A NORMATIVE THEORY OF BUSINESS BANKRUPTCY

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INTRODUCTION

THIS Article will view bankruptcy through the lens of a single theory. Scholars, especially those of an economic bent, are coming to agree that a business bankruptcy law should function to reduce the cost of capital for firms. There appear to be few papers, however, that evaluate the basic structure of a modern bankruptcy code by a cost of capital yardstick alone. This is due in part to disagreement about whether a bankruptcy law should pursue goals in addition to capital cost reduction. The novelty of this Article will lie in its single-minded application to bankruptcy of the cost of capital metric and in its argument that only this metric should matter. The Article will focus on U.S. law for convenience.[1] Its conclusion will hold that a bankruptcy law committed exclusively to capital cost reduction would be considerably smaller and less centralized than the law we now have.

A. Early Bankruptcy Theory

Formal bankruptcy theory began with the recognition that a bankruptcy system is sometimes necessary to solve a collective action problem among the creditors of an insolvent firm. Insolvency may be a function of economic distress, financial distress, or both. Economic distress occurs when the firm cannot earn revenues sufficient to cover its costs, exclusive of financing costs. Such a firm has negative economic value. A firm is only in financial distress if it would have positive earnings were it not required to service its debt. Because a firm's debt is sunk when insolvency occurs, the existence of debt is irrelevant to the question of whether the firm should continue or not. Social welfare is maximized when eco-

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[1] Germany recently has amended its bankruptcy law to resemble more closely the American law, and Italy is considering similar revisions. For a summary of German law, see generally The European Restructuring and Insolvency Guide 2002/2003 115–26 (Callie Leamy ed., 2002). An analysis of American law thus may have more than parochial significance. For an excellent history of American bankruptcy law, see generally David A. Skeel, Jr., Debt's Dominion (2001). For a thoughtful description of current conflicts among bankruptcy scholars, see generally Douglas G. Baird, Bankruptcy's Uncontested Axioms, 108 Yale L.J. 573 (1998).

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nomically distressed firms are liquidated but financially distressed firms are continued.

Creditors are less interested in saving firms than in whether assets exist to satisfy their claims. If assets exist, creditors will attempt to seize them, which commonly will yield a piecemeal liquidation. When a firm is experiencing only financial distress, however, the creditors' total insolvency-state payoff would be maximized were the firm continued. Saving a firm, though, will often require creditors to coordinate their collection efforts, and coordination costs may be high. As a consequence, reasonable equilibria exist in which, without regulation, financially as well as economically distressed firms are liquidated piecemeal.[2] A bankruptcy system can avoid these inefficient equilibria by staying creditor collection efforts so that a state official has time to decide whether the firm is worth saving.[3]

Early modern theory favored letting the market make the liquidation/continuation decision. More concretely, a state official should conduct auctions of insolvent firms, free of current claims, distributing the proceeds to creditors. If economic value would be maximized by a piecemeal liquidation, the highest bids will be for individual assets; if continuing the firm as an economic entity would maximize value, then the highest bids would be for the firm as a unit.[4] On this view, the Swedish system, which auctions off most insolvent firms,[5] is preferable to the American system which,

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[2] A concise description of the game among creditors is provided in Sayantan Ghosal & Marcus Miller, Co-ordination Failure, Moral Hazard and Sovereign Bankruptcy Procedures, 113 Econ. J. 276 (2003). In the contexts considered here, they show that liquidation is the likely outcome. A similar showing is made in Stanley D. Longhofer & Stephen R. Peters, Protection for Whom? Creditor Conflict and Bankruptcy, 6 Am. L. & Econ. Rev. 249, 258–61 (2004).

[3] The canonical statement of this approach to bankruptcy is in Thomas H. Jackson, The Logic and Limits of Bankruptcy Law 7–19 (1986). Professor Adler adds that bankruptcy law must reconcile "mutually insupportable obligations." Barry E. Adler, The Law of Last Resort, 55 Vand. L. Rev. 1661, 1674 (2002).

[4] Auction approaches are advocated in Douglas G. Baird, The Uneasy Case for Corporate Reorganizations, 15 J. Legal Stud. 127, 136–47 (1986) and Michael C. Jensen, Corporate Control and the Politics of Finance, 4 J. Applied Corp. Fin., Summer 1991, at 13, 31–32.

[5] Sweden formally provides for reorganization, but a recent summary claimed that during a period when 25,000 bankruptcies took place, only 600 firms were reorganized. The prevalence of auctions apparently results from the power of secured claimants to demand full repayment. For a more complete description of Swedish bank-

in Chapter 11, distributes the firm to current claimants through a judicially supervised bargaining process between the claimants and the firm's owners.[6]

Early theorists believed that a bankruptcy system should strictly follow the absolute priority rule, which requires creditors to be paid in the order that the firm's contracts created.[7] An implication of this rule is that equityholders—the owners—should receive nothing because the residual claim on an insolvent firm is worth nothing. Only distributional goals could justify violating absolute priority, but using a bankruptcy system to pursue such goals is questionable on two grounds. First, these goals are difficult to implement because parties can contract around the distributional rules through the price term or through other terms. For example, if a bankruptcy system is amended to subordinate senior creditor claims in order to shift wealth to junior creditors, senior creditors

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ruptcy law, see The European Restructuring and Insolvency Guide, supra note 1, at 275–86. The Swedish experience is typical of European insolvencies. See Edward Eyerman, John Hatton & Tony Stringer, When Angels Lose Their Wings, Fitch Ratings: Corporate Finance Special Report, Jan. 26, 2004, at 10, available at http://www.gtnews.com/article/5755.cfm ("Notwithstanding many mechanisms among European insolvency regimes that allow for protection against creditor claims to maintain a distressed company as a going concern, the displacement of management [by an administrator] and lack of new financing . . . produce a consistent trend across Europe towards liquidation . . . of distressed companies."). Swedish law was recently amended to reduce the power of secured claimants, in the hope of increasing the number of reorganizations. See Guy Lofalk, The Far-Reaching Reforms of Swedish Insolvency Legislation, Eurofenix, Autumn 2003, at 8.

[6] Some scholars claim that there is a recent trend, triggered by creditor pressure, to sell more firms, or parts of firms, in Chapter 11 and to reorganize fewer firms. See Douglas G. Baird & Robert K. Rasmussen, Chapter 11 at Twilight, 56 Stan. L. Rev. 673, 674 (2003); Douglas G. Baird & Robert K. Rasmussen, The End of Bankruptcy, 55 Stan. L. Rev. 751, 784–85 (2002); Douglas G. Baird & Robert K. Rasmussen, Control Rights, Priority Rights, and the Conceptual Foundations of Corporate Reorganizations, 87 Va. L. Rev. 921, 958 (2001); David A. Skeel, Jr., Creditors' Ball: The "New" New Corporate Governance in Chapter 11, 152 U. Pa. L. Rev. 917, 920–33 (2003). For a contrary view that the number of traditional reorganizations has not declined, see Lynn M. LoPucki, The Nature of the Bankrupt Firm: A Response to Baird and Rasmussen's *The End of Bankruptcy*, 56 Stan. L. Rev. 645, 660–71 (2003). Creditor-initiated sales are discussed in Part IV.

[7] For example, "a good bankruptcy law should maximize the *ex post* value of the firm, with an *appropriate* distribution of this value across claimants, one that respects the priority of claims among the various classes of creditors." Philippe Aghion, Bankruptcy and its Reform, *in* 1 The New Palgrave Dictionary of Economics and the Law 145, 145 (Peter Newman ed., 1998).

can respond with increased interest rates or more rigorous lending terms. Consequently, bankruptcy systems cannot achieve distributional objectives in the long run. Second, distributional objectives are sometimes cast in social terms (for example, the law should attempt to save jobs). However, early theorists believed that a bankruptcy system was a poor vehicle for achieving social goals.

B. Current Bankruptcy Theory and This Article

Modern theory relates the results of a bankruptcy procedure to earlier stages in the life of the borrowing firm. An ex post efficient bankruptcy system would maximize the payoffs that creditors receive from insolvent firms. For example, a system that rescues only financially distressed firms generates higher payoffs for creditors than a system that attempts to rescue economically distressed firms as well. At the borrowing stage, a competitive credit market reduces the amounts that lenders require solvent firms to repay when the lenders' expected insolvency payoffs increase. It thus will be shown, in Part I below, that: (a) Interest rates fall as the efficiency of the applicable bankruptcy system increases (a more efficient system increases creditor payoffs); (b) a society that wants to maximize social welfare would prefer firms to pursue every project for which credit can be raised;[8] (c) debt-financed firms pursue fewer projects than society prefers because firms must surrender bad state returns to creditors, but must share good state returns with them. Society thus should want an efficient bankruptcy system because lower interest rates increase the share of good state returns that firms can keep, thereby reducing the wedge between the socially efficient project set and the project set that debt-financed firms will pursue; and (d) an efficient bankruptcy system also improves the borrower's investment incentives because firms invest in projects to maximize net expected profits, which rise as the interest rate falls.

In addition, a bankruptcy system that reduces the cost of debt capital will reduce the cost of capital generally. The equityholders own a call option on a leveraged firm because shareholders can buy the firm by repaying the debt. The strike price for exercising this

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[8] This result assumes that a firm's project does not create a negative externality. Part I.B.1 infra will defend the plausibility of this assumption in bankruptcy contexts.

call option thus is determined by the firm's cost of credit. Reducing this cost—that is, reducing the strike price—makes the stock of a leveraged firm more valuable to own. Hence, it becomes easier for firms to raise equity capital as their country's bankruptcy system becomes more efficient.

These economic results have concrete policy implications, of which four are briefly summarized in this Introduction. First, the U.S. Bankruptcy Code gives trustees or debtors in possession "avoiding powers."[9] These powers permit the insolvent party or its representative to recover for the bankrupt estate eve-of-bankruptcy payments to creditors and to challenge liens that may not have been taken in full compliance with state law. The avoiding powers have been a central feature of bankruptcy law for a century, but their existence requires a better theoretical grounding. These powers (other than the traditional prohibition of fraudulent conveyances) generally decrease the value of the bankrupt firm rather than increase it. For example, if a trustee successfully uses an avoiding power to demote a creditor from secured to unsecured status, the firm's assets will be reduced by the trustee's litigation costs, but the total value available for distribution to creditors will not otherwise increase. A consistent practice of using the avoiding powers to police the use of secured credit thus reduces the ex post value of firms and thereby increases the market cost of capital.

Second, parties should be permitted to write contracts, now prohibited, that permit customers and suppliers to cease dealing with an insolvent firm. As is shown below, when solvent parties have exit rights, debtors could still pursue efficient projects but would have difficulty continuing inefficient projects. Consequently, free contracting regarding exit will cause interest rates to fall below the level that the current bankruptcy regime induces.

Third, the debtor-in-possession should decide which creditor expenses are reimbursed. The Code currently authorizes bankruptcy courts to reimburse junior creditor expenses that increase the amount available for distribution to the juniors, but the Code reimburses little senior creditor spending. This compensation scheme encourages rent seeking by the juniors, who sometimes litigate to

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[9] This phrase apparently was popularized in scholarly literature in Thomas H. Jackson, Avoiding Powers in Bankruptcy, 36 Stan. L. Rev. 725 (1984).

defeat absolute priority rather than to increase the value of the in-solvent firm. A better scheme would delegate the reimbursement decision to the debtor-in-possession. The debtor has no incentive to subsidize rent seeking and would sometimes enlist the seniors in the task of value maximization.

Fourth, the law should permit parties to contract in the lending agreement to influence the insolvent firm's choice of a bankruptcy procedure. "Bankruptcy contracts" can reduce the firm's incentives inefficiently to delay entry into the bankruptcy system and to choose the system that maximizes the firm's private benefits, rather than the monetary return available for distribution to creditors.

This summary shows that while assigning the goal of capital cost reduction to a bankruptcy system is unlikely to be controversial, a serious pursuit of the goal would have important implications. A bankruptcy law with no avoiding powers, that suppliers and cus-tomers could contract out of, that reverses the scheme for compen-sating creditor expenses, and that is only a default procedure from which parties are free to deviate would greatly differ from current law. Part I below will argue for the centrality of the capital cost re-duction criterion when evaluating bankruptcy systems by explicat-ing the relationship between interest rates and a firm's ability and incentive to pursue projects. Part II will criticize central features of the U.S. Bankruptcy Code, such as the avoiding powers, whose performance receives poor grades under a cost reduction metric. Part III will show that default bankruptcy systems, which allow parties to contract ex ante for the procedure they prefer, induce lower interest rates than the current mandatory system. This Part also will respond to current objections to "bankruptcy contract-ing." Part IV will develop criteria for deciding when courts should enforce the increasingly common contracts that require a dis-tressed debtor to pursue a specified liquidation strategy, should the debtor ultimately fail, in return for refinancing or forbearance. The Conclusion will summarize omitted issues and briefly justify the exclusion of social goals from the purview of a business bankruptcy law.

Before reaching the analysis, it will be helpful to remark on two "macro" features of U.S. bankruptcy law. First, the U.S. system is more market-driven than most of its European counterparts. In many European jurisdictions, when an important firm experiences

distress, the country in which the firm performs routinely petitions the European Union Directorate of Competition to approve a subsidy, the purpose of which is to inject liquidity into the firm. The Directorate generally approves a subsidy if it believes that the firm is, or can be made, viable. In the U.S., by contrast, the credit market decides whether to extend further liquidity to a distressed firm. Distressed debtors that cannot persuade the market to provide further funds are forced into Chapter 7, where they are broken up and liquidated. As a consequence, the market, rather than a state agency, makes the initial decision whether a distressed firm should disappear or reorganize. The reforms proposed below thus would add market features to a system already driven in large part by the market.

Second, when the market permits bankruptcy courts to make a decision, the U.S. Bankruptcy Code largely governs their decisionmaking power with standards.[10] Standards yield less predictability for parties than rules.[11] The uncertainty that the Code's choice of regulatory style produces is a concern because firms hold real options on potential projects: Investing in a project today eliminates the firm's ability to gather more information about the project's desirability in the future. The value of an option increases in the variance of possible returns. Thus, a firm's decision *whether* to pursue a project is importantly a function of its cost of capital, while the firm's decision *when* to pursue a project is importantly a function of how uncertain the firm's legal environment is. From a private point of view, the value of the firm's option to delay increases with the degree of uncertainty the firm faces. From a public point of view, however, because interest rates are positive, the social cost of delaying good projects also increases with the degree of uncertainty. This Article will treat uncertainty indirectly. Firms free to choose often would prefer to substitute more explicit contractual rules for the law's standards. The argument for increasing contractual freedom in the bankruptcy area is grounded here on the property of free contracting to reduce interest rates. An addi-

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[10] These standards are summarized in Alan Schwartz, The New Textualism and the Rule of Law Subtext in the Supreme Court's Bankruptcy Jurisprudence, 45 N.Y.L. Sch. L. Rev. 149, 187–89 (2000).

[11] See generally Alan Schwartz & Robert E. Scott, Contract Theory and the Limits of Contract Law, 113 Yale L.J. 541 (2003).

tional advantage of expanding the freedom to contract would be to reduce uncertainty, which in turn would accelerate the pursuit of good projects.

I. THE MODERN VIEW: INTEREST RATES AND INVESTMENT

A. Bankruptcy Systems and the Interest Rate

The relationship between the performance of a bankruptcy system, a firm's cost of capital, and its ability and incentive to pursue projects can be exhibited with a simple model. There are seven important assumptions:

A1: The borrowing firm is run by an owner/manager.

A2: Creditors are imperfect monitors of payoff-related actions that the firm takes after it borrows.

A3: Capital markets are competitive.

A4: Creditors can predict the mean of their payoffs in the default state.

A5: A "firm" is the project that it pursues.

A6: Creditors and the firm are risk neutral.

A7: An insolvent firm enters the applicable bankruptcy system.

Assumption A1 is made because there is a rough correspondence of interest between the shareholders and managers of even large insolvent firms. Both groups prefer the firm to continue in its current form rather than to disappear or be auctioned to the market.[12] Assumption A2 captures the agency problem between the firm and its creditors: The firm can take unobservable actions after borrowing that affect the creditors' expected return. Assumption A3 is realistic; A5 and A7 are innocuous and made for convenience. A4 and A6 are domain assumptions. A4 rests on the view

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[12] See infra note 50 and accompanying text (considering the implications of a possible preference by managers for a less risky investment strategy than shareholders may want).

that trade creditors and private lenders have considerable experi-
ence with default, which they commonly predict with sophisticated
credit-scoring models,[13] and A6 is more accurate when applied to
firms rather than to individual proprietorships.[14]

The borrowing firm has a project that requires capital of *I* to do,
which the firm raises in the credit market.[15] The project succeeds
with probability *p* and earns *v* (in present value terms) net of pro-
duction costs.[16] An insolvent firm enters a bankruptcy system and

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[13] The model here assumes that the firm borrows money from a bank, an insurance
company, or a set of sophisticated bondholders. Many of the firms considered here
thus will have "medium" or "low" credit quality; high quality firms are more likely to
borrow from public sources. See David J. Denis & Vassil T. Mihov, The Choice
Among Bank Debt, Non-Bank Private Debt, and Public Debt: Evidence from New
Corporate Borrowings, 70 J. Fin. Econ. 3, 5 (2003). Part III.B.3 will consider whether
the conclusions that Part I will reach should be modified when some of the firm's debt
is held by individuals or small businesses.

