. Diamond, Corporate Capital Structure: The Control Roles of Bank and Public Debt with Taxes and Costly Bankruptcy, 80 Econ. Q. 11 (1994). As I do below, Diamond discusses the role of ex ante structure in continuation decisions. But Diamond's focus is on whether bank debt or public debt maximizes firm value given the pre-

It is commonly noted that managers and equity holders have an incentive to continue even an inviable insolvent firm.[55] The literature contains descriptions of managers' incentive to keep their jobs[56] and of shareholders' incentive to extend their option on a firm's assets.[57] It has also been observed that bankruptcy law serves these incentives by forcing creditors to endure a prolonged, structured reorganization negotiation (at least under those circumstances where the inducement to liquidate described by Gertner and Picker is insufficient).[58] But there has been little attention to how reform or elimination of the bankruptcy reorganization process would affect the continuation decision.[59] Analysis of reform proposals in light of the continuation decision yields an important observation: All proposals for alternatives to bankruptcy reorganization discussed in Part I above, save the proposal for cash auctions, share with bankruptcy reorganization a bias in favor of continuation. Indeed, some of these alternatives may exacerbate this bias.

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sumably higher cost of, and better continuation decision provided by, the former. There are, in addition, numerous articles that discuss variations in initial capital structure with variations in insolvency costs, including costs from an inefficient continuation decision. See, e.g., Michael J. Alderson & Brian L. Betker, Liquidation Costs and Capital Structure, 39 J. Fin. Econ. 45, 47-49 (1995) (collecting and discussing earlier work); D. Bruce Johnsen, The Quasi-Rent Structure of Corporate Enterprise: A Transaction Cost Theory, 44 Emory L.J. 1277 (1995); Oliver E. Williamson, Corporate Finance and Corporate Governance, 43 J. Fin. 567, 576-82 (1988) (describing theories of debt and equity). Michael Jensen has suggested that firms adjust their capital structures to reduce the costs of postinsolvency workouts, although he takes as given the rule that would govern absent postinsolvency agreement among creditors. See Michael C. Jensen, Active Investors, LBOs, and the Privatization of Bankruptcy, 2 J. Applied Corp. Fin. 35 (1989). My focus here is on the simultaneous ex ante decision on capital structure and the rule that would govern absent postinsolvency agreement among investors.

55 See, e.g., Vojislav Maksimovic & Gordon Phillips, Efficiency of Bankrupt Firms and Industry Conditions: Theory and Evidence 9 (Dec. 9, 1996) (unpublished manuscript, on file with author) (collecting cites).

56 See, e.g., Susan Rose-Ackerman, Risk Taking and Ruin: Bankruptcy and Investment Choice, 20 J. Legal Stud. 277, 309-10 (1991).

57 See, e.g., Lucian A. Bebchuk & Howard F. Chang, Bargaining and the Division of Value in Corporate Reorganization, 8 J.L. Econ. & Org. 253, 255-56 (1992).

58 See, e.g., id. at 273.

59 Contrast Robert K. Rasmussen, The Ex Ante Effects of Bankruptcy Reform on Investment Incentives, 72 Wash. U. L.Q. 1159 (1994), which addresses how various alternatives to bankruptcy affect the preinsolvent firm. Related work includes discussion of how bankruptcy-induced breaches in absolute priority affect the firm ex ante. See Barry E. Adler, Bankruptcy and Risk Allocation, 77 Cornell L. Rev. 439 (1992); Julian R. Franks & Walter N. Torous, An Empirical Investigation of U.S. Firms in Reorganization, 44 J. Fin. 747 (1989); Gertner & Scharfstein, supra note 51; Thomas H. Jackson & Robert Scott, On the Nature of Bankruptcy: An Essay on Bankruptcy Sharing and the Creditors' Bargain, 75 Va. L. Rev. 155 (1989); Alan Schwartz, The Absolute Priority Rule and the Firm's Investment Policy, 72 Wash. U. L.Q. 1213 (1994).

To begin the analysis, consider more closely the American bankruptcy reorganization process. In addition to a half a year with an exclusive right to propose a reorganization plan,[60] managers of a bankrupt firm may persuade a court to approve a plan even over the objection of a creditor not paid in full under the plan. For example, managers might propose a plan to continue a debtor corporation, with general creditors of the corporation to receive equity shares of the reorganized enterprise. If the managers can convince holders of a majority in number and two-thirds in amount of the general claims,[61] the bankruptcy court may confirm the plan over the objection of some general creditors, assuming the court is convinced that the shares the general creditors are to receive are worth at least as much as these creditors would receive in (piecemeal) liquidation.[62] Moreover, if the managers can convince another class of creditors whose claims are not reinstated in full under the plan to accept the plan, the bankruptcy court may confirm the plan over the objection of all the general creditors if the court is convinced that the shares the general creditors are to receive are worth at least as much as these creditors would receive in liquidation, assuming prebankruptcy equity is to receive nothing under the plan.[63] Or, if another class with claims not reinstated accepts the plan, even assuming prebankruptcy equity is to receive property under the plan, the court may confirm provided it finds that the shares the general creditors are to receive are of sufficient value to constitute payment in full of the general claims.[64]

The bankruptcy process does not provide a dissenting creditor access to a market valuation of the property it is to receive under a reorganization plan. In one oft-noted case, *In re Nite Lite Inns*,[65] a court bluntly denied redress to a creditor despite the creditor's argument that it could not sell the securities to be issued under a plan for the amount the court found the securities to be worth.[66] Other courts are more subtle,[67] and although formal study is sparse, it is a long-held, widespread belief that courts tend to overvalue businesses attempting

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60 See 11 U.S.C. § 1121(c)(3) (1994). This assumes a plan is proposed within the first 120 days. See id. § 1121(c)(2).

61 This constitutes acceptance by a class. See id. § 1126(c).

62 See id. § 1129(a)(7). "Piecemeal" is the accepted interpretation of the statutory language.

63 See id. §§ 1124, 1129(a)(10), (b)(2).

64 See id. § 1129(b)(2).

65 17 B.R. 367 (Bankr. S.D. Cal. 1982).

66 See id. at 373; see also In re Sound Radio, Inc., 93 B.R. 849, 855 (Bankr. D.N.J. 1988).

67 In the infamous Eastern Airlines bankruptcy, the judge optimistically, some would argue foolishly, believed the going concern salvageable until its assets were almost totally depleted. See Lawrence A. Weiss & Karen H. Wruck, Information Problems, Conflicts of

to reorganize in Chapter 11.[68] If liquidation is the alternative, such overvaluation serves the interests of managers, who wish to keep their jobs as long as possible,[69] and of prebankruptcy equity investors, who fear that a market valuation from a sale of assets would reveal that equity is entitled to no share of the insolvent firm.[70] Thus, with the cooperation of some creditors and a court, managers or equity can use bankruptcy reorganization to continue an inviable firm at the expense of dissenting creditors.

It is attractive to focus on Chapter 11's continuation bias, as I just have. But in evaluating alternatives to bankruptcy, it may be more revealing to focus instead on Chapter 11's safeguards against such bias. As noted, a court may allow a firm to continue only if it is convinced that liquidation would not better serve a dissenting creditor. The legislative history of the bankruptcy code suggests that Congress was concerned about mischief by a coalition of an insolvent firm's managers and a subset of its creditors. The drafters of the code observed that because a firm's managers may have a "natural tendency . . . to pacify large creditors . . . at the expense of small and scattered public investors. . . . [These investors should] have legislative assurance that their interests will be protected."[71] As just noted, such protection is imperfect. But it exists.

Interest and Asset Stripping: Chapter 11's Failure in the Case of Eastern Airlines 5, 15, 25-29 (INSEAD Working Paper No. 96/48/AC, 1996).

