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Bankruptcy Thermodynamics

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BANKRUPTCY THERMODYNAMICS

*Paul B. Lewis**

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"How weary, stale, flat, and unprofitable
Seem to me all the uses of this world!
Fie on't, ah fie, 'tis an unweeded garden
That grows to seed. Things rank and gross in nature
Possess it merely."

Hamlet, act I, sc. ii, lines 133-37; or a creditor's lawyer discussing a firm in Chapter 11

I. INTRODUCTION

Consider a firm in financial trouble. Whether or not technically insolvent, it cannot generate sufficient cash flow to meet its obligations. As a result, its creditors are getting nervous. Unsecured creditors are considering stopping deliveries, filing lawsuits, and executing judgments. Secured creditors are demanding more security. Banks contemplate set-off. The equity holders are concerned that their investment may be lost. Yet somebody thinks this firm is worth saving. Due to creditor unrest and insufficient cash flow, it cannot be saved without employing bankruptcy law. The firm thus files a petition under Chapter 11 of the Bankruptcy Code.[1]

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1. The Bankruptcy Code (Code) is found in Title 11 of the United States Code. Under the Code, there are two primary types of bankruptcy proceedings. In the first, a debtor liquidates its assets and the proceeds are distributed to creditors. *See, e.g.*, 11 U.S.C. § 726. This type of proceeding typically occurs under Chapter 7 of the Code. In the other, an entity attempts to reorganize under either Chapter 9, 11, 12, or 13 of the Code. In a reorganization, the goal is to formulate a plan providing for various payment streams to pre-petition creditors and the rehabilitation of the financially distressed entity. Chapter 9 concerns debt adjustment of municipalities. Chapter 11 deals primarily with reorganization of corporate entities. Chapter 12 pertains to family farmer debt adjustment. Chapter 13 applies to individual debt adjustment.

My focus in this Article is on corporate reorganization. Both business liquidation under Chapter 7 of the Code and the rehabilitation of individual debtors raise distinctly different policy issues than are addressed herein. For a discussion of some of these policy issues, see, e.g., Margaret Howard, *The Theory of Discharge in Consumer Bankruptcy*, 48 OHIO ST. L.J. 1047 (1987) (discussing inadequacies of theoretical justifications for discharge); Thomas H. Jackson, *The Fresh Start Policy in Bankruptcy Law*, 98 HARV. L. REV. 1393 (1985) (discussing the broad legal context of discharge issues).

One major distinction between corporate reorganization and other forms of bankruptcy proceedings is that corporate reorganization is not—unlike the other forms of bankruptcy—inherently redistributional. Corporate bankruptcy offers no "fresh start" by which debts can be discharged and future income and certain other assets can be protected from pre-petition claimants. *Compare* 11 U.S.C. § 1141 (Chapter 11 "discharge" consists of exchanging old obligations for new obligations), *with* 11 U.S.C. § 727 (individual debtor may be granted discharge).

Now consider this firm from a different perspective. It is an entity whose resources are finite, though distributable in numerous ways. The firm has attempted to distribute its resources in the most economically beneficial way. Perhaps it has scaled back its operations; perhaps it has undertaken other internal restructuring. But it is failing nonetheless. It cannot increase its cash flow from any additional internal reorganization or restructuring. To survive, even with its operations reduced, it must increase its resources. Because the firm cannot generate additional resources internally, this can only be accomplished through an external infusion of capital.

Corporate bankruptcy law presupposes that there is no fundamental inconsistency between corporate reorganization of troubled firms[2] and

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Business filings form a relatively small part of all bankruptcy filings, and filings under Chapter 11 are a small percentage of all business filings. For example, during the 12-month period ending September 30, 1997, there were 1,367,354 filings in United States Bankruptcy Courts. Of these filings, 958,045 were cases filed under Chapter 7 and 397,097 were filed under Chapter 13. Only 11,221 of the filings were made under Chapter 11. The remaining 966 were filed under Chapter 12. For this period of time, 54,252 of the filings were business filings. *See Bankruptcy Court Decisions*, Jan. 13, 1998, at A8-A9.

2. This Article is concerned only with troubled firms. By "troubled firms" I mean firms experiencing a prolonged negative cash flow such that they cannot meet their obligations as they become due, irrespective of whether they are technically insolvent. Troubled firms have undertaken all reasonable efforts to restructure, such as scaling back operations, but still are headed toward liquidation under non-bankruptcy law.

It is true that firms not conforming to this definition of "troubled" may seek bankruptcy protection under current law. One such reason that a firm might do so is to gain the advantages afforded by the automatic stay. *See, e.g.*, Daniel Keating, *Offensive Uses of the Bankruptcy Stay*, 45 VAND. L. REV. 71, 80-122 (1991) (identifying five offensive—rather than defensive—reasons for filing bankruptcy, and noting costs of courts allowing offensive use of the bankruptcy stay). The analysis undertaken here extends only to troubled firms in the sense defined above, and does not extend to firms with positive cash flow. The latter sort of firm may successfully emerge from bankruptcy without implicating the concerns identified herein. Accordingly, I have limited my analysis to the sort of troubled firm for which the bankruptcy process perhaps is most commonly deemed appropriate, a firm that has taken reasonable steps to return itself to viability under state law, yet still is headed for dissolution. I contend herein that this sort of troubled firm can emerge successfully from bankruptcy *only* by imposing costs on others, and that this fact must be recognized in assessing the relative benefits of a reorganization.

The text of the Bankruptcy Code generally does not impose either an insolvency requirement or any other "good faith" hurdle to enter Chapter 11. *See, e.g.*, *In re* Johns-Manville Corp., 36 B.R. 727, 732 (Bankr. S.D.N.Y. 1984) (holding that there is no good faith requirement to file, and no insolvency requirement for voluntary Chapter 11 petition). Many courts, however, have imposed an implied "good faith" filing requirement despite the absence of such language in the Code. *See, e.g.*, Michigan Nat'l Bank v. Charfoos, 979 F.2d 390, 392-94 (6th Cir. 1992); Humble Place Joint Venture v. Fory, 936 F.2d 814, 816-18 (5th Cir. 1991). In addition, numerous commentators have addressed the issue of for whom bankruptcy is appropriate. *See generally* Brian S. Katz, *Single Asset Real Estate Cases and the Good Faith Requirement: Why Reluctance to Ask Whether a Case Belongs in Bankruptcy May Lead to the Incorrect Result*, 9

the protection of these firms' creditors. This Article contends that, as a theoretical matter, this cannot be true. To illustrate this, I employ a model derived from the laws of physics to offer an analogy and an explanation of both the process of reorganization and of certain results that must occur when serious attempts are undertaken to save troubled firms in bankruptcy.

The laws of thermodynamics describe certain results of processes that occur in a system. Thermodynamic principles tell us that systems move toward disorder. This is the natural state of affairs. This natural state, however, runs contrary to the purpose of corporate bankruptcy law, which is to attempt to reverse the flow of disorder of certain types of systems—troubled firms—and return them to viability. As described in Part IV of this Article,[3] the process by which all systems undergo certain natural changes toward a state of heightened disorder can be stemmed in limited ways, all of which involve direct and indirect costs to one or more other systems. Drawing from an examination of the results of processes in a thermodynamic system, I propose a thermodynamic model through which I both examine the process of corporate reorganization of troubled firms and propose an explanation of why certain costs to creditors and to other third parties are likely to be a necessary part of any reorganization.

Case law shows that major protections for secured and unsecured creditors in bankruptcy are being limited so that creditors can be forced involuntarily to infuse resources into troubled firms. This is accomplished by deviating in bankruptcy from the parties' expectations of their legal rights, either by altering the contract between the parties or by failing to adhere to the parties' underlying rights established under nonbankruptcy law. As a result, value is moved from creditors to the debtor or to the debtor's equity holders. Such transfers undoubtedly exact an array of costs. However, avoiding "doomsday"[4] has become the over-

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BANKR. DEV. J. 77 (1992) (arguing that certain kinds of cases should be dismissed on the ground that they are instituted in bad faith); Lawrence Ponoroff & F. Stephen Knippenberg, *The Implied Good Faith Filing Requirement: Sentinel of an Evolving Policy*, 85 NW. U. L. REV. 919 (1991) (examining evolution and application of good faith filing requirement).

3. *See infra* pt. IV.

4. *See* Paul F. Festersen, *Equitable Powers in Bankruptcy Rehabilitation: Protection of the Debtor and the Doomsday Principle*, 46 AM. BANKR. L.J. 311, 317 (1972). Festersen defined the Doomsday Principle as "[t]he salutary and uncouth rule of law which proclaims necessity the mother of invention, or less epigrammatically stated, that the courts will find the power and forge the weapons to achieve the result considered to be desirable." *Id.* at 317. These results include maximizing the possibility of a debtor's reorganization. According to Festersen, Doomsday,

> defined as a dismissal or adjudication, is likely to be the end of the world not only

riding goal of Chapter 11,[5] trumping in the process certain fundamental principles of contract and bankruptcy law. The corporate contract[6] by which the parties have allocated risk and potential reward may be cast aside. Instead, to avoid the sounding of the death knell of the firm,[7] courts are willing to transfer value in anti-contractarian fashion from a firm's creditors to a different group of firm investors, the equity holders of the failing business. The costs that result when external impact is devalued in a reorganization process are significant and often unrecognized or undervalued. These costs include inefficiencies[8] that result when parties' rights are arbitrarily[9] changed *ex post* under bankruptcy law.[10]

> for the debtor but, in general, for any hopes of a reasonable recovery for its creditors. The Principle operates to discourage this untidy eventuality. Payday, the alternative to Doomsday, is a confirmation which continues the debtor as a viable enterprise, returns to the creditors at least as much as they could have obtained in liquidation, and preserves a molecule of the body economic.

Id. at 318 n.17.

5. In redrafting the business reorganization laws, there is little doubt that Congress favored reorganization. *See* United States v. Whiting Pools, 462 U.S. 198, 202 (1983) ("By permitting reorganization, Congress anticipated that the business would continue to provide jobs, to satisfy creditors' claims, and to produce a return for its owners. H.R. REP. NO. 595, at 220. Congress presumed that the debtor's assets would be more valuable if used in a rehabilitated business than if 'sold for scrap.' ").

6. For purposes of this Article, all parties in a consensual relationship with the debtor will be considered parties to the corporate contract of the firm. This includes not only those having commercial contracts with the firm, but also the firm's equity holders, who have entered into a consensual risk-reward arrangement based on the firm's performance. For a broad discussion of the contractual nature of the firm, see FRANK H. EASTERBROOK & DANIEL R. FISCHEL, THE ECONOMIC STRUCTURE OF CORPORATE LAW ch. 1 (1991). *See also* William W. Bratton, Jr., *The New Economic Theory of the Firm: Critical Perspectives from History*, 41 STAN. L. REV. 1471 (1989) (discussing historical perspective on economic theory of firm); Henry N. Butler, *The Contractual Theory of the Corporation*, 11 GEO. MASON U. L. REV. 99 (1989) (describing the contractual theory of the corporation).

7. The bankruptcy alternative to reorganization for a business entity is liquidation under Chapter 7 of the Bankruptcy Code. In a Chapter 7 liquidation, as under state law, the debtor generally has the lowest priority in distribution. *See* 11 U.S.C. § 727(a)(6). Exceptions to this rule exist for property exempted either under federal bankruptcy law or under applicable state law. *See* 11 U.S.C. § 522.

8. Those with interests in the firm bargain for their position and expect to receive the benefits as well as the burdens of that bargain. When these expectations can no longer be relied upon, the result is contractual inefficiency.

9. Such alteration is arbitrary even if consistently applied in bankruptcy, because the decision to enter bankruptcy may or may not be chosen by either the debtor or its creditors. Firms can and do struggle with their financial problems merely with the aid of state law protections.

10. The Bankruptcy Code affords parties certain assurances to prevent these deviations from occurring involuntarily, but these protections are not being strictly observed by courts. *See infra* pt. II.

Some bankruptcy theorists have attempted to justify these costs. Maintaining and rehabilitating a failing business seems intuitively to be socially desirable—jobs may be protected, suppliers can continue to supply, and business assets retain their use. For these theorists, the desire to achieve such ends appropriately overrides other values.[11] Other commentators have contended that bankruptcy law is merely a procedural mechanism for collectivizing debt collection.[12] As such, no justification exists in bankruptcy for altering state-law created substantive rights.

Part II of this Article provides two significant examples of the increasing tendency of courts to erode creditor protections in bankruptcy in order to attempt to return troubled firms to viability. Part III examines the results of such attempts for creditors, the firm itself, and for the broader financial universe associated with the firm and its creditors. Part III also examines how bankruptcy theorists have justified or criticized these results. Part IV examines certain relevant laws of thermodynamics to provide the needed scientific background for the thermodynamic model. Part V sets forth this thermodynamic model, which explains why, if we wish to save troubled firms, costs to creditors and other third parties are largely necessary and unavoidable. Part VI then returns to the issues considered in Part II and offers an alternate explanation of the results seen in these cases in light of the thermodynamic model.

II. THE LOSS OF CREDITOR PROTECTION

The Bankruptcy Code affords certain protections to both secured and unsecured creditors. While courts do not lightly discard these protections, they have been willing to limit them to assist the prospect of reorganization.[13] To illustrate these limitations for both secured and

11. *See infra* pt. III.C.1.

12. *See infra* pt. III.C.2.

13. It is interesting to note that reorganization has a short history relative to other aspects of bankruptcy law. Both the earliest bankruptcy laws, which date from Roman times, and the earliest English bankruptcy laws were distinctly pro-creditor in nature and suggested nothing about the concept of business reorganization. *See, e.g.*, Statute of 1542, 34-35 Hen. VIII, ch. 4 (first English bankruptcy law providing pro-creditor remedies, largely to prevent fraud); MAX RADIN, HANDBOOK OF ROMAN LAW (1927); VIII WILLIAM HOLDSWORTH, A HISTORY OF ENGLISH LAW (1966). The first codification of corporate reorganization in England occurred in 1878. The Joint Stock Companies Arrangement Act of 1878, 33 & 34 Vict. C. 104, a document of some 400 words, empowered a court to sanction and make binding on all creditors of a debtor any compromise agreement voted for by those creditors representing three-fourths in value of such creditors.

In the United States, although the Constitution gave Congress the right to establish "uniform Laws on the subject of Bankruptcies throughout the United States," U.S. CONST. art. I, § 8, cl. 4, there was no corporate reorganization statute as part of the federal bankruptcy law until 1934.

unsecured creditors, I turn now to an examination of a major limitation of the protections afforded each in bankruptcy. Part VI of this Article returns to each of these examples and employs the thermodynamic model to offer an alternate explanation of the result in each of these instances.

A. *Adequate Protection of Secured Creditors*

The major protection afforded secured creditors in bankruptcy is called adequate protection. While adequate protection is not specifically defined in the Bankruptcy Code, a nonexhaustive list of methods of satisfying it is included in section 361 of the Code.[14] Adequate

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Until that time only equity receivership was available. The depression was the impetus for the introduction of corporate reorganization into the existing bankruptcy law, the Bankruptcy Act of 1898. *See* Bankruptcy Act of 1898, ch. 541, 30 Stat. 544 (1899). In his February 29, 1932, address to Congress, President Herbert Hoover stated: "the present Bankruptcy Act is defective in that it holds out every inducement for waste of assets long after business failure has become inevitable. It permits exploitation of its own process and wasteful administration by those who are neither truly representative of the creditor nor the bankrupt." S. DOC. NO. 65, 72d Cong., 1st Sess. XI (1932). President Hoover subsequently urged Congress to implement a system of corporate reorganization. *See* H.R. DOC. NO. 522, 72d Cong., 2d Sess. (1933). The result was the proposal of H.R. 5884 in the first session of the 73d Congress. This became § 77B of the Bankruptcy Act. *See* Act of June 7, 1934, 48 Stat. 911.