[14] Individuals sometimes start businesses with credit card debt. Because persons are
risk averse, the availability of discharge and a high exemption level encourage entre-
preneurial activity by providing some insurance against business failure. See Wei Fan
& Michelle J. White, Personal Bankruptcy and the Level of Entrepreneurial Activity,
46 J.L. & Econ. 543, 546–51 (2003); John Armour & Douglas Cumming, Bankruptcy
Law and Entrepreneurship 9 (Jan. 25, 2005) (unpublished manuscript, on file with the
Virginia Law Review Association). Failure insurance, however, creates moral hazard.
Hence, a business bankruptcy law that applies to individual proprietorships must re-
solve a tradeoff between risk and incentives. This tradeoff is not modeled here be-
cause risk neutral firms would not insure against business risks. For an analysis of the
risk/incentive tradeoff when individuals borrow, see generally Barry Adler, Ben Polak
& Alan Schwartz, Regulating Consumer Bankruptcy: A Theoretical Inquiry, 29 J. Le-
gal Stud. 585 (2000). In addition, individual entrepreneurs are argued to be more op-
timistic regarding investment than is socially optimal because of their penchant for
discounting hyperbolically, a problem that is aggravated by the low interest rates ad-
vocated here but moderated by collateral, which these entrepreneurs are commonly
asked to provide. See Isabelle Brocas & Juan D. Carrillo, Entrepreneurial Boldness
and Excessive Investment, 13 J. Econ. & Mgmt. Strategy 321, 339 (2004). This Article
abstracts from such cognitive issues because it focuses on the corporate borrower.

[15] This Article does not analyze the firm's choice of debt rather than equity. Com-
mon motivations for debt are that debt is tax deductible and that leverage increases
the borrower's bargaining power when renegotiating with creditors and customers.
See, e.g, Murat Usman, Optimal Debt Contracts with Renegotiation, 13 J. Econ. &
Mgmt. Strategy 755, 757 (2004). Also, debt financing is plausible in light of Assump-
tion A2 because debt is an optimal contract when creditors cannot observe effort and
observe project returns imperfectly. See Paul Povel & Michael Raith, Optimal Debt
with Unobservable Investments, 35 RAND J. Econ. 599, 601–05 (2004).

[16] Here, *v* is drawn from a positive, compact support $V_a \subset \mathfrak{R}_+$ by a cumulative dis-
tribution function $G_a(v)$. The expected value of a solvent firm thus is:

$$v = \hat{v} \equiv \int_{Va} v dG_a(v)$$

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continues to function until the system runs its course. Denote the set of feasible bankruptcy systems as *S*, and let the particular system in place be called s_i. The value of the insolvent firm's project is partly a function of the bankruptcy system the parties use; this value thus is denoted $v(s_i)$.[17] The costs of a bankruptcy also are partly a function of the system that is in place; these costs are denoted $c(s_i)$. Creditors cannot realize more than the value of the firm in the applicable bankruptcy system less the costs of realizing that value. This creditors' return is called $x(s_i) = v(s_i) - c(s_i)$.

Creditors that function in competitive markets earn zero pure profits; hence, when creditors lend the firm the investment cost *I*, they expect to receive no more than *I* in return.[18] The firm promises to repay to creditors the sum *F*. It is assumed that the firm's return from a successful project exceeds the face value of the debt *(v > F)*, and that the firm's return from an unsuccessful project is less than the face value of the debt *(F > v(s_i))*. The firm thus is solvent in the success state and insolvent in the failure state. The creditors' expected return *I* therefore is a weighted sum: With probability *p*, the creditors receive the face value of the debt *F*; with probability *1– p* the creditors receive the smaller bankruptcy return $x(s_i)$. Their expected return thus is

$$(1) \quad I = pF + (1-p)(x(s_i))$$

The first term on the right hand side is the creditors' expected return in the solvency state and the second term is the creditors' expected return in the insolvency state.

The model has six periods:

t^0: The firm chooses a project to pursue.

t^1: The firm borrows *I* in a competitive credit market.

t^2: The firm chooses the level of effort to invest in the project.

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[17] The bad state return $v(s_i)$ is drawn from *[0, v(s_i)]* by a cumulative distribution function *G(v)*.

[18] The risk-free interest rate is assumed to be zero for convenience.

t^3: The firm and its creditors learn whether the project will be a success or a failure.

t^4: The firm pays creditors F in the success state or enters the bankruptcy system.

t^5: The bankruptcy process concludes and creditors receive the bankruptcy return.

The economic variable of immediate interest is F because F determines the interest rate the firm must pay. Using Equation (1) to solve for F yields

$$(2) \qquad F = \{I - x(s_i)(1 - p)\}/p$$

It should be apparent that F falls as $x(s_i)$ increases.[19] Intuitively, when the creditors' expected bankruptcy return $(x(s_i))$ increases, competition will cause them to reduce the amount (F) that they demand from the firm when it is solvent.

The firm's effective interest rate is the amount that it must repay divided by the amount that it borrows less one:

$$r = (F - I) - 1$$

Since I is a constant—it is the sum the firm needs to do its project—the effective interest rate will rise as F rises. And F, it has just been shown, is a function of the creditors' insolvency-state return, increasing as this return falls.

A bankruptcy system affects both the value and the cost elements of the creditors' insolvency-state return. As shown in the Introduction, the firm's insolvency-state value is higher in a system that liquidates economically distressed firms and saves financially distressed firms than the insolvency-state value would be in a system that attempted to save all firms. The insolvency return also increases when system costs fall. If auctions would generate at least as much value as Chapter 11 reorganizations, but at lower cost, then an economy with a bankruptcy system that requires auctions

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[19] To check, differentiating the right hand side of (2) with respect to $x(s_i)$ yields $(p - 1)/p$ which is negative because $p < 1$.

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would, other things equal, have lower interest rates than those that U.S. firms now pay. To summarize, bankruptcy systems have an important effect on interest rates: the bankruptcy system that maximizes the creditors' bad state return minimizes the interest rate firms must pay to finance projects.

B. Interest Rates and Investment

1. Funding Efficient Projects

It is helpful to begin with the social preference and then ask whether firms have an incentive to implement this preference. Society prefers firms to pursue projects that generate positive expected returns. Denoting W as social welfare, a firm should undertake a project that costs I to do if $W = pv + (1 - p) x - I \geq 0$.[20] The first term on the right hand side is the expected value if the project succeeds; the second term is the expected value if the project fails. To derive the minimum project return needed for social efficiency, denoted $\underline{v}$, let $W = 0$. Then

$$(3) \quad \underline{v} = \{I - x(1 - p)\}/p$$

The right hand side of Equation (3) is identical to the right hand side of Equation (2), which solves for the maximum amount of debt that creditors can require the firm to repay. Because the maximum that creditors can exact equals the minimum that it is socially desirable for the firm to earn, the firm should pursue every project whose expected return is above the minimum. This yields:

> *Proposition 1*: It is socially efficient for firms to undertake all projects that creditors will finance.

Regarding the intuition, in the model creditors bear the full costs of a firm's failure. Therefore, creditors will only finance projects whose expected gains at least equal their costs. Society wants firms to pursue every project whose returns are greater than this.

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[20] From now on, subscripts will be suppressed except where necessary to avoid ambiguity. For example, $x(s_1)$ is now denoted x.

Proposition 1 may seem controversial because the analysis assumes away externalities. Two externalities are worth noting: A firm's failure may harm (a) the local community, and (b) persons injured by the firm's tortious acts. Regarding communities, the Conclusion will argue that a market exists among firms and the local communities that want them, showing that there is no actual externality. The tort concern holds that firms will not fully take accident costs into account when choosing activity and precaution levels because potential victims do not bargain with the firm ex ante. Consequently, projects will appear more profitable to firms and creditors than they actually are. The credit market will respond by financing too many projects, which contradicts the Proposition. This view, however, is erroneous because borrowing firms commonly internalize expected tort costs, and even in the rare case when they do not, there is no efficiency loss.

That firms purchase insurance to protect assets that are at stake for them demonstrates the former point. A firm of value V with debt D appears to have only $V - D$ at stake. Tort claims, however, take pro rata with contract creditor claims. Expected tort claims thus dilute the value of the firm's debt. To prevent this dilution, creditors who hold substantial debt require firms to purchase liability insurance.[21] The typical firm thus insures in the amount needed to protect its own interest plus these creditors' interests. The firm thus will internalize expected accident costs up to most of its value.

Therefore, a tort externality exists when potential accident costs approach or exceed firm value. This is likely to occur only when the firm commits a mass tort.[22] There are two possibilities when

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[21] See Claire A. Hill, Is Secured Debt Efficient?, 80 Tex. L. Rev. 1117, 1161–62 (2002). The ubiquity of insurance is recognized in the recently passed amendment to the Bankruptcy Code, the Bankruptcy Abuse Prevention and Consumer Protection Act of 2005, H.R. 685, 109th Cong. (2005) (enacted), which adds the "failure to *maintain* appropriate insurance that poses a risk to the estate or to the public" to the grounds in 11 U.S.C. § 1112(b) on which a Chapter 11 may be converted to a Chapter 7 or dismissed. Id. § 442(a) (emphasis added). This proposal became effective law 180 days after the April 20, 2005, passage of the Act. See 11 U.S.C. § 1112(b)(4)(C) (2005).

[22] The argument in the text implies that few tort claims will be asserted in typical bankruptcies. The recent Warren and Westbrook study found that the debtor scheduled personal injury claims in 3 of the 386 bankruptcy cases they analyzed. There were a total of 7 such claims out of the over 7,000 claims they explored. See Elizabeth

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asking whether the mass tort case affects Proposition 1. First, nei-
ther the borrowing firm nor its contract creditors can anticipate
that the firm is committing a mass tort. In this event, the legal rules
could not affect the firm's precaution or activity level decisions.
Second, the parties did or should have anticipated the possibility of
a mass tort. The firm apparently could profit in this case not by ef-
ficiently reducing expected accident costs but by issuing secured
debt. This debt will shift wealth from general creditor tort victims
to the firm and its secured lenders. Also, because the debt partly
substitutes for precautions, the firm may expand output exces-
sively. An appropriate policy response would permit mass tort
claimants to take pari passu with, or ahead of, secured claimants.[23]

   It would be premature to alter bankruptcy priority rankings in
this way, however, because the posited strategic behavior seems
not to occur. A recent study shows that firms for whom the possi-
bility of facing enormous claims has become palpable (for example,
the cigarette companies) issue *less* secured debt than otherwise
comparable firms issue.[24] To summarize, firms apparently are not
taking fewer precautions or choosing higher activity levels than the
information available to them would efficiently require. Proposi-
tion 1 therefore need not be qualified by the tort externality be-
cause the Proposition holds only that it is *efficient* for firms to take
all projects that the credit market will finance. Whether the state
should respond on *distributional* grounds to the presence of an un-
expected, large victim class by altering the Bankruptcy Code, set-
ting up a public compensation fund, or in some other way is be-
yond the scope of this Article.

   Turning from what society should want regarding projects to
what borrowers will actually do, while creditors bear the costs of

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Warren & Jay Lawrence Westbrook, Contracting Out of Bankruptcy: An Empirical
Intervention, 118 Harv. L. Rev. 1197, 1224, 1227, 1229 n.105 (2005).
   [23] Commentators taking this view include Lucian Arye Bebchuk & Jesse M. Fried,
The Uneasy Case for the Priority of Secured Claims in Bankruptcy, 105 Yale L.J. 857,
882–83 (1996) and John Hudson, The Case Against Secured Lending, 15 Int'l Rev. L.
& Econ. 47 (1995).
   [24] See Yair Listokin, Is Secured Debt Used to Redistribute Value from Tort Claim-
ants in Bankruptcy? An Empirical Analysis (2004) (unpublished manuscript, on file
with the Virginia Law Review Association). Listokin suggests that firms anticipating
large tort liabilities also anticipate the possibility that they will experience financial
distress. Firms then reject secured debt because it gives creditors considerable power
in the default state.

failure ex post, they impose these costs on the firm ex ante through the interest rate. In a bankruptcy system that follows absolute priority, a firm's expected return from a project thus is

$$\pi(s) = -I + p(v - F) + (1 - p)(0)$$

The first term on the right hand side is the project's cost, the second term is the firm's return when the project succeeds (project value less debt), and the third term is the firm's return when the project fails (zero because creditors take the assets). The firm will not go forward unless it expects to earn positive profits. Letting $\pi(s)$ equal zero thus pins down the minimum expected return, denoted v_{min}, above which the firm will take a project.

$$(4) \quad V_{min} = (I/p) + F$$

The firm will reject a project unless the sum the firm borrows *(I)* equals or is below the expected gain from project success *(p(v − F))*. Equating these values and solving for v yields Equation (4).

From Equations (2) and (3), the minimum project return required for social efficiency, $\underline{v}$, equals *F*. Equation (4) shows that firms must expect to earn more than F to take a project. Therefore, firms sometimes *will reject* projects that society would want them to pursue. This is because, in deciding what to prefer, society counts project returns in both success and failure states, while firms just count project returns in success states and must share these returns with creditors. Because v_{min} falls as *F* falls, and because *F* falls as the bankruptcy system becomes more efficient, society should want to increase the efficiency of its bankruptcy system. We can summarize this reasoning in Proposition 2:

> *Proposition 2:* Society prefers an efficient bankruptcy system because this enlarges the set of efficient projects that firms will pursue.

As an illustration, if the success probability for a project is 0.8, the project costs $100 to do and the insolvency return available for distribution to creditors is $80, from Equation (2) creditors will require the firm to repay $105. Using Equation (4), the firm will re-

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ject the project unless the project is expected to return at least $230 in the success state. If the insolvency return were only $50, however, creditors would require the firm to repay $112.50. In this case, the firm would reject the project unless its success state return were at least $242.50.[25] This example shows that higher bad state payoffs to creditors enlarge the set of fundable projects for firms to pursue. Since society wants firms to pursue every project in the fundable set, society should implement the bankruptcy system that maximizes creditor payoffs.[26]

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[25] Regarding these calculations, for the initial example, Equation (2) defines *F*, the sum creditors will require the firm to repay, as $F = \{I - px\}/p = \{100 - .8(80)\}/.8 = 105$. Equation (4) defines the minimum success state the firm requires to go forward as $v(min) = I/p + F = 100/.8 + 105 = 230$. The second example uses these equations but sets $x = 50$.

[26] Considerable evidence exists to support the results reached in text. Scott and Smith found that adoption of the 1978 version of the Bankruptcy Code, which was believed to raise lending costs, raised interest rates. Jonathan A. Scott & Terence C. Smith, The Effect of the Bankruptcy Reform Act of 1978 on Small Business Loan Pricing, 16 J. Fin. Econ. 119, 131 (1986). As another example, the homestead exemption permits an individual debtor to shield a statutorily specified amount of equity in her home. 11 U.S.C. § 522(d)(1) (2000). Small firms are often run by individuals or have their debt guaranteed by the individuals who are their principals. Professors Berkowitz and White found that small business borrowers in states with high exemption levels were more likely to be credit-rationed and to pay higher interest rates. Jeremy Berkowitz & Michelle J. White, Bankruptcy and Small Firms' Access to Credit, 35 RAND J. Econ. 69, 76–81 (2004). Regarding comparative data, asset "redeployability" refers to the value that a firm's assets have to creditors upon default. The more efficient the bankruptcy system, the greater is this value on net. Professor Benmelech and his colleagues find that "greater redeployability is associated with greater loan size, lower interest rates, longer maturity and longer duration debt, and fewer creditors. These results highlight the economic importance of liquidation value and provide support for incomplete contracting and transaction cost theories for financial policy." Efraim Benmelech, Mark J. Garmaise & Tobias J. Moskowitz, Do Liquidation Values Affect Financial Contracts? Evidence from Commercial Loan Contracts and Zoning Regulation 3 (Nat'l Bureau of Econ. Research, Working Paper No. 11004, 2004). Further, Aghion and his colleagues obtain a result similar to that derived above in a model that attempts to explain differential growth rates among countries. See Philippe Aghion, Peter Howitt & David Mayer-Foulkes, The Effect of Financial Development on Convergence: Theory and Evidence 6–14 (Nat'l Bureau of Econ. Research, Working Paper No. 10358, 2004). In their analysis, "creditor protection" refers to the ability of creditors to be repaid and the "gap value" refers to the degree of a country's technological backwardness. Id. at 6–8. Aghion, Howitt, and Mayer-Foulkes's model implies that "in countries with a high degree of creditor protection the critical gap value $\underline{a}$ below which entrepreneurs become credit-constrained is lower than in countries with a low degree of creditor protection." Id. at 8. They find substantial empirical support for this prediction in a cross-sectional analysis of 71 countries during the period 1960–1995. Id. at 14. Simeon Djankov and his colleagues

2. Pursuing Projects Efficiently

A bankruptcy system also affects the effort level that firms financing with debt choose when pursuing projects. In the model above, the probability that the firm's project would succeed, *p*, was implicitly assumed to be exogenous. Realistically, however, project success depends in part upon the firm's efforts, and in part upon how the world turns out. The latter causal factor is represented here by a stochastic state variable denoted θ.[27] Effort is assumed to involve not only money, but also the diligent and intelligent application of skill. Thus, it is difficult for creditors to know whether a borrowing firm is exerting the optimal amount of effort. In addition, it would be costly to describe in a contract the various efficient actions the firm should take in each of the many possible states of the world that could materialize. For these reasons, this Article makes the standard assumption that effort is noncontractible.[28]

Although the probability of success for projects increases with the firm's effort level, this effort is costly. Thus, society prefers the

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gathered data on private credit for 129 countries and found that "both better creditor rights, and the presence of credit registries [i.e., accessible disclosure about potential borrowers] are associated with a higher ratio of private credit to GDP. However, creditor rights appear to be particularly important for private credit in the richer countries . . . ." Simeon Djankov, Caralee McLiesh & Andrei Shleifer, Private Credit in 129 Countries 4 (Nat'l Bureau of Econ. Research, Working Paper No. 11078, 2005). Also, Luc Laeven and Giovanni Majnoni, Does Judicial Efficiency Lower The Cost of Credit?, 29 J. Banking & Finance 1791 (2005), in a cross-sectional analysis of 106 countries, find (at 1792) that "improvements in judicial efficiency and judicial enforcement of debt contracts are critical to lowering the cost of financial intermediation for households and firms." Finally, Professor Esty finds that foreign banks are more likely to fund domestic projects in countries with strong creditor protection and strong legal enforcement. Benjamin C. Esty, When Do Foreign Banks Finance Domestic Projects? New Evidence on the Importance of Legal and Financial Systems 27 (Sept. 22, 2004) (unpublished manuscript, on file with the Virginia Law Review Association), available at http://ssrn.com/abstract=594526 (last accessed Mar. 4, 2005).