[68] See, e.g., Walter J. Blum, The Law and Language of Corporate Reorganizations, 17 U. Chi. L. Rev. 565 (1950); J. Ronald Trost, Corporate Bankruptcy Reorganizations: For the Benefit of Creditors or Stockholders?, 21 UCLA L. Rev. 540 (1973).

[69] Turnover of top management is high for firms in bankruptcy. See, e.g., Stuart C. Gilson & Michael R. Vetsuypens, CEO Compensation in Financially Distressed Firms, 48 J. Fin. 425, 441 (1993) (finding CEO annual turnover rate of 30.7% in sample of firms filing for bankruptcy or restructuring their debt between 1981 and 1987, as compared to rate of less than 10% for solvent firms); Stuart C. Gilson, Management Turnover and Financial Distress, 25 J. Fin. Econ. 241, 246-47 (1989) (reporting that top management of a firm two years prior to financial distress remains unchanged two years after distress only about 34% of the time, only 29% of the time when distress results in bankruptcy). Other turnover estimates are higher still. But if a firm's highest value is achieved in liquidation, an efficient outcome would certainly cost the managers their jobs.

[70] Michael Alderson and Brian Betker report that continuation is usually the right decision for firms that reorganize under Chapter 11. See Michael J. Alderson & Brian L. Betker, Liquidation vs. Continuation: Did Reorganized Firms Do the Right Thing? 1 (Feb. 1996) (unpublished manuscript, on file with author). However, their results are limited, at best, in that the values they use for comparison are based on reports in the Chapter 11 plan itself. See id. at 8. For a description of Chapter 11 payments to junior claims or interests despite less than full payment to senior claims or interests, see, e.g., Brian L. Betker, Management's Incentives, Equity's Bargaining Power, and Deviations from Absolute Priority in Chapter 11 Bankruptcies, 68 J. Bus. 161 (1995) (collecting studies).

[71] S. Rep. No. 95-989, at 10 (1978), reprinted in 1978 U.S.C.C.A.N. 5787, 5796.

A shortcoming in the rights distribution and modified rights distribution proposals by Bebchuk and Aghion-Hart-Moore, respectively, and in my Chameleon Equity or Schwartz's contractual proposal, is that each removes the judicial safeguard, which is valuable however flawed. Roe's partial-auction proposal is similarly flawed if under it a court's job would be done once new interests and claims were exchanged for old.[72] Each of these proposals is designed to facilitate an accurate determination of vertical entitlements while it protects potential going-concern surplus over liquidation value. None sufficiently addresses the continuation decision *among* the duly installed residual claimants of the postinsolvent firm. As a monolith, a new class of residual interests can be counted on to make the efficient decision. But if a coalition among managers and some portion of the new residual interest determines to continue an inviable firm, the remaining residual interest may be forced by vote to internalize the costs of inefficient continuation.

Imagine, for example, that a multicreditor insolvent firm's managers, or would-be replacements,[73] and its largest creditors, or purchasers from these creditors, agree to continue the firm even though each knows that the firm has a greater piecemeal liquidation than going-concern value.[74] The managers may desire extracompensatory remuneration for managerial services. The creditors in the coalition, or purchasers from these creditors, may value continuing or new relationships with the firm, relationships that may include extracompeti-

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[72] It is not clear whether Roe would permit a judge to liquidate a firm based on a minority objection.

[73] Aghion, Hart, and Moore contend that the replacement of incumbent managers would eliminate any continuation bias. See Aghion et al., Economics, supra note 21, at 537-39. But as the experience of Eastern Airlines suggests, replacement managers may be as anxious as their predecessors to continue an inviable firm. See generally Weiss & Wruck, supra note 67.

[74] Virtually all bankruptcy scholarship assumes that large firms have many lenders. As Douglas Diamond illustrates, this is not theoretically inevitable. See Diamond, supra note 54, at 30-31 (describing circumstances under which bank debt is preferable to public debt). Even a large firm could borrow from a single institution, which could in turn have diversified investors. It is plausible, nonetheless, to assume that many large firms will efficiently have multiple sources of debt capital, perhaps because a single institutional lender to a large firm would have large administrative expenses, see id. at 30, or because a single lender or its managers, like a large shareholder or its managers, could exert a powerful influence over a debtor that would not be in the debtor's best interests, see generally Bernard S. Black, Agents Watching Agents: The Promise of Institutional Investor Voice, 39 UCLA L. Rev. 811 (1992) (describing conflicts of interests facing institutional money managers). Cf. Mark J. Roe, Strong Managers, Weak Owners: The Political Roots of American Corporate Finance 260-62 (1994) (arguing that presence of multiple parties with power can reduce side payments to any one such party); Patrick Bolton & David S. Scharstein, Optimal Debt Structure and the Number of Creditors, 104 J. Pol. Econ. 1 (1996) (arguing that multiple creditors may minimize strategic management default).

tive payments in exchange for the creditors' support of the managers' plan to continue. As Bernard Black explains in the debate on institutional stock ownership: "[B]anks, insurers, and mutual funds can use their influence to obtain business, public pension funds can trade votes for local jobs, and foundations and endowments can trade votes for financial support."[75] More simply, one firm may own some, but not all, the new equity in the insolvent firm with which it could compete or engage in related business. Any explicit or implicit side payment would, in theory, be a breach of a fiduciary duty, for which aggrieved investors could seek redress. But the legal process is imperfect. Thus, if an inviable firm continued, the coalition could obtain private benefits from the firm at the expense of the noncoalition creditors.[76] This problem would be most pronounced if the noncoalition creditors held interests too small to make feasible negotiations with coalition members that might result in a breakup of the coalition.[77]

If noncoalition claims or interests did not compose a majority of the new, postinsolvency residual interests, the noncoalition investors could not through their own informed votes or through sale to informed investors block a continuation decision to be made by majority vote of such interests. Even if noncoalition claims initially composed a majority of new residual interests, a substantial coalition

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[75] Black, supra note 74, at 855. Black concludes that a firm wisely risks these potential side payments if the alternative is management with unfettered discretion to operate the firm as it wishes. This conclusion, however, is inapposite where the alternative is liquidation. Moreover, if an inviable firm continues, side payments to management may be subtle as such payments can be through the ordinary vehicle of salary from the firm. Contrast the description, supra note 33, of difficult side payments to a firm's management from an investor with whom management has no legitimate relationship.

[76] For a general description of conflicts of interests among share voters, see generally Bernard S. Black, Shareholder Passivity Reexamined, 89 Mich. L. Rev. 520 (1990); Sanford J. Grossman & Oliver D. Hart, One Share-One Vote and the Market for Corporate Control, 20 J. Fin. Econ. 175 (1988).