Section 77B of the Bankruptcy Act allowed the debtor to propose a reorganization plan to be approved by its creditors. For confirmation, approval was needed by 2/3 of creditors in the amount of each claim affected by the plan. Court approval was needed, and a court needed to find the plan fair, equitable, and feasible. Major changes in the corporate reorganization law occurred in 1938 and again in 1978 with the introduction of Chapter 11 of the modern Bankruptcy Code. *See* Bankruptcy Reform Act of 1978, Pub. L. No. 95-598, 92 Stat. 2549.

14. *See* 11 U.S.C. § 361, which states:

> Adequate Protection. When adequate protection is required under section 362, 363, or 364 of this title in an interest of an entity in property, such adequate protection may be provided by—
>
> (1) requiring the trustee to make a cash payment or periodic cash payments to such entity, to the extent that the stay under section 362 of this title, use, sale, or lease under section 363 of this title, or any grant of a lien under section 364 of this title results in a decrease in the value of such entity's interest in such property;
>
> (2) providing to such entity an additional or replacement lien to the extent that such stay, use, sale, lease, or grant results in a decrease in the value of such entity's interest in such property; or
>
> (3) granting such other relief, other than entitling such entity to compensation allowable under section 503(b)(1) of this title as an administrative expense, as will result in the realization by such entity of the indubitable equivalent of such entity's interest in such property.

Id.

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protection is linked in the legislative history both to the protection of private property under the Fifth Amendment[15] and to the policy rationale that creditors should receive the benefit of their bargain.[16] Underlying these concerns is the notion that secured creditors do not substantially benefit from bankruptcy proceedings, and therefore they should not have to bear their cost.[17]

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15. *See* S. REP. NO. 989, at 49 (1977), *reprinted in* 1978 U.S.C.C.A.N. 5787, 5835. The U.S. Supreme Court has held that the Fifth Amendment requires the claim of a secured creditor to be protected to the extent of the value of the collateral securing the claim. *See* Wright v. Union Cent. Life Ins. Co., 311 U.S. 273, 281-82 (1940). *But see* James S. Rogers, *The Impairment of Secured Creditor's Rights in Reorganization: A Study of the Relationship Between the Fifth Amendment and the Bankruptcy Clause,* 96 HARV. L. REV. 973, 978 (1983) (arguing that the Bankruptcy Clause is not affected by Takings and Due Process Clauses of the Fifth Amendment).

16. The legislative history states that the need for adequate protection rests "as much on policy grounds as on constitutional grounds. Secured creditors should not be deprived of the benefit of their bargain." S. REP. NO. 989, at 53 (1978), *reprinted in* 1978 U.S.C.C.A.N. 5787, 5839.

To determine whether a secured creditor is adequately protected, a value must be placed on the collateral. Valuations of collateral are used to determine the allowed claim of a secured creditor under § 506 of the Code. A valuation that looks at the asset's highest possible value tends to protect the creditor; one that focuses more on intended use tends to help the debtor.

The nature of the valuation employed is often central to determining the question of when adequate protection exists. Courts exercise a range of discretion in determining whether valuation issues should be decided on a going concern or a liquidation basis, because adequate protection questions are questions of fact to be decided by a decisionmaker based on both measurements of value and the credibility of witnesses. *See In re* Martin, 761 F.2d 472 (8th Cir. 1985) (determining that value is a flexible concept open to case-by-case interpretation).

Because of the inherent uncertainty parties face when addressing valuation issues, they may agree on an appraisal in order to avoid the risk of an adverse judicial determination on valuation. For an extensive discussion of the problems resulting from the Code's failure to address meaningfully the valuation issue, see generally Chaim J. Fortgang & Thomas M. Mayer, *Valuation in Bankruptcy,* 32 UCLA L. REV. 1061 (1985) (illustrating valuations problems in bankruptcy).

When a creditor is undersecured—that is, when the value of the collateral securing the creditor's loan is less than the value of the loan—the secured portion of the creditor's claim equals only the value of its collateral. For example, a creditor whose $1,000,000 loan is secured by collateral valued at $1,000,000 will have its entire claim secured. If, however, the property is valued at $750,000, the claim is secured to that degree, but the remaining $250,000 of the claim is unsecured. *See* 11 U.S.C. § 506(a) ("An allowed claim of a [secured] creditor . . . is a secured claim to the extent of the value of such creditor's interest in the estate's interest in such property . . . and is an unsecured claim to the extent that the value of such creditor's interest . . . is less than the amount of such allowed claim.").

17. *See* Reading Co. v. Brown, 391 U.S. 471, 482 (1968) ("[I]n considering whether those injured by the operation of the business during an arrangement should share equally with, or recover ahead of, those for whose benefit the business is carried out, the latter seems more natural and just."); *In re* Grandfather Mountain Ltd. Partnership, 207 B.R. 475, 487 (Bankr. M.D.N.C. 1996) (holding that, in considering confirmation of non-consensual plan, a court must consider as a factor "whether the primary risk of reorganization remains with the equity interests

Consider now the adequate protection implications of the Supreme Court's decision in *United Savings Association v. Timbers of Inwood Forest Associates, Ltd.*[18] *Timbers* considered the question of whether an undersecured creditor in bankruptcy, statutorily denied interest on its claim,[19] is entitled to compensation for the lack of the collateral's use value, lost to it because foreclosure is delayed by the bankruptcy filing and resultant automatic stay.[20] Section 506(b) explicitly states that an oversecured creditor is entitled to interest.[21] *Timbers* posed the question of whether an undersecured creditor should be compensated for its inability to seize and sell collateral.[22] The Supreme Court held that an

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of the reorganized debtor"); *In re* EFH Grove Tower Assocs., 105 B.R. 310, 314 (Bankr., E.D.N.C. 1989) ("The costs of the debtor's reorganization should be borne by those who stand to gain from the reorganization."). *But see* Vanston Committee v. Green, 329 U.S. 156, 163-64 (1946) (ruling that reimbursing secured creditors for cost of delay is "inequitable to unsecured creditors").

18. 484 U.S. 365 (1988).

19. At its core, *Timbers* is a case about interest. Interest is of great significance in bankruptcy. As one commentator recently wrote, "In a bankruptcy case, interest is the tail of the dog, but it is a long tail and it wags a lot." Dean Pawlowic, *Entitlement to Interest Under the Bankruptcy Code*, 12 BANK. DEV. J. 149, 149 (1995). In addition to *Timbers*, the Supreme Court has decided two other significant bankruptcy interest rate cases in recent years. *See* Rake v. Wade, 508 U.S. 464 (1993) (addressing issue of interest in a Chapter 13 plan intended to cure arrearage and maintain payments of an oversecured home mortgage); United States v. Ron Pair Enters., 489 U.S. 235 (1989) (addressing the question of whether § 506(b) applies only to consensual oversecured claims, or whether it applies to non-consensual oversecured claims as well). In addition, the treatment of interest issues in bankruptcy has generated extensive academic commentary. *See, e.g.*, David G. Carlson, *Postpetition Interest Under the Bankruptcy Code*, 43 U. MIAMI L. REV. 577 (1989); Paula A. Franzese, *Secured Financing's Uneasy Place in Bankruptcy: Claims for Interest in Chapter 11*, 19 HOFSTRA L. REV. 1 (1990); John T. McCoid, II, *Pendency Interest in Bankruptcy*, 68 AM. BANKR. L.J. 1 (1994); Pawlowic, *supra*.

20. Foreclosure is delayed by the automatic stay unless the creditor can convince the Court to lift the stay, either for cause, see 11 U.S.C. § 362(d)(1), or because the debtor does not have equity in the property and the property is not necessary for an effective reorganization. *See* 11 U.S.C. § 362(d)(2).

21. Section 506(b) of the Code states:

> To the extent that an allowed secured claim is secured by property the value of which, after any recovery under subsection (c) of this section, is greater than the amount of such claim, there shall be allowed to the holder of such claim, interest on such claim, and any reasonable fees, costs, or charges provided for under the agreement under which such claim arose.

Id.

22. In *Timbers*, the creditor held a security interest in an apartment building. The security interest included an assignment of rents. The debtor had agreed to pay the creditor post-petition rents, but the creditor claimed it was entitled to additional compensation. The Bankruptcy Court agreed and conditioned the stay's continuance on monthly payments at the market rate of 12% on the estimated realizable value from the foreclosure. *See Timbers*, 484 U.S. at 368-69. The district court affirmed, but the Fifth Circuit, sitting en banc, reversed. *See id.* at 469.

undersecured creditor is not entitled to such compensation. In an opinion by Justice Scalia, the Court denied the creditor's appeal, which claimed entitlement to monthly payments to compensate it for the lost use value of the loan collateral that the automatic stay prevented it from possessing.[23]

The Supreme Court began its analysis by indicating that if the apartment complex serving as collateral had been declining in value, the creditor would have been entitled to cash payments.[24] The key issue then became whether the phrase "interest in property" included the creditor's right—delayed by the automatic stay—to take immediate possession of the defaulted security.[25] If yes, the creditor would not be adequately protected unless the proceeds it was deprived of during the term of the stay were reimbursed.

The Court concluded that the term "interest in property" does not include a secured party's right to immediate foreclosure. The Court reasoned that section 506 defines the amount of the secured creditor's allowed claim and the conditions of its receiving post-petition interest. It concluded that under section 506(a), the term "interest in property" means the security interest without taking account of the right to immediate possession on default.[26] If the latter were included, the "value of such creditor's interest" would increase, and the proportions of the claim that are secured and unsecured would change, as the stay continues, since the value of the entitlement to use the collateral from the date of bankruptcy would increase with the passage of time.[27] The Court contended that section 506 denies undersecured creditors interest on their claims, just as it denies oversecured creditors post-petition interest to the extent that such interest, when added to the claim's principal amount, exceeds the collateral's value. Because section 506(b) clearly allows for interest only to the extent that the creditor is oversecured, interest can be paid only out of the equity cushion. Thus, the Court reasoned, undersecured creditors fall under the general rule disallowing post-petition interest.[28]

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23. *See id.* at 382.
24. *See id.* at 370-71.
25. *See id.* at 371.
26. *See id.*
27. The Court concluded that the meaning of the phrase "value of such entity's interests" in § 361(1) and (2), when applied to secured creditors, means the same. *See id.* at 372.
28. *See id.* at 374, 382. This general rule is found in § 502(b)(2) of the Code. *See* 11 U.S.C. § 502(b)(2). In addition, the Court stated that the creditor's claim created inconsistencies between § 362(d) and § 552. *See id.* at 374. Section 552(a) states the general rule that a pre-petition security interest does not reach property acquired by the estate post-petition. Section 552(b) sets out an exception for the encumbrance of post-petition proceeds, product, offspring,

The result of *Timbers* is that secured creditors lose some of their "adequate protection."[29] If adequate protection means preserving the benefit of the bargain, then following *Timbers*, an undersecured creditor has been denied part of that consideration for which it had contracted. The loss to the secured creditor, who will not benefit by a successful reorganization, but who bears at least part of its cost, is linked to the debtor's corresponding gain, a gain designed to infuse resources into an entity to increase its likelihood of survival.[30] I return to this theme in

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profits, and rents, but only if the interest in such collateral is included in the security agreement and has been perfected pre-petition under applicable non-bankruptcy law. The Court reasoned that to hold for United Savings would be to allow an unperfected undersecured creditor to achieve the result contemplated by § 552 by demanding the "use value" of the collateral under § 362. *See id.*

29. It should be noted that *Timbers* effectively has been overruled with regard to single-asset cases. The 1994 Amendments added § 362(d)(3), which states that in single-asset cases, a court will grant relief from the stay unless the debtor can show within 90 days of filing either that it has a plan which has a reasonable possibility of being confirmed in a reasonable time or that it has commenced monthly payments equal to interest at a fair market value.

30. *Timbers* is a significant illustration of the problem of the erosion of protection of secured creditors. There are other examples. Consider the issue of whether a court should grant a superpriority lien under § 364(d) when the creditor whose lien is being primed is undersecured and objects to the issuance of the priming lien. Section 364(d) allows for priming liens when credit is otherwise unavailable and when "there is adequate protection of the interest of the holder of the lien on the property of the estate on which senior or equal lien is proposed to be granted." 11 U.S.C. § 364(d)(1)(B).

Consider *In re 495 Central Park Ave. Corp.*, 136 B.R. 626 (Bankr. S.D.N.Y. 1992), in which the bankruptcy court found that an undersecured creditor would be adequately protected when a priming lien enabled the developer/debtor to complete renovation of a commercial building that, as a result, would presumably increase the building's value by more than the amount of the priming lien. In effect, the court determined that the likelihood that the value would increase as anticipated constituted the required adequate protection necessary to satisfy the conditions of § 364(d). *See id.* at 632.

Granting a priming lien under these circumstances directly contravenes the intended purpose of Chapter 11, which is to make an appropriate use of assets for the ownership acting as a collective body. In *495 Central Park Ave. Corp.*, the party making the decisions—the debtor—did not bear the potential costs of the attempted reorganization but did stand to gain from it. *See id.* at 629-31. As a result, it had every incentive to try to force a reorganization in circumstances when liquidation may have been the better approach for the ownership taken as a whole. Thus, allowing the debtor to externalize the costs of its decisions results in decisions that ignore the true social costs of keeping the firm together.

It is not the priming lien per se as a method of infusing value into the troubled debtor to which I object. In certain circumstances—when the collateral's value will increase by a sum greater than the amount of the additional loan—it may be in the interests of the collective ownership to have such a lien granted. Under such circumstances, an existing creditor who has faith in management and who believes that the additional loan likely will increase the building's value by more than the amount of the priming lien would be expected to consent to the priming lien if it did not in fact make the loan itself. If, however, it believes that the collateral's value will remain the same or drop following the additional financing, it will object to any additional financing request.

Part VI of this Article when considering *Timbers* in light of the thermodynamic model proposed herein.

B. *Unsecured Creditors and the Absolute Priority Rule*

The major protection afforded unsecured creditors in a Chapter 11 reorganization is the absolute priority rule.[31] To understand the protection provided by the absolute priority rule, it is first necessary to have a general understanding of how a plan of reorganization is confirmed under Chapter 11. A debtor first proposes a plan of reorganization.[32]

When a court allows a lien priming the status of an undersecured creditor over that creditor's objection, it has eroded the value of the creditor's protection by making it a dependent upon a gamble. Adequate protection should not depend on a gamble, particularly not upon a gamble the creditor does not undertake voluntarily.

A number of courts have agreed. In perhaps the most strongly worded recent opinion, the Third Circuit, *en banc*, noted the problems with allowing such a priming lien. *See In re* Swedeland Dev. Group, Inc., 16 F.3d 552 (3d Cir. 1994). The court severely criticized a bankruptcy court's authorization of such a priming lien predicated on the bankruptcy judge's belief that a partially completed project, when completed and sold over an eight-year period, would adequately protect the primed creditor's existing secured claim.