[27] The state variable θ can be thought of as demand for the firm's products or as a composite of input prices. Demand thus can be strong (a high θ) or weak (a low θ). Because the state variable θ is stochastic, a firm that exerted high effort, as an example, might still fail if demand fell sufficiently.

[28] This paragraph states the contract theory implication of Assumption A2: that creditors cannot observe payoff relevant actions the firm takes after it borrows. The Assumption rules out simple incentive contracts of the following form: The interest rate is low if the firm's effort level is high while the interest rate is high if the firm's effort level is low.

firm to exert effort to increase the probability of project success until the marginal gain from further effort equals the marginal cost. The firm, however, will only exert effort until its *private* marginal gain equals marginal cost. When a firm is financed with debt, it must share its success state return with creditors, whom it must compensate for bearing the risk of nonpayment. As a consequence, a debt-financed firm's private marginal return is lower than the social marginal return. The firm will respond by "underinvesting": by choosing a lower effort level than is socially optimal.

An inefficient bankruptcy system exacerbates the underinvestment effect by widening the gap between the creditors' good and bad state returns. When this gap is wide, as Section I.B.1 showed, the interest rate is high, so that the firm can keep even less of the success state return. Its incentive to exert effort correspondingly falls further. The underinvestment effect also exacerbates the project financing effect because the probability of project success falls as the firm's effort level falls. Equation (2) showed that the face value of the debt rises as the success probability p falls.[29] Equation (4) showed that the hurdle value for projects—v_{min}—increases as F increases. Thus, a decrease in the success probability shrinks the set of efficient projects that firms will pursue.

This and the next three paragraphs state formally the relation between the efficiency of a bankruptcy system and the efficiency with which firms pursue projects. Readers who find the intuitive explanation just given sufficient should skip to the summary section below. To begin, denote the effort level the firm chooses as e. The probability that the firm's project succeeds, denoted $p(e;\theta)$, increases as the effort level increases.[30] Recalling that the insolvency

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[29] Checking this by differentiating Equation (2) with respect to p yields $-(I - x)/p^2$ which is negative because $I > x$. F falls as p rises and also the converse.

[30] More precisely, it is assumed that: (a) $p(e;\theta)$ is differentiable and strictly concave in e; (b) $lim_{e \to 0} p'(e;\theta) = \infty$; (c) $p(\infty,\theta) < 1$. Assumption (a) holds that there is diminishing marginal returns to effort. Assumption (b) holds that it *always* is efficient for the firm to choose an effort level that exceeds zero while assumption (c) holds that the failure probability is positive at the maximum effort level. The model applies to decisions that the firm makes when solvent. As is well known, an insolvent firm has incentives to make sub-optimal investment decisions. This possibility is considered in Section II.C and Part III below.

return is $v(s_i) - c(s_i) = x(s_i)$, society wants the firm to choose the effort level that maximizes social welfare, which is

$$p(e;\theta)v + (1 - p(e;\theta))x - e - I.$$

The socially optimal level of effort, at which the marginal social return to effort (the left hand side of (5) below) equals the marginal cost (the right hand side), is

$$(5) \quad p'(e;\theta)(v - x) = 1$$

The firm, however, does not choose effort to maximize the *social* return but rather chooses effort to maximize its *private* return. It is initially assumed that absolute priority is followed, so that the firm solves *max* $p(e;\theta)_{e \geq 0}(v - F) + (1 - p(e;\theta))(0) - e - I$. The firm's private return is lower than the social return because the firm must share success state gains with creditors and it keeps no failure state gains. The firm thus realizes a lower return to effort than the return society would want it to earn. Precisely, the solution to the firm's maximization problem is:

$$(6) \quad p'(e;\theta)(v - F) = 1$$

The left hand side of Equation (6) is smaller than the left hand side of Equation (5) by definition: F is the sum the firm promises to repay and x is the insolvent firm's net value, so F must be larger than x when the firm is distressed. Equation (6) thus says that marginal revenue (the left hand side) equals marginal cost (the right hand side) at a lower effort level than society would want the firm to choose. This yields:

> *Proposition 3:* The gap between the socially optimal level of investment in debt-financed projects and the actual investment level widens as a country's bankruptcy system becomes less efficient.

The underinvestment effect is magnified if the bankruptcy system violates absolute priority because paying the firm a positive sum in the failure state reduces the penalty for failure. To show

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this, suppose that the firm anticipates the ability to exact the sum *g* from creditors to ensure a smooth bankruptcy process if the firm's project fails. The firm now solves

$$\max p(e;\theta)_{e>0}\; p(e;\theta)(v-F) + (1-p(e;\theta))(g) - e - I$$

The solution to this is:

$$(7)\quad p'(e;\theta)(v - F - g) = 1$$

   The left hand side of Equation (7) is lower than the left hand side of Equation (6), thus implying that a system's failure to follow absolute priority reduces further the firm's incentive to choose the optimal effort level. This reasoning yields:

> *Proposition 4:* The gap between the socially optimal level of investment in debt-financed projects and the actual investment level widens as deviations from absolute priority increase.

   When a firm has a set of projects from which to choose, limited liability creates an incentive for the firm to choose among the riskier projects because these projects shift more downside risk to the debt. Absolute priority violations, it has been shown, further shift downside risk, and thereby increase the firm's incentive to choose a sub-optimal but highly risky project.[31] Proposition 4 adds to this result that absolute priority violations *also* reduce the firm's incentive to exert effort on behalf of the project the firm ultimately chooses. Effort is reduced because a firm that expects a positive payoff in the insolvency state has less incentive to avoid insolvency. In other words, absolute priority violations partly insure the firm against project failure. This insurance, in turn, creates moral hazard.

   The underinvestment effect exacerbates the financing effect derived above. The success probability $p(e;\theta)$ declines as the firm exerts less effort. As $p(e;\theta)$ falls, v_{min}—the minimum success state return the firm requires for project pursuit—increases. This is because the firm must earn more in the success state to compensate

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[31] See Lucian Arye Bebchuk, Ex Ante Costs of Violating Absolute Priority in Bankruptcy, 57 J. Fin. 445, 452–53 (2002).

creditors for the increased likelihood that they will realize only the low failure state return.

C. Summary

A bankruptcy system should function to maximize the return that creditors earn when firms fail. The larger this return is, the lower the interest rate is that creditors demand. A lower interest rate is efficient for two related reasons. First, the set of economically viable and socially desirable projects that firms will pursue becomes larger as the interest rate falls. Second, the effort that firms exert in pursuit of debt-funded projects increases toward the optimal level as the interest rate falls.[32]

These results, however, tell an incomplete story. The model in Part I supposed the firm to make only three decisions: to choose whether to pursue a project, how to finance the project, and what effort level to invest in the project. A firm that is in financial or economic distress, however, makes two more decisions: when to enter the bankruptcy system, and which bankruptcy procedure to choose (if there is more than one). When the firm's bankruptcy payoff would be zero, the firm may make the latter two decisions inefficiently. In particular, the firm has an incentive to delay entry into the system in the hope that its fortunes will improve, thereby probably wasting assets, or to choose the procedure that maximizes private benefits for the firm,[33] thereby probably reducing the creditors' bankruptcy payoffs. Part III will argue that parties should be free contractually to assure the firm a positive bankruptcy return when this payoff would best ameliorate these two agency problems. Part II first considers the implications of Part I's conclusions for contexts where bankruptcy initiation or the choice of a bankruptcy procedure is not at issue.

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[32] The prices of debt and equity are generally positively correlated, making the effects of a bad bankruptcy system difficult to escape.

[33] A private benefit could be the nonpecuniary utility of running the firm, the opportunity to signal that the firm is actually well run, or the opportunity to further develop human capital from operating the firm's assets.

II. LEGAL APPLICATIONS

Part I showed that a bankruptcy law is efficient when it maximizes the creditors' bad state payoffs. Part II considers central sections of the Bankruptcy Code that frustrate this goal. These sections create incentives for some parties in a bankruptcy to redistribute wealth to themselves from other parties. Since these redistributional efforts come at positive cost to the bankrupt estate, the Code sections that encourage them actually reduce net creditor payoffs. Part II argues that these Code sections should either be repealed or amended, and thus makes concrete the view that a bankruptcy law seriously devoted to capital cost reduction would differ materially from the existing law.

A. The Avoiding Powers

It will be helpful, when discussing the avoiding powers, to derive a definition. Under the Bankruptcy Code, the "bankrupt estate" is defined as the set of assets that is available for distribution to general creditors.[34] Much of the Code attempts to maximize the estate so defined. This can be done in two ways: increase the value of the insolvent firm or shift assets from other claimants to the general creditors. The first method is desirable because when firm value increases, it is possible to increase the bad state payoff of at least one creditor without decreasing the payoffs of any other creditors. Thus, the effective pursuit of method (a) will reduce the cost of capital. The second method, on the other hand, is undesirable because when the estate is defined as the set of assets available to general creditors, the trustee and other parties are encouraged to reduce the payoffs to those claimants who are not general creditors. Since these efforts are costly, the consistent pursuit of method (b) necessarily reduces the total value available for distribution to all claimants, and so necessarily increases the cost of capital. This reasoning yields a normative recommendation and a definition that is used below. Regarding the recommendation, the Bankruptcy Code should make the "bankrupt estate" be coextensive with the value of the insolvent firm. Regarding the definition, a bankruptcy law implements a "bankruptcy reason" if (a) compliance with the

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[34] See 11 U.S.C. § 541(a) (2000).

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law will increase the value of the insolvent firm or (b) the law improves the incentives of firms to invest optimally in projects. This definition of a bankruptcy reason follows from the basic goal of a bankruptcy law: to reduce the cost of debt capital for firms. Section II.A will argue that, apart from the traditional prohibition on fraudulent conveyances, none of the avoiding powers implements a bankruptcy reason.[35]

1. Policing Secured Credit

The Code sections that permit the trustee to avoid improperly-perfected mortgages have only redistributional effects, and thus reduce creditor payoffs. The most important such section gives the trustee the rights of a lender that had extended credit to and simultaneously obtained a judicial lien on the property of the debtor—a "lien creditor"—on the day the bankruptcy petition was filed.[36] These rights exist whether or not an actual lien creditor existed.[37] Under the laws of every state, a lien creditor can "defeat"—that is, subordinate—the secured claim of a creditor whose security interest or real property mortgage was imperfectly perfected.[38] Consequently, if proper perfection of an actual security interest had not occurred as of the date of the petition, the trustee can use her lien creditor powers to defeat that interest. The effect of defeat is to reduce the priority of the secured lender to that of a general creditor. Secured lenders commonly do perfect properly. Casebooks, however, are filled with examples of their occasional mistakes and the Code gives the trustee an incentive to ask whether a mortgage on the debtor's property is vulnerable to attack.

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[35] A traditional fraudulent conveyance occurs when the debtor sells assets to favored buyers at below market prices. See 11 U.S.C. § 548 (2000). In recent years, courts have considered whether to use fraudulent conveyance law to require disgorgement from creditors of firms that failed after engaging in leveraged buyouts. E.g., Moody v. Sec. Pac. Bus. Credit, Inc., 971 F.2d 1056 (3d Cir. 1992); United States v. Tabor Court Realty Corp., 803 F.2d 1288 (3d Cir. 1986). This effort seems misguided, but is beyond the scope of this Article to evaluate.

[36] 11 U.S.C. § 544 (2000). Under the Bankruptcy Code, the trustee and a Chapter 11 debtor-in-possession have the same powers. Id. § 1107. The word "trustee" thus also refers to the Chapter 11 debtor.

[37] The trustee also has the status of a "bona fide purchaser of real property" from the debtor, who had perfected the transfer "at the time of the commencement of the case, whether or not such a purchaser exists." Id. § 544(a)(3).

[38] See, e.g., U.C.C. § 9-317 (2003).

The trustee's power to avoid security interests is traditionally justified on the ground that it increases the sanction that state law imposes on nonperfecting creditors. The state law sanction for failing to perfect in timely or appropriate fashion is to subordinate the secured lien to the lien of an *actual* later lien creditor or an *actual* later secured lender, and then in an amount *no greater than* the later creditor's claim. To this sanction the Code adds the relegation of the entire secured claim to general creditor status.

A bankruptcy reason cannot support this federal intervention into state security laws. No new value is created when a secured creditor becomes one more general creditor, but value is destroyed in the amount of the trustee's investigation and litigation expenses. A bankruptcy reason would only exist if state recording laws were inadequate. The resulting uncertainty regarding the existence of property rights in a debtor firm would increase credit costs, and thus be a concern that federal law could appropriately remedy. There is, however, no theoretical reason to believe that state law is deficient. The credit market is national for small firms and international for large firms. As a consequence, lenders would charge higher interest rates to firms in states where there is relatively less transparency regarding the existence of liens, or ration credit to these firms. Potential borrowers in relatively disadvantaged states thus would lobby their legislatures to improve local recording laws, and the incentive of states to increase local economic activity would predict receptivity to improvement. Similarly, states likely would increase transparency if that would create a competitive advantage in attracting and retaining firms. In short, strong theoretical reasons exist to believe that state competition regarding laws regulating lien transparency has worked well. Furthermore, no sufficient theoretical or empirical results have been advanced to the contrary. On this record, state law appears to ensure an adequate measure of lien transparency, so that the wealth-reducing effect of authorizing trustees to pursue secured creditors does not buy increased credit market efficiency.[39]

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[39] The author has criticized the law making process that generated the U.C.C. See generally Alan Schwartz & Robert E. Scott, The Political Economy of Private Legislatures, 143 U. Pa. L. Rev. 595 (1995). This criticism did not imply that a state would pass a proposed uniform law which disadvantaged borrowers operating in that state.

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2. Preferences

Money Transfers. The preference sections of the Code also create incentives for the trustee to redistribute wealth from some creditors—those that received preferences—to other creditors—those that did not. These redistributions, too, come at positive cost, and thus reduce the net value of the bankrupt estate. The Code permits the trustee to recover payments to a creditor made in the ninety days before bankruptcy unless (a) the creditor made a contemporaneous transfer to the debtor; or (b) the payment was made in the ordinary course of the debtor's business.[40] Payments in the former category do not reduce the value of the firm because cash out is replaced with cash or goods in. The exception for payments in category (b) has a similar justification. Shipments in the ordinary course, over time, will offset payments in the ordinary course; the typical transaction sequence thus will not deplete the firm's value. The trustee's power otherwise to avoid preferences can be partly restricted by private agreement. A firm may contract out of the law by issuing security. An eve-of-bankruptcy payment to a secured creditor is not a preference: The creditor has a property right in the firm's assets, and it is entitled to realize that right in whatever way the security agreement permits.

There are two traditional justifications for preventing distressed firms from preferring some general creditors over others: the prohibition is ex post efficient, and the prohibition treats all general creditors equally.[41] This part shows the following: (a) the preference law is ex post inefficient; (b) a mandatory rule prohibiting the payment of preferences is ex ante inefficient; rather, the preference

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[40] 11 U.S.C. § 547 (2000).