[77] One might argue that the coalition problem among postinsolvency residual interests in a vote-based regime would be mitigated in the United States by American regulation of financial intermediaries. Mark Roe has explained that a history of American social and regulatory skepticism toward large financial institutions has fragmented banks and limited ownership interests by banks, insurance companies, mutual funds, and pension funds. See Roe, supra note 74. It might be the case, then, that a powerful coalition could not easily form. Even if this were so, however, as Roe persuasively argues, impediments to concentrated intermediary ownership may prevent effective intermediary monitoring, the benefits of which might offset any costs of increased collusion among investors and managers. See id. at 235-53; see also discussion supra note 75. It is unclear, moreover, that restrictions on institutional block ownership reduce rather than increase the risk of a controlling coalition between management and investors. Competition among multiple blockholders might prevent the stable formation of any such coalition. See id. at 260-62; Maxwell L. Stearns, The Misguided Renaissance of Social Choice, 103 Yale L.J. 1219, 1239 n.75 (1994). Thus, it may be that a first-best insolvency system should anticipate large blockholders.

block would have an advantage over smaller, proliquidation blocks in the competition to purchase a controlling interest.[78]

Ultimate liquidation could, in any case, constitute a hollow victory for initial investors. At the outset of an open-market competition for residual shares, some rationally ignorant preinsolvency investors, with interests too small to justify investigation for an informed vote,[79] might sell their interests at a price that did not reflect the firm's liquidation value, even if proliquidation forces ultimately won the day. If a procontinuation coalition initially gained control, even knowledgeable noncoalition investors could lose despite eventual liquidation. To be sure, holders of noncoalition interests might sell to a holder or purchaser of coalition claims. Such a holder or purchaser would have an incentive to liquidate an inviable firm if it held all claims and thus internalized all costs of inefficient continuation. But if the holder or purchaser had to sacrifice, or pay the coalition members to sacrifice, the private benefits the coalition members would otherwise extract from the firm, the holder or purchaser would pay that much less for the noncoalition claims.[80] This differential sales price could be a transfer from, not among, initial investors, as the coalition members might have purchased their initial interests from ignorant investors or from investors who could not garner a private benefit and who, therefore, would not be able to demand a price for any such benefit. Anticipation of such sellers' losses could result in a disincentive to initial, preinsolvency investment.[81] There could be other costs of sale, as described in Part II above, including costs of investigation. Thus, despite an appropriate outcome, the costs of building a proliquidation coalition would be an expense of a vote-based insolvency regime.

Initial investors might attempt to reduce continuation bias with a ban on transactions between a firm restructured in a vote-based regime and any of the firm's new residual owners. To prevent unfavorable competition between firm and shareholder, such a no-transaction rule could also prohibit significant ownership by any business concern. This approach, which would make it more difficult for management to purchase partners in a procontinuation coalition, could be costly, however, for a firm that proved to be viable. The information a share-

78 Cf. Jeremy Bulow et al., Toeholds and Takeovers (Aug. 1996) (unpublished manuscript, on file with author) (describing toeholds that a winning bidder must purchase).

79 For a description of rational investor apathy, see Henry G. Manne, Some Theoretical Aspects of Share Voting: An Essay in Honor of Adolf A. Berle, 64 Colum. L. Rev. 1427, 1439-44 (1964) (explaining that critical element in deciding whether to exercise voting rights involves cost and reliability of information).

80 For discussion of a related point, see infra note 86 and accompanying text.

81 See Grossman & Hart, supra note 44, at 56.

holder, particularly a sizeable shareholder, may gather as a monitor can make it an ideal source of resources for a firm. As Mark Roe explains, for example, if permitted, a lender might "buy stock in their debtors to help protect their loans and provide a secondary information channel to support their loans."[82] A no-transaction rule would sacrifice the efficiency of such an arrangement.

Rather than rely on a no-transaction rule within a vote-based regime, initial investors might attempt to alter the terms of the vote itself. A rule that permitted continuation only on a supermajority vote of a restructured firm's residual interests would diminish the risk that a controlling management coalition would inefficiently continue a firm and thus transfer value from noncontrolling interests. A rule that required a supermajority for continuation of a firm would reduce the size of the dissenting interest from which the management coalition could extract value. Thus a supermajority voting rule could correct for the continuation bias.[83] But there would be further consequence. Such a rule would not discriminate between efficient and inefficient liquidations. A competitor of a viable firm, for example, might own or purchase an interest in the firm and block, or threaten to block, continuation to garner a private benefit from the firm's liquidation.[84] Even if the payoff resulted in no more than a transfer among similarly situated creditors—and thus would not, as a transfer, create a disincentive to initial investment—that transfer would be won only through costly strategic behavior. All else equal, the costs of inefficient liquidation from a supermajority rule might not be as great as the costs of inefficient continuation from a majority rule, because managers would not be expected to coordinate the inefficient demise of their firm. Yet the risk of inefficient liquidation, or expense from strategic behavior to avoid it, would exist. Therefore, as a response to continuation bias, a super-majority rule would create offsetting costs.

Absent judicial intervention, then, if an insolvency rule provided for a vote of the postbankruptcy residual class—inherent in

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[82] Roe, supra note 74, at 243. American law does not, but in a regime of efficient capital regulation likely would, permit banks to hold substantial equity interests. See discussion supra note 77.

[83] David Skeel has speculated that dispersion of creditors may have led Congress to adopt bankruptcy's supermajority rule (by claim amount) for class acceptance of a plan, discussed supra note 63 and accompanying text. See David A. Skeel, Jr., The Nature and Effect of Corporate Voting in Chapter 11 Reorganization Cases, 78 Va. L. Rev. 461, 489 (1992). Skeel does not, however, address managerial or coalition bias in favor of continuation and he rejects as "misguided" a supermajority rule. See id. Cf. Bolton & Scharfstein, supra note 74, at 17-19 (describing the relationship between voting rules and payoffs to creditors).

[84] Cf., e.g., Skeel, supra note 83, at 490 (noting that minority shareholder may use veto power "as a weapon designed to extract concessions").

Bebchuk's, AHM's, Schwartz's, and perhaps Roe's reform proposal, as well as in my Chameleon Equity proposal—the rule might result in incorrect continuation decisions or, as a price of avoiding inefficient decisions, an inefficient sacrifice by initial investors. A better rule might provide the benefits of efficient continuation decisions to initial investors. Indeed, absent such a better rule, continuation bias could compromise the benefits from discipline that help make fixed obligations efficient in the first instance.

Unlike vote-based alternatives, the proposal for a cash auction, developed by Douglas Baird, might allow initial investors to benefit from efficient continuation decisions, at least where there would be multiple bidders in competition for a firm.[85] An auction rule does not suffer the infirmity of the proposals that consign the continuation decision to a vote. Because a winning bidder that wished to continue an insolvent firm would be forced to purchase *all* interests in the firm, it would internalize any net cost of continuation or liquidation. There is, therefore, little fear that an auction rule would produce systematically inefficient continuation decisions.

This argument about the potential benefits of an auction rule can be seen as part of a more general body of literature on private benefits. When an entity in control of a corporation offers to sell its interest, the entity demands compensation for any private benefit it will give up with control. If the control entity were forced to share the value of its private benefit, it would simply remain in control. This prerogative has led many scholars to observe that an equal-sharing rule for corporate control premiums would discourage some efficient transfers.[86] If, however, there were a forced sale of *all* the interest in a firm, an equal-sharing rule could not prevent an efficient sale of the controlling interest. An insolvency auction rule may be thought of, then, as a means to compel the sale of a firm's controlling interest to the single purchaser of all other interests so that equal treatment of similarly situated initial investors does not prevent an efficient transfer.

Thus, once one factors in the costs of continuation bias or its eradication, it *may be* that an auction rule or some form of Chapter 11

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[85] See supra text accompanying note 10.

[86] For a straightforward description of this argument, see Frank H. Easterbrook & Daniel R. Fischel, The Economic Structure of Corporate Law 117-19 (1991). For similar or related accounts, see also, e.g., Lucian A. Bebchuk, Efficient and Inefficient Sales of Corporate Control, 109 Q.J. Econ. 957 (1994); Marcel Kahan, Sales of Corporate Control, 9 J.L. Econ. & Org. 368 (1993). But cf. William D. Andrews, The Stockholder's Right to Equal Opportunity in the Sale of Shares, 78 Harv. L. Rev. 505 (1965) (acknowledging but discounting possibility of prevented beneficial purchases under equal-sharing rule).

would be, after all, the most efficient insolvency regime despite the advantages of a vote-based regime in a world without continuation bias. The former would be more efficient than the latter if the costs of an auction would be less than the costs of a court-supervised reorganization.