The Third Circuit rejected the bankruptcy judge's contention that development property increases in value simply because the debtor continues with construction. The construction might or might not cause the property to gain in value or otherwise be profitable. Operating projections cannot provide adequate protection. The court stated that

> continued construction based on projections and improvements to the property does not alone constitute adequate protection. Those cases which have considered improvements to be adequate protection have done so only when the improvements were made in conjunction with the debtor's providing additional collateral beyond the contemplated improvements. We reject the notion that development property is increased in value simply because a debtor may continue with construction which might or might not prove to be profitable.

Id. at 566 (citations omitted). The court concluded that

> Congress did not contemplate that a creditor could find its priority position eroded and, as compensation for the erosion, be offered an opportunity to recoup dependent upon the success of a business with inherently risky prospects. We trust that in the future bankruptcy judges in this circuit will require that adequate protection be demonstrated more tangibly than was done in this case.

Id. at 567; *see* Lawrence K. Snider & Paul B. Lewis, *Priming Liens and the Undersecured Creditor after* In re Swedeland Development Group, Inc., 4 J. BANKR. L. & PRAC. 211 (1995).

31. *See* 11 U.S.C. § 1129(b); *see also* Walter J. Blum & Stanley A. Kaplan, *The Absolute Priority Doctrine in Corporate Reorganizations*, 41 U. CHI. L. REV. 651 (1974) (tracing evolution of the doctrine); Kenneth Klee, *All You Ever Wanted to Know About Cram Down Under the New Bankruptcy Code*, 53 AM. BANKR. L.J. 133 (1979) (describing elements of cram down).

32. The debtor has sole discretion to file a plan for the first 120 days after the order for relief. 11 U.S.C. § 1121. This period may be extended for cause. If the debtor has not filed a

Because the debtor has the initial right to propose a plan, this gives the debtor a fair amount of leverage in the negotiating process within Chapter 11.[33] If neither the debtor's plan nor any other plan successfully can be confirmed, it is likely that the firm's assets will be liquidated.[34]

In order for a plan of reorganization to be confirmed in Chapter 11,[35] all impaired[36] classes[37] must vote for the plan.[38] As long as the plan is consensual, the debtor's ability to retain ownership is determined contractually based on the parties' agreement rather than on the rule of law. If the plan is not consensual, however, and an impaired class rejects the plan, the plan still can be confirmed in a cram down if at least one class of impaired creditors accepts the plan[39] and if the "best interests" test is satisfied.[40] If this and other requirements are met, a plan can be successfully crammed down[41] upon a dissenting class of claimants.

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plan within 120 days, or if the plan has not been confirmed within 180 days, any party may file its own plan. 11 U.S.C. § 1121(c). This was not the case under Chapter X of the Bankruptcy Act, under which the debtor retained the exclusive right to propose a plan throughout the pendency of the bankruptcy proceeding.

33. The desire to give the debtor leverage for negotiation is made clear in the legislative history of the Code. *See* S. REP. NO. 989, 95th Cong., 2d Sess. 1188 (1978). The debtor's exclusive right to propose a plan under the old Chapter X, however, was deemed to give it too much leverage. Thus, Congress reached a compromise whereby the debtor initially has the exclusive right to propose a plan, but the right to propose a plan would be opened to all parties in interest if a plan is not proposed by the debtor and confirmed within a reasonable time. *See, e.g.*, H.R. REP. NO. 595, 95th Cong., 2d Sess. 174 (1978).

34. *See* 11 U.S.C. § 1112(a) (providing for conversion of a case from Chapter 11 to one under Chapter 7 of the Code).

35. The Bankruptcy Code imposes 13 requirements on a party attempting to confirm a plan of reorganization. *See* 11 U.S.C. § 1129(a)(1)-(13).

36. A class is said to be impaired unless certain specified requirements are met which essentially leave unaltered the rights of the party in question. *See* 11 U.S.C. § 1124. All non-impaired classes are deemed to accept a plan automatically. *See* 11 U.S.C. § 1126(f).

37. Classification often becomes a major issue in the reorganization process, and complaints of gerrymandering are not uncommon. Under the Code, all classes must contain similar creditors. *See* 11 U.S.C. § 1122. It is not the case that all similar creditors must be classified together. *See In re* U.S. Truck Co., 800 F.2d 581 (6th Cir. 1986) (allowing classification based on desire to create a consenting class of creditors). *But see In re* Pine Lake Village Apartment Co., 19 Bankr. 819 (Bankr. S.D.N.Y. 1982) (disallowing creation of separate classes of unsecured creditors in order to obtain accepting class). *See generally* Bruce A. Markell, *Claims & Opinions: Clueless on Classification: Toward Removing Artificial Limits on Chapter 11 Claim Classification*, 11 BANKR. DEV. J. 1 (1994/1995) (arguing against current law on classification).

38. *See* 11 U.S.C. § 1129(a)(8).

39. *See* 11 U.S.C. § 1129(a)(10).

40. The best interest test requires the dissenting impaired class of creditors to receive at least as much as it would in a Chapter 7 liquidation. *See* 11 U.S.C. § 1129(a)(7).

41. *See* 11 U.S.C. § 1129(b).

There are a variety of requirements that must be satisfied for a plan to be successfully crammed down. Among these are that at least one impaired class of non-insider creditors must actually accept the plan,[42] the plan must not discriminate unfairly, and the plan must be "fair and equitable."[43] For impaired dissenting unsecured creditors, a plan is deemed to be fair and equitable if it satisfies the terms of the absolute priority rule.[44] The absolute priority rule goes a long way toward determining whether the equity holders in such cases can retain an interest in the reorganized debtor.[45]

Under the absolute priority rule, priority is absolute in the sense that no junior class of claimants can receive anything in a cram down unless all senior classes are first paid in full. Thus, if the class of unsecured creditors—which is senior to the equity holders—objects to a plan of reorganization, and the debtor attempts to confirm the plan by means of a cram down, the equity holders cannot receive anything under the plan's terms unless the unsecured creditors are paid in full.[46]

The absolute priority rule protects unsecured creditors by assuring that their priority position will not be involuntarily subordinated in bankruptcy to that of the firm's equity holders. Taken in conjunction with the rest of the Bankruptcy Code, the absolute priority rule provides

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42. *See* 11 U.S.C. § 1129(a)(10).

43. *See* 11 U.S.C. § 1129(b)(1).

44. Section 1129(b)(2)(B) provides:

> For the purpose of this subsection, the condition that a plan be fair and equitable with respect to a class includes the following requirements:
>
> . . . .
>
> (B) With respect to a class of unsecured claims—
>
> (i) the plan provides that each holder of a claim of such class receive or retain on account of such claim property of a value, as of the effective date of the plan, equal to the allowed amount of such claim; or
>
> (ii) the holder of any claim or interest that is junior to the claims of such class will not receive or retain on account of such junior claim or interest any property.

Id.

45. Prior to the adoption of the 1978 Bankruptcy Code, the absolute priority rule went even further in this regard. Under former Chapter X of the Bankruptcy Act, absolute priority had to be maintained for all classes of creditors, irrespective of whether each class consented to the plan. Under Chapter 11, absolute priority may be waived by a class that so consents. As a result, negotiation has taken on increasing importance. While in a consensual, negotiated reorganization, the unsecured creditors may receive something even if the secured creditors have encumbered all of the debtor's assets, this is not the case in a liquidation. In a liquidation, under these circumstances, the secured creditors will receive everything, and the unsecured creditors and the equity holders will receive nothing. Thus, the threat of liquidation may create a sizable incentive for unsecured creditors to accept a negotiated plan that greatly impairs their interests.

46. *See* 11 U.S.C. § 1129(b)(2)(B).

for a distribution in a cram down that substantially mirrors the priority scheme established under state law.[47] Taken at its face, however, the rule renders it doubtful that the existing equity holders of a company that truly cannot meet its liabilities can ever participate in the reorganized debtor absent a consensual plan of reorganization.

Such future participation by the existing equity holders was presumably one of the debtor's primary purposes in seeking bankruptcy protection in the first place. As a result, following the enactment of the 1978 Bankruptcy Code, a major debate has arisen as courts have employed the so-called "new value exception" to the absolute priority rule.[48] The new value exception—if it exists under the Code—provides

47. *See, e.g.*, U.C.C. § 9-504.

48. To understand the debate regarding the new value exception, one must begin by looking at the statutory language of the old Bankruptcy Act of 1898. This Act provided, *inter alia*, for creditors to consent to plans of reorganization that impaired their interests, and it required plans of reorganization to be "fair and equitable." However, the Act did not define the phrase "fair and equitable." The absolute priority rule resulted from reasoning that because creditors have priority over equity holders in contracts under state law, this order of priority must be retained in a reorganization in order for it to be "fair and equitable." *See, e.g.*, Northern Pac. Ry. v. Boyd, 228 U.S. 482 (1913). The absolute priority rule thus requires the last penny of a senior class to have priority over the first penny of a junior class.

The idea of a new value exception arose in dicta as a result of the equitable principles inherent in the bankruptcy process. The first notable case in its history is *Kansas City Terminal Ry. v. Central Union Trust Co.*, 271 U.S. 445 (1926), in which the Court allowed for the modification on equitable grounds of the existing priority structure over the objection of junior creditors by allowing a shareholder of the debtor who agreed to contribute new value to the reorganized company to retain an interest, so long as the senior secured creditor, whose claim exceeded the firm's value, consented. In *Kansas City*, the junior claimants would have received nothing under any circumstances, because the senior claimant's claim exceeded the assets' value. Thus, the proposal in question did not materially differ from a scenario whereby the firm was sold to the secured creditor, who then allowed the old equity to buy into the new firm.

Case v. Los Angeles Lumber Prods. Co., 308 U.S. 106 (1939) changed this analysis. In *Case*, a bankruptcy judge allowed equity to retain an interest in the reorganized debtor based on the promise of continuing management, influence and good will in the community. Unlike the facts of *Kansas City*, the *Case* judge allowed this to occur over the objection of the senior creditors. The Supreme Court reversed this holding on the grounds that any new value contribution which could justify such a rule would have to be based upon equity's contribution of "money or money's worth." *Id.* at 121-22. Justice Douglas noted that such contributions were not enough to give them equity over the dissent of the creditors. These contributions had no place in the asset column of the business' balance sheet. The Court did not, however, reject the notion of a new value exception. Without noting the important factual distinction between *Kansas City* and *Case*—that in the former, the senior creditor consented to the proposal, whereas in the latter the senior claimants did not—the Court implied that it might be a different story if the shareholder's would contribute "money or money's worth" to get the business back on its feet.

In 1988, the Court decided *Norwest Bank Worthington v. Ahlers*, 485 U.S. 197 (1988). In *Ahlers*, the Court considered the question of whether the promise by the owners of a failing

for the debtor's existing equity holders to retain a stake in the reorganized debtor notwithstanding a plan's failure to satisfy the absolute priority rule to the extent that the old equity holders contribute "money or money's worth"[49] to the reorganized entity. To illustrate more clearly what is at issue,[50] I examine two significant and divergent recent treatments of the issue: the Ninth Circuit's opinion upholding the new value exception in *In re Bonner Mall Partnership*[51] and the Seventh Circuit's opinion suggesting that there should be no new value exception in *Kham & Nate's Shoes No. 2 v. First Bank of Whiting*.[52]

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family farm of future "labor, experience, and expertise" was sufficient for the confirmation of a plan of reorganization that otherwise did not satisfy the requirements of the absolute priority rule. The Court found that the owner's promise was "intangible, inalienable, and in all likelihood unenforceable," and, citing the language of *Case*, held that it "has no place in the asset column of the balance sheet of the new [entity].' " *Ahlers*, 485 U.S. at 204 (quoting *Los Angeles Lumber*, 308 U.S. at 122-23). The Court went on to state that "the statutory language and the legislative history of § 1129(b) clearly bar any expansion of any exception to the absolute priority rule beyond that recognized in our cases at the time Congress enacted the 1978 Bankruptcy Code." *Id.* at 206.

This issue was scheduled to come before the Supreme Court in the 1994-1995 year following a ruling by the Ninth Circuit that the new value exception survived the enactment of the 1978 Bankruptcy Code. The case settled before the Supreme Court had an opportunity to decide it. The petitioner in the case, U.S. Bancorp Mortgage Company, requested, however, that the Supreme Court exercise its powers pursuant to 28 U.S.C. § 2106 and vacate the Ninth Circuit's opinion upholding the new value exception. The Supreme Court declined to do so. *See* United States Bancorp Mortgage Co. v. Bonner Mall Partnership, 513 U.S. 18 (1994).

The ultimate vitality of the new value exception may finally be decided this term. The Supreme Court has granted certiorari to review the decision of the Seventh Circuit upholding the exception in *Bank of Am. Nat'l Trust & Sav. Ass'n v. 203 N. LaSalle Partnership*, 126 F.3d 955 (7th Cir. 1998), *cert. granted*, 66 U.S.L.W. 3718 (May 4, 1998).

49. *See* Case v. Los Angeles Lumber, 308 U.S. 106, 122 (1939) ("stockholder's participation must be based on a contribution in money or money's worth, reasonably equivalent in view of all the circumstances to the participation of the stockholder").

50. My analysis will in fact differ in a fundamental respect from the analysis employed by courts. The central question for a court is whether the new value exception survived the enactment of the 1978 Code. The key question is, in light of the thermodynamic paradigm and the effect on all parties in interest, should the Supreme Court ultimately recognize the continued vitality of the new value exception.

51. 2 F.3d 899 (9th Cir. 1993).