[41] See Douglas G. Baird, Thomas H. Jackson & Barry E. Adler, Cases, Problems, and Materials on Bankruptcy 241 (3d ed. 2000) ("Section 547 . . . gives the trustee the ability to recover assets that creditors grabbed on the eve of bankruptcy. This power to avoid 'preferences' ensures that the bankruptcy process can in fact overcome the collective action problem that arises when an insolvent debtor has multiple creditors."); see also In Re Bullion Reserve of N. Am., 836 F.2d 1214, 1217 (9th Cir. 1988) ("The dual purpose of § 547 . . . is to discourage creditors from racing to the courthouse to dismember the debtor during its slide into bankruptcy and to further the prime bankruptcy policy of equal distribution among similarly situated creditors."). Traditional justifications for the preference law are summarized in Charles J. Tabb & Ralph Brubaker, Bankruptcy Law: Principles, Policies, and Practice 441–44 (2003). The complexity of preference litigation is illustrated in Rafael I. Pardo, On Proof of Preferential Effect, 55 Ala. L. Rev. 281, 299–319 (2004).

law should be a default; and (c) the pursuit of ex post equality among general creditors is without justification.

The ex post efficiency case for prohibiting preferences is thought to follow from the justification for bankruptcy law itself. A firm's survival prospects may be fatally worsened by last minute depletions of its capital. Some such firms may be only financially distressed, however, and so should be continued. Prohibiting preferences thus advances the goal of saving viable firms.

A distressed firm would pay preferences, in the traditional theory, either because it may yield to creditor pressure or because the firm's principals may be in league with powerful creditors. The former reason is unpersuasive because creditors cannot force a distressed firm to pay preferences. To be sure, in the absence of a bankruptcy filing, creditors will attach property pursuant to judicial orders. The debtor, however, need not make voluntary payments. Creditors can threaten attachment in order to force the debtor to pay, but the debtor can respond by credibly threatening to file, which would stay all attachments.[42] Thus, if the preference law were repealed, distressed firms would pay preferences because they wanted to, not because they had to.

The question when a distressed firm would want to prefer some creditors has never been seriously explored. If no preference law existed, a distressed firm would pay preferences only if it expected to be liquidated. To see why, recall that the pro rata bankruptcy distribution rule requires each general creditor to receive a sum that equals the firm's ratio of total value to total debt times the creditor's unpaid debt.[43] A distressed firm that pays one creditor more than this must pay at least one other creditor less. When would a distressed firm default in this asymmetric way?

Consider first a firm that believes its continuation value to exceed its liquidation value (that is, that it is liquidity-constrained but

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[42] The firm faces a tradeoff when creditors threaten attachments. Attachments can destroy the firm, but a bankruptcy proceeding can be costly to the firm and to its managers. A common motive for filing, according to the bankruptcy community, is to forestall attachments. This view underlies the text's assertion that the firm's threat to file is credible. Firms also sometimes resolve the tradeoff by renegotiating with powerful creditors. These ex post agreements are discussed in Part IV below.

[43] See 11 U.S.C. § 726 (2000). Let d_i be the debt a particular creditor holds, D be the firm's total debt, and v be its value. Then each creditor receives the bankruptcy share which $(d_i/D)(v)$ can be written $(v/D)(d_i)$.

only financially distressed). The firm could either file for bankruptcy or attempt to settle privately with its creditors. Suppose that the firm preferred to settle. To prefer a creditor is to pay it more than its pro rata bankruptcy share. Nonpreferred creditors, however, would reject a work-out offer that offered them less than their pro rata bankruptcy payoffs. Instead, these creditors would bring suit and attempt to attach the distressed firm's assets. These efforts would cause the firm to file. From the firm's point of view, then, the goals of settling privately and paying preferences are inconsistent. Rather, a firm that wants to settle privately would offer each creditor its pro rata share plus a portion of the cost savings from avoiding bankruptcy.[44] In other words, the pro rata rule precludes a firm interested in survival from paying today what are defined as preferences. Consequently, a separate prohibition against preferences does not materially increase a financially distressed firm's commitment to the pro rata rule.

Now consider a firm that believes its liquidation value to exceed its continuation value. This debtor, in its capacity as a firm, is indifferent as to how its assets are divided because the firm will disappear with certainty. It has no incentive to adhere to any rule of distribution. The firm's principals, in their individual capacities, however, may not be indifferent as to whom the firm pays. Rather, the principals may cause the firm to pay particular creditors either to ensure good will for the principals, in consequence of a personal relationship, or to avoid liability exposure if a principal has guaranteed the firm's debt.

The trustee's power to recover preferences thus is exercised *only on behalf of the general creditors of economically failing firms.* Redistributing the assets of a failed firm among its general creditors amounts to redecorating the Titanic's salon. Because redecoration is costly, enforcing the preference prohibition diminishes the value of the bankrupt estate. The preference law is actually ex post inefficient.[45]

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[44] These offers are accepted with positive probability. See Alan Schwartz, Bankruptcy Workouts and Debt Contracts, 36 J.L. & Econ. 595, 601–08, 613–18 (1993).

[45] That financially distressed firms would renegotiate or use Chapter 11 while economically distressed firms would give up is shown in Pascal François & Erwan Morellec, Capital Structure and Asset Prices: Some Effects of Bankruptcy Procedures, 77 J. Bus. 387, 390 (2004) and Ernst-Ludwig von Thadden, Erik Berglof & Gerard Roland,

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Turning to ex ante efficiency, Part I showed that legal rules which reduce the value of distressed firms raise interest rates. Thus, parties would wish to avoid the rules if possible. This reasoning implies that the parties' current ability to contract out of the preference law by giving security should be expanded. It is a more difficult question whether the default rule should permit distressed firms to pay whomever they choose, so that firms would have to contract into the preference law, or whether current law should be the default, so that firms would have to contract out. It is worth stressing, however, that the question regarding what the default should be is the ground on which preference law should be discussed. Bankruptcy reasons cannot justify the Code's current mandatory rule.[46]

A preliminary consideration of the default question should begin with a possible strategy of creditors who are unsure, ex ante, whether the debtor, if economically distressed, would later prefer anyone. The equilibrium strategy is to charge interest rates that assume preferences will be paid. The interest rate increases from this "assume the worst" strategy could exceed the interest rate reductions that repeal of the preference law would produce. Hence, if repealing the preference law altogether would materially increase

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Optimal Debt Design and the Role of Bankruptcy 4–5 (Aug. 2003) (unpublished manuscript, on file with the Virginia Law Review Association). This Article applies their analysis to the question of when a firm might pay preferences. If the preference law deterred creditors from collecting, then its repeal might increase transaction costs by increasing creditor collection efforts. Few bankruptcy scholars believe that the law deters collection, however. A preferred creditor who is caught must give the money back and so loses only its collection costs. Not everyone is caught and discount rates are positive. As a consequence, creditors today seek preferences unless collection costs are very high. For a full exposition of this view, see generally Barry E. Adler, A Re-Examination of Near-Bankruptcy Investment Incentives, 62 U. Chi. L. Rev. 575 (1995). The preference law, as the text says, thus adds costs (of discovering and litigating to recover preferences) to costs already incurred.

[46] Professors Daniels and Triantis argue that preference law encourages early exit by an informed creditor because the creditor knows it will have to disgorge payments made shortly before bankruptcy. George G. Triantis & Ronald J. Daniels, The Role of Debt in Interactive Corporate Governance, 83 Cal. L. Rev. 1073, 1094–96 (1995). According to these scholars, early exit is good because it signals to the market that the debtor is distressed, and thus facilitates rescue. Id. This view is questionable based on the argument set forth here because a viable debtor would not pay preferences and an unviable debtor could not be rescued. In addition, Part III.A below shows that when early rescue is a possibility, parties have available to them contracts that would encourage early rescue more efficiently than the preference law appears to do.

uncertainty, current law should be the default because parties would commonly prefer it.

Any increase in uncertainty, however, is unlikely to be of this magnitude. A creditor with the power to exact a preference often will be the firm's main bank. Primary bank lenders commonly require borrowers to keep their accounts with the bank, and the bank will set off the borrower's debt to it against the bank account. Because set-offs are not considered preferences under the Code, current creditors must price the bank's ability to get them. Creditors today thus face the uncertainty of material asymmetric defaults. In addition, which creditors will likely receive preferences seems predictable. This reasoning suggests that the better default would permit the firm to pay whomever it chooses.[47]

Turning from efficiency to equity, the pro rata rule gives each creditor the same proportional payoff.[48] Making the preference law a default sometimes would subvert this ex post equality result. That bankruptcy law should pursue equality of any type, however, is a position whose correctness is incorrectly assumed. Principles of equality are principles of entitlement. Thus, in conditions of scarcity, each actor who has an equal entitlement is entitled to an equal share. An actor can have such an entitlement either instrumentally (respecting the entitlement would advance an independent goal) or intrinsically (equality in the context at issue is a good in and of itself).[49] Making the pro rata rule mandatory, it has been shown here, is inefficient, and no other non-equality goal has been identified that a mandatory preference law would advance. Business bankruptcy also is an inappropriate arena in which to pursue intrinsic equality claims. For example, the equal welfare doctrine holds that the disadvantaged are entitled to more pleasure because they have the capacity to experience more pleasure. Such reasoning would be

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[47] A firm could contract out of this default by offering a "no preference" covenant to all of its creditors; the covenant would promise that if the firm became insolvent it would pay all unsecured creditors pro rata. A violation of the covenant would trigger immediate acceleration of the debt and would also impose goodwill costs. A possibly better general solution would permit parties to specify in the lending agreement that the preference section of the current Code (11 U.S.C. § 547) would apply to pre-bankruptcy payments.

[48] See supra note 41.

[49] See Joseph Raz, Principles of Equality, 87 Mind 321 (1978); see also Derek Parfit, Equality and Priority, 10 Ratio 202, 205–06 (1997).

misplaced if applied to business firms. There is, therefore, no good reason, in the business bankruptcy context, to temper the pursuit of efficiency with equality considerations. And to summarize the argument of this section, although the current preference law is mandatory as regards monetary payments, it should be a default that would permit insolvent firms to make irreversible payments to creditors at any time preceding the filing of a bankruptcy petition.

Securing Antecedent Debt. The trustee can defeat a mortgage lien given within ninety days of bankruptcy to secure an antecedent debt.[50] Although the prohibition on security transfers may in fact increase creditors' bad state payoffs, unlike the prohibition on monetary transfers, this possibility cannot justify the law. To understand the Code's possible contribution, note that an insolvent firm may sometimes have an incentive to overinvest—to pursue a project that has a negative net present value but also has a sufficiently high upside to return the firm to solvency if the project succeeds. The firm may take the project because it could capture much of the upside value while creditors bear the entire downside risk. Suppose then that a firm has such a project available to it, but needs external financing. While new creditors will not finance bad projects, an existing creditor might if given security.

To see why, let a creditor hold a debt with an expected value that is below face. The creditor is asked to make a new loan, but loans into bad projects will have values below face when made. The creditor may nevertheless finance the bad project if it is given security for the prior unprotected debt. The resulting increase in the creditor's expected insolvency payoff for the earlier loan may more than offset the creditor's expected loss on the new bad loan. Hence, a firm that can secure antecedent debts may be able to finance a negative net present value project—to overinvest. The preference law precludes this possibility by permitting the trustee to avoid the late lien, thereby preserving value for creditors as a group.[51]

An existing creditor, however, may be the best, or only, source of new financing for a financially distressed firm. This creditor too

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[50] 11 U.S.C. § 547 (2000).

[51] This consequence of 11 U.S.C. § 547 was identified in Barry E. Adler, Bankruptcy and Risk Allocation, 77 Cornell L. Rev. 439, 462 n.97 (1992).

may refuse to lend if its existing debt remains unprotected. Thus, the prohibition on security transfers makes it harder for distressed firms to obtain working capital. The issue is whether it is better to risk chilling new financing for possibly salvageable firms in order to deter overinvestment by probably failing firms. The former appears to be the more serious danger. Distressed firms commonly need working capital but few firms, it seems, have attractive overinvestment opportunities: the availability of a negative value project with an upside large enough to restore the firm to solvency.[52] Relaxing the prohibition on security transfers, so that financially distressed firms could borrow more easily, thus would increase the value of troubled firms on net.[53] An objection to this claim is that giving firms the power to secure antecedent debts would reduce certainty for creditors as a group. But this objection lacks force. Firms today can secure prior debts if they do so more than three

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[52] Eckbo and Thorburn reject the overinvestment hypothesis based on Swedish data. The authors explain this result by theorizing that the managers of distressed firms have a strong incentive to invest conservatively in order to preserve private benefits of control. B. Espen Eckbo & Karin S. Thorburn, Control Benefits and CEO Discipline in Automatic Bankruptcy Auctions, 69 J. Fin. Econ. 227, 228 (2003). Andrade and Kaplan, in a study of defaulting debtors, also report: "we find no evidence that the distressed firms engage in risk shifting/asset substitution of any kind." Gregor Andrade & Steven N. Kaplan, How Costly is Financial (Not Economic) Distress? Evidence from Highly Leveraged Transactions That Became Distressed, 53 J. Fin. 1443, 1445 (1998). Dahiya and colleagues find little evidence of overinvestment in a sample of firms that received DIP financing. Sandeep Dahiya, Kose John, Manju Puri & Gabriel Ramírez, Debtor-in-Possession Financing and Bankruptcy Resolution: Empirical Evidence, 69 J. Fin. Econ. 259 (2003). Similarly, Chatterjee and colleagues find that both stock and bond prices rise when a DIP financing is announced, indicating the market's belief that the insolvent firm's project has positive value. Sris Chatterjee, Upinder S. Dhillon & Gabriel Ramírez, Debtor-in-Possession Financing, 28 J. Banking & Fin. 3097 (2004). These authors also note that "DIP loans are typically short-term revolving lines of credit that restrict the use of proceeds to working capital . . . ." Id. at 3099.

[53] The issue discussed here reappears during bankruptcy when debtors in possession ask courts to approve working capital loans from prior lenders who demand cross-collateral clauses (that is, who will lend only if their prior unsecured debt is covered by new mortgages). Bankruptcy courts have been sympathetic to these requests, but this type of financing may not survive appellate attack. See In re Saybrook Mfg. Co., 963 F.2d 1490, 1491 (11th Cir. 1992) (holding that bankruptcy courts lack the power to approve cross-collateral financing).

months before bankruptcy, and creditors who care can deter this practice with negative pledge clauses.[54]

B. *Opting Out by Solvent Parties*

Parties cannot contract out of the current Code.[55] In the analysis above, creditors already had transferred money or goods to the insolvent firm or rendered services to it. These creditors were owed debts. Parties instead sometimes have contracts requiring them to provide goods or services to or to buy goods or services from a firm that later becomes insolvent. The solvent party may prefer to cancel the contract rather than continue dealing with its insolvent contract partner. The default rule in commercial law permits the solvent firm to exit.[56] The default rule in bankruptcy once required that the party continue to deal but, prior to 1978, the party could expressly condition its future performance on the solvency of its contract partner, or on the partner's avoidance of bankruptcy. Today, terms with such conditions, termed "ipso facto" clauses, are unenforceable.[57] As a consequence, an insolvent firm that has entered bankruptcy may "assume" an ongoing contract and thereby require the solvent firm to perform it.

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[54] Barring late liens also responds to the inefficient continuance concern. An economically distressed firm may seek more liquidity, not for a new project that would save it, but to continue a bad project so that managers may continue to consume private benefits. This issue is deferred to Part III because there exist contracts that respond to this concern without possibly drying up a credit source for salvageable firms.

[55] The rule against contracting out applies both in the United States and Europe. Parties once could effectively contract out of the English bankruptcy law by using the floating charge, a lien that permitted the secured party to take the collateral in the event of bankruptcy. The secured lending agreement thus became a contract that permitted the secured party to avoid bankruptcy whenever the return from foreclosure exceeded the return from participating in the system. The efficiency properties of the floating charge are analyzed in John Armour & Sandra Frisby, Rethinking Receivership, 21 Oxford J. Legal Stud. 73 (2001). English law was recently amended to prevent secured parties from foreclosing in this way. See John Armour & Rizwaan Jameel Mokal, Reforming the Governance of Corporate Rescue: The Enterprise Act 2002 (ESRC Ctr. for Bus. Research, Univ. of Cambridge, Working Paper No. 289, June 2004), available at http://www.cbr.cam.ac.uk/pdf/wp289.pdf.

[56] See U.C.C. § 2-609 (2004).

[57] See, e.g., 11 U.S.C.S. § 365(e)(1)(A) (2005) (prohibiting the right to terminate a contract with a debtor due to the "insolvency or financial condition of the debtor at any time before the closing of the case").

In Congress's view, the refusal to enforce ipso facto clauses follows from a bankruptcy reason. If solvent parties could costlessly refuse to deal with bankrupt firms, Congress believed that mass exits of suppliers and customers would follow. These exits would have the same result as an unregulated creditor right to collect: Financially as well as economically distressed firms would be liquidated. This view is mistaken. Rather, the current Code causes inefficient performances by solvent parties and sub-optimal investment by borrowers. Since borrowers bear the costs of these inefficiencies, in the form of higher interest rates, bankruptcy reasons imply enforcing ipso facto clauses, not their prohibition.