III
An Integrated Theory

In accord with most literature on the subject, the discussion thus far has treated the question of an insolvent firm's viability as a riddle to be solved by the insolvency process. This need not be the case. Investors could design a capital structure so that the event of insolvency, as signified by an uncured default, would provide good information about a firm's economic prospects. Failure to satisfy fixed obligations need not suggest a firm's economic failure. And one could imagine that investors would prefer an automatic restructuring, such as that provided by Chameleon Equity, if a firm were likely to be viable despite failing to meet fixed obligations. This could be true, moreover, despite the continuation bias inherent in a majority-vote regime, because the cost of protecting a viable concern with an auction or Chapter 11 could be too high a price to pay for elimination of this bias. However, if failure to satisfy a set of fixed obligations would be likely to occur only when the firm were likely inviable—because the firm's initial capital structure insulated these obligations from most exogenous economic shocks—investors might prefer that default trigger an auction, a prohibition on transactions between the firm and its investors, a supermajority vote for continuation, or, more provocatively, a race among creditors to a firm's assets.

To illustrate this idea, imagine that an entrepreneur intends to finance a project with $100 in outside capital. Assume, for the sake of simplicity, that taxes do not bias the choice between debt and equity. If continuation were not an issue and valuation were costless, the entrepreneur could obtain the $100 in whatever mix of debt and equity that best balanced debt's competing features: an enhanced managerial initiative and an enhanced incentive for equity, as the residual interest, to have the firm take even unjustified risk.[87] There would be no reason to consider insolvency issues. Continuation is an issue,

[87] For a seminal work on minimizing agency and debt-equity conflict costs, see generally Michael C. Jensen & William H. Meckling, Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure, 3 J. Fin. Econ. 305 (1976). But see Wolfgang Kürsten, Risky Debt, Managerial Ownership and Capital Structure: New Fundamental Doubts on the Classical Agency Approach, 151 J.I.T.E. 526 (1995) (challenging Jensen and Meckling). For a recent sophisticated analysis of debt's role, see generally Oliver Hart &

however, and value may not be easily discernible. Consequently, the entrepreneur may be wise to attract investment in a capital structure subject to an insolvency regime based on predictions about the future.

Assume that the entrepreneur believes the firm will be best managed subject to the discipline of heavy fixed obligations.[88] Assume further, however, that given a high level of fixed obligation, the entrepreneur believes the firm may well perform acceptably[89] yet suffer unfortunate circumstances that will reduce the value of the firm below its fixed obligations and, consequently, disable the firm from satisfying those obligations.[90] After considering these factors, the entrepreneur might finance the firm with $80 in preferred equity and $20 in common equity, allowing the firm to pass automatically from common to preferred equity if a reduction in firm value from $100 to below $80 disables the firm from satisfying its fixed obligations. The entrepreneur might choose $80 of preferred stock instead of $80 in debt—choose, in essence, Chameleon Equity—because the consequences of debt could be a Chapter 11 reorganization or some form of a sale, which, the entrepreneur may reasonably believe, would burden the firm with unnecessary continuation costs.

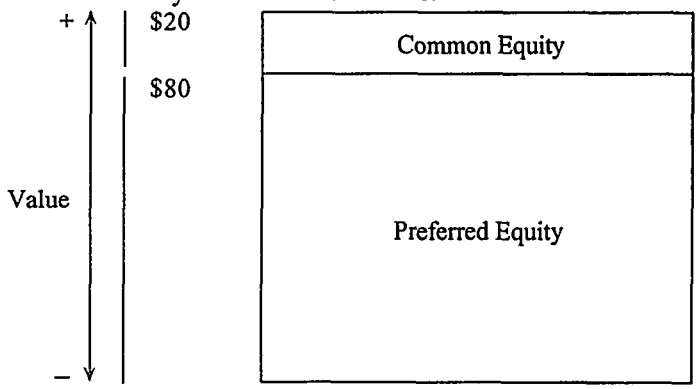

Figure One

John Moore, Default and Renegotiation: A Dynamic Model of Debt (Jan. 1997) (unpublished manuscript, on file with author).

88 This assumption is for the sake of simplicity only. In fact, a decision on level of fixed obligations would depend in part on the costs of such obligations. As described in the text below, those costs, in turn, depend on the mix by type among the fixed obligations. It is difficult, however, to examine a single feature in a multifaceted equilibrium if all features vary simultaneously.

89 A firm performs "acceptably" if its going-concern value exceeds its piecemeal-liquidation value. The comparison of these values will vary from firm to firm depending on the nature of the assets deployed. See Oliver E. Williamson, The Economic Institutions of Capitalism 52-56 (1985) (discussing asset specificity).

90 Assume, for the sake of simplicity, that only insolvency, not mere illiquidity, can result in a payment default that will trigger the applicable insolvency regime. See supra note 33; see also supra note 34, for a suggestion of a more sophisticated model.

Ease of continuation may not be the only goal, however. The entrepreneur may believe that a reduction in firm value from $100 to $50 permits the presumption of firm viability. But she may also believe that if the firm is unable to satisfy even $50 of fixed obligations it will be a candidate for efficient liquidation. Events exogenous to a firm's viability will cause some variance in the firm's value and consequent ability to meet obligations. A large, unexpected misfortune, however, may reflect not ordinary variance but a fundamental change from initial expectations of the firm's prospects, which depend on the configuration of the firm's assets. That is, as Michael Jensen has implicitly concluded, exogenous catastrophes may be rare compared to endogenous disasters.[91] This is particularly likely to be the case if one imagines that a firm's fortune is won or lost in small steps. A consistent series of missteps is not likely the result of bad luck alone. In the context of this example, put simply, if the firm deteriorates so that it cannot meet $50 of its obligations, the likely cause may be that, viewed ex post, the firm's projects are bad ideas poorly executed. Yet, as explained in Part II, if the residual claim to the firm's value is an equity interest subject to ordinary rules at a time the firm is worth less than $50, and presumably inviable, a coalition among managers and some equity holders could inefficiently continue the firm. Rules properly designed to facilitate continuation when continuation is likely efficient may yield inefficient continuation when liquidation is likely the better result. Thus, the entrepreneur may decide to further modify *both* the firm's capital structure and, at least implicitly, its insolvency regime.

The entrepreneur might decide to introduce debt subject to insolvency rules that favor liquidation should the firm become insolvent (now defined traditionally as asset value less than debt). The firm could consist of $50 in debt, $30 in preferred equity, and $20 in common equity. As for the insolvency regime, it may be easy to rule out Chapter 11 or any other system that favors continuation at the risk of forgone efficient liquidation. By hypothesis, if insolvent, the firm's assets will likely be worth more in the hands of others. Any impediment to alternative deployment will likely destroy value. This leaves the possibilities of an immediate postinsolvency auction, a vote-based rule that restricts postinsolvency equity ownership, a rule of no protection

[91] See Michael C. Jensen, Corporate Control and the Politics of Finance, 4 J. Applied Corp. Fin. 13, 24 (1991); cf. James W. Bowers, Rehabilitation, Redistribution or Dissipation: The Evidence for Choosing Among Bankruptcy Hypotheses, 72 Wash. U. L.Q. 955, 969 (1994) (interpreting Bradley & Rosenzweig data on poor firm performance); Bradley & Rosenzweig, Untenable Case, supra note 32, at 1063-67 (describing firms' poor performances in years preceding bankruptcy).

from creditor collection absent a supermajority vote by creditors, and a rule of no protection from individual creditor collection under any circumstances.[92]