52. 908 F.2d 1351 (7th Cir. 1990). Courts have in fact taken three different approaches to the new value exception question. The first approach contends, based largely on the view stated in *Dewsnup v. Timm*, 502 U.S. 410 (1992), that the 1978 Bankruptcy Code did not alter pre-Code judicially created practice unless the legislative history contains at least some discussion of the intent to make this change. Because the Code is silent on the subject and the legislative history is virtually silent, the rule of *Case* survived the enactment of the 1978 Code. *See, e.g., In re* S.A.B.T.C. Townhouse Ass'n, 152 Bankr. 1005, 1009 (Bankr. M.D. Fla. 1993); *In re* Sovereign Group 1985-27, Ltd., 142 B.R. 702, 707 (Bankr. E.D. Pa. 1992). The second group has argued that the rule of *Case* did not survive the 1978 codification. This argument is

In *Bonner Mall Partnership*, the debtor proposed a plan that provided for the transfer of all of its assets to a new corporation created by the plan. The primary creditor was owed $6.6 million; its debt was secured by the mall, and it was significantly undersecured.[53] The plan proposed to treat this creditor's claim by repaying the $3.2 million secured debt over thirty-two months following the plan's confirmation, with monthly interest payments payable in the interim. All other secured debt payments would be deferred. All of the debtor's unsecured creditors who were owed more than $1000 would be paid according to a pro-rata distribution of preferred stock shares in the new corporation. Under the plan, the equity holders would receive nothing on their claims. The equity holders would contribute, however, a total of $200,000 in cash to the debtor in exchange for two million of the four million authorized shares of the new corporation's common stock. Nobody else had the right to receive stock in exchange for such contributions. The class of unsecured creditors in which the primary creditor's unsecured claim would be placed would be impaired. Because the primary creditor was not going to vote its unsecured claim in favor of the plan, the sole method by which the plan could be confirmed was by the new value exception to the absolute priority rule, should the court find that the exception remained viable post-1978.[54]

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based on the fact that § 1129(b)(2)(B)(ii) of the Code replaced the *Los Angeles Lumber* standard of "fair and equitable" with a congressionally enacted standard and that the new standard makes no reference to a new value exception. Because the words of the statute are clear on their face, the appropriate conclusion is that the new value exception failed to survive the enactment of the 1978 Code. *See, e.g., In re* Century/Outlook, Ltd., 127 B.R. 650, 657 (Bankr. N.D. Cal. 1991). The third approach contends that the new value exception is not an exception at all. The absolute priority rule prohibits retention of one's interest in a reorganized entity "on account of" old interests. In cases where old equity is contributing new capital, its retained interest in the reorganized debtor is based on this new contribution, not on account of a prior interest. On this view, allowing existing equity holders to retain stake in the reorganized entity based on their capital contribution is consistent with the absolute priority rule. *See, e.g., In re* Montgomery Court Apartments, 141 B.R. 324, 342-46 (Bankr. S.D. Ohio 1992); *In re* Creekside Landing, Ltd., 140 B.R. 713, 717-19 (Bankr. M.D. Tenn. 1992); Anthony L. Miscioscia, Jr., Note, *The Bankruptcy Code and the New Value Doctrine: An Examination into History, Illusions, and the Need for Competitive Bidding*, 79 VA. L. REV. 917, 933-36 (1993) (framing new value question in terms of Supreme Court rules of statutory construction); *see generally* Bruce A. Markell, *Owners, Auctions, and Absolute Priority in Bankruptcy Reorganizations*, 44 STAN. L. REV. 69 (1991) (arguing that new value exception is merely reformulation of absolute priority rule).

53. *See Bonner Mall*, 2 F.3d at 905. The bankruptcy judge valued the property at $3.2 million, meaning that the creditor held a secured claim of $3.2 million and an unsecured claim for the other $3.4 million it was owed. *See* 11 U.S.C. § 506(a).

54. *See Bonner Mall*, 2 F.3d at 906-07.

The Ninth Circuit began its analysis by stating that a new value exception did in fact exist under pre-Code Bankruptcy Act practice.[55] The court then looked at three major factors to justify its view that the doctrine survived the enactment of the 1978 Bankruptcy Code. First, the court determined that the Code provision codifying the absolute priority rule did not prohibit confirmation of a new value plan. This was based on an argument that the "on account of" language in section 1129(b)(2)(B)(ii) prohibits only the granting of property interests on account of existing ownership status. It does not prohibit old equity from "participat[ing] in the reorganized debtor on account of a substantial, necessary, and fair new value contribution."[56] The court was untroubled by the argument that the old equity was being given a property right on account of its existing status by being accorded the exclusive right to contribute new value in exchange for stock.[57]

Second, the court decided that Congress' failure to include expressly the new value doctrine as a standard to be considered in applying the "fair and equitable" principle did not reflect an intent to eliminate the exception. It based its reasoning on "the normal rule of statutory construction that if Congress intends for legislation to change the interpretation of a judicially created concept, it makes that intent specific."[58] Because the court believed that the new value exception existed prior to the Code, it concluded that the lack of evidence that

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55. *See id.* at 907.

56. *Id.* at 909.

57. The court did indicate, however, that it recognized "that in some larger sense the reason that former owners receive new equity interests in reorganized ventures is that they are former owners." *Id.* But this did not affect the court's reasoning. Rather, the court focused on the fact that stock was obtained only when additional capital was invested ("A reading of the full text of § 1129(b)(2)(B)(ii) makes it clear that what Congress had in mind was direct or immediate causation rather than a more remote variety, and that it did not intend to prohibit persons who receive stock because they have provided new capital from becoming participants in the reorganized debtor simply because they were also owners of the original enterprise."). *Id.* As for the exclusive right to contribute, the court noted, somewhat disingenuously, that there may be reasons other than new contributions to afford stock—such as that the plan proponent may believe that the participation of old equity in the new business will enhance the business' value after reorganization, or nobody else may be willing to contribute value. *See id.* at 911. Neither explanation addresses, however, why granting old equity the *exclusive* ability to participate is not in and of itself a granting of a property interest "on account of such junior claim or interest," as is prohibited by § 1129(b)(2)(B)(ii). *See, e.g., In re* Bryson Properties, XVIII, 961 F.2d 496, 504 (4th Cir. 1992) (holding that when debtor's equity is the only party allowed opportunity to contribute new capital, the equity effectively can "purchase" the property without marketing the property or otherwise subjecting it to the sale requirements of § 363 of the Code, where, among other things, the secured creditor also could bid on the property).

58. *Bonner Mall*, 2 F.3d at 913 (quoting *Midatlantic Nat'l Bank v. New Jersey Dep't of Envtl. Protection*, 474 U.S. 494, 501 (1986)).

Congress intended to eliminate the exception establishes the exception's continuing vitality.

The court's third justification for concluding that the new value exception survived the 1978 Code was that the new value exception was consistent with the structure and underlying policies of Chapter 11.[59] The primary creditor contended that the Code is designed to give creditors, not the bankruptcy court, the power to decide when to waive the absolute priority rule.[60] The court decided, however, that the purpose of the cram down provision in section 1129(b) is to allow the court—not the creditors—to decide whether a "fair and equitable" plan should be confirmed over creditor objections.[61] It also observed that the new value exception is based on a practical necessity, namely that the reorganized debtor frequently could not obtain new money in the absence of the doctrine. The court held this interpretation to be consistent with the general theme that Chapter 11 should aim to assist a debtor's reorganization and to increase the estate's value.[62] Accordingly, the court ruled that confirming a plan based on the new value exception falls properly within the equitable powers afforded a bankruptcy court.[63]

By contrast, consider Judge Easterbrook's treatment of the same issue in *Kham & Nate's Shoes No. 2 v. First Bank of Whiting*.[64] Like *Bonner Mall*, this case dealt with a plan that allowed for the debtor's principals to retain their equity interests despite the debtor's inability to pay dissenting senior creditors in full. Judge Easterbrook's opinion centered on two issues—the economic rationality of the creditor's decision to dissent and the codification of the 1978 Act. As to the former, the court noted that it may be in the creditor's best interest to

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59. This argument is in some sense a response to Judge Easterbrook's opinion in *Kham & Nate's Shoes No. 2 v. First Bank of Whiting* discussed *infra*. *See infra* text accompanying notes 64-65.

60. As noted, as long as a plan is consensual, the absolute priority rule does not come into play. *See generally* 11 U.S.C. 1129(a)(8) & 1129(b).

61. *See Bonner Mall*, 2 F.3d at 915.

62. *See id.* at 916.

63. *See id.* at 917. Given the facts of this case, it is hard to find much equitable justification for the *Bonner Mall* court's position. Even commentators who support the new value exception recognize that there are difficult policy issues when dealing with investors in public companies, and that the argument for added protection for such investors is problematic. *See* Raymond T. Nimmer, *Negotiated Bankruptcy Reorganization Plans: Absolute Priority and New Value Contributions*, 36 EMORY L.J. 1009, 1029 (1987) ("In a public company, the shareholder's stake is often a purely financial investment and it is difficult to defend protecting these investors over others (creditors) whose claim is superior under nonbankruptcy law and is equally financial in character.").

64. 908 F.2d 1351 (7th Cir. 1990).

consent to the continuing involvement of old equity, either because they are bringing needed new capital or for some other reason, like management expertise. If so, the creditors will act in their best interests and consent to a plan that calls for the continued participation of the old equity holders.[65] As to the latter, the court noted that the language of the Code suggests that the new value exception did not survive. The court stopped short, how-ever, of holding explicitly that there is no new value exception, holding instead that even if the exception survived the 1978 codification, the facts in this case suggest that the equity holders's contribution would be insufficient to satisfy it.

The vitality of the new value exception to the absolute priority rule remains heavily litigated, but the Supreme Court may finally render an authoritative ruling on the issue this term.[66] However, the clear trend in lower courts has been to uphold the existence of the exception.[67] In

65. *See id.* at 1360 ("In principle, then, the exchange of stock for new value may make sense. When it does, the creditors should be willing to go along. Creditors effectively own bankrupt firms. They may find it worthwhile, as owners, to sell equity claims to the managers; they may even find it worthwhile to give the equity away in order to induce managers to stay on and work hard. Because the Code allows creditors to consent to a plan that impairs their interests, voluntary transactions of this kind are possible. . . . When there is value to be gained by allowing a lower class to kick in new value and keep its interest, the creditors should be willing to go along."). In fact, empirical evidence suggests that creditors do in fact frequently allow the existing equity holders to participate in the reorganized company under these circumstances. *See* Lynn M. LoPucki & William C. Whitford, *Bargaining over Equity's Share in the Bankruptcy Reorganizations of Large Public Held Companies*, 139 U. PA. L. REV. 125, 195 (1990) (describing and analyzing legal context for bargaining and settlement of reorganization cases).

66. As noted, the Supreme Court granted certiorari on a new value case for the 1998-1999 term. *See* Bank of Am. Nat'l Trust & Sav. Ass'n v. 203 N. LaSalle Partnership, 126 F.3d 955 (7th Cir. 1998), *cert. granted*, 66 U.S.L.W. 3718 (May, 4, 1998).

67. A large majority of courts that have decided new value cases have held that the exception survived the enactment of the 1978 Code. Most courts of appeals that have considered the viability of the new value exception since *Ahlers* have declined, however, to decide expressly whether the exception survived the Code. *See In re* Wabash Valley Power Ass'n, 72 F.3d 1305 (7th Cir. 1996); *In re* Woodbrook Assocs., 19 F.3d 312 (7th Cir. 1994); John Hancock Mut. Life Ins. Co v. Route 37 Bus. Park Assocs., 987 F.2d 154 (3d Cir. 1993); Unruh v. Rushville State Bank, 987 F.2d 1506 (10th Cir. 1993); *In re* Lumber Exch. Bldg. Ltd. Partnership, 968 F.2d 647 (8th Cir. 1992); *In re* Snyder, 967 F.2d 1126 (7th Cir. 1992); *In re* Bryson Properties, XVIII, 961 F.2d 496 (4th Cir.), *cert. denied*, 506 U.S. 866 (1992); *In re* Greystone III Joint Venture, 948 F.2d 134 (5th Cir.), *modified*, 948 F.2d 142 (5th Cir.), *cert. denied*, 506 U.S. 821 (1992); Kham & Nates Shoes v. First Bank, 908 F.2d. 1351 (7th Cir. 1990); *In re* Stegall, 865 F.2d 140 (7th Cir. 1989).

Among the courts of appeals that have upheld the new value exception are the Seventh Circuit in *In the Matter of 203 N. LaSalle Partnership*, 126 F.3d 955 (7th Cir. 1997), the Ninth Circuit in *In re Bonner Mall Partnership*, 2 F.3d 899 (9th Cir. 1993), *cert. granted*, 114 S. Ct. 681 (1994), and the Sixth Circuit in *In re U.S. Truck Co.*, 800 F.2d 581 (6th Cir. 1986). By contrast, the Second Circuit very recently held that the new value exception does not apply to single asset real estate cases. *See In re* Coltox Loop Cent. Three Partners L.P., 138 F.3d 39 (2d

Cir. 1998).

The majority of lower courts that have considered the issue have held that the exception remains viable. Such cases include: BT/SAP Pool C Assoc., L.P. v. Coltex Loop Cent. Three Partners, LP, 203 B.R. 527 (S.D.N.Y. 1996), *reversed by In re* Coltox Loop Cent. Three Partners L.P., 138 F.3d 39 (2d Cir. Feb. 19, 1998); *In re* Way Apartments, DT., 201 B.R. 444 (N.D. Tex. 1996); Bank of Am. v. 203 Lasalle St. Partnership, 195 B.R. 692, 708-709 (N.D. Ill. 1996); *In re* Sea Garden Motel & Apartments, 195 B.R. 294 (D. N.J. 1996); *In re* Elmwood Inc., 182 B.R. 845 (D. Nev. 1995); FGH Realty Credit Corp. v. Newark Airport/Hotel Ltd. Partnership, 155 B.R. 93 (D.N.J. 1993); *In re* F.A.B. Indus., 147 B.R. 763 (C.D. Cal. 1992); *In re* Route 37 Business Park Assocs., 146 B.R. 640 (D.N.J. 1992), *rev'd on other grounds*, 987 F.2d 154 (3d Cir. 1993); *In re* Bonner Mall Partnership, 142 B.R. 911 (D. Idaho 1992), *aff'd*, 2 F.3d 899 (9th Cir. 1993), *cert. granted*, 510 U.S. 1039 (1994), *motion to vacate denied*, 513 U.S. 18 (1994); *In re* Sovereign Group 1985-27, 142 B.R. 702 (E.D. Pa. 1992); *In re* Sun Valley Newspapers, Inc., 171 B.R. 71 (BAP 9th Cir. 1994); *In re* Tucson Self-Storage Inc., 166 B.R. 892 (BAP 9th Cir. 1994); *In re* Green, 98 B.R. 981 (BAP 9th Cir. 1989); *In re* Economy Lodging Sys., Inc., 205 B.R. 862 (N.D. Ohio 1997); *In re* Mission Heights Investors, Ltd. Partnership, 202 B.R. 131 (Bankr. D. Ariz. 1996); *In re* Moonraker Assocs. Ltd., 200 B.R. 950 (Bankr. N.D. Ga. 1996); *In re* Applied Safety Inc., 200 B.R. 576 (Bankr. E.D. Pa. 1996); *In re* Graphic Communications, Inc., 200 B.R. 143 (Bankr. E.D. Mich. 1996); *In re* Haskell Dawes, Inc., 199 B.R. 867 (Bankr. E.D. Pa. 1996); *In re* Homestead Partners, Ltd., 197 B.R. 706 (Bankr. N.D. Ga. 1996); *In re* Haas, 195 B.R. 933 (Bankr. S.D. Ala. 1996); *In re* Baseline-Dobson Ctr. Real Estate, 193 B.R. 284 (Bankr. D. Ariz. 1994); *In re* Duval Manor Assocs., 191 B.R. 622, 636 (Bankr. E.D. Pa. 1996); *In re* 203 North LaSalle St., Ltd. Partnership, 190 B.R. 567 (Bankr. N.D. Ill. 1995), *aff'd*, 195 B.R. 692 (N.D. Ill. 1996); *In re* Fur Creations by Varriale, 188 B.R. 754, 760 (Bankr. S.D.N.Y. 1995); *In re* Gramercy Twins Assocs., 187 B.R. 112, 126-127 (Bankr. S.D.N.Y. 1995); *In re* HRC Joint Venture, 187 B.R. 202 (Bankr. S.D. Ohio 1995); *In re* Beaver Office Prods., Inc., 185 B.R. 537 (Bankr. N.D. Ohio 1995); *In re* Rocha, 179 B.R. 305 (Bankr. M.D. Fla. 1995); *In re* Woodmere Investors Ltd. Partnership, 178 B.R. 346 (Bankr. S.D.N.Y. 1995); *In re* Cipparone, 175 B.R. 643 (Bankr. E.D. Mich. 1994); *In re* Krisch Realty Assocs., L.P., 174 B.R. 914 (Bankr. W.D. Va. 1994); *In re* Short, 173 B.R. 946 (Bankr. E.D. Okla. 1994); *In re* Barakat, 173 B.R. 672 (Bankr. C.D. Cal. 1994); *In re* 8315 Fourth Ave. Corp., 172 B.R. 725 (Bankr. E.D.N.Y. 1994); *In re* EBP, Inc., 172 B.R. 241 (Bankr. N.D. Ohio 1994); *In re* Baldwin Park Towne Ctr., Ltd., 171 B.R. 374 (Bankr. C.D. Cal. 1994); *In re* Dean, 166 B.R. 949 (Bankr. D.N.M. 1994); *In re* Union Meeting Partners, 165 B.R. 553 (Bankr. E.D. Pa. 1994); *In re* Wynnefield Manor Assocs., L.P., 163 B.R. 53 (Bankr. E.D. Pa. 1993); *In re* One Times Square, Assocs., Ltd. Partnership, 159 B.R. 695 (Bankr. S.D.N.Y. 1993), *aff'd*, 165 B.R. 773 (S.D.N.Y.), *aff'd*, 41 F.3d 1502 (2d Cir. 1994), *cert. denied*, 115 S. Ct. 1107 (1995); *In re* SM 104 Limited, 160 B.R. 202 (Bankr. S.D. Fla. 1993); *In re* S.A.B.T.C. Townhouse Ass'n, Inc., 152 B.R. 1005 (Bankr. M.D. Fla. 1993); *In re* Mother Hubbard Inc., 152 B.R. 189 (Bankr. W.D. Mich. 1993); *In re* Albrechts Ohio Inns, Inc., 152 B.R. 496 (Bankr. S.D. Ohio 1993); *In re* Ropt Ltd. Partnership, 152 B.R. 406 (Bankr. D. Mass. 1993); *In re* Waldengreen Assocs., Ltd., 150 B.R. 463 (Bankr. M.D. Fla. 1993); *In re* Eitemiller, 149 B.R. 626 (Bankr. D. Idaho 1993); *In re* Shepcaro, 144 B.R. 3 (Bankr. D. Mass. 1992); *In re* Capital Ctr. Equities, 144 B.R. 262 (Bankr. E.D. Pa. 1992); *In re* Harman, 141 B.R. 878 (Bankr. E.D. Pa. 1992); *In re* Batten, 141 B.R. 899 (Bankr. W.D. La. 1992); *In re* Montgomery Court Apartments, 141 B.R. 324 (S.D. Ohio 1992); *In re* Creekside Landing, Ltd., 140 B.R. 713 (Bankr. M.D. Tenn. 1992); *In re* SLC Ltd. V, 137 B.R. 847 (Bankr. D. Utah 1992); *In re* Bjolmes Realty Trust, 134 B.R. 1000 (Bankr. D. Mass. 1991); *In re* Woodscape Ltd. Partnership, 134 B.R. 165 (Bankr. D. Md. 1991); *In re* Professional Dev. Corp., 133 B.R. 425 (Bankr. W.D. Tenn. 1991); *In re* VIP Motor Lodge, Inc., 133 B.R.