To understand this conclusion, consider a model in which the firm has a financial creditor (the investor) and a supplier (the seller).[58] As before, the firm has a project that requires the sum I to pursue and whose success probability is partly a function of the effort the firm exerts. The investor supplies the sum I. The firm's project cannot succeed without the seller's product. The seller's production cost is a random variable j, which can range from very low to very high. A successful project returns v_s, which is sufficient to pay off the seller and the investor. An unsuccessful project returns v_f.[59] It is assumed that $I > max \{v_f\} > j^h$. The former inequality holds that an unsuccessful project cannot earn enough to pay off the investor; the latter inequality holds that it may nevertheless be efficient for the seller to perform for some unsuccessful projects (in these cases, the seller's cost would be less than the project's value). The seller, however, prefers to breach whenever its cost turns out to exceed the contract price, which is denoted k. The firm earns a private benefit, b, from the project so it prefers the project to be done, whether completion is efficient or not.

If a court could determine the insolvent buyer's expectation damages accurately, then contract law alone would permit the firm to complete the project only when completion would be efficient.

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[58] The analysis that follows is drawn from Yeon-Koo Che & Alan Schwartz, Section 365, Mandatory Bankruptcy Rules and Inefficient Continuance, 15 J.L. Econ. & Org. 441 (1999).

[59] For readers interested in model details, the seller's cost j is drawn from $[0, j^h]$ by a cumulative distribution function $F(j)$. The successful project return v_s is drawn from a positive compact support V_s and the unsuccessful project return v_f is drawn from a positive compact support V_f.

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The buyer's damages upon seller breach are *max{v_f – k, 0}* (that is, project value less price when this difference is positive, and zero otherwise). The seller thus will perform, even if the seller's costs turn out to be high, when its loss from performance *(j – k)* would be lower than expectation damages, which are the buyer's loss from breach *(v_f – k)*; otherwise, the seller will breach.

   The value of the insolvent firm's project, v_f, is the present discounted value of future returns, however, and courts seldom can observe future returns perfectly. Thus, a court may err in calculating damages. In a standard formulation, the possibility of judicial error is represented by denoting the expected damages that the seller would pay on breach, estimated from when the seller learns what its production costs would be, as *E(d) = max(v_f – k + ε, 0)*, where *E(ε)* has mean zero and positive variance. In less technical words, courts are assumed to find expectation damages accurately on average, but in any given case a court may err on the high or the low side.

   The possibility of judicial error implies that the *expected damages* the seller faces, when it must decide whether to perform or breach, will exceed the true damages. From the seller's point of view, the damage distribution is truncated at the lower tail: The seller does not benefit from a court's highly negative errors, because the buyer pays no damages when the seller breaches, but the seller is harmed by the court's highly positive errors, because the buyer's damages are unbounded from above. The seller must pay the damages a court finds, however large they turn out to be.

   To understand the effect of this asymmetry, suppose that project value is less than the seller's cost *(j > v_f)*, but project value still is high enough to permit the buyer to pay the price *(v_f > k)*. The buyer would then take either of two actions. First, the buyer may demand that the seller perform. When the seller is facing an overcompensatory sanction (in expectation), it may prefer trade to breach. A seller that does perform earns the negative sum *k – j*. The project generates a payoff to the buyer of *v_f – k*, which the buyer would have to pay to the investor. Thus, when the seller is coerced to perform, the two solvent parties' returns sum to *k – j + v_f – k = v_f – j < 0* (because project value is below cost). The buyer receives no cash, but realizes its private benefit of *b*.

The buyer's second possible action when a project would be inefficient to complete but could sustain payment of the contract price would be to permit the seller to exit. Since the buyer could accept performance under the contract, the solvent parties would consent to project cancellation only if they received the same total (negative) payoffs that performance would have yielded. Satisfying this condition would require the seller to pay to the buyer the sum the seller would lose had it performed, which is $k - j$, and the buyer again would have to pay the investor $v_f - k$. Cancellation thus permits the buyer to earn $(j - k) - (v_f - k) = j - v_f > 0$, but the buyer would not receive its private benefit because there would be no project. Hence, the buyer will enforce trade when its private benefit would exceed the fee it would earn by permitting exit (that is, when $b > j - v_f$); and the buyer will permit cancellation otherwise. Both of the buyer's possible actions yield the same total negative payoff for the solvent parties.

Turning to the contract stage, the seller and investor will anticipate that the buyer's project may turn out to be inefficient but that, in this event, the buyer would either compel trade or exact a bribe in order to permit cancellation. Since either possibility generates a negative payoff for the solvent parties, they will charge higher interest rates than the rates they would charge were courts able always to find expectation damages accurately. Part I has shown that the set of fundable projects shrinks, and the incentive of a firm to exert effort in project pursuit inefficiently falls as the interest rate the firm faces increases.

This analysis shows why parties often used ipso facto clauses. An ipso facto clause is a perfect substitute for accurate expectation damages. The seller would exercise its right under the clause to exit without paying any damages whenever its performance cost would exceed the price. An insolvent buyer could pay the seller to reverse this decision only when it would be efficient for the seller to perform; that is, when the return from the buyer's project would exceed not only the contract price but also the seller's cost. In contrast, when the buyer's project would be inefficient to complete, the buyer would lack the liquidity to prevent exit. Thus, an ipso facto clause yielded ex post efficiency and good investment incentives, and therefore lowered the interest rate. A buyer would offer an ipso facto clause when its share of the increase in the project's

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expected surplus made possible by a lower interest rate exceeded the expected private benefit the buyer later could extract through renegotiation were the clause absent. That buyers capture the *entire* expected surplus from projects when they borrow in competitive credit markets, and that higher interest rates are paid in every circumstance while private benefits are only realized in failure states, explains why ipso facto clauses were common.

Part I showed that parties internalize the costs and benefits of efficient lending agreements. Thus, social welfare was greater when buyers had the freedom to offer ipso facto clauses than welfare now is under the law that prohibits ipso facto clauses and thus encourages buyers to insist on their contractual right to performance ex post. Prohibiting ipso facto clauses is therefore inefficient. In the lexicon of this Article, bankruptcy reasons imply the enforcement rather than the prohibition of contracts that permit customers and suppliers to condition their performance on the continued solvency of their contract partners.

C. Compensating Experts

Bankruptcy reasons imply a reversal of the Code's rules for compensating experts. Creditors often retain experts such as lawyers, investment bankers, and accountants during the course of a Chapter 11, and these expert fees can be substantial.[60] The Code authorizes the bankruptcy court to reimburse many junior creditors' expert expenses[61] and courts commonly grant reimbursement

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[60] Ang, Betker, and Weiss each report that administrative fees can be substantial, ranging between three and eight percent of the total liquidating value of the bankrupt firm's assets. James S. Ang, Jess H. Chua & John J. McConnell, The Administrative Costs of Corporate Bankruptcy: A Note, 37 J. Fin. 219, 223 (1982) (reporting 7–8%); Brian L. Betker, The Administrative Costs of Debt Restructurings: Some Recent Evidence, 26 Fin. Mgmt. 56, 57 (1997) (reporting 3.9%); Lawrence A. Weiss, Bankruptcy Resolution: Direct Costs and Violation of Priority of Claims, 27 J. Fin. Econ. 285, 299 (1990) (reporting 3.1%) . Fees also can be large in absolute terms. Experts in the WorldCom bankruptcy have sought to collect $600 million in fees, and the Enron Chapter 11 plan estimates that expert fees will sum to $995 million. See Mitchell Pacelle, Bankruptcy Specialist To File for Additional Payment; On Top of $63.4 Million, 'Success Fee' to Be Sought Of Additional $25 Million, Wall St. J. (Eastern Edition), Sept. 4, 2004, p. A2.

[61] Creditors are authorized to form committees to assert their interests, and the court can reimburse the expenses for professional services that these committees incur. See 11 U.S.C.S. §§ 330(a), 1103 (2005).

requests.[62] Apart from attorneys' fees in some cases, the Code does not authorize the reimbursement of senior creditor expert expenses.[63] A compensation scheme based on a bankruptcy reason would reverse this allocation, authorizing the payment of compensation to seniors but not to juniors.

To see why, consider a simple model in which the insolvent firm has a senior creditor whose claim is in the money and a junior creditor whose claim is not.[64] Parties may employ experts for productive or for redistributional reasons. An investment banker acting for a creditors' committee composed of juniors would be productive if she helped to develop a better business plan for the insolvent firm. She would be rent seeking, however, if she attached an inflated value to the proposed plan in order to increase the juniors' stake in the reorganized company. Courts seldom can distinguish clearly between productive and redistributional spending because often the same expert activity—proposing and evaluating a plan—can have both effects.

In this model, the senior creditor would not spend productively—to increase firm value—because her claim is in the money and there is enough value to cover it. The junior creditor has an incentive to spend productively because he is the residual claimant. On the other hand, the junior also has an incentive to engage in rent seeking because his payoff increases as the value of the senior claim falls.[65] A court that could distinguish efficient from inefficient

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[62] See Lynn M. LoPucki & Joseph W. Doherty, The Determinants of Professional Fees in Large Bankruptcy Reorganization Cases, 1 J. Empirical Legal Stud. 111, 135–36 (2004) ("[I]n the large majority of cases, the courts awarded professionals nearly the entire amounts for which they applied.").

[63] The U.C.C. permits secured creditors to contract for the recovery of reasonable attorneys fees incurred in connection with repossession out of "the cash proceeds of disposition." U.C.C. §§ 9-608(a)(1)(A), 9-615(a)(1) (2004). These contracts are enforced in bankruptcy. 11 U.S.C.S. § 506(b) (2005). The Code otherwise makes no provision for the reimbursement of senior creditor expert expenses. A reorganization plan that reimburses senior expenses for professionals would be confirmable, but the extent of senior compensation under plans appears unknown.

[64] Firms commonly are in Chapter 7 when the senior claim is out of the money; the focus here is on Chapter 11. The analysis below follows Arturo Bris, Alan Schwartz & Ivo Welch, Who Should Pay for Bankruptcy Costs?, Forthcoming, 34 J. Legal Stud. 2 (2005).

[65] Juniors may attack absolute priority by, among other things, attempting to subordinate senior liens, attempting to recover preferences from seniors, proposing an inflated value for the firm, delaying proposing a plan unless compensated, and propos-

spending would only reimburse productive junior expert costs, which would eliminate redistributional spending by both creditor types.

The Code, however, creates perverse spending incentives on the assumption that courts cannot make this distinction. The senior today primarily spends defensively, to fend off the junior's redistributional efforts, while the junior allocates his spending between productive and redistributional activities, depending on which would most increase his payoff. As a consequence, cases exist in which the senior could make a constructive contribution but will not because her claim is in the money. Likewise, the junior could make a constructive contribution but will not because he does better litigating to subordinate the senior claim. Total firm value falls in consequence, both because value enhancements are foregone and because the court sometimes reimburses junior efforts to defeat absolute priority. A reimbursement scheme animated by a bankruptcy reason instead would attempt to increase senior and reduce junior spending.

A simple reform would authorize the bankruptcy court to reimburse senior spending on experts but not junior spending. It may be possible to do better. To see how, suppose that the insolvent firm itself wanted to maximize value. The firm likely is more competent than the court at distinguishing spending by type. Therefore, the firm would be less likely than the court to compensate the juniors for rent seeking and would enlist the seniors in value maximization when feasible. The reimbursement power thus should be given to the debtor-in-possession. Regarding the key assumption, there is an increasing tendency to write compensation contracts with the firm's managers (often new ones) that reward the managers for effective turnaround efforts. Also, while the managers of insolvent firms may have incentives to extend the firm's life inefficiently and otherwise to consume private benefits, they seemingly could seldom profit from subsidizing rent seeking by others. Regardless of whether the reimbursement power is given to the court or to the firm, a focus on capital cost reduction shows that the power is used perversely today.

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ing a high variance business strategy for the reorganized firm (which can reduce the value of senior debt).

To summarize this Part, the avoiding powers, the contracting out rules, and the Code's compensation practices create incentives for the trustee and other parties to waste the bankrupt firm's resources in the service of redistributing value among creditors. These rent-seeking efforts seldom, if ever, increase the total value available to all. A bankruptcy law whose goal is to minimize the cost of capital thus would eliminate the avoiding powers, permit opting out by solvent parties, and dampen the collection efforts of junior creditors.

III. CONTRACTING FOR BANKRUPTCY PROCEDURES

The argument to this point implicitly assumed that the state had put in place a single bankruptcy system. This system, it was shown, should function to reduce capital costs for firms. Relevant to what follows, Part II.B argued that the bankruptcy system also should be a default, in the sense that creditors and suppliers should be permitted to contract for the right to refuse to deal further with a firm that becomes insolvent. In fact, the U.S. has two bankruptcy "subsystems": liquidation (Chapter 7 of the U.S. Bankruptcy Code) and reorganization (Chapter 11). Under current law, the insolvent firm makes the initial choice which of these systems to use. The bankruptcy court either allows the firm's choice to stand or orders the firm and its creditors into the other system. The choice between these subsystems, or "procedures," also is mandatory, in the sense that the firm cannot contract with its creditors ex ante to use one or the other procedure should it become distressed.

Part III will argue that capital costs would be reduced were firms permitted to agree in lending contracts to use a particular procedure in the failure state. Expanding the contractual space would respond to two bankruptcy-related agency problems that arise between a distressed firm and its creditors. The first concerns bankruptcy initiation: because bankruptcy is hard on a firm and its managers, a firm sometimes will delay entry into the applicable bankruptcy system in the hope that its fortunes will improve, or because its managers want continued access to private benefits of control. The second agency problem exists in consequence of the property of bankruptcy procedures to be state dependent: either reorganization or liquidation could maximize the value of the insolvent firm, depending partly on the state of the world that exists

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when the firm becomes distressed. The firm's managers, however, have an incentive to always choose reorganization because it is the procedure that maximizes private benefits. Procedural contracting responds efficiently, in theory, to these agency problems. Hence, permitting parties ex ante to contract for the procedure that would be best in their circumstances would reduce capital costs.

   There is, however, a question whether the practice of firms to incur debt over time and from multiple creditors creates practical obstacles to the writing of procedural contracts. Also, some commentators claim that bankruptcy contracting would be inefficient either because creditors who are natural persons and creditors with small claims—"nonadjusting creditors"—will not adjust their interest rates to the controlling bankruptcy scheme, or because the transaction costs of any contracting scheme would swamp the gains.[66] Part III concludes by arguing that: (a) the obstacles to coordinating on "bankruptcy contracts" likely could be overcome, (b) the efficiency objections to bankruptcy contracting are erroneous or misconceived, and (c) there is no harm in giving contracting schemes a try.

A. The Bankruptcy Initiation Problem

An implication of the analysis in Part I is that the firm's bad state return should be driven to zero. This payoff maximizes the creditors' return and so minimizes the interest rate. A procedure that drives a firm's bad state payoff to zero, however, creates a disincentive for firms to use the procedure. Rather, an insolvent firm would have an incentive to delay filing; it receives nothing if it files today but could consume resources today if it files tomorrow.[67] A contract that would give the distressed firm a positive payoff in bankruptcy would increase the firm's incentive to use the system, but the contract would worsen the firm's ex ante incentive to invest. Thus, at the lending stage, parties free to contract would face

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[66] See, e.g., Warren & Westbrook, supra note 22, at 1214.

[67] Décamps and Faure-Grimaud also show that when the game between the owners of a leveraged firm and its creditors is analyzed in a dynamic option framework, the owners' option always induces excessive continuance; the firm, left to its own devices, will operate longer than is optimal. Jean-Paul Décamps & Antoine Faure-Grimaud, Excessive Continuation and Dynamic Agency Costs of Debt, 46 Eur. Econ. Rev. 1623, 1636–37 (2002).

a tradeoff between two incentive problems: The lender will want to encourage the firm to exert optimal effort in project pursuit, but induce the firm, conditional on project failure, to enter a bankruptcy system before wasting assets. The relative strength of these conflicting incentives turns out to vary with the parties' circumstances, so that procedural contracts would differ across parties. It follows that restricting the parties' freedom to choose among possible procedures cannot be optimal.[68]

To pursue this insight, this Article continues with a variant of the model introduced in Part I.[69] Again, the firm borrows in period one and exerts effort in period two. Project success is a function of the firm's effort level and a stochastic state variable. However, there is now an added period, 2', in which the firm observes a "signal," private to it, that reveals the type of project it turns out to have. The project will be (a) a certain success that returns the value v_s; (b) a certain failure that returns v_f; or (c) a possible success. A possibly successful project returns v_s with probability p if the project is run as originally planned, but the project would return v_s with probability $q > p$ if further credit is extended and the project is restructured. The firm had agreed, in period one, to repay lenders the sum F where $v_s > F > v_f$. Thus, the firm is solvent only if the project succeeds. In period 3, as before, creditors and the market observe the project's type. It is efficient to extend further credit to a type (c) project in periods 2 or 3 because the marginal increase in the expected value of success is assumed to justify the additional infusion of funds. In period 4, also as before, the firm either pays F to creditors—the project had succeeded, with or without help—or the firm enters the bankruptcy system. A rescue of a type (c) project would be futile by period 4 because bad projects commonly deteriorate.