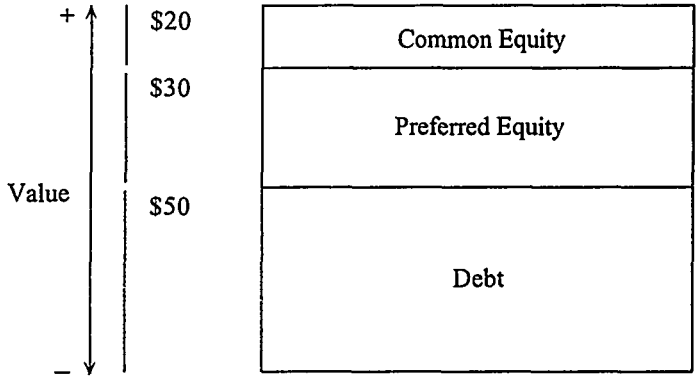

Figure Two

It would be possible to design an auction that offered some possibility of protection for an insolvent but viable firm and at the same time allowed swift piecemeal liquidation. Douglas Baird has argued that a bankruptcy auction could occur quickly, even before potential bidders for a going concern had the opportunity to investigate the firm's value.[93] Baird believes that even a risk-averse stakeholder, as a repeat player or as financed by diversified investors, could purchase a firm without complete information and then sell it as a going concern or piecemeal after ultimate purchasers had the opportunity to gain better information.[94] The stakeholder or its investors would sometimes lose and sometimes receive a windfall. A quick auction might be employed even where, as in the current example, a firm is likely to be inviable because it is insolvent. There may be little possibility that

[92] The last is not the only proposal that would permit individual creditor action. James Bowers has argued that permitting such collection would not be as damaging as bankruptcy's defenders suppose. He contends that managers would pay creditors first with assets the firm can least painfully sacrifice. See James W. Bowers, Groping and Coping in the Shadow of Murphy's Law: Bankruptcy Theory and the Elementary Economics of Failure, 88 Mich. L. Rev. 2097, 2115-41 (1990); James W. Bowers, Whither What Hits the Fan?: Murphy's Law, Bankruptcy Theory, and the Elementary Economics of Loss Distribution, 26 Ga. L. Rev. 27, 62-64 (1991). He also argues that bankruptcy reorganization has been unsuccessful. See Bowers, supra note 91, at 968-70. Bowers does not allow for firm protection when insolvency impairs only the most junior fixed obligations, a circumstance in which, I argue here, such protection may be appropriate.

[93] See Baird, Revisiting Auctions, supra note 10, at 641-52. But note that Baird recognizes auction costs not discussed here and addresses the possibility that an auction might not occur quickly if it were optional at the time of insolvency. See id.

[94] I assume here, for the sake of argument, that bids on individual pieces of collateral would satisfactorily establish the amount of secured creditors' priorities. For a description of the problem that arises when this is not the case, see Adler, supra note 27, at 320-22.

anyone would, in any length of time, bid more for the firm as a going concern than competing bidders would offer in the aggregate for the firm's assets piecemeal. But the chance that someone might ultimately purchase the firm as a going concern would be of some value.

It is worth noting, however, that if the auctioned firm were highly likely to be inviable, the quick purchaser Baird envisions would not itself base its bid substantially on, or in fact preserve, any potential going-concern surplus over liquidation value even if the bidder recognized the potential for such surplus. If the firm were likely inviable, there might be a large expected net cost in holding assets together until sufficient time had passed to compare adequate ultimate-user bids on the firm as a going concern with such bids on the assets divided piecemeal. That is, the best chance efficiently to continue a likely inviable firm may be for a seller to seek out, and invite investigation by, potential bidders who might place a unique value on the firm.[95] However, the consequent costs of search and investigation, including the expected costs of inefficient continuation during delay, might not be justified given the alternative of quickly selling smaller units of assets, which are closer to being fungible, and about which potential purchasers may have good information.

If an auction rule is optimal, therefore, it may not be because an auction is generally a good way of preserving a viable going concern. It may be that an auction rule is optimal because once a firm is, from an ex ante perspective, a likely candidate for liquidation, there should be a sale of its assets, whether through a central auction or after individual creditor collection. Thus, given the assumption of inviability, the costs of sale would inevitably be well borne, but perhaps only given such assumption.

Similarly, a rule that allowed continuation by majority vote but prohibited transactions between a firm and its new equity investors, or a rule that allowed continuation only with a supermajority vote of such investors, would offer some protection against continuation bias but might be efficient only if a firm were likely inviable. If a firm could not transact business with, or be forced to compete with, its equity investors, management might find it difficult to form a procontinuation coalition, as the opportunity for subtle side payments would diminish. These restrictions, while perhaps appropriate for a likely inviable firm, could, if enforceable, inefficiently deprive a viable firm of potentially valuable business relationships.[96] Rather than restrict the firm's postinsolvency transactions, a firm could condition postin-

[95] See supra note 37 and accompanying text.

[96] See supra note 82 and accompanying text.

solvency continuation on a supermajority vote, which could leave a procontinuation coalition few investors of whom it could take advantage. Again, this rule might be sensible for a firm that is likely inviable, but could burden a viable firm with a costly strategic encounter among investors.[97] Thus, neither rule is likely optimal in all settings, and might be optimal only after a firm has suffered substantial deterioration.

It is unclear, moreover, that an auction rule, a no-transaction rule, or a supermajority rule would be efficient, even if one assumed that the expected gain from saving the odd viable but insolvent firm exceeded any expected cost from delayed liquidation or inefficient continuation. This is because an auction rule, a no-transaction rule, or a supermajority rule might impose significant additional costs. Any such rule would displace a creditors' race to an insolvent firm's assets. This is the feature each rule shares with the current bankruptcy procedure. Elimination of the race has benefits when the likely consequence of the race is dismemberment of a viable concern. Here, however, by hypothesis, an insolvent firm is unlikely to be viable. The possibility remains that elimination of the race is valuable in any case, in part because without competition among creditors, the creditors need not expend resources monitoring the debtor in preparation for the contest. But as bankruptcy's leading proponent, Thomas Jackson, concedes, elimination of monitoring expense may carry with it elimination of management discipline from monitoring.[98] That is, a creditor in a position to collect first might also be in a position easily to prevent waste by management. In a collective proceeding, the creditor may not expend the effort to monitor, as the creditor would share whatever benefits such efforts would produce. Without significant concern for protection of a going concern, then, it is by no means certain that a race to assets is a net burden to investors.[99]

Further minimizing the potential net value of an auction, no-transaction, or supermajority-vote regime is the fact that all hope of preserving an insolvent but viable going concern would not be lost if a firm were subject to a creditors' race on insolvency. Negotiated workouts among creditors, perhaps supplemented through an aggregation

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97 See supra notes 83-84 and accompanying text.

98 See Jackson, supra note 1, at 18.

99 This may seem radical to those familiar with American bankruptcy law. But encouragement of liquidation is not foreign to world experience. See, e.g., Jonathan R. Macey, Corporate Law and Corporate Governance in Sweden: A Law and Economics Perspective 100-03 (Dec. 1992) (unpublished manuscript, on file with author) (noting that at the time of recent reform efforts, Swedish law, at least on its face, promoted liquidation of firms that dissipated much of their value); Triantis, supra note 22, at 103-04 (describing tendency of Canadian bankruptcy law to promote liquidations).

of claims, are possible even if holdouts are permitted.[100] Workouts can take place in anticipation of default, before creditors have a right to collect. Holdouts can be forced to accept payment in full. This is not to say that such negotiations would always succeed. Strategic behavior could make negotiation expensive and might often cause a breakdown of cooperation and a competition for assets. But negotiation, even under the shadow of a race, would *sometimes* succeed if a firm were viable. And a rule that allowed individual creditor collection would not sacrifice any beneficial incentive of a creditor to monitor in preparation for an almost certain race if the firm were inviable and cooperation, therefore, of little benefit.