those instances—such as *Bonner Mall*—where courts have recognized the exception, a clear erosion of creditor protection is evident. Unsecured creditors in bankruptcy tend to fare poorly. The one protection they receive is a promise that their non-bankruptcy priority positions will be respected in bankruptcy. By recognizing the new value exception, courts have eroded that protection and have moved value from the unse-cured creditors to the equity holders of the distressed firm. Without such a capital infusion, the prospect of reorganizing a troubled firm would diminish. Thus, once again we see creditors being forced to supply to the debtor's equity holders resources without which reorganization is unlikely. Such infusions to the reorganizing entity's owners result in costs that also must be recognized in determining the propriety of the transfers. I return to this concept in Part VI while considering the new value exception in light of the thermodynamic model proposed herein.

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41 (Bankr. D. Del. 1991); *In re* Tallahassee Assocs., 132 B.R. 712 (Bankr. W.D. Pa. 1991); *In re* Hendrix, 131 B.R. 751 (Bankr. M.D. Fla. 1991); *In re* C.P.M. Const., 124 B.R. 335 (Bankr. D. N.M. 1991); *In re* E.I. Parks No. 1 Ltd. Partnership, 122 B.R. 549, 557-58 (Bankr. W.D. Ark.1990); *In re* Mortgage Inv. Co., 111 B.R. 604 (Bankr. W.D. Tex. 1990); *In re* 222 Liberty Assocs., 108 B.R. 971 (Bankr. E.D. Pa. 1990); *In re* Dowden, 143 B.R. 388 (Bankr. W.D. La. 1989); *In re* Sherwood Square Associates, 107 B.R. 872 (Bankr. D. Md. 1989); *In re* Ashton, 107 B.R. 670 (Bankr. D. N.D. 1989); *In re* Pullman Const. Indus., Inc., 107 B.R. 909 (Bankr. N.D. Ill. 1989); *In re* Aztec Co., 107 B.R. 585 (Bankr. M.D. Tenn. 1989); *In re* Snyder, 105 B.R. 898 (Bankr. C.D. Ill. 1989), *aff'd*, 967 F.2d 1126 (7th Cir. 1992); *In re* Lettick Typografic, Inc., 103 B.R. 32 (Bankr. D. Conn. 1989); *In re* Johnson, 101 B.R. 307 (Bankr. M.D. Fla. 1989); *In re* Yasparro, 100 B.R. 91 (Bankr. M.D. Fla. 1989); *In re* Snyder, 99 B.R. 885 (Bankr. C.D. Ill. 1989), *aff'd*, 144 B.R. 393 (C.D. Ill. 1990); *In re* Kramer, 96 B.R. 972 (Bankr. N.D. Neb. 1989); *In re* 47th & Belleview Partners, 95 B.R. 117 (Bankr. W.D. Mo. 1988); *In re* Kendavis Indus., Int'l., Inc., 91 B.R. 742 (Bankr. N.D. Tex. 1988); *In re* Henke, 90 B.R. 451 (Bankr. D. Mont. 1988); *In re* 8th St. Village Ltd. Partnership, 88 B.R. 853 (Bankr. N.D. Ill. 1988), *aff'd*, 94 B.R. 993 (N.D. Ill. 1988); *In re* Future Energy Corp., 83 B.R. 470 (Bankr. S.D. Ohio 1988).

There are far fewer lower court cases which have held that the exception is not viable under the Code. These cases include: *In re* Trevarrow Lanes, Inc., 183 B.R. 475 (Bankr. E.D. Mich. 1995); *In re* Triple R Holdings, L.P., 145 B.R. 57 (N.D. Cal. 1992); *In re* A.V.B.I., Inc., 143 B.R. 738 (Bankr. C.D. Cal. 1992); *In re* Ribs Auto Sales, Inc., 140 B.R. 390 (Bankr. E.D. Va. 1992); *In re* Drimmel, 135 B.R. 410 (D. Kan. 1991), *aff'd sub nom.*, Unruh v. Rushville State Bank, 987 F.2d 1506 (10th Cir. 1993); *In re* Outlook/Century Ltd., 127 B.R. 650 (Bankr. N.D. Cal. 1991); *In re* Lumber Exchange Ltd. Partnership, 125 B.R. 1000 (Bankr. D. Minn. 1991), *aff'd on other grounds*, 134 B.R. 354 (D. Minn. 1991); *In re* Embassy Enters., 125 B.R. 552 (Bankr. D. Minn. 1991); *In re* Winters, 99 B.R. 658 (Bankr. W.D. Pa. 1989).

III. RESULTANT COSTS FROM THE EROSION OF CREDITOR PROTECTION IN BANKRUPTCY

A. *The Contractual Firm*

According to Coase, the reason that firms exist is to eliminate some of the transaction costs involved in negotiating and monitoring the multitude of contracts that would otherwise be required for the operation of a business entity. Instead, a firm substitutes a single contract between an entrepreneur and each owner of an element of production for what would otherwise be multiple contracts.[68] The relationships between a firm and its creditors and a firm and its equity holders form part of the contractual firm. Lack of adherence to the terms of these agreements in bankruptcy results in numerous costs.

It is well established that creditors and equity holders (the Participants) bargain with a firm and make their business decisions based on an understanding of the likely rate of return they will receive, both in the event that the business is successful and in the event that the business fails. The latter expectations are based on the Participants' state law created priority rights that apply in the event of a default.[69] The Participants understand their priority positions and their related legal rights, such as the existence of the equity holders' limited liability.[70] Accordingly, the parties can attempt to determine the two essential elements of their bargain—the risk (and the accompanying likelihood of recovery in a default) and the potential return on their investment.[71] To

68. *See* R.H. Coase, *The Nature of the Firm*, 4 ECONOMICA N.S. 386, 392-94 (1937) ("[T]he operation of a market costs something and by forming an organization and allowing some authority (an "entrepreneur") to direct the resources, certain marketing costs are saved. The entrepreneur has to carry out this function at less cost, taking into account the fact that he may get factors of production at a lower price than the market transactions he supersedes, because it is always possible to revert to the open market if he fails to do this.").

69. *See, e.g.*, UCC § 9-504. As a general rule, secured creditors have heightened priority over unsecured creditors. This may result in unsecured creditors charging a higher interest rate than secured creditors to compensate for their heightened risk. The equity holders have the lowest priority in the event of a default, but they accept this heightened level of risk because it is compensated with a boundless residual gain in the event that the business succeeds.

70. Limited liability plays a significant role in determining the degree of risk faced by both equity holders and creditors, and thus is a prominent factor in determining how much of a return is needed to justify that risk. Because it serves to limit the losses which the equity holders can sustain, it potentially affects the recovery of all other Participants.

71. Risk allocation and the potential return on an investment are the two keys to any commercial contractual relationship. The two are closely correlated. For example, as the risk to a creditor rises, so does the interest rate that the creditor must charge to compensate for that risk. Conversely, as the risk to the creditor falls, so should the attendant interest rate. Any creditor can obtain a largely risk-free investment by investing in Treasury Bills. To make the more risky

the degree these variables can be predicted accurately, all parties can approximate their risks to determine the return needed to justify their investment.

The priority rules established under state law[72] go a long way toward shaping the leverage that exists between the parties when a debtor is in financial trouble. The debtor's pending financial insolvency, of course, also shapes the leverage between the parties. This leverage—which has been bargained for by all Participants—sets the parameters for a potential pre-bankruptcy workout. As such, it is an important part of the *ex ante* bargain to know what these positions are. Under state law, each party's rights in this regard are clearly defined.

Clearly, the erosion of creditor protections in bankruptcy results in costs to creditors and to third parties with whom they contract. When creditors are forced involuntarily to relinquish resources to a debtor to aid its prospect of reorganization, a creditor must either bear the costs of these transfers itself or transfer them to another party. As a result, the cost to those doing business with the creditor in the future likely will rise.[73]

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investment in a firm worthwhile, a firm must offer a creditor significant return to offset the possibility of loss. There are numerous potential risks to an investor, including the possibility of bankruptcy. The decision as to whether credit is to be issued on a secured or an unsecured basis is one method of allocating risk. By including or not including security interests, Participants make decisions about distributional priority *ex ante* when a credit relationship begins.

72. While there are a number of exceptions, perhaps the most notable being for purchase money security, there are essentially four dominant priority scenarios under Article 9 of the Uniform Commercial Code. Assuming that the secured party is properly perfected, *see, e.g.*, UCC §§ 9-302 to 9-305, and assuming that creditor *A* comes temporally before creditor *B*, there are four possible scenarios: First, neither creditor *A* nor creditor *B* is secured; in this instance, neither party has priority. Second, creditor *A* is secured and creditor *B* is unsecured. Here, creditor *A* has priority. Third, creditor *A* is unsecured and creditor *B* is secured. In this instance, unless the unsecured creditor has obtained a judicial lien prior to the secured creditor perfecting, *see* UCC 9-301(1)(b), creditor *B* has priority. And finally, both creditor *A* and creditor *B* may be secured. In this instance, Creditor *A* generally has priority due to its temporal advantage. *See* UCC §§ 9-301, 9-312 & 9-313.

Under these priority rules, assume that a firm has a basic corporate structure where there are secured creditors, unsecured creditors, and equity holders. In the event of a default, the basic rules under state law hold that secured creditors are entitled to the value of their lien, meaning that they have a right to use the asset to obtain repayment on their debt. *See* UCC §§ 9-504, 9-505. If anything remains after the secured creditors have been paid, the unsecured creditors take on a *pro rata* basis. If anything remains after all creditors have been paid in full, the equity holders receive what is left. *See* UCC § 9-504.

73. This may have broad social ramifications. Lenders in the future will need to protect themselves to a greater degree. As a result, the amount they expend on monitoring of debtors' activities likely will increase, the guidelines as to who may receive a loan will likely become more strict, interest rates may rise, and the amount of capital available to be loaned in the future may decrease. Other less directly measurable effects may result as well, as creditors are forced to take additional protective measures.

If bankruptcy courts do not protect Participants' state law created rights in bankruptcy, parties lose the ability to accurately determine their prospective legal position in the event of a default, for they cannot know whether the default will occur under state law or under federal bankruptcy law. A Participant's inability to gauge accurately its legal rights destroys its ability to position itself contractually in an optimal manner. Freedom to contract allows assets to be utilized in their most effective manner. A legal regime that honors these contractual arrangements only in limited and unpredictable circumstances casts into jeopardy the efficiency benefits created by these arrangements.

B. *The Bankruptcy Code and the Corporate Contract*

The Bankruptcy Code stands as an implied, immutable contract term in any commercial lending arrangement.[74] Bankruptcy law stands in a

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Because the Bankruptcy Code cannot be circumvented, lenders may further protect themselves by including in lending agreements mechanisms of default that are triggered well before the debtor has achieved a situation of true financial crisis. As a policy matter, it cannot be desirable to prematurely pull financing from solvent debtors, because this would precipitate bankruptcies that otherwise could have been avoided, resulting in increased transaction costs that drain assets from both the creditors and the debtor. This also may lead to increased claims of lender liability. For a discussion of lender liability issues in this context, see, e.g., *K.M.C. v. Irving Trust*, 757 F.2d 752 (6th Cir. 1985). *Cf.* Kham & Nate's Shoes No. 2 v. First Bank, 908 F.2d 1361 (7th Cir., 1990). *See also* Werner F. Ebke & James R. Griffin, *Good Faith and Fair Dealing in Commercial Lending Transactions*, 49 OHIO ST. L. REV. 1237 (1989) (articulating standards for distinguishing good and bad faith); Daniel R. Fischel, *The Economics of Lender Liability*, 99 YALE L.J. 131, 140-47 (1989) (arguing that the growth of the good faith doctrine in lender liability context is based on misunderstanding of basic economic principles); William H. Lawrence & Robert D. Wilson, *Good Faith in Calling Demand Notes and in Refusing to Extend Additional Financing*, 63 IND. L.J. 825, 841-46 (1988) (proposing analogy and statutory construction technique to understanding definition of good faith); A. Brooke Overby, *Bondage, Domination, and the Art of the Deal: An Assessment of Judicial Strategies in Lender Liability Good Faith Litigation*, 61 FORD. L. REV. 963, 968 (1993) (surveying over 200 cases and tracing doctrine of good faith). *See generally* Dennis M. Patterson, *Good Faith, Lender Liability and Discretionary Acceleration: Of Llewellyn, Wittgenstein, and the Uniform Commercial Code*, 68 TEX. L. REV. 169 (1989).