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[68] A number of authors observe that if the firm is insolvent but has a possible good new project, the firm's incentive to pursue the project will increase if the firm is permitted to share in the returns. For analyses of this suggestion and its effect on ex ante incentives, see Robert K. Rasmussen, The Ex Ante Effects of Bankruptcy Reform on Investment Incentives, 72 Wash. U. L.Q. 1159 (1994) and Adler, supra note 51. A contract theory approach that also reaches this conclusion is in Alan Schwartz, The Absolute Priority Rule and the Firm's Investment Policy, 72 Wash. U. L.Q. 1213 (1994). The model here considers only a firm's original projects.

[69] The analysis below follows Paul Povel, Optimal "Soft" or "Tough" Bankruptcy Procedures, 15 J.L. Econ. & Org. 659 (1999).

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The bankruptcy procedure concludes in period 5. The firm earns a private benefit from operating the project.

Either of two lending agreements could be optimal in this story. The first contract, denoted an incentive contract, k_e, would transfer the firm immediately to its creditors when they learn the project's type, unless the project will be a certain success. The creditors would liquidate a type (b) project and refinance a type (c) project. A firm that borrows under this contract would not disclose the period 2' signal of project type. Rather, the firm would continue to operate through period 3, even if the period 2' signal had indicated that the firm has a type (b) project that should have been liquidated promptly, or a type (c) project that should have been refinanced promptly. The firm will be silent because it reaps a private benefit from operating a type (b) project, though it will later fail. Additionally, the firm reaps this benefit *plus* the possibility of a monetary payoff if it operates a type (c) project without further funds. The k_e incentive contract thus foregoes the possibility of an efficient early rescue (refinancing a type (c) project in period 2') or an efficient early liquidation (again occurring in period 2'). On the other hand, this contract induces the firm to exert high effort because the firm's bad state payoff is zero. The second possible contract commits creditors to two strategies: (a) to pay the firm the value of the firm's private benefit if it reveals in period 2' that its project is a certain failure, or (b) to refinance if the firm discloses in period 2' that it has a type (c) project. The latter commitment has positive expected value for the firm.[70] This contract is denoted a "disclosure contract," k_d.

A firm will exert less effort under k_d than under k_e because failure would be less costly to it.[71] That the firm works less hard reduces the probability that its project will succeed and pay creditors

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[70] Recalling that $v_s > F$, refinancing permits the firm to earn an additional expected return of $(q - p)(v_s - F) > 0$ because $q > p$.

[71] Any payment to the firm in the bad state reduces the wedge between the firm's good and bad state returns, and thus worsens its incentives. Formally, denote by s either payment the firm receives under the disclosure contract. Then the firm will choose its effort level to maximize $R = p(e;\theta)[v_s - F] + (1 - p(e;\theta))s - e - I$. The solution to this problem is $p'(e;\theta)[v_s - F - s] = 1$. The left hand side of this expression is less than the left hand side of Equation (5) set out in Part I, so the firm exerts less effort when it receives a payment in the bad state than when it receives nothing in the bad state.

off in full. The k_d contract, however, by creating the possibility of an efficient early rescue or early liquidation, maximizes the creditors' return in the state of world in which the project is doing poorly. Therefore, which of these contracts is optimal turns on which incentive it is more important for parties to encourage: *optimal investment*, at the cost of foregoing the opportunity of an efficient early intervention, or *optimal disclosure*, at the cost of a reduced incentive to invest.

The incentive contract k_e often would be best if type (c) projects are rare—that is, for those firms whose projects are binary as certain successes or certain failures. In this context, early rescue would not be a serious concern. When the choice is between success or failure, avoiding failure by encouraging high effort is best. The disclosure contract k_d, on the other hand, is more likely best if the firm's project will with positive probability need additional funds to avoid failure. In this context, a prompt rescue or early loss cutting may be necessary. The optimal contract thus is parameter-specific: particular parties would prefer one or the other of these contracts depending on the borrower's ability to carry out its project and the type of project it is expected to have.

The disclosure contract k_d is analogous to a "soft" bankruptcy procedure, in which absolute priority is violated (the firm gets a share of the insolvency return), and the firm's managers sometimes retain their jobs. Firms functioning under such a procedure may enter bankruptcy in time to be rescued. The incentive contract k_e is roughly analogous to a "tough" bankruptcy procedure that liquidates the firm, follows absolute priority in distribution, and dismisses the old managers. Firms functioning under this system may unduly delay entering bankruptcy. Chapter 11 reorganizations resemble soft procedures and Chapter 7 liquidations resemble tough procedures. The analysis here thus implies that the bankruptcy initiation problem is best solved by permitting parties to contract for the state-supplied procedure—Chapter 7 or 11—that would be best for them.

B. Bankruptcy Contracting with State Dependency

1. State Dependency and Asset Specificity

The analysis in Part III.A, by beginning at the borrowing stage, could give a plausible justification for the existence of two bankruptcy procedures. An analogy to corporate law illustrates that this justification needs more work. The assets of solvent firms are reallocated to higher-valuing users in the market for corporate control. Corporate law requires a firm that puts itself in play to sell itself to the highest bidder, but otherwise sales of solvent firms are largely unregulated. In contrast, the assets of insolvent firms commonly are reallocated to higher-valuing users in a complex and costly administrative proceeding—Chapter 11. Should the same economic task—to reallocate assets efficiently—be performed in the same way? A positive answer could justify the existence of just one bankruptcy procedure: an auction of the insolvent firm. This answer would be incorrect, however, because there are material differences between sales of solvent and insolvent firms. These differences arise because bankruptcy auctions must be prompt, which sometimes would require an auction in the wrong state of the world, and because bankruptcy auctions are less strategy-proof than acquisition auctions. The implications of these differences are exhibited by comparing a bankruptcy procedure with mandatory auctions to a procedure that permits reorganization through a sale of the firm to its current claimants.

Auctions have attractive features. An auction permits the market, rather than a public decisionmaker, to make the continuation versus liquidation decision. A firm that wins the auction has better incentives and more expertise than a public official at choosing correctly between continuing the firm or shutting it down.[72] Also, auctions can be conducted quickly relative to procedures such as Chapter 11 and appear to have lower transaction costs than reorganizations. Finally, auctions decouple the task of deciding what to do with the insolvent firm from the task of deciding which claims

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[72] See Douglas G. Baird & Edward R. Morrison, Bankruptcy Decision Making, 17 J.L. Econ & Org. 356, 357–58 (2001) ("To the extent the reorganization takes time . . . the shutdown decision rests with a bankruptcy judge or some other actor who lacks both the expertise and the incentives needed to make this decision well. Entrusting the shutdown decision to such a person can be costly . . . .").

are paid. This increases the chance that absolute priority will be followed.

These advantages of the auction may be offset when the insolvent firm's assets have a substantial industry-specific component.[73] For example, while firms in many industries use computer systems, only firms in the steel industry use annealing machines. These machines thus are worth their scrap value to buyers outside the industry. When asset specificity is high, industry firms will be the more likely buyers of an insolvent firm's assets and will pay the most. Economic and financial distress may be correlated across firms in an industry, however. If a strong correlation exists, (barely) solvent industry firms may lack the liquidity to buy insolvent firms. Hence, in cases when asset specificity *and* the correlation of returns across firms are high, an auction is unlikely to maximize the insolvency return.

The relation among these economic factors may be made more precise by letting L be the liquidation (or auction) value that a firm's assets will bring, z, the probability that a firm outside the industry will win the auction, and γ the degree of industry specificity the firm's assets possess, where $0 \leq \gamma \leq 1$ *and* $\gamma = 1$ denotes complete asset specificity. The firm is assumed to realize v if sold to another firm in the same industry. Thus, the sale value of the firm's assets is

$$L = (1 - z)v + z(1 - \gamma)v$$

The first term on the right hand side is the expected value of a within-industry bid and the second term is the expected value of an outsider bid. The expression simplifies to:

$$L = (1 - z\gamma)v$$

When the likelihood that a within industry bidder will appear is low (z is high), and when the industry specific character of the firm's assets increases (γ is high), the auction value L falls.

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[73] This was originally noted in Andrei Schleifer & Robert W. Vishny, Liquidation Values and Debt Capacity: A Market Equilibrium Approach, 47 J. Fin. 1343, 1344 (1992).

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The evidence supports this analysis. Bankruptcy auctions are routinely held in Sweden. As expected, these resolve insolvencies more quickly than Chapter 11 does. The Swedish data also show the following: First, auctions dissipate between twenty-three and thirty-nine percent of asset value,[74] depending on the economic parameters.[75] Second, creditors will finance sales to themselves and to the firm's old owners when market sales would have produced an even larger value loss. Third, sales to the old owners occur more than sixty percent of the time. A solvent firm with industry-specific assets would be reluctant to offer itself for sale during an industry recession. Insolvent firms that are not reorganized must be sold. A bankruptcy system that always requires auctions, or never permits them, thus is less efficient than a system that permits the method of maximizing value to turn on the economic parameters that obtain when insolvency occurs.[76] This conclusion is strengthened when the potential for an inefficient auction is considered.

An auction is efficient when assets are sold to the bidder with the highest valuation. This goal may be frustrated when one of the bidders has an initial stake in the auctioned object and the object's

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[74] Per Stromberg, Conflicts of Interest and Market Illiquidity in Bankruptcy Auctions: Theory and Tests, 55 J. Fin. 2641, 2644 (2000).

[75] This is consistent with Todd C. Pulvino, Effects of Bankruptcy Court Protection on Asset Sales, 52 J. Fin. Econ. 151, 153 (1999), which finds that bankrupt airlines sell planes at discounts that range from fourteen to forty-six percent relative to sales by nondistressed airlines and with Edith S. Hotchkiss & Robert M. Mooradian, Acquisitions as a Means of Restructuring Firms in Chapter 11, 7 J. Fin. Intermediation 240, 243 (1998), which finds that bankrupt targets (entire firms) are purchased at a forty-five percent discount on average, relative to prices paid for solvent firms in the same industry.

[76] Acharya and colleagues also show that the optimality of a bankruptcy system turns partly on the degree of asset specificity. Viral V. Acharya, Rangarajan K. Sundaram & Kose John, Cross-Country Variations in Capital Structures: The Role of Bankruptcy Codes 22 (Dec. 16, 2004) (unpublished manuscript, on file with the Virginia Law Review Association), available at http://faculty.london.edu/vacharya/pdf/acharya-sundaram-john.pdf. These authors argue that the preference of managers to continue a failing firm causes relatively little harm when asset specificity is high because the opportunity cost of a foregone liquidation is low. Conversely, the preference of creditors to liquidate a distressed firm at once causes relatively little harm when asset specificity is low because the opportunity cost of a foregone continuation is low. This analysis implies that parties should be free to contract for a Chapter 11 style procedure when asset specificity is high and a Chapter 7 style procedure when asset specificity is low. Part III.B.3, infra, formalizes this intuition.

value is not transparent.[77] To see why, consider a coalition between an impaired creditor (its claim is out of the money) and management bidding against an outsider.[78] The creditor may join with the firm if the firm has some private information and the firm may prefer dealing with a party it knows rather than a stranger. The coalition has a stake in the sense that, holding both debt and equity, it will receive some of the auction proceeds. The outside bidder can acquire information about firm value at a cost that exceeds the coalition's cost (because coalition members are informed by virtue of their status).

Inefficiency may result because the coalition has an incentive to bid more than the value of the firm to it. This incentive has two sources. First, overbidding forces the price up; this increases the coalition's gain if it loses the auction because the coalition will then sell its stake to the winner. Second, the coalition is subsidized to overbid because, having a stake, it actually pays part of the bid price to itself if it wins. Overbidding can yield inefficiency when the outside bidder has a higher valuation for the firm's assets than the coalition has. If a coalition overbid exceeds such an outsider's valuation, the outsider will drop out even though it would have won had the coalition bid truthfully. As a result, the party with the lower valuation will win. More seriously, outsiders who must pay a cost to enter—to become informed—know that they are bidding against insiders with an incentive to inflate prices. This knowledge may cause an outsider with the highest valuation for the firm's assets not to enter the auction.

The extent of inefficiency is a function of the coalition's composition. A creditor whose claim is not impaired would not bid above the value of that claim, for any excess would go to junior creditors. Senior creditors are less likely than juniors to hold impaired, or se-

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[77] This claim presupposes asymmetric information between at least some creditors and the firm regarding the firm's ex post value. This assumption is consistent with the view that bankruptcy proceedings reveal information about the value of insolvent firms.

[78] The analysis here follows Edith S. Hotchkiss & Robert M. Mooradian, Auctions in Bankruptcy, 9 J. Corp. Fin. 555 (2003). The analysis above assumes private values (different potential buyers value the firm differently). When an auction has a large common element, a party with an initial stake in the object being sold has a very strong advantage. See Jeremy Bulow, Ming Huang and Paul Klemperer, Toeholds and Takeovers, 107 J. Political Economy 427 (1999).

riously impaired, claims. Therefore, a coalition between a senior creditor and juniors or equity will probably run an efficient auction. In contrast, junior creditors whose claims are far out of the money will try harder artificially to inflate auction revenues. Whether an auction would maximize ex post value thus partly depends on the firm's capital structure when it becomes insolvent. Auctions are more likely best if much of the debt is held by a few seniors, and less likely to be value-adding if there is considerable junior debt. Once more, requiring auctions in every case would be unwise.[79] Also, bidders for solvent firms are unlikely to hold large stakes in them. Such stakes are prevented by the widespread existence of poison pills, and by legal requirements that require a potential acquirer to make public disclosure of a stake as low as one percent. Consequently, acquisition auctions in theory should not be, and in practice appear not to be, seriously plagued by coalition concerns.

To summarize, an analysis of the related factors of state dependency, asset specificity and capital structure lends further support to the claim that the law should supply parties with at least two bankruptcy procedures (resembling Chapters 7 and 11). There is a question how the choice between these procedures is best made. Today, this choice is initially made by the insolvent firm but ultimately is made by the bankruptcy court. The analysis in Section III.A suggested that the choice is best made by parties in the ex ante contract. This was because which procedure is optimal for particular parties turned on factors such as the nature of the debtor's project and on the potential efficacy of a later refinancing. The parties are better informed about these parameters than a court. Section III.B.2 next shows that, bankruptcy initiation aside, parties sometimes would delegate the choice of a procedure to the insolvent firm ex post, but sometimes could increase creditor payoffs when the firm's discretion is constrained in the lending agreement. The

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[79] Baird and Rasmussen report an increasing number of asset sales in Chapter 11 and claim that creditors played a major role in causing these sales to be made. Douglas G. Baird & Robert K. Rasmussen, The End of Bankruptcy, 55 Stan. L. Rev. 751, 751, 780 (2002) [hereinafter The End of Bankruptcy]; Douglas G. Baird & Robert K. Rasmussen, Reply: Chapter 11 at Twilight, 56 Stan. L. Rev. 673, 694–97 (2003) [hereinafter Twilight]. Regrettably, their data set does not indicate who the initiating creditors were and the number of bidders in each case. Thus, it is difficult to evaluate the efficiency of these auctions.

arguments in Sections III.A and III.B together thus make the case for permitting parties to contract ex ante for their preferred procedure.

2. Contracting to Induce Optimal Choice

In this version of the model,[80] two bankruptcy procedures exist, denoted *L* and *R*. The *L* system auctions firms to the market while the *R* system reorganizes them. When a firm borrows to finance its project, which of these systems will be optimal should the firm become insolvent is unknown; as Section III.B.1 demonstrated, the optimality of a bankruptcy system depends on the later state of the world and the specificity of the firm's assets. As before, the firm's owners and managers receive a private benefit from operating the firm during a bankruptcy procedure. This benefit is larger in the *R* procedure because a reorganization takes longer to realize and thus permits the owners to be in charge for a longer period (and to have a greater probability of remaining in charge permanently). Only private benefits matter to the firm because, being insolvent, it has no claim to the monetary return a procedure could generate. Therefore, the firm will always choose the *R* procedure unless constrained.

The firm submits lending agreements to potential creditors, who function in competitive credit markets. Two of the possible contract types are considered here for illustration. The first contract, denoted an *R* contract, is silent about bankruptcy, thereby implicitly delegating the choice of procedure to the firm ex post. If the *L* system turns out to be optimal, parties to the *R* contract can renegotiate to use the *L* procedure. The marginal gain from using the optimal procedure can sustain the payment of a reorganization bribe to the firm to forego the greater private benefits of a reor-

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[80] The following is based on Alan Schwartz, Contracting about Bankruptcy, 13 J.L. Econ. & Org. 127 (1997). An informal version is in Alan Schwartz, A Contract Theory Approach to Business Bankruptcy, 107 Yale L.J. 1807 (1998). Gigler and Kareken show that the set of bankruptcy contracts that can implement efficient or second-best efficient outcomes is larger than that in my papers and obtain an efficiency ranking over possible contracts. It is enough here to show that some bankruptcy contracts in the theoretically feasible set are efficient. Frank Gigler & John Kareken, On a Contract Approach to Bankruptcy (Apr. 14, 2004) (unpublished manuscript, on file with the Virginia Law Review Association).

ganization. Just how the surplus obtained from avoiding an ineffi-
cient reorganization is divided in particular cases is a function of
the parties' bargaining power.