It is thus theoretically plausible that a firm's investors would choose not to protect an insolvent firm from piecemeal liquidation despite the possibility that the firm would be more valuable as a going concern, because the investors might design a capital structure to make this possibility small.[101] Managers, for their part, might maintain debt in the capital structure of a firm subject to such a nonprotection rule for fear that the market for corporate control would replace them if they did not.[102] To be sure, it would not be certain that an aggregation of shares would form to replace managers who inefficiently substituted equity for debt and thus eliminated the risk of liquidation in the event of insolvency. That the market does not always yield efficiency is a reason there is a continuation bias, described in Part II. However, if insolvency were remote, management might well not remove the bond of debt's disciplinary benefits. Such a move, though not certain to result in replacement, would introduce an immediate risk of replacement. Later, if insolvency seemed more likely, the managers might be able to have the firm sell new equity as

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100 For a similar point, see, e.g., Haugen & Senbet, supra note 26, at 30-31; see also, e.g., Peter Fitts et al., Bankruptcies, Workouts, and Turnarounds: A Roundtable Discussion, 4 J. Applied Corp. Fin. 34, 47 (1991) (presenting Sam Zell's perspective on investing in distressed companies).

101 Oliver Williamson also recognizes that rules designed to keep assets together might optimally vary with circumstances. See Williamson, supra note 54. He notes that discretion inherent in equity finance is a cost where there is little asset specificity, but a benefit where there is much asset specificity. He offers that a "discretionary system [might be] advised to replicate [debt] rules across all activities for which rules work well and intervene only on those occasions where expected net gains can be projected." Id. at 581. He goes on to observe, however, that "the admonition to 'follow the rules with discretion' is too facile. . . . [T]o combine rules with discretion will never realize the hypothetical ideal." Id. at 582. Williamson concludes that a combination of rules with discretion, "dequity," would "always entail compromise." Id. He does not consider, as I do here, that initial capital structure might address subsequent alterations in assessments of asset specificity or, in the language of this Article, firm viability.

102 For a discussion of management incentive to provide self-discipline, see, e.g., Jensen, supra note 19, at 324.

a substitute for debt, and risk replacement by the market at that time rather than elimination through liquidation after default. But management might not always be able to retire debt in advance of default. (Management is frequently replaced under current bankruptcy law,[103] yet bankruptcies occur.) Moreover, the value of a nonprotection rule would not be entirely lost even if management would ultimately avoid the rule with the substitution of equity for debt. In a deteriorating firm, an earlier signal may be more valuable to investors than a later one, even if the postsignal probability of an efficient outcome is less than one in either case.[104]

In the above illustration, then, the entrepreneur might have the firm issue $50 of debt subject to *no* special insolvency rule. Such a firm might continue at the pleasure of its common or preferred equity investors unless it became unable to pay its debt obligation. That is, the entrepreneur may prefer that the firm suffer a continuation bias while the firm can meet its debt obligations, and is thus likely viable. But the entrepreneur may intentionally subject the firm to creditor collection if the firm cannot cure a payment default on its debt even after it has discontinued payments on its preferred equity. Such default might lead to quick liquidation in a creditors' race to assets. But that may be optimal for what is likely an inviable firm. This illustration is concededly simple. The argument for a creditor race rests on the assumption that the entrepreneur and initial investors can with some certainty equate a firm's inviability with a payment default presumably induced by a decline in value to a specified level. Less certain investors might well choose an auction or another less draconian alternative to apply before a firm dissipates most of its capital. The point remains, however, that an alternative to individual creditor collection may be preferable not because that alternative is the best way in general to preserve a viable going concern, but because it may be the best way to preserve a viable going concern given the likelihood of inviability.

There is a limitation to these observations. The central argument here applies most readily to publicly held firms. Closely held firms are often small and subject to a single dominant creditor or a coordinated group of creditors. Investors in such firms do not face the risk that coalitions of others will impose on them costs of inefficient continuation or insufficient monitoring. Thus these firms, which compose a

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[103] See supra note 69.

[104] Cf. George G. Triantis & Ronald J. Daniels, The Role of Debt in Interactive Corporate Governance, 83 Cal. L. Rev. 1073, 1094-96 (1995) (describing bankruptcy's voidable preference rules as measure to induce creditor monitoring prior to insolvency).

majority of Chapter 11 cases,[105] would not benefit from the capital structures and insolvency rule alternatives designed to combat such bias and induce creditor monitoring. This limitation is not, however, a serious deficiency in the analysis of this Article. The typical firm with a manager-shareholder and a dominant creditor cannot continue without the expertise of the manager and the permission of the creditor. Bargaining between two parties may easily yield settlement or it may not. This is or would be the case under current bankruptcy law or any plausible alternative. Therefore, it may not matter much what insolvency regime governs these firms. As stated by Douglas Baird, an alternative to bankruptcy "may simply shift an elaborate set of negotiations to a different forum."[106] Thus, discussion of the appropriate insolvency regime for multiple-creditor firms may be the only insolvency discussion of interest.

In sum, investors may treat a firm's capital structure and rules to govern failure as part of an integrated decision. More specifically, the risks of inefficient continuation and insufficient monitoring may affect both a firm's optimal capital structure and its optimal insolvency rule.

IV
PUZZLE INTERPRETATIONS

A number of puzzles may be reinterpreted in light of the idea that the appropriate rule for financial failure depends on the degree of that failure. These puzzles include asset-based finance, the apparent investor acquiescence in the seemingly expensive American bankruptcy reorganization process, and common equity's residual interest in a firm that fails to pay dividends on preferred stock.

A. Asset-Based Finance

Among the most widely discussed finance puzzles is that of asset-based priority. A secured creditor's priority interest is limited to the value of its collateral. Any claim based on the deficiency of the collateral is a general obligation of the debtor. Secured credit is not the only form of priority debt. It is also possible for senior debt to have priority over junior debt for the senior's entire claim, whatever the nature of the firm's assets. Therefore, assuming that there is a role for

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[105] See, e.g., Samuel L. Bufford, What Is Right About Bankruptcy Law and Wrong About Its Critics, 72 Wash. U. L.Q. 829 (1994).

[106] Baird, Revisiting Auctions, supra note 10, at 636. But see Elazar Berkovitch, et al., The Design of Bankruptcy Law: A Case for Management Bias in Bankruptcy Reorganization (February 28, 1994) (unpublished manuscript, on file with author) (describing how bankruptcy law can, in principle, beneficially structure postinsolvency negotiations between entrepreneur and investor); supra notes 50-53 and accompanying text.

varying priority among fixed obligations,[107] there is the question of whether priority should be asset-based.

A number of good explanations for asset-based priority justify its existence. Clifford Smith and Jerold Warner have explained that the property interest secured creditors have in specific collateral prevents the substitution of initial assets with riskier assets.[108] Randal Picker has offered that ex ante division of a firm's assets as collateral eliminates individual creditors' incentives to race for a firm's assets in the event of insolvency.[109] If the firm is viable, such a race could be costly. There are other potential explanations.

The observations in this Article supplement these explanations and advance Picker's analysis. To this point I have discussed liquidation as if that term referred to an atomization of a firm's assets. This is not necessarily the case. Liquidation may entail movement of asset *blocks* out of the common control of a single set of managers. Secured credit may facilitate an efficient liquidation by providing secured creditors interests in these blocks. The blocks may contain assets that are most valuable if kept together. Where a firm is subject to individual creditor collection—an event that could become more common in a world of unimpeded investor choice, as I argue below—the security interests may be necessary to prevent general creditors from claiming assets within the blocks. Security interests, then, may protect synergy among assets at the same time they permit unencumbered assets to be divided by a general-creditor competition, the prospect of which may yield an efficient incentive for creditors to monitor, as I argue in Part III above. Thus, efficient liquidation short of atomization may occur without intervention of a bankruptcy court.