74. Courts have uniformly held that it violates public policy for a party to agree to waive the right to file a bankruptcy petition. *See In re* Jenkins Court Assocs., L.P., 181 B.R. 33 (Bankr. E.D. Pa. 1995) (holding that *ipso facto* clauses precluding the right to seek bankruptcy protection are per se invalid); *In re* Atrium High Point, L.P., 189 B.R. 599 (Bankr. M.D.N.C. 1995) (same). It may be possible, however, to waive the bankruptcy automatic stay, though a motion for a court order enforcing the waiver is likely to be necessary. *See In re* Cheeks, 167 B.R. 817 (Bankr. D.S.C. 1994) (enforcing pre-petition agreement stating that mortgagor would not oppose mortgagee's relief from stay motion in the event of bankruptcy). Increasingly, courts have seen pre-petition waivers of the stay as being just one factor in considering whether they ultimately should grant relief from the stay. *Compare In re* Powers, 170 B.R. 480 (Bankr. D. Mass. 1994) (enforcing pre-petition waiver), *with* Farm Credit of Cent. Fla., ACA v. Polk, 160 B.R. 870

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special relationship to the rest of commercial law for two related reasons. First, bankruptcy law contains elements that run directly contrary to numerous state law created provisions, including provisions containing the possibility of deviation in bankruptcy from the state law rules for priority following default.[75] Second, bankruptcy is a special sort of immutable contract term because it trumps non-bankruptcy creditors' remedies.[76]

(M.D. Fla. 1993) (refusing to enforce pre-petition waiver). For a discussion of this issue, see generally Marshall E. Tracht, *Contractual Bankruptcy Waivers: Reconciling Theory, Practice and Law*, 82 CORNELL L. REV. 301 (1997) (analyzing bankruptcy waivers in light of economic rationale for bankruptcy law and structure of Code).

There appear to be at least two reasons why the Bankruptcy Code must be an immutable rather than a default contractual term. First, the transaction costs for individual parties designing a method of corporate reorganization individually tailored to meet their needs would be enormous. Second, the problem of opt-outs would continually exist. No one would agree to be a part of a bankruptcy proceeding unless the proceeding were mandatory for all creditors. *See, e.g.*, THOMAS H. JACKSON, THE LOGIC AND LIMITS OF BANKRUPTCY LAW (1986). At least one commentator has proposed, however, that the Bankruptcy Code should not be immutable. *See* Robert K. Rasmussen, *Debtor's Choice: A Menu Approach to Corporate Bankruptcy*, 71 TEX. L. REV. 51, 100-08 (1992) (arguing for a menu system of bankruptcy options with option chosen at firm formation).

75. For priority rules under the Bankruptcy Code, see, e.g., 11 U.S.C. § 507. While certain priority rules under the Bankruptcy Code largely track state law created rights, other rules give preference to claims that would not receive such preference under state law. *See, e.g.*, 11 U.S.C. § 507(a)(3) (preference for employee wages).

76. Once a bankruptcy petition has been filed, creditors are effectively forbidden from enforcing their remedies under state law during the pendency of the bankruptcy proceeding. Instead, they must abide by the rules of the Bankruptcy Code. The Code does allow, however, for the lessening of certain restrictions. For example, the automatic stay may be lifted if certain conditions are met. *See* 11 U.S.C. § 362(d) (granting relief from stay for cause, including a lack of adequate protection or when debtor has no equity in the property and property is not necessary for effective reorganization).

In addition, a debtor who has filed a bankruptcy petition may find itself again subject to state law. Not all debtors successfully reorganize, and failure to do so may subject a debtor to state law creditors' remedies. Some courts also require good faith on the part of a debtor filing bankruptcy. While no good faith filing requirement appears in the Code, see, e.g., *In re Johns-Manville Corp.*, 36 B.R. 727, 731-42 (Bankr. S.D.N.Y. 1984) (finding no good faith requirement to file and no insolvency requirement for voluntary Chapter 11 petition), certain courts have been willing to impose such a rule based on inferences drawn from other Code sections and kick the debtor out of bankruptcy, subjecting it again to state law creditors' remedies. *See In re* C-TC 9th Ave. Partnership, 1997 WL 283395 (2d Cir. 1997) (holding that the court need not rely on factors for dismissal set out in § 1112(b), stating that "this list is illustrative, not exhaustive," and dismissing the filing of a debtor who "enjoyed no likelihood of rehabilitation" and whose "main purpose in filing its Ch. 11 petition was to stay the state court proceedings and to re-litigate in the bankruptcy forum the matters that had been settled in the state court."); Michigan Nat'l Bank v. Charfoos, 979 F.2d 390, 392 (6th Cir. 1992) ("It is well-settled that even though Chapter 11 does not expressly so state, bad faith may serve as a ground for dismissal of a petition. It is less firmly established though what actions may rise to the level of bad faith.")

Bankruptcy law establishes a system of loss allocation.[77] It is an inherent part of almost all bankruptcy cases that there are insufficient assets to satisfy all claimants.[78] In determining how these losses are to be borne, there are a number of options. These options include looking at the loss allocation bargain struck by the parties *ex ante*,[79] or deviating from this bargain based on an *ex post* imposition of non-bankruptcy social policy concerns that are largely extrinsic to the initial bargain.[80] A strong argument can be made for application of the former, particularly in regard to those claims that are fundamentally contractual in nature.[81] Because all contractual claims are fundamentally alike in character, no claim warrants special treatment in bankruptcy.

It is significant then that the filing of a bankruptcy petition is not necessitated by law. Rather, debtors file for bankruptcy protection or creditors force bankruptcy upon debtors[82] in search of strategic advantage.[83] Thus, whether a default occurs in bankruptcy or under state law

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(citations omitted); Humble Place Joint Venture v. Fory, 936 F.2d 814, 816-17 (5th Cir. 1991) ("The Bankruptcy Code provision that a Chapter 11 case may be dismissed 'for cause' has been interpreted to include the lack of good faith in its filing."); *In re* Winshall Settlor's Trust, 758 F.2d 1136, 1137 (6th Cir. 1985) ("generally, an implicit prerequisite to the right to file [a Chapter 11 petition] is 'good faith' on the part of the debtor, the absence of which may constitute cause for dismissal"); *see also* Katz, *supra* note 2, at 81-82 (discussing the good faith requirement in the single asset debtor scenario); Ponoroff & Knippenberg, *supra* note 2 (discussing at length the policy of good faith in bankruptcy proceedings).

77. It is worth noting that not all defaults implicate the bankruptcy system. A debtor may choose to default on an obligation to a creditor because the debtor can make better use of the asset by keeping it in its ongoing projects and paying the damages for default than it could by repaying on its obligation. Such a breach may be considered efficient from an economic perspective. *See* Charles Goetz & Robert Scott, *Liquidated Damages, Penalties and the Just Compensation Principle: Some Notes on an Enforcement Model and a Theory of Efficient Breach*, 77 COLUM. L. REV. 554, 558-59 (1977).

78. *See* S. REP. NO. 989, 95th Cong., 2d Sess. 11 (1978), *reprinted in* 1978 U.S.C.C.A.N. 5796 ("[R]eorganization in its fundamental aspects, involves the thankless task of determining who should share the losses incurred by an unsuccessful business and how the value of the estate should be apportioned among creditors and debtors.").

79. *See In re* American Mariner Indus., 734 F.2d 426 (9th Cir. 1984); Thomas H. Jackson, *Bankruptcy, Nonbankruptcy Entitlements, and the Creditors' Bargain*, 91 YALE L.J. 857 (1982).

80. *Compare* Elizabeth Warren, *Bankruptcy Policy*, 54 U. CHI. L. REV. 775 (1987) (stating that bankruptcy has special role to play and accordingly, policy concerns justify bankruptcy deviations from non-bankruptcy substantive rights) *with* Douglas G. Baird, *Loss Distribution, Forum Shopping, and Bankruptcy: A Reply to Warren*, 54 U. CHI. L. REV. 815 (1987) (viewing bankruptcy as an alternative method of debt collection that should adhere to non-bankruptcy substantive rights).

81. *See* EASTERBROOK & FISCHEL, *supra* note 6, at 24.

82. *See* 11 U.S.C. § 303.

83. Many business entities fail without going into bankruptcy. The choice to file a bankruptcy petition is normally made by the debtor as a defensive measure against creditors

often is determined as a matter of business strategy rather than as a matter of law. When bankruptcy law deviates from state law created priority rights, an element of uncertainty enters the bargaining process which leads to rent-seeking behavior.[84] This in turn creates inefficient and sub-optimal results in a number of ways. For example, any allocation of resources that differs from what is expected under state law and favors equity holders at the creditors' expense in contravention of the Participants' *ex ante* expectations has the effect of externalizing at least part of the cost of business failure from the equity to the creditors in a way that the creditors could not forecast and adjust for at the time they entered the bargain.[85] The creation of this sort of externality is undesirable because it provides incentives for the equity holders to engage in socially excessive, risky behavior. This, in turn, creates a moral hazard problem analogous to concerns associated with limited liability.[86]

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pursuing them. Creditors may file an involuntary petition against the debtor as an offensive move, however, perhaps to create a preference period or to require court supervision of a proposed extraordinary business venture on the part of the debtor. *See* 11 U.S.C. § 303. Whether voluntary or involuntary, there is no triggering mechanism for bankruptcy. Rather, defaults can be addressed under applicable state law as well as under the Bankruptcy Code.

84. *See* Douglas G. Baird, *A World Without Bankruptcy*, 50 LAW & CONTEMP. PROBS. 173, 185 (1987) ("Creating rights in a piecemeal fashion by recognizing some rights in bankruptcy, but not elsewhere, brings significant costs of its own. To the extent that the existence or the extent of substantive rights turns on whether one is inside or outside bankruptcy, some creditors or managers will use or threaten to use a bankruptcy proceeding even when there is no reason to collectivize the debt collection process.").

85. Were this accurately foreseeable, the workings of the market would assure that creditors charged more to compensate for their prospective loss. The uncertainty of creditors' position inside versus outside of bankruptcy may result in their unnecessarily charging a higher interest rate to all future borrowers in order to protect against a contingent bankruptcy filing that may or may not occur.

86. Firms seek bankruptcy protection for a variety of reasons, including to retroactively alter their contractual rights from the terms under which the firm's capital structure was created. This is a form of contractual misbehavior, which occurs when rights are fixed under the terms of a contract and then a party tries to profit by deviating from the contract. *See* RICHARD POSNER, ECONOMIC ANALYSIS OF LAW 293-94 (2d ed. 1977). This contractual misbehavior, by which equity *ex post* alters the *ex ante* contractual arrangement (with the help of the bankruptcy courts), implicates the same type of policy concerns which attend the existence of limited liability.

When bankruptcy courts allow equity holders to avoid their full share of the costs of business failure, the effect is that the equity holders are allowed to externalize the costs of overly risky behavior by transferring some of the loss to the debtor's creditors. The equity thus does not bear the full burden of its risky behavior. An incentive is created, therefore, for the equity holders to direct a firm to behave in a socially risk-excessive manner. This type of scenario was unlikely to have been envisioned by the parties at the time they entered into the transaction.

The result of this sort of transaction is a heightened version of the sort of externalization problems for which limited liability often has been criticized. Limited liability is in many ways the defining characteristic of the corporate entity. Shareholders have a residual claim on whatever

As noted, unquestionably there are costs when creditors' rights existing under state law are limited in bankruptcy in order to revive a troubled debtor.[87] The most obvious resultant cost is that all future borrowing must occur at a higher than optimal rate. Less obvious is that many of the firm's advantages as a corporate structure begin to dissolve when the firm's Participants cannot accurately predict the rules of the legal regime under which they are contracting. Whether these costs and others are justifiable in the context of bankruptcy has been the subject of sizable debate in the academic literature.

C. *Bankruptcy and Two Views of Creditor Costs*

Two central views of the purpose of bankruptcy law have arisen among academic commentators. One view offers a social justification for imposing costs upon creditors in bankruptcy which they could not be

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remains after all other claimants are paid. This constitutes a potentially boundless upside for the shareholders if a business succeeds. Yet, in the event that the corporation fails, shareholders cannot lose more than the current value of their investment in the firm, no matter how large the corporation's debts.

The traditional justification for limited liability is that it is necessary to encourage the sort of investment in the capital markets that is the hallmark of the modern, public corporation. *See, e.g.*, Henry Manne, *Our Two Corporation Systems: Law and Economics*, 53 VA. L. REV. 259, 260-64 (1967). With unlimited liability, investment would decrease for a number of reasons. For example, because limited liability makes investment less risky to investors, it increases the expected value of their investment. *See* David W. Leebron, *Limited Liability, Tort Victims, and Creditors*, 91 COLUM. L. REV. 1565, 1573 (1991). In addition, because shares would become of unequal value depending upon whose hands they were in, the liquidity and thus the efficiency of the capital markets would be called into question. *See* Paul Halpern et al., *An Economic Analysis of Limited Liability in Corporation Law*, 30 U. TORONTO L.J. 117, 129-31 (1980); Leebron, *supra*, at 1581 ("Joint limited liability would . . . severely undermine the liquidity of capital markets."). *See generally* Joseph A. Grundfest, *The Limited Future of Unlimited Liability: A Capital Markets Perspective*, 102 YALE L.J. 387 (1992) (providing a capital markets analysis of proportionate liability). Yet another justification for limited liability stems directly from the notion of the corporate contract. A corporation is not a real entity in some sense. Rather, it is merely a series of contractual arrangements between workers and those who contribute capital. Absent these contractual relations, the firm does not exist. It follows that no one should risk more than he or she puts in to this series of contractual relations. *See* Frank Easterbrook & Daniel R. Fischel, *Limited Liability and the Corporation*, 52 U. CHI. L. REV. 89, 89-90 (1985).

Limited liability results in the shifting of risk. Equity investors lose their investment before debt investors do. Limited liability, however, shifts risk from equity to creditors as a result of the limitations placed on equity's ultimate liability. This creates a moral hazard problem, because equity has incentive to engage in socially excessive levels of risk taking. As noted, the same effect is present when bankruptcy courts alter state law rights and thereby increase the costs of business failure to the creditors and reduce the costs to the debtor and its equity holders.

87. This is not to suggest that creditors may never choose to bail out a troubled enterprise with their own resources. Rather, it suggests that courts should not displace the creditors' business judgment with their own.

made to bear under state law. I shall call this view the Social Benefit View. The other approach recognizes no justification for such deviation from state law and maintains the propriety of strict adherence in bankruptcy to state law created priority rights. This view is called the "Creditors' Bargain."[88]

While bankruptcy law generally adheres to state law created rights, it does at times deviate from these rights.[89] Such deviation may be necessary in order to allow for a collective proceeding to function efficiently under the terms of the Bankruptcy Code. Thus, the central question becomes whether such deviations should be strictly limited to instances in which procedure demand them,[90] or whether broader social goals demand substantive changes to achieve results otherwise unobtainable under state law.