The firm also can offer potential creditors a different agreement,
denoted the *L* contract, that would pay the insolvent firm a share
of the monetary return that an insolvency procedure will generate,
regardless of the procedure the firm chooses.[81] The firm's share is
set to compensate the firm for foregoing the greater private bene-
fits of the *R* procedure when the *L* procedure would be optimal. In
the model, both contract types yield ex post efficiency: That is, the
insolvent firm will always make the efficient procedural choice.
Hence, the optimal contract will maximize the creditors' expected
monetary return given the correct choice of procedure. An exam-
ple is set out next to show that the *L* contract sometimes is optimal
in this sense. This is significant because, as noted, parties today can
only write *R* contracts because ex ante contractual constraints on
the power of insolvent firms to choose the bankruptcy procedure
are unenforceable.

In the example, the *L* procedure returns $300 for distribution to
creditors when it is optimal, and the *R* procedure returns $200
when it is optimal. The *R* procedure would return $100 when the *L*
procedure is optimal, but the firm uses the *R* procedure instead.
The *L* procedure is optimal with a 50% probability. The firm is as-
sumed to have 75% of the bargaining power in a renegotiation,
which is plausible if much of the debt is unsecured because creditor
coordination costs are then high.[82] The firm's owners receive a pri-

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[81] This Article does not take a position on whether bankruptcy auctions, which the *L*
procedure commonly requires, should permit noncash bids, as argued in Philippe
Aghion, Oliver Hart & John Moore, The Economics of Bankruptcy Reform, 8 J.L.
Econ. & Org. 523 (1992). Rhodes-Kropf and Viswanathan have shown that partici-
pants in noncash auctions are likely to bid with debt, so that firms may emerge from
bankruptcy substantially leveraged, a prediction that is consistent with the evidence.
Matthew Rhodes-Kropf & S. Viswanathan, Corporate Reorganizations and Non-
Cash Auctions, 55 J. Fin. 1807, 1808 (2000); see also Stuart C. Gilson, Transactions
Costs and Capital Structure Choice: Evidence from Financially Distressed Firms, 52 J.
Fin. 161, 162 (1997) ("In general, sample firms end up more highly leveraged than
they were before becoming financially distressed, and the increase in leverage appears
to be permanent.").

[82] If the debt is widely held and the firm can credibly threaten to use the sub-optimal
procedure, it can make a take-it-or-leave-it offer to the creditors that will deprive
them of much of the surplus from using the correct procedure. See Alan Schwartz,

vate benefit of $30 in the *L* procedure and a private benefit of $80 in the *R* procedure.

The creditors' return under the *R* contract is calculated as follows: The creditors receive the full monetary return of $200 when the *R* procedure is optimal because the firm will choose the *R* procedure without having to be bribed. The creditors receive 25% of the marginal gain from using the *L* procedure when it is optimal; this gain here is $200 ($300 under *L*, rather than $100 under the sub-optimal *R*). The firm receives the rest of the gain as an ex post bribe. Hence, the creditors' expected return under the *R* contract is

$$R_k = .5(200) + .5[100 + .25(200)] = \$175$$

The *L* contract requires the firm to receive a portion of the monetary return from the procedure it chooses. This share must compensate the firm for foregoing the larger private benefit it would realize under the *R* procedure.[83] Letting *t* be the requisite bribe *(0 < t < 1)*, *t* solves:

$$t(300) + 30 \geq t(100) + 80$$

The first term on the left side of this inequality is the firm's share of the *L* procedure monetary return when *L* is optimal, and the second term is the firm's private benefit from using the *L* procedure. The first term on the right side is the firm's share of the sub-optimal *R* procedure monetary return, and the second term is the firm's private benefit from using the *R* procedure. On these values,

Bankruptcy Workouts and Debt Contracts, 36 J.L. & Econ. 595, 596–97 (1993). Such a threat may be possible to make here because the firm always prefers the *R* procedure. In addition, if a creditor has market power and thus would earn positive profits by continuing to deal with the firm, the firm can exploit this dependency in a renegotiation. See Benjamin S. Wilner, The Exploitation of Relationships in Financial Distress: The Case of Trade Credit, 55 J. Fin. 153, 154 (2000) (noting that where a firm will generate a large percentage of its trade creditor's profits, the firm should be willing to accept a less favorable ex ante contract, in anticipation of more power in ex post renegotiations upon experiencing financial distress).

[83] The firm has all of the ex ante bargaining power because creditors function in competitive markets. Consequently, the contractual bribe to the firm is determined only by the value of the private benefits the firm may have to give up.

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$t \geq .25$. Thus, the creditors' maximum expected return under the *L* contract is

$$L_k = .75[.5(300) + .5(200)] = \$187.50$$

The firm will choose the optimal procedure under this contract, so the term in brackets is the expected value of an efficient procedural choice. The firm must be paid at least 25% of this value. And on these parameters, the firm would offer creditors the *L* contract when it borrows.

The *L* contract has two advantages. The contract induces the choice of *L* when *L* is optimal, and the contract addresses the bankruptcy initiation problem as well because it pays the firm a portion of the bankruptcy return. A distressed firm is less likely to waste assets before bankruptcy if it earns a positive payoff in a bankruptcy procedure. On the other hand, the *R* contract may be best when (a) creditors have considerable bargaining power ex post (much of the debt is secured, for example); (b) when the *R* procedure is likely to be optimal (for the *R* contract permits creditors to capture the entire *R* monetary return without having to pay a bribe); or (c) the *R* procedure would generate relatively high returns when it is optimal.

To generalize, then, the state should supply parties with (at least) two bankruptcy procedures that regulate liquidation and reorganization. Each of these procedures could maximize the net insolvency return, depending on the circumstances parties face ex post. The state also should permit parties to contract in lending agreements concerning which procedure later would be applied to them. These ex ante contracts would best solve two agency problems that arise between an insolvent firm and its creditors. The firm may unduly delay entering into a procedure and may choose the procedure that maximizes private benefits rather than monetary returns. Expanding the contracting space regarding bankruptcy thus should be an important part of the capital cost minimization task.

3. Impediments to Bankruptcy Contracting

Commentators make five objections to bankruptcy contracting. First, a contracting scheme will not take externalities into account.

Second, the transaction costs of contracting with multiple creditors will exceed the gains any contracting scheme could create. Third, many creditors will not adjust to the scheme in place, thereby producing inefficiency. Fourth, conflict among creditors will preclude agreement on contracting schemes. Fifth, bankruptcy contracts will be temporally inconsistent, and therefore inefficient.[84] Section I.B.1 showed that the first objection, relating to externalities, is unpersuasive.[85]

The second objection of transaction costs rests on a regrettably common mistake: to substitute the judgment of the professor for the judgment of the parties. To see how that mistake is made here, realize that, absent externalities, the costs of a bankruptcy contracting scheme would be borne by the borrower. A firm that proposes a bankruptcy procedure would bear the creditors' costs of participation because those costs would be reflected in the interest rate, and the firm obviously would bear its own costs of choosing the procedure and administering it. Since the firm would internalize the transaction costs that a departure from the state supplied default procedure would cause, the firm would contract out of the default only if contracting for a different procedure would, in the judgment of the firm, produce expected gains in excess of expected costs. The current mandatory bankruptcy system prevents firms from making this comparison. Academic analysts who justify today's law on transaction cost grounds thus must believe that they are better than business borrowers at comparing gains to costs. No basis for this implausible belief is ever advanced.

The third objection that the existence of nonadjusting creditors would cause bankruptcy contracts to be inefficient should be rejected on two grounds: (a) Moving to a free contracting world would not materially worsen the nonadjusting creditor "problem"; (b) To the extent that it is a problem, it exists everywhere. This fact requires a proponent of the nonadjusting creditor objection either

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[84] Warren and Westbrook make the first three of these objections, as have earlier commentators whom they summarize. See Warren & Westbrook, supra note 22, at 1212–19; see also Susan Block-Lieb, The Logic and Limits of Contract Bankruptcy, 2001 U. Ill. L. Rev. 503 (2001). Lynn LoPucki introduced the latter two objections into the literature. See Lynn M. LoPucki, Contract Bankruptcy: A Reply to Alan Schwartz, 109 Yale L.J. 317 (1999).

[85] See supra notes 21–24 and accompanying text.

to defend the view that mandatory rules should govern commercial life in general, or to defend the view that a bankruptcy contract would somehow differ from the many other investment contracts that parties today are free to make. They have not attempted either defense.[86]

To understand the first rejoinder, recall that current law permits the insolvent firm to choose between two procedures: liquidation or reorganization. In a world of free contracting, current law (as intelligently modified) would be the default contract. Section III.B.2 showed that parties sometimes could improve on the default contract by writing lending agreements that would influence the borrower's ex post procedural choice.[87] A second possible new scheme would require the insolvent debtor to be auctioned. Thus, relaxing the Code's mandatory nature likely would yield three contracting procedures: the current Code as the default, a contract that would affect how the insolvent firm used the current Code, and an auction procedure. There apparently would be little new to learn. In addition, fewer creditors may fail to adjust under free contracting because the terms that create bankruptcy contracts will appear in lending agreements, thereby heightening the salience of bankruptcy in general.

The second response to the nonadjusting creditor objection begins with the observation that the objection cannot be confined to the insolvency context. In the literature, a "nonadjusting creditor" is a natural person who lacks the sophistication to evaluate a contracting scheme or a business whose bankruptcy claim would be too small to justify evaluating a contracting scheme.[88] This definition characterizes many participants in capital markets. To make this clear, consider an entrepreneur who must raise money for a project. The entrepreneur will first choose a business form under which to function. Then the entrepreneur will attempt to raise money from investors. In Delaware, the entrepreneur can create (a) a general corporation, (b) a close corporation, (c) a limited li-

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[86] The creditor conflict and temporal inconsistency objections do attempt to distinguish bankruptcy contracting from contracting in general, but these objections, it will be shown, presuppose adjusting creditors, who react rationally to the contracting scheme in place.

[87] See supra notes 80–83 and accompanying text.

[88] See Warren & Westbrook, supra note 22, at 1214.

ability company (an "LLC") that can be (i) owner managed or (ii) manager managed, (d) a general partnership, (e) a limited liability partnership (an "LLP"), (f) a limited liability limited partnership (an "LLLP"), or (g) a statutory business trust.[89] Each of these forms creates different rights and risks for investors. For example, an investor who extends credit to an LLP can reach the assets of the general partners if the partnership becomes insolvent but an investor who extends credit to an LLLP cannot. Also, while the corporate statute specifies many terms of the corporate contract, it specifies few terms of a business trust. Potential investors must learn their rights directly from the trust instrument.[90]

If the presence of nonadjusting creditors can justify a mandatory bankruptcy law, then the presence of "nonadjusting investors" can justify a mandatory enterprise law as well. Many potential investors in enterprise, whether they purchase debt or equity, cannot master every possible business form that firms today are free to use, nor can they fully adjust the level of their investments to the particular enterprise form the entrepreneur offers. These nonadjusting investors are small shareholders or bondholders and minor trade customers and suppliers, and they are numerous. It therefore must follow that there should be one business form that every entrepreneur must offer and to which every investor can adjust.

No serious person believes that entrepreneurs should be required to use one mandatory enterprise form. This overwhelming consensus rests on reasons that also support rejecting the one mandatory bankruptcy law solution. The efficiency of a business form is context dependent: Partnerships are best for some commercial activities while large corporations are best for others. Hence, to require one mandatory business form would be inefficient. Also, there commonly is an identity of interest between investors who participate actively and those who participate passively. For example, large shareholders want corporate managers

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[89] See Del. Code Ann. tit. 8, §§ 101–398 (2001) (corporations and close corporations); id. tit. 6, §§ 18–201–18–1109 (1999) (limited liability companies); id. tit. 6, §§ 17–101–17–1111 (1999) (partnerships); id. tit. 12, §§ 3801–3862 (2001) (business trusts).

[90] A good explanation of how enterprise forms evolved to affect creditors' rights is Henry Hansmann, Reinier Kraakman, & Richard C. Squire, The New Business Entities in Evolutionary Perspective, 2005 U. Ill. L. Rev. 101 (2005).

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to maximize profits and to pay dividends when the firm has excess cash. Small shareholders share these goals. Hence, the corporate charter to which large shareholders consent will benefit smaller shareholders as well. Similarly, Part III has shown that the efficiency of a bankruptcy procedure is context dependent, so that requiring one mandatory procedure is inefficient. Also, with an exception to be considered immediately below, there would be an identity of interest between actively and passively participating creditors. Large creditors would want the firm to choose the bankruptcy procedure that maximizes expected monetary returns; small creditors will share this goal, and thus will be happy with the bankruptcy contract that survives large creditor scrutiny.

To be sure, any contracting scheme, including a bankruptcy contracting scheme, requires supporting regulation. Thus, corporate law specifies the notice that an entrepreneur must give to investors regarding the business form the entrepreneur has chosen. Also, specific mandatory rules sometimes appropriately supplement general defaults. Corporate managers thus cannot contract out of fiduciary duties. Any bankruptcy contracting scheme would also have to solve a notice problem and would contain some mandatory protections. Today, however, it is the bankruptcy law itself that is mandatory. That the presence of nonadjusting creditors can justify this also is a position that cannot be seriously held, unless bankruptcy contracts pose a more serious adjustment problem for parties with small stakes than other financial contracts pose. No opponent of bankruptcy contracting has made such a showing.

A more credible objection to bankruptcy contracting is creditor conflict, which could arise from two sources: (a) creditors have different maximands, and (b) the juniors and seniors may disagree over the investment strategies the insolvent firm should pursue. Regarding the former source, financial creditors want to maximize the return on the outstanding debt because they have ceased to lend. In contrast, a creditor who is a customer or supplier of an insolvent firm may prefer the *R* procedure, whether it is optimal or not, if the insolvent firm would be difficult for the creditor to replace. The profit this party would earn during the more lengthy *R* procedure may outweigh the loss the party would suffer from collecting less of its pre-bankruptcy debt. Parties that anticipate sharing the firm's preference always to use the *R* procedure would re-

ject a bankruptcy contract that sometimes would induce the firm to choose the *L* procedure.

Bankruptcy law handles this type of creditor conflict by a combination of majority and supermajority voting rules. The majority rule solution seemingly would work well if it were advanced to the time of contracting because there is less creditor conflict ex ante than after insolvency. Under such a regime, a bankruptcy contract would bind all creditors if a majority in amount of creditors have signed it. A majority likely would be relatively easy to assemble.

Regarding conflict over investment, the fourth problem, the firm will not choose a business strategy under the *L* procedure because it is sold at auction, but it will choose a business strategy under the *R* procedure. The firm's choice of procedure can affect how risky it will be when the procedure terminates. Anticipating this, junior creditors could prefer the firm to enter the *R* procedure in the hope that they could induce the firm to choose a high variance business strategy.[91] The seniors, in contrast, commonly would prefer the *L* procedure when it is optimal; their claims will be in or close to the money, and the variance of auction returns commonly is lower than the variance of the juniors' favored business plan. This is because auction bidders would run the firm to maximize profits while the juniors may want the firm run to maximize the chance of an upside return that is large enough to pay their claims. At the lending stage, the juniors thus may reject a bankruptcy contract that would prevent them from later influencing the insolvent firm's business strategy.

This conflict should not prevent bankruptcy contracting because the firm could bribe juniors to sign the optimal contract. The parties' insolvency payoffs cannot sum to more than the value of the firm. The *L* procedure is optimal when the insolvent firm has a higher value in that procedure. Hence, there will be a positive difference between the expected value of claims on the firm in an optimal *L* procedure and the expected value of claims in the suboptimal *R* procedure. Since the firm bargains with all creditors, it could obtain the juniors' consent to the contract that would maxi-

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[91] This is a variant of the concern that insolvent firms will overinvest.

mize ex post value by transferring some of that value to them in the deals they are offered.[92]

A perhaps more serious contracting problem stems from the state dependency of bankruptcy procedures. As an example, let the *R* contract be optimal when the firm first borrows, but the *L* contract become optimal before earlier debt is repaid. The firm's lending agreements would then be time inconsistent. This fifth problem also has an apparent solution, which is to include in every agreement a term that would convert the agreement into the form, as regards the choice of a bankruptcy procedure, that is optimal in light of current circumstances. For example, the early *R* contract thus would convert to an *L* contract. A creditor would be willing to sign a contract with an updating term for two reasons. In an informationally efficient credit market, the best estimate of the economic parameters that will obtain when the loan is to be repaid is given by the parameters that obtain when the loan is made. The creditor therefore would not expect the contract to change. Second, the creditor would actually prefer the contract to change when change would be efficient, for the creditor's expected insolvency payoff increases as the likelihood that the firm will choose the optimal procedure increases. Hence, firms could make their lending agreements time consistent with regard to bankruptcy.[93]

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[92] The juniors are residual claimants and thus actually have conflicting incentives. On the one hand, they prefer the firm to choose the efficient investment strategy; this will maximize the expected size of the pie and so maximize the chance of a return for juniors after the seniors have been paid. On the other hand, because the juniors have a call option on the firm, they sometimes will prefer the firm to pursue a strategy that has a lower mean return but a higher variance. As it happens, when the juniors' choice is analyzed formally, it appears that the juniors would prefer the firm to pursue a value-maximizing strategy unless the firm has available to it a project that has an extremely high variance. Alan Schwartz, Bankruptcy Contracting Reviewed, 109 Yale L.J. 343, 352 (1999). The evidence suggests that such projects are rare. See authorities cited at supra note 52. Bhattacharyya and Singh also show that ex ante contracts could generate agreement on the optimal auction procedure if the contracts were legally enforceable. Sugato Bhattacharyya & Rajdeep Singh, The Resolution of Bankruptcy by Auction: Allocating the Residual Right of Design, 54 J. Fin. Econ. 269 (1999).