B. Investor Acquiescence

A standard challenge to any proposal for reform of a supposed inefficient practice is to pose the question of why the practice persists

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[107] Aside from the provision of a potential for an easily reorganized capital structure, as discussed above in Part III, the issuance of priority debt establishes a bond by a firm against the firm's future risk financed by others. For a discussion of this point, see generally Alan Schwartz, A Theory of Loan Priorities, 18 J. Legal Stud. 209 (1989).

[108] See Clifford W. Smith, Jr. & Jerold B. Warner, Bankruptcy, Secured Debt, and Optimal Capital Structure: Comment, 34 J. Fin. 247 (1979).

[109] See Picker, supra note 26, at 648. In an article prepared contemporaneously with this one, Patrick Bolton and David Scharfstein make an argument similar to the one below, that individual rather than multiple security interests in complementary assets maximizes a firm's liquidation value. See Bolton & Scharfstein, supra note 74, at 16-17. They do not, however, describe this conclusion as a justification for secured credit. See also Robert E. Scott, A Relational Theory of Secured Financing, 86 Colum. L. Rev. 901, 913 (1986) (describing the use of "blanket" security interests to promote efficient projects).

if in need of reform. Judge Easterbrook has asked this question about the persistence of bankruptcy reorganization.[110] In an earlier Article, I argued that American investors fail to adopt my proposed Chameleon Equity structure in part because tax, tort, commercial, and corporate laws create legal impediments to such adoption.[111] I contended that U.S. tax and tort laws prevent investors from realizing the full benefits of Chameleon Equity. United States tax law favors debt over equity, even preferred equity. And U.S. tort law furnishes tort victims with ordinary unsecured claims, which are senior to preferred equity but of equal or junior priority to consensual debt. I also argued that commercial and corporate laws would not permit enforcement of management's promise to have a firm forgo traditional debt, which makes a firm subject to the bankruptcy reorganization process that managers may covet as the only chance to save their jobs or equity's interest.

If, as I suggest in this Article, an efficient firm may not be a pure Chameleon Equity firm, but a firm subject to both preferred stock and traditional debt, the analysis of legal impediments changes. The tax and tort law prejudices against preferred stock remain an impediment to an efficient mix of preferred stock and debt. Indeed, such prejudices may explain why a not insignificant number of publicly held firms successfully reorganize in bankruptcy,[112] this despite my supposition that in an undistorted environment, firms unable to pay their debts would seldom reorganize. That is, tax and tort laws may induce artificially high levels of debt such that insolvency (traditionally defined) often occurs while the firm is still viable. But assuming the analysis in this Article is correct, little may be lost from commercial and corporate law rules that prevent managers from effectively promising to have a firm forgo all traditional debt. The argument here is that an efficient firm may issue traditional debt.

Although an impediment to abjuration of traditional debt may not be particularly costly, there is an important alternative impediment to another management promise. Bankruptcy law itself prohib-

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110 See Frank H. Easterbrook, Is Corporate Bankruptcy Efficient?, 27 J. Fin. Econ. 411 (1990).

111 See Adler, supra note 27, at 334-40; see also Merton, supra note 14, at 27 (discussing role of tax law).

112 See Lynn M. LoPucki & William C. Whitford, Patterns in Bankruptcy Reorganization of Large, Publicly Held Companies, 78 Cornell L. Rev. 597, 602-03 (1993) (finding that 51% of such reorganizations resulted in survival of "core business" entity). The results of Eastern Airlines's bankruptcy reorganization are documented in Weiss, supra note 24. But see Bowers, supra note 91, at 959 (arguing that estimates of successful reorganizations are overstated); Edith Shwalb Hotchkiss, Postbankruptcy Performance and Management Turnover, 50 J. Fin. 3, 7-15 (1995) (describing high rate of postreorganization failure).

its the enforcement of a contract that would prevent management from filing a bankruptcy petition.[113] I have argued elsewhere that, this fact notwithstanding, a court would dismiss a bankruptcy case, though properly filed, if the contracts among the investors left the bankruptcy court with no issue to resolve relevant to a collective proceeding.[114] A Chameleon Equity firm might leave a court with no such issue. Notably, under the rules that would govern a simple Chameleon Equity firm, holders of fixed obligations could not compete for assets and no one would need to conduct or supervise a valuation or sale of a firm's assets or interests therein. But a bankruptcy court might not consider the contractual alternatives to bankruptcy described in this Article a good substitute for a court-supervised proceeding.

In contrast to the Chameleon Equity firm I first described, a traditional firm subject to ordinary debt but not subject to a collective proceeding would suffer from the very competition among creditors that bankruptcy serves to prevent. Though this competition could be by design of the investors, no bankruptcy court would dismiss a case where such competition existed. The same might be said of a case in which the debtor firm were subject to a rule that permitted continuation only with important restrictions on the firm's future transactions or with a supermajority vote of creditors. Investors in such a firm would solve their collective action problem, but would do so by imposition of a rule that would favor liquidation. Bankruptcy judges tend to see the salvation of firms as an important part of the judicial role. As a consequence, managers might be able to take advantage of the bankruptcy reorganization process regardless of prior agreement. Moreover, because the bankruptcy code explicitly grants the court authority to supervise any sale of assets outside the ordinary course of business,[115] a court might not dismiss a Chapter 11 case to permit an auction under contractually authorized terms. And once a case is ensconced in Chapter 11, at least some courts have been reluctant to permit asset auctions.[116]

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[113] See, e.g., Schwartz, supra note 48, at 599 n.10 (collecting cases). Baird argues that a firm can effectively agree not to enter bankruptcy if each of its directors agrees, subject to personal liability, not to file on behalf of the firm. See Baird, supra note 24, at 22. But it is not clear why the same courts that fail to enforce a firm's promise not to file a bankruptcy petition would enforce a director's promise not to file on behalf of a firm.

[114] See Adler, supra note 27, at 334 n.94 (collecting cases).

[115] See 11 U.S.C. § 363(b)(1) (1994).

[116] See In re Lionel Corp., 722 F.2d 1063, 1070-71 (2d Cir. 1983) (finding burden of offering business justification for selling assets on party that wants to conduct immediate sale); see also Baird, Revisiting Auctions, supra note 10, at 639 (discussing *Lionel*).

There is, then, little mystery that bankruptcy's collective proceeding persists in the United States despite seemingly efficient alternatives. Though, as noted in Part V below, an examination of legal rules and contractual responses in other countries might support or refute the claim that investors believe collective proceedings are inefficient.

C. *Common Equity's Postdefault Interest*

When an American firm fails to pay preferred-stock dividends, terms of the preferred-stock contracts may give holders rights to representation on the firm's board of directors. In rare cases, if failure to pay continues, the preferred stockholders gain control of the board. Consistent with the concept of Chameleon Equity, discussed in Part I above, when the firm becomes unable to satisfy its fixed obligations, the holders of the lowest-priority fixed obligations, as those who presumptively will gain or lose from marginal changes in the value of the firm, are responsible for the plight of the company. Unlike low-priority fixed claims in a Chameleon Equity firm, however, traditional preferred stock does not convert to the firm's common-equity interest even when it becomes a source of control. The preferred stock retains control only until arrearages are satisfied and retains any liquidation priority. If at any time the firm maintains or gains assets of value in excess of debt, preferred dividends owed, and preferred-stock liquidation rights, that excess belongs to common equity.[117] This arrangement may persist despite the provision of some period in which common equity has an opportunity to have the firm repay arrearages that may have accumulated as a result of illiquidity, not insufficient asset value. Thus it may persist that a firm is subject to the control of fixed claims, rather than residual interests.