Two possible explanations exist for the second avenue of default enforcement created by bankruptcy law. Under the Social Benefit View, substantive policy differences in bankruptcy justify the need for a second method of enforcement. From this perspective, Chapter 11 exists to deal with certain attendant social issues that are implicated whenever a

88. The name and substance of the "Creditors' Bargain" argument comes from writings by Thomas Jackson, beginning with his seminal article, *Bankruptcy, Non-Bankruptcy Entitlements, and the Creditors' Bargain,* 91 YALE L.J. 857 (1982). Recently, however, Jackson has retreated a bit from his position in this area. *See* Thomas H. Jackson & Robert Scott, *On the Nature of Bankruptcy: An Essay on Bankruptcy Sharing and the Creditors' Bargain,* 75 VA. L. REV. 155, 167-68 (1989) (noting how common disaster scenarios, which cannot be specified *ex ante* and could not be coordinated among creditors if such specification were possible, may alter a creditor's desire to strictly enforce the *ex ante* bargain). *But see* Mark J. Roe, *Commentary on "On the Nature of Bankruptcy": Bankruptcy, Priority and Economics,* 75 VA. L. REV. 219, 220-21 (1989) (arguing that finance theory suggests strong reasons why parties would choose not to share exogenous risks, even if common disaster risks could be anticipated and shared *ex ante*).

89. Some deviations are set out expressly in the Code, such as the general *pro rata* treatment of unsecured creditors subject to the existence of certain priority claims in § 507. In addition, some bankruptcy rules which do not appear on their face to affect state law created priority rights may in fact have loss allocation consequences in bankruptcy. For example, under § 506(a) of the Code, a creditor's right under state law to foreclose and to use the collateral to collect its entire debt is transformed into a more limited right to receive the collateral's collectible value. This shifts some losses away from the lower priority claimants by making an asset available for use by the debtor and thus creating a corresponding potential benefit for lower claimants that would otherwise be unavailable to them under state law once the secured creditor had foreclosed. This rule may result in the increased spreading of losses in bankruptcy.

90. *See* S. REP. NO. 989, 95th Cong., 2d Sess. 53 (1978), *reprinted in* 1978 U.S.C.C.A.N. 5787, 5839; H.R. REP. NO. 595, 95th Cong., 1st Sess. 339 (1977), *reprinted in* 1978 U.S.C.C.A.N. 5963, 6295 ("There may be situations in bankruptcy where giving a secured creditor an absolute right to his bargain may be impossible or seriously detrimental to the policy of bankruptcy laws. . . . Though the creditor might not receive his bargain in kind, the purpose of the section is to insure that the secured creditor receives in value essentially what he bargained for.").

corporation is in financial distress. These needs justify changes in state substantive law in bankruptcy. The second possibility is that procedural justifications are the rationale for the separate systems. Under this view, corporate bankruptcy serves as a means toward efficient debt collection in situations of multiple defaults to numerous creditors. The Social Benefit View justifies the costs to creditors that bankruptcy exacts as a necessary component to achieve net societal gain. The Creditors' Bargain recognizes no fundamental policy differences between instances of default under bankruptcy rather than under state law, and accordingly this view espouses careful adherence to non-bankruptcy substantive rights in bankruptcy proceedings.

1. The Social Benefit View

The Social Benefit View of corporate reorganization law is based on the notion that bankruptcy law has a special role to play in dealing with the vast array of complex issues that attend situations of financial distress. Under this view, policy concerns under state law that attend single, isolated defaults are fundamentally different from policy issues that are implicated in instances of widespread financial distress. It is the latter with which the federal bankruptcy laws are designed to deal.[91] Accordingly, one cannot turn to state law as a grounding point for bankruptcy law, for the policies that underlie each are radically different.[92] As a result, the overall policy schemes reflect their respective intentions. For example, state law collection mechanisms, unlike federal bankruptcy law, never allow a debtor to remain in business and to extinguish debt which is lawfully owed and which the debtor is unable to pay. Rather, under state law, creditors of financially distraught debtors retain their place in line for payment until the debtor is sufficiently solvent to pay.

The breadth of concerns at stake in bankruptcy, under this view, justifies looking beyond the concerns of state foreclosure laws, which are designed primarily to protect the interests of creditors. Rather, goals

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91. These interests are diverse, since defaults occur in a wide range of complex situations. As a result, a broad spectrum of interests are always implicated in situations of financial distress. To note just a few concerns, employees may go unpaid, taxes may not be collectable, creditors will be knocking on the company's door, and executory contracts may well be at issue.

92. This position has been espoused perhaps most frequently by Elizabeth Warren in recent years. A number of Warren's writings touch on this theme. *See, e.g.*, Warren, *supra* note 80; Elizabeth Warren, *Bankruptcy Policy Making in an Imperfect World*, 92 MICH. L. REV. 336 (1993) (articulating competing goals that underlie bankruptcy system). *See also* Donald R. Korobkin, *Value and Rationality in Bankruptcy Decisionmaking*, 33 WM. & MARY L. REV. 333, 335 (1992) (arguing for "value based account" which considers both economic and non-economic values of those affected by financial distress").

in bankruptcy should include enhancing the value of a going company (or at least preserving its going concern value), protecting certain parties deemed socially worth protecting who are not well-situated to protect themselves,[93] establishing a method to collectivize debt collection to make it a more fair and efficient process, and determining how the company's existing value will be distributed. This last element contains the risk-sharing provisions. Adherents to the Social Benefit View contend that in order to protect certain favored parties, bankruptcy law should in fact deviate from the way risk has been bargained for by the parties under state law.[94] For example, in making the value distribution decisions, additional concerns incorporated in the loss allocation calculus should include determining who best can bear the risk of loss, protecting those poorly situated to bear the costs associated with financial distress[95]—such as employees who cannot easily spread the risk of business failure—and preserving an efficient use of the assets in question.

Consistent with this view of bankruptcy is the concept that affording the debtor maximum opportunity to successfully reorganize is the best way to address such attendant social concerns as loss of jobs and the impact on neighboring businesses and suppliers.[96] Implied in such a

93. One example of such a protected class is employees of the company, whose wages are given prioritized treatment in bankruptcy which they would not otherwise receive under state law. *See* 11 U.S.C. § 507(a)(3) & (4).

94. *See supra* note 92.

95. This includes, presumably, those with no formal legal rights to a proceeding, such as neighboring businesses. For example, Warren writes:

> But the revival of an otherwise failing business also serves the distributional interests of many who are not technically "creditors" but who have an interest in a business's continued existence. Older employees who could not have retrained for other jobs, customers who would have to resort to less attractive, alternative suppliers of goods and services, suppliers who would have lost current customers, nearby property owners who would have suffered declining property values, and states or municipalities that would have faced shrinking tax bases benefit from the reorganization's success. By giving the debtor business an opportunity to reorganize, the bankruptcy scheme acknowledges the losses of those who have depended on the business and redistributes some of the risk of loss from the default. Even if dissolution is inevitable, the bankruptcy process allows for delay, which in turn gives time for all those relying on a business to accommodate the coming change.

See Warren, *supra* note 80, at 787-88.

96. The legislative history to the 1978 Bankruptcy Code does provide some support for this position. The House Report of the original committee working on Chapter 11 noted that "the purpose of a business reorganization case . . . is to restructure a business's finances so that it may continue to operate, provide its employees with jobs, pay its creditors. . . . The premise is

theory is the belief that the loss to non-debtor parties in this redistribution process—that is, the costs to creditors whose bargained-for positions are altered in reorganization—is not a weighty enough social concern to offset the corresponding societal gains to be had by attempting to preserve a failing business.

From both equitable and economic perspectives, there is something attractive at first about the Social Benefit View. On the side of equity, there seems to be something intuitively desirable about sharing loss. On the economic side, the justification for maintaining an existing firm arises from the fact that much of the firm's value stems from the contractual relationships that already exist with customers, with suppliers, and with employees. If a firm is rehabilitated rather than liquidated, the value of such contracts will be maintained, and the firm will not again incur the transaction costs of re-establishing these relationships.[97] If justifiable, the Social Benefit View provides an acceptable rationale for the erosion of creditor protection in the name of aiding reorganization.

This view, however, has been criticized in ways that go to the heart of the equitable and economic justifications presented. In terms of equity, the notion that it is undesirable social policy to inflict the entire loss upon one party ignores the fundamental existence of (save with tort victims of the debtor) a consensual bargain that has been struck *ex ante* in all instances whereby the parties allocated the spread of losses in the event of a default. The integrity of such a bargain is a compelling consideration that should not be summarily ignored.[98]

As a related point, forum shopping and other strategic behavior will be induced if bankruptcy courts do not enforce state law created priority

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that it is more economically efficient to reorganize than to liquidate, because it preserves jobs and assets." H.R. REP. NO. 95-595, at 220 (1977). However, many reorganizations may require the sort of "restructuring," such as closing factories or laying off workers, that seriously cast a doubt as to the kind of protection being afforded the dependents of debtors.

97. *See* Richard V. Butler & Scott M. Gilpatrick, *A Re-Examination of the Purposes and Goals of Bankruptcy*, 2 AM. BANKR. INST. L. REV. 269, 281 (1994).

98. In addition, the notion that the State (in this case a bankruptcy court) may protect a party by forcing both sides to deviate from a freely-entered, informed, consensual bargain is disturbingly paternalistic. While paternalism may be justified in certain limited instances—such as where there is a threat at the time the contract is signed, where fraud vitiates the pact, where certain parties (infants, incompetents) are not able to contract meaningfully, where contracts have adverse effects on third parties, or where the contract exists to carry out or promote for illegal purposes, there is no justification for the government to alter contractual agreements freely entered into between sophisticated parties of relatively equal bargaining strength. For a broad discussion of paternalism, see generally Anthony Kronman, *Paternalism and the Law of Contracts*, 92 YALE L.J. 763 (1983) (discussing moral and economic justifications of three different forms of paternalism).

rights. When parties' rights are treated differently in different forums, a tremendous strategic incentive exists to choose the more favorable forum.[99] In addition, differences in substantive rights between bankruptcy and non-bankruptcy law lead to other undesirable strategic behavior. For example, the leverage in eve-of-bankruptcy workout negotiations will be dramatically altered when each party to the workout knows that merely by one party choosing to file a bankruptcy petition—an arbitrary act in some sense, for firms can and do fail outside of bankruptcy as well—the parties' rights may be dramatically changed. This leverage constitutes part of the consideration for the original bargain and should not be readily swept aside.

In regard to economic concerns, it would be difficult to contend that, as a matter of social policy, it is always beneficial to reorganize rather than liquidate.[100] In fact, protecting old ownership, under whose auspices the business has failed, seems to be a rather odd and indirect method of attempting to protect dependents of a debtor business. Instead, finding a different and more efficient use of the assets may well be in the best interest of all concerned parties.[101]

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99. This point has been forcefully made by Douglas Baird. Baird suggests an analogy where there are two cities far apart, and it is costly to travel from one to the other. For this reason, each city has a courthouse where disputes may be resolved. Thus, there is a procedural need—the great distance in cities—to have two different avenues of enforcement available. But this need does not justify a change in the substantive law available at each courthouse. As Baird points out, the gains in having multiple courthouses is dependent upon the extent to which the differences in the allocation of justice in each venue are minimized. Similarly, while the need to efficiently process multiple defaults may justify the existence of federal bankruptcy law, it does not justify deviation in bankruptcy law from underlying state law-created substantive principles. Just as you would not want an individual to choose the court in town *A* over the court in town *B* because town *A*'s court will yield a more favorable result, one would not want a debtor to choose to default in bankruptcy instead of under state law provisions because doing so will be to its substantive benefit. *See* Baird, *supra* note 80, at 825-26.

100. *See* Douglas G. Baird & Thomas H. Jackson, *Corporate Reorganization and the Treatment of Diverse Ownership Interests: A Comment on Adequate Protection of Secured Creditors in Bankruptcy*, 51 U. CHI. L. REV. 97, 99-100 (1984) ("No one, to our knowledge, argues that keeping a firm intact is *always* a good thing. Yet as soon as one concedes that a reorganization may not always be desirable, one is faced with the problem of understanding and articulating *why* reorganizations are favored in the first place and *how much* should be given up to facilitate them.") (emphasis in original).

101. Thomas Jackson has argued that a reorganization is in many ways just another form of liquidation in which the entity is sold as a unit to existing claim holders. This would seem preferable as a form of liquidation whenever the going concern value of a firm exceeds the piecemeal liquidation value. A reorganization, like a liquidation proceeding, contains both a sale of the assets and a payment of claims against the debtor from the sale of the assets. A major difference, however, is that valuation becomes a much harder issue in a reorganization "sale" than in a liquidation sale; in a true liquidation, the market determines the value of an asset, where in a reorganization "sale" these valuations are merely estimates made by the bankruptcy

For example, consider a restaurant that serves German food. The restaurant is located in an area where nobody likes German food, but everybody in the area wishes that there was an Italian restaurant nearby. As a result of the dislike of German food, the restaurant is on the verge of insolvency; it thus files a petition to attempt to reorganize under Chapter 11. The pertinent question is whether it is socially desirable for this restaurant to be able to reorganize, if the reorganization comes at the expense of the restaurant's creditors. Now as an alternative, imagine that, instead of reorganizing, the restaurant is liquidated under Chapter 7 of the Code,[102] and the assets are sold to someone who opens an Italian restaurant that subsequently thrives. The Italian restaurant deploys the firm's assets (dishes, silverware, etc.) in the industry for which they were intended, thus making an efficient use of the firm's assets. Because the Italian restaurant meets the community's needs and is successful, it employs at least the same number of people as were previously employed. As a result, a thriving business has replaced a failing one. Despite the lack of a reorganization, no attendant social problems have developed. In this example, reorganization could heighten rather than lessen the social ills attending the financially distressed entity.[103]

The Social Benefit View of corporate bankruptcy runs contrary to accepted views of corporate finance. It is widely accepted in corporate finance literature that there is little link between financing decisions and investment decisions. Thus, it appears that factors relating to how a business deploys its assets should have nothing to do with questions of who owns the assets.[104] This appears particularly true in bankruptcy, where claims of ownership are temporarily stayed.[105] Yet the Social Benefit View necessarily links the ownership and use of assets by claiming that certain individuals with ownership claims in a debtor must be willing to forfeit part of those claims so that a firm may survive and prosper. Thus, the Social Benefit View of bankruptcy confuses two

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judge. *See* Jackson, *supra* note 79, at 893-94.

102. It is possible of course to liquidate under Chapter 11 as well. *See, e.g., In re* Prism Properties, 200 B.R. 43, 47 (D. Ariz. 1996) (stating that an entity whose corporate charter was revoked is a proper Chapter 11 debtor under the Code, but only to liquidate under Chapter 11).

103. As Baird and Jackson have noted, the decision to liquidate necessarily brings about externalities, but these externalities may be either positive or negative. *See* Baird & Jackson, *supra* note 100, at 102 n.20.

104. According to Modigliani and Miller, under certain assumptions a corporation cannot increase its value by altering its capital structure; rather, firm value is solely a function of the size and risk of the firm's income stream. *See* Franco Modigliani & Merton H. Miller, *The Cost of Capital, Corporation Finance and the Theory of Investment*, 48 AM. ECON. REV. 261 (1958). Thus, one cannot naturally assume that there is a link between who has ownership rights in the firm and how the firm's assets are deployed.