[93] It has been argued that bankruptcy contracts are not strategy proof: The firm could request a sub-optimally low bribe in early borrowing, to obtain an artificially low interest rate, and then raise the bribe to the correct level in later contracts, thereby exploiting initial creditors. Anticipating exploitation, an early creditor would refuse to sign the contract, thereby unraveling the contractual scheme. See LoPucki, supra note 84, at 325. There are three problems with this claim: First, the firm would be making a fraudulent contract, which is rare for solvent borrowers to do. Second,

An analysis of the parties' contracting problem—to create efficient incentives for firms to invest, not to delay filing for bankruptcy when insolvent, and to choose the optimal bankruptcy procedure—implies that one size does not fit all. Rather, any single system would be sub-optimal for some sets of parties some of the time.[94] As a result, theoretical reasons exist for believing that bankruptcy contracting would be an efficient response to common agency problems that arise between distressed firms and their creditors. The objections to bankruptcy contracting either are unpersuasive or appear to be surmountable. If so, opening up the contracting space would materially reduce firms' capital costs. If parties would write few bankruptcy contracts, however, nothing would be lost.

IV. EX POST CONTRACTS

Distressed firms commonly attempt to renegotiate their debt. These renegotiations sometimes eventuate in two variants of the *L* contract described above. Under both, creditors supply more funds, or forebear from immediate collection, if the firm agrees to liquidate should its situation worsen. The "auction contract" requires the debtor, if it enters bankruptcy and fails to meet specified financial targets by a named date, to auction itself to the market. The "foreclosure contract" requires a firm to waive the automatic

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the fraud would be easy to discover because early substantial creditors monitor, so that committing it would materially reduce the firm's ability later to refinance. Finally, there are two contracting responses: (a) a firm could credibly commit not to raise the bribe on the eve of bankruptcy, when it may be desperate, by offering what is described above as a "tough" contract, which would result in an immediate transfer of control to creditors if the firm proposed a nontrivial increase in the bribe percentage; or (b) more simply, the firm could offer most-favored-nation clauses to early major creditors. These clauses would prevent the firm from profiting from artificially low early interest rates.

[94] Rasmussen also argues that one size does not fit all and suggests that the state should supply potential borrowers with a menu of bankruptcy procedures that firms can put in their corporate charters. Robert K. Rasmussen, Debtor's Choice: A Menu Approach to Corporate Bankruptcy, 71 Tex. L. Rev. 51, 66 (1992). Parties would be required to use the system the firm's charter selected. This proposal appears not to respond well to the bankruptcy-initiation and state-dependency problems because the difficulty of amending corporate charters implies that the procedure particular parties use would not turn on the current economic parameters. On the other hand, the proposal avoids contracting difficulties.

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stay as against a secured creditor if the firm files for bankruptcy.[95]
The secured lender would then take the assets subject to its lien.
When those assets are substantial, foreclosure commonly leads to
liquidation. Neither "ex post contract" has received serious appel-
late review, though the bankruptcy courts are more inclined to en-
force auction contracts than foreclosure contracts. Part IV will ar-
gue that auction contracts are efficient and should be enforced, but
these contracts do not substitute adequately for the liquidation
contract described in Part III. Foreclosure contracts, however, of-
ten are inefficient and should not be enforced.

To evaluate ex post contracts, let current law obtain, so that
lending agreements necessarily are silent regarding bankruptcy. In
this version of the basic model, the firm first borrows, then invests
effort in pursuing a project, and finally creditors observe a public
signal of the firm's prospects. The signal reveals whether the pro-
ject is a success, a possible success if the project is refinanced, or a
failure. If the project fails (with or without further financing), it
now is assumed that liquidation would maximize value. Creditors
today extend further funds to a firm with a failed project only to
keep the firm afloat until an auction can be conducted. Creditors
often condition refinancing of a potentially salvageable project on
the firm's agreement to an auction if the project fails. Ex post auc-
tion contracts thus come in two types, either requiring an auction
at once, or in the event of project failure.

A. Auction Contracts

An auction contract resembles the renegotiation bargain mod-
eled above, pursuant to which parties agree after distress to use the
L procedure when it turns out to be optimal. Section III.B showed
that renegotiation bargains yield ex post efficiency—the firm
chooses liquidation when liquidation would maximize the total
monetary return. However, Section III.B also showed that when
parties at the lending stage anticipate that liquidation would be

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[95] These contracts are discussed in Baird & Rasmussen, The End of Bankruptcy, su-
pra note 79, at 784–85, 787; Baird & Rasmussen, Twilight, supra note 79, at 678–85.
Foreclosure contracts are more commonly referred to as "stay waivers." For a discus-
sion, including cites to much of the literature, see 1 Nat'l Bankr. Review Comm'n,
Bankruptcy: The Next Twenty Years 478–87 (1997).

best, they write *L* contracts because these generate greater expected returns for creditors than do renegotiation bargains. As a consequence, auction contracts that arise from ex post renegotiations are sub-optimal relative to ex ante procedural contracts.

It follows that failure to enforce auction contracts would make a bad situation worse. These contracts nevertheless are controversial. They often are obtained by secured lenders, and these lenders have poor incentives, as they prefer liquidation when liquidation would maximize their payoffs rather than total firm value.[96] This objection is inapplicable to contracts under which the entire firm is offered to the market, however. An efficient auction maximizes total revenue.[97]

B. Foreclosure Contracts

Foreclosure contracts, or stay waivers, should be unenforceable. To see why, assume that the firm is economically distressed and consider the two possibilities: (a) the secured claim exceeds the value of the liened assets; (b) the secured claim is less than the value of the liened assets. A foreclosure contract is efficient in the first instance. When the secured lender's claim is out of the money, it has an incentive to maximize the value of the collateral to minimize the size of its loss. A foreclosure contract is inefficient in the second instance because the secured party will invest resources in maximizing value until its private marginal return would equal its marginal cost. Since the creditor's private marginal return is less than the social return, which reflects the total potential asset value, the creditor would conduct an inefficient foreclosure auction. A foreclosure contract would not be written in the second case if junior creditors could coordinate their activities and so bribe the senior to foreclose efficiently. Because coordination costs can be high, however, a court could not infer the efficiency of a foreclosure con-

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[96] Clas Bergström, Theodore Eisenberg & Stefan Sundgren, Secured Debt and the Likelihood of Reorganization, 21 Int'l Rev. L. & Econ. 359, 362 (2002); David A. Skeel, Jr., Creditors' Ball: The "New" New Corporate Governance in Chapter 11, 152 U. Pa. L. Rev. 917, 937 (2003).

[97] When a coalition of creditors and the firm are permitted to bid, an auction could be inefficient for the reasons set out in Part III.B.1. This possibility is not pursued here because ex post contracts appear mainly to be exacted by senior lenders. As said above, coalitions including seniors are likely to run efficient auctions.

tract from its existence alone. As a consequence, the court should not enforce a foreclosure contract before learning *both* whether the firm is economically distressed *and* whether the secured creditor's claim is out of the money. This is to say, though, that the court should not enforce the contract at all because to enforce a contract is to eschew inquiry into whether the contract is efficient.

This analysis implies that foreclosure contracts should never be enforceable. When the firm is only financially distressed, withdrawing the liened assets would risk destroying going-concern value. Hence, the court should ask, similar to current law,[98] whether the assets are worth more when combined with the firm's other assets than when sold individually. And since foreclosure contracts should be enforced neither when the firm is economically distressed nor when it is financially distressed, it follows that these contracts should not be enforced at all.

CONCLUSION

This Article makes three claims. First, a business bankruptcy law should reduce the costs of debt capital. These costs fall as payoffs to creditors increase. When firms' capital costs fall, the set of positive value projects that credit markets can fund increases, as do the incentives of firms to invest effort in funded projects. Several normative implications follow from a heightened focus on increasing creditor payoffs: The trustee or debtor-in-possession should be induced to maximize the value of the insolvent firm, not the value of that part of the firm available to general creditors; the bankruptcy law should have no avoiding powers; the estate should reimburse the fees that senior creditors incur for professionals but not the fees of juniors; and parties should be free to contract out of bankruptcy altogether. This Article's second claim holds that the state should supply a menu of bankruptcy procedures and permit parties, in their lending agreements, to contract for the particular procedure they expect will be optimal for them. Such bankruptcy contracting would help to ameliorate two ex post agency costs of debt: that an insolvent firm may unduly delay its entry into the bank-

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[98] See 11 U.S.C. § 362(d)(2)(B) (2000) (allowing for a lifting of the stay where property is not necessary to an effective reorganization).

ruptcy system, and may choose the procedure that maximizes the managers' private benefits rather than the return to creditors.[99]

This Article is incomplete in three respects regarding these two claims. Initially, the Article fails to relate the firm's choice of capital structure to the efficiency of particular bankruptcy systems. To illustrate this link, a firm may choose the number of creditors to have, or the ratio of secured to unsecured debt, in order to maximize its liquidation value in the event of failure.[100] A firm also may choose a sufficiently low debt level such that, if that level cannot be sustained, the firm will be economically distressed with certainty.[101] Such a capital structure can yield roughly the same outcomes as the *L* contract described above, for a necessary implication of the insolvency of a firm with the posited capital structure is the efficiency of liquidation. Capital structure issues have been neglected here because they are relatively neglected in the literature.[102] Further,

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[99] An indication of the difference in perspective that is partly responsible for the divide between opponents and supporters of bankruptcy contracting is illustrated by the Conclusion to Warren and Westbrook's spirited critique: "Bankruptcy is the forum in which our society makes its final decisions about the life and death of a business and who gets what . . . . It is a sort of economic Judgment Day to which society and its members refer . . . ." Warren and Westbrook, supra note 22, at 1254. This Article holds, in contrast, that the appropriate role of "our society" is the same in bankruptcy as it is in other business contexts. That role is to increase social wealth by improving market performance and by enforcing the agreements that private parties make. It is the task of a different Decisionmaker altogether to adjudicate issues of "life and death . . . and who gets what." *Id.*

[100] See Rafael Repullo & Javier Suarez, Monitoring, Liquidation, and Security Design, 11 Rev. Fin. Stud. 163, 164 (1998); see also Patrick Bolton & David S. Scharfstein, Optimal Debt Structure and the Number of Creditors, 104 J. Pol. Econ. 1, 8–16 (1996).

[101] Barry E. Adler, A Theory of Corporate Insolvency, 72 N.Y.U. L. Rev. 343, 344 (1997); Michael J. Alderson & Brian L. Betker, Liquidation Costs and Capital Structure, 39 J. Fin. Econ. 45, 46 (1995).

[102] Acharya and colleagues, discussing capital structure, recite:

> Surprisingly, while the normative question of designing optimal bankruptcy codes has been the subject of a number of papers, this positive question of how bankruptcy codes affect capital structures—in particular, how cross-country variations in capital structures are related to variations in bankruptcy codes—does not appear to have been investigated in the theoretical literature.

Acharya, Sudaram & John, supra note 76, at 2. An extensive literature does attempt to explain a firm's capital structure choice as a response to various agency problems. A concise review is Oliver Hart, Financial Contracting, 39 J. Econ. Lit. 1079 (2001). Analysts in this literature seldom model the effect of a particular bankruptcy system on the firm's choice of debt or consider the firm's preferences over possible systems. Empirical tests of agency cost explanations for the debt decision that omit explicit

the Article fails to analyze a recent practice under which creditors induce the insolvent firm to write compensation contracts that condition managerial payoffs on value increases. For example, a manager may receive a bonus if the firm emerges promptly from Chapter 11 with a viable business plan. Good contracts seldom can entirely eliminate the effect of bad laws, however, so this Article focuses on how to improve general aspects of the system.

Finally, this Article discusses few Code sections in detail. This partly is a consequence of space constraints. Perhaps more importantly, it is a current scholarly practice to analyze a subset of rules while holding constant the rest of the structure.[103] This Article's object, in contrast, is to call particular constitutive features of the structure itself into question. The related features focused on above are the Code's failure to pursue rigorously the goal of capital cost reduction and the law's mandatory nature. This Article is relevant to the analysis of particular rules, however, because it attempts to identify and explain the purposes that a business bankruptcy law should pursue. Keeping the object in mind should help analysis on the ground.[104]

This Article's third claim is that bankruptcy law should not attempt directly to preserve jobs or help local communities.[105] Regarding jobs, an employee has two types of human capital, broadly speaking: firm-specific human capital, which is useful in the current

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consideration of bankruptcy issues are promising but inconclusive. *See* Roberta Dessi & Donald Robertson, *Debt, Incentives and Performance: Evidence from UK Panel Data*, 113 Econ. J. 903 (2003).

[103] For excellent work in this vein, see, e.g., Barry E. Adler & Ian Ayres, *A Dilution Mechanism for Valuing Corporations in Bankruptcy*, 111 Yale L.J. 83 (2001); Philippe Aghion, Oliver Hart & John Moore, *Improving Bankruptcy Procedure*, 72 Wash. U. L.Q. 849 (1994); Aghion, Hart & Moore, *supra* note 81; Lucian Arye Bebchuk, *A New Approach to Corporate Reorganizations*, 101 Harv. L. Rev. 775 (1988).

[104] The bankruptcy reform bill recently passed limits the length of Chapter 11 proceedings and reduces the procedural requirements in small business bankruptcies, but is otherwise unresponsive to the cost and contracting concerns expressed here. *See supra* note 21. This may be because an efficient bankruptcy law benefits borrowers in general, and the class of borrowers is too atomized to obtain efficient reform. On the other hand, a necessary condition to good reform is to identify the goal toward which reformers can strive should effective striving become possible.

[105] For claims to the contrary, see, e.g., Brian A. Blum, *The Goals and Process of Reorganizing Small Businesses in Bankruptcy*, 4 J. Small & Emerging Bus. L. 181, 232 (2000); Elizabeth Warren, *Bankruptcy Policymaking in an Imperfect World*, 92 Mich. L. Rev. 336, 354–563 (1993).

firm; and general human capital, which is useful to the labor market. Understanding how best to make a particular production line work is firm-specific human capital; knowing how to program a computer is general human capital.

Firm-specific human capital is partly protected by a bankruptcy system that preserves financially distressed firms because these are continued as entities. A bankruptcy system that minimizes credit costs also creates jobs by increasing the set of projects that firms will pursue and the system preserves jobs because it maximizes the likelihood of project success (through the effect of low interest rates on the firm's effort choice). The liquidation of economically distressed firms, in turn, will not affect workers whose human capital is primarily general because these workers are employable elsewhere. Thus, the social goal of preserving jobs and the economic goal of eliminating inefficient firms conflict only when the employees of an economically distressed firm possess firm-specific human capital. Liquidation makes this capital redundant, but nevertheless is preferable to continuing the firm. When a firm has negative economic value, the firm-specific human capital of its employees also has negative economic value. Such human capital is best redeployed to other uses.[106]

There are, broadly speaking, two ways to facilitate redeployment. First, firms can be taxed ex ante to contribute to programs that facilitate job transitions. This would cause firms to take into account the social costs of project choices that produce job loss. Second, current programs supply unemployment insurance and, perhaps most importantly, provide employees with information about job opportunities. These programs perhaps could be improved or supplemented with job retraining programs. In contrast to these policies, the bankruptcy system continues unviable firms in existence until the money runs out. This is the worst solution. It increases uncertainty for parties, maximizes credit costs, delays the process of redeploying assets to their best uses, probably lowers to-

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[106] A component of a worker's human capital may be specific to an industry. If the firm has done materially worse than the industry, the worker's human capital is effectively general because she will be employed at another industry firm. If the industry is generally depressed, however, the argument in the text applies: The worker's human capital is redundant in its current use.

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tal employment overall and reduces the incentive of workers to search for productive jobs.

Bankruptcy law also should not respond to local communities whose welfare may be reduced by firm failure. Healthy firms in decentralized economies commonly close, reduce the scale of, or move plants. These economic choices in the aggregate help society but can hurt particular localities. Perhaps social programs should be created to help communities suffering from the consequences of economic change. Such community assistance programs also would respond to plant closings resulting from the liquidation of economically unviable firms. Also, communities can, and sometimes do, use tax breaks, industrial zones and the like to buy the presence of firms that would generate positive externalities. These "local community markets" can allocate otherwise failing firms to places that value their continuance.

The importance of facing firms with hard budget constraints has been demonstrated by the contrasting performances of firms in market and mercantilist economies. Firms that are not allowed to fail, in order to protect workers and localities, employ too many people, fail to innovate, produce poor products, and lose large sums of money. A good bankruptcy law must have a high degree of toughness because being hard on failure causes capital costs to fall.