Control by preferred stockholders, as holders of fixed claims, is not in itself mysterious. The conflict between residual interests and fixed claims gives holders of residual interests an incentive for too much risk and holders of fixed claims an incentive for too little risk. It is generally accepted that holders of the residual interest ordinarily control a firm because holders of residual interests are more likely to foster managerial diligence than holders of fixed claims.[118] Nevertheless, it is theoretically possible that for some firms, residual-interest-induced incentive for risk unjustified by expected return is more important than other agency problems. As a result, one might expect to observe some firms under the control of fixed claimants. As a matter

[117] See, e.g., Baron v. Allied Artists Pictures Corp., 337 A.2d 653, 658 (Del. Ch. 1975); Petroleum Rights Corp. v. Midland Royalty Corp., 167 A. 835, 837 (Del. Ch. 1933).

[118] See, e.g., Jensen & Meckling, supra note 87, at 323-25, 337-39.

of theory, therefore, it is not surprising that preferred stockholders might have control of a firm subject to common-equity interests. As a matter of fact, however, firms do not begin under control of fixed obligees. The question, then, is why are firms ever structured so that fixed obligees gain control after a default.

The answer may, in part, be derived from the preceding analysis of insolvency regimes. Unlike a start-up firm, a firm that has failed to satisfy fixed obligations has likely experienced a decline in value. Initial investors may not believe that an auction of the firm or a contest for the firm's assets will be warranted if a decline impairs only preferred stock, not debt. But investors may not be confident that the firm should at that point take the same risks a firm with no negative experience might justifiably endure. The installation of preferred stockholders, holders of fixed claims, in control of a partially failed firm still subject to debt, may appropriately inhibit managers from risk taking—expansion, for example.[119] Such inhibition may enhance the value of debt in such a firm and, consequently, permit the discipline of debt's continuing imposition of fixed obligations, a discipline good managers may accept.

This is not a solution to the puzzle of preferred stock, however persuasive the analysis. As noted, it is rare for preferred stockholders to gain control of a board, regardless of arrearages. Representation but not control is far more common. Thus, typically, not only does common equity retain an interest in a firm that fails to pay preferred-stock dividends, it retains ultimate control of the firm, seriously exacerbating the problem of risk incentive. The ideas in this Article may explain why arrearages cause control of, but not the full residual interest in, a firm to shift, as is sometimes the case. But there remains a mystery when neither shifts, as is commonly the case.

V

NEED FOR COMPARATIVE EVIDENCE

The experience of the modern corporation in the United States may not be adequate to fully test the hypothesis of this Article. As noted, tax and bankruptcy laws skew the choice of capital structure and insolvency rules. Moreover, the chief example of a large American corporation prior to the advent of corporate tax and bankruptcy

[119] I propose this merely as part of a potential explanation. A related point, not directly relevant here, is that a shift of control of, but not full residual interest in, a firm allows a period during which the firm benefits from conservative control while the investors sort out whether the firm is merely illiquid or is without sufficient value to satisfy its fixed claims. Mere illiquidity remains a possibility despite the above-mentioned grace period afforded common equity before control passes.

laws may not provide lessons for current firms.[120] As Douglas Baird explains, the railroad at the end of the nineteenth century was subject to debt held by a handful of bankers with interrelated interests.[121] So, while these firms may have efficiently continued postinsolvency, it is not clear that their creditors faced the conflict that can produce continuation bias. Control by an oligopoly of bankers over industrial firms no longer exists,[122] and may not be desirable, given the oligopoly's threat to competition.[123] Further, the general economic shock in the 1890s that left a number of railroads both insolvent and viable may have been an unusual occurrence. Thus the American experience may not provide evidence of efficient organization in a beneficial regulatory environment.[124]

The experience of other countries may prove more useful. Until 1992 in Canada, for example, a secured creditor was exempt from the restriction on collection imposed by the Canadian Bankruptcy Act, which was employed by some insolvent firms.[125] A general creditor was barred from collection, as all creditors are in the United States, and could be forced to accept a decision to reorganize if its class voted for reorganization. But unlike in the United States, a court could not "cram down" a plan rejected by a class of general creditors.[126] Thus, in some respects, this Canadian insolvency system resembled what I suggest might be an optimal system. A firm unable to pay its low-priority fixed obligations, general credit, could continue with a vote of such obligations *provided* the firm paid in full its high-priority obliga-

120 The federal corporate income tax was first enacted in 1909. See Department of the Treasury, Integration of the Individual and Corporate Tax Systems 153 (1992) ("The corporate income tax originally was enacted in 1909 as an excise tax on the privilege of doing business in the corporate form."). A form of bankruptcy law that at least roughly resembles current law has been in force since 1898. See Baird, supra note 24, at 25-41.

121 See Baird, supra note 24, at 25-28.

122 See Roe, supra note 74, at 263-67.

123 See id. at 256.

124 There is, however, some U.S. evidence that is at least not inconsistent with the hypothesis in this Article. Michael Barclay and Clifford Smith report that firms with higher than average growth options in their investment opportunity sets issue significantly fewer fixed claims in the forms of lease and debt obligations, but more preferred stock. See Michael J. Barclay & Clifford W. Smith, Jr., The Priority Structure of Corporate Liabilities, 50 J. Fin. 899, 908 (1995). If firms with growth options are highly variable even when efficiently operated, and if insolvency increases the risk of liquidation even under the U.S. bankruptcy system, it is not surprising to find relatively more preferred stock and relatively less debt. But these data are subject to other interpretations and, in any case, support only part of the story I tell here.

125 See Lynn M. LoPucki & George G. Triantis, A Systems Approach to Comparing U.S. and Canadian Reorganization of Financially Distressed Companies, in Current Developments in International and Comparative Corporate Insolvency Law, supra note 4, at 109, 118.

126 See id. at 165.

tions, secured credit, or obtained the consent of the holders of such obligations.

In a recent study, Timothy Fisher and Jocelyn Martel reported on Canadian firms subject to the pre-1992 Canadian Bankruptcy Act.[127] In their sample, unsecured creditors accepted about three-fourths of proposed reorganization plans.[128] Fisher and Martel estimated that, on average, approved plans yielded a higher return on debt than liquidation would have provided.[129] They attribute this to the good sense of unsecured creditors. And certainly, all else being equal, unsecured creditors should be more likely to continue a viable firm than an inviable one. But it may be incorrect to conclude from this evidence that Canadian unsecured creditors not only can assess viability, but are also able to overcome any continuation bias and liquidate all firms they see as inviable. Because the Canadian Bankruptcy Act did not bar collection by secured creditors, it may be that the only sort of firm able to present a reorganization plan to unsecured creditors was one that could pay its secured creditors in full[130]—that is, a firm less likely than one unable to satisfy its secured claims to have deteriorated beyond viability.

There are, of course, other plausible interpretations of the Canadian data. And to complete the picture one would need more information about those firms that chose not to attempt reorganization under the Canadian Bankruptcy Act. That is to say, this discussion of the Fisher and Martel study is merely a start. More work on Canada, the United States, and other countries is necessary before any firm conclusions fairly may be drawn.

CONCLUSION

In a world free from legal impediment, investors might design a firm's capital structure so that insolvency would be a strong signal of a firm's inviability. Consequently, corporate bankruptcy law and proposed alternative collective procedures remain without certain justification. This is so because creditor inability to act collectively may not be a problem, but a solution.

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127 See Timothy G. Fisher & Jocelyn Martel, The Creditors' Financial Reorganization Decision: New Evidence from Canadian Data, 11 J.L. Econ. & Org. 112 (1995).

128 See id. at 112.

129 See id. at 115-18.

130 See LoPucki & Triantis, supra note 125, at 118 (observing that secured creditors' ability to collect kept firms from using reorganization provisions of pre-1992 Canadian Bankruptcy Act).