105. *See* Baird, *supra* note 80, at 820.

central questions which require separation. Bankruptcy law determines who owns the assets. How the assets are deployed is a question whose resolution should not depend on bankruptcy law.[106]

2. The Creditors' Bargain

The second dominant view of bankruptcy recognizes no justification for deviation from non-bankruptcy substantive rights beyond that needed to carry out the procedural mechanism for bankruptcy. This is the Creditors' Bargain approach. Adherents to the Creditors' Bargain view bankruptcy as merely a second, procedurally distinct method of debt collection for situations where there are multiple defaults.[107] As such, there should be strict adherence to state law-created rights.[108] If not, the problem of forum shopping will always remain. The focus of the Creditors' Bargain is largely creditor protection, since creditors effectively own a firm in bankruptcy.[109]

The Creditors' Bargain approach justifies the need for bankruptcy law because state law debt collection rules are designed to deal with individual instances of a debtor's default and do not deal effectively with multiple defaults. As a result, bankruptcy law is needed to deal effectively with collective defaults.[110] Classic common pool problems

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106. *See* Baird & Jackson, *supra* note 100, at 104 ("When a firm files a petition in bankruptcy, two questions arise. First, one must decide what to do with the firm's assets, and second, because of the presence of diverse owners, one must decide who gets them. Our principal proposition is that the answer to the second question should not, ideally, alter the answer to the first.").

107. *See, e.g.,* THOMAS H. JACKSON, THE LOGIC AND LIMITS OF BANKRUPTCY LAW 7-19 (1986); Baird, *supra* note 80, at 824-25.

108. The Supreme Court has supported adherence to non-bankruptcy-created substantive rights in bankruptcy. In *Butner v. United States,* 440 U.S. 44, 54 (1979), the Court criticized the use of "undefined considerations of equity" in bankruptcy to change results dictated by non-bankruptcy law. The Court noted: "Congress has generally left the property rights in the assets of a bankrupt's estate to state law." *See also* Vanston Comm. v. Green, 329 U.S. 156, 161 (1946) ("A purpose of bankruptcy is so to administer an estate as to bring about a ratable distribution of assets among the bankrupt's creditors. What claims of creditors are valid and subsisting obligations against the bankrupt at the time a petition in bankruptcy is filed is a question which, in the absence of overruling federal law, is to be determined by reference to state law.").

109. Creditors effectively own a firm in bankruptcy because the equity of an insolvent firm is essentially valueless, while the firm's going concern value still can be sold to pay off some of the debt to creditors. *See generally* Douglas G. Baird & Thomas H. Jackson, *Bargaining After the Fall and the Contours of the Absolute Priority Rule,* 55 U. CHI. L. REV. 738, 753-54 (1988).

110. A debtor may of course file for bankruptcy if it has only one creditor. In addition, under the terms of the Bankruptcy Code, a single creditor is all that is needed to bring an involuntary bankruptcy proceeding as well. Section 303(b)(2) of the Code states that a single creditor may bring an involuntary petition under certain circumstances. Courts have been loathe

exist in situations where there are multiple defaults. In such circumstances, there is a common pool of assets that is insufficient to satisfy all claimants. Problems arise in situations where the parties do not act collectively, where their action is motivated entirely by self-interest, and where they act with no regard to the common pool. As a result, there is diminution in the common pool.[111] Proponents of this view see a fundamental purpose of bankruptcy law to be to provide a solution to the common pool problem.

The Bankruptcy Code effectively forces creditors in a bankruptcy proceeding to enter a bargain to determine how ownership rights in the assets should be allocated. This bargain replicates the hypothetical bargain the creditors would have made *ex ante* at the time they negotiated their positions were they able to so contract.[112] Thus, bankruptcy law replicates this bargain, and it is mandatory upon all creditors.[113]

This hypothetical bargain is dependent upon diverse creditors acting in a collective fashion. The advantages to this sort of bargain are numerous. For example, it avoids strategic costs associated with a race to the courthouse. In addition, it eliminates the variance in potential recoveries that would attend such individual action. This has value for risk-averse creditors.[114] While creditors may not be able to predict *ex ante* the likelihood of their successful recovery should they try to recover under state law, creditors can agree *ex ante* that as a group they stand to benefit by collective action. The Bankruptcy Code embodies an attempt to put this collective action into operation. For a variety of

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to allow this, however, and rarely has a single creditor successfully filed an involuntary petition, despite the explicit language in the Code providing for such a petition. *See* Lawrence K. Snider & Paul B. Lewis, *The Single Creditor Involuntary Bankruptcy Petition*, 2 J. BANK. L. &. PRAC. 101, 101-02 (1993).

111. *See* JACKSON, *supra* note 107, at 11-12; *see also* Alan E. Friedman, *The Economics of the Common Pool: Property Rights in Exhaustible Resources*, 18 UCLA L. REV. 855, 887 (1971) (proposing qualified, general, theoretical solution to the common pool problem). In addressing common pool problems, it is important to note that it is rational for each individual to act selfishly in regard to the pool's assets; however, this self-interested behavior leads to sub-optimal results for the group when viewed collectively.

112. This bargain, of course, must be hypothetical. In addition to the practical impossibilities of having all creditors bargain amongst themselves, the identity of creditors changes over time.

113. No one would enter into the Creditors' Bargain were not all parties bound by it, for if any one party could opt out and enforce its rights under state law, the Creditors' Bargain itself would become meaningless. At least one commentator has argued for more discretion in how bankruptcy terms are determined. *See generally* Rasmussen, *supra* note 74 (arguing for a menu system of bankruptcy options with option chosen at firm formation).

114. *See* Jackson, *supra* note 88, at 862.

reasons, including opt-out problems and the fact that the creditors of a given debtor are likely to change over time, creditors cannot put such an agreement into place individually.[115] The reduction in collection costs achievable through bankruptcy is beneficial to secured and unsecured creditors alike.[116]

Adherents to the Creditors' Bargain view bankruptcy law as designed to serve several primary purposes to benefit the collective. First, bankruptcy law serves to identify rights that were entered into under state law. Second, it stays individual recovery actions[117] to prevent dismemberment of the common pool and to maximize the total assets available to be recovered. Finally, it sets up a process by which the assets of the common pool are distributed or put to use according to the method that the creditors as a group most value. As a matter of policy, the Creditors' Bargain says nothing about loss allocation. Rather, it espouses the principle that whatever rights exist under state law also should exist under federal bankruptcy law.[118] Accordingly, the

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115. *Id.* at 866.

116. Critics of the Creditors' Bargain have argued that it places economic gain as the highest value, and its use of this collectivist methodology is merely a guise to detract attention from the true values at its core. *See, e.g.*, Warren, *supra* note 80, at 802-03 (arguing that Douglas Baird's Creditors' Bargain approach "is not one of collectivism so much as one of economic rationality: the aim of bankruptcy policy is to make certain that assets go to their highest-valued use. Baird is at pains to avoid the economic lingo, but he cannot escape the conclusion that the only value he protects is economic wealth maximization for the bankrupt estate.").

117. *See* 11 U.S.C. § 362.

118. Or, as Thomas Jackson has noted, the notion that bankruptcy law should adhere to state law created rights

> does not rest on the assertion that the nonbankruptcy rule is always substantively right. Instead, the point is normatively neutral in the selection of entitlements: The collectivist principle would impose the same limitation on altering any given set of nonbankruptcy entitlements. Thus while this view of bankruptcy policy is neutral about the initial selection of entitlements, it is not neutral about selective changes in those entitlements within bankruptcy. Even though a nonbankruptcy rule may suffer from infirmities such as inefficiency or unfairness, if the nonbankruptcy rule does not undermine the advantages of a collective proceeding (or sabotage the individual's "fresh start"), imposing a different bankruptcy rule is a second best, and perhaps a counterproductive, solution.

Thomas Jackson, *Avoiding Powers in Bankruptcy*, 36 STAN. L. REV. 725, 731 (1984); *see also* Baird, *supra* note 80, at 827-28.

This point has been criticized as fallaciously suggesting that the Creditors' Bargain of bankruptcy is distributionally neutral, when in fact it is only facially so. According to this critique, the Creditors' Bargain also reflects distributional choices. By choosing to "preserve" the priority rights to property as they are established under non-bankruptcy law rather than to

protections afforded creditors under state law—such as the right to receive the benefit of their contractual bargain and their position of priority in the event of default—should be maintained in bankruptcy.

IV. SOME BASICS OF THERMODYNAMICS[119]

The laws of thermodynamics provide an interesting paradigm for examining the corporate reorganization of troubled firms. In this section I briefly sketch some pertinent facets of thermodynamics and identify five basic thermodynamic principles through which I examine bankruptcy law. These elements center around the issues of the conservation of energy in a system, the tendency of a system to move toward an equilibrium state, and the impact on related systems when attempts are made to reverse the natural increase of a system's entropy. After examining these precepts, I then analyze corporate reorganization in light of these fundamental principles.

Thermodynamics is an area of physics that deals with energy.[120] Its principal subjects are the transformation of heat into mechanical work, the converse transformation of mechanical work into heat, and resulting changes in the states of matter. Heat is a form of energy that can be transformed into other kinds of energy. Thermodynamics describes and correlates the directly observable properties of substances. It postulates rules that these quantities must obey under given conditions.

A thermodynamic system (the "System") is that portion of the universe selected for investigation. A System's complexity may vary, as may the degree to which it is homogeneous. Everything external to the

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redistribute them in bankruptcy, the Creditors' Bargain is fact making distributional decisions. *See, e.g.*, Warren, *supra* note 80, at 803.

119. The idea of viewing law in scientific terms has a long history in the United States. Christopher Columbus Langdell, Dean of Harvard Law School in the late 19th century, had the revolutionary idea of viewing the search for legal truth as a species of the search for scientific truth. From this idea came his notion of viewing law as capable of being distilled to rational explanatory principles which would reduce an enormous mass of material to discrete and understandable principles. From this arose the concept of studying law by the case method. For a discussion of Langdell's influence, see GRANT GILMORE, THE AGES OF AMERICAN LAW 41-48 (1977).

120. The science of thermodynamics grew out of the quest of the engineer Sadi Carnot to build the most efficient heat engine possible. A steam engine functions by boiling water, which creates steam, which in turn pushes on the pistons. This pressure on the pistons has the result of making a wheel go around. If one were to allow the steam to escape into the air, new water would have to be added to the engine. This approach would be inefficient. If the steam could be captured and condensed, with the resulting water pumped back into the boiler, the system could continuously circulate, with heat provided to the system which in turn would be converted to work. The basic precepts of thermodynamics arose out of an attempt to accomplish this. *See* I RICHARD P. FEYNMAN ET AL., THE FEYNMAN LECTURES ON PHYSICS 44-2 (1963).

System is called the surroundings ("Surroundings"), and the System is separated from the Surroundings by a boundary (the "Boundary"). Systems may or may not interact with their Surroundings. The Boundary may isolate the System, resulting in an isolated System. Alternatively, it may allow either limited or full interaction with the Surroundings.[121]

Classical thermodynamics is a macroscopic science. It addresses appropriate observable averages of microscopic behavior. Thus, the laws of macroscopic thermodynamics arise out of the microscopic actions of atoms and other particles. Rather than try to discern a complete description of all individual particle action—which even if feasible would reveal only the trees, not the forest—thermodynamics looks to the average behavior of particles to illustrate the broad effect of phenomena. Thus, classical thermodynamics looks only to the most probable behavior of large groups of molecules and ignores the molecules' individual dynamics.[122]

The science of thermodynamics has several well-known laws which describe behavior in an isolated System. This discussion concentrates on the first and second of these laws.[123] The First Law of Thermodynamics is essentially a logical extension of the basic concept that energy is

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121. *See, e.g.*, C.J. ADKINS, EQUILIBRIUM THERMODYNAMICS 1-4 (1983). In reality, a System can be isolated in a number of ways. A fully isolated System would be one where no heat enters, where no volume changes are involved, and would be materially closed so that no particles enter or leave the System. But Systems are often not so thoroughly isolated. A System can allow heat to flow (and thus not be thermally isolated), it can allow volume to change, and it can be materially open to the entrance or exit of particles. *See* MARTIN BAILYN, A SURVEY OF THERMODYNAMICS 19 (1994).

122. *See* CHANG L. TIEN & JOHN H. LIENHARD, STATISTICAL THERMODYNAMICS 3 (1979). The branch of inquiry that examines the techniques for deriving these most probable states is known as statistical thermodynamics. Statistical thermodynamics is in turn comprised of two subdivisions—statistical mechanics and kinetic theory. Statistical mechanics derives from the concept that the equilibrium state of a System is the macroscopic state that corresponds to the statistically most probable microscopic state. The problem for statistical mechanics is thus to determine what is the most probable microscopic state. Its applicability is thus to equilibrium states. Kinetic theory, by contrast, considers definite molecular models and the details of individual particle motion. It is applicable to non-equilibrium behavior. *See id.* at 3-4.

123. There are two other laws. The so-called "Zeroth Law" concerns the properties of Systems in thermal equilibrium. The law holds that if two Systems, *A* and *B*, are separately in a state of thermal equilibrium with a third System *C*, then Systems *A* and *B* also must be in thermal equilibrium with each other. Thus, if Systems *A* and *B* are put in contact, there will be no changes in their existing equilibrium states.

The Third Law of thermodynamics is that 0 degrees Kelvin is an unobtainable state. It can be stated this way: "The temperature of a system cannot be reduced to O°K in a finite number of operations no matter how idealized they may be." ALLEN L. KING, THERMOPHYSICS 83 (1962). An alternate statement of the Third Law is that the entropy change associated with a reversible isothermal process decreases toward zero as the temperature of the System approaches O°K.

conserved. No device for producing energy can succeed, nor can there ever be a process the net effect of which is the destruction of energy. Rather, the energy in an isolated System always remains constant.[124] That is not to say that the energy of a given part of a System can never be affected. Rather, any change in energy in one part of the System must be exactly balanced by a corresponding change in energy elsewhere in the System.[125] The net resultant amount of energy is always constant. That is, the change in a System's internal energy must equal the total energy influx by mechanical, thermal, and chemical processes.[126]

The First Law extends the concept of conservation of energy to Systems in which there is a flow of heat. The law makes a general statement about the behavior of Systems whose state is changed under conditions of thermal isolation. Formally, the law has been stated as follows: "A change of the total energy (kinetic, potential, and internal) is equal to the rate of work done on the control mass plus the heat transfer to the control mass."[127] It follows, then, that when a System is isolated, a definite amount of energy is always associated with a given

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124. Thus, where (E total) is the energy of everything that might be altered during an event in a System:

$$(E\ total)_{final\ state} = (E\ total)_{initial\ state}$$

Or, alternatively: E_{total} = constant.

125. *See* HENRY A. BENT, THE SECOND LAW 10 (1965).

126. Mathematically, where U_f and U_i are the final and initial levels of the system's internal energy, respectively, and W represents the work input by mechanical processes, Q represents the flow into the System by thermal processes, and E is the energy added by chemical processes, then:

$$U_f - U_i = W+Q+E$$

See KING, *supra* note 123, at 7. Energy has one other significant characteristic, namely that it is additive. This means that the energy of the System is the sum of the energy of the System's parts. *See* BENT, *supra* note 125, at 12.

127. JOHN HOWELL & RICHARD BUCKIUS, FUNDAMENTALS OF ENGINEERING THERMODYNAMICS 121 (1987). Mathematically, where U is the energy of the System, Q is the heat put into the system, and W is the work done on the System, this can be expressed as:

$$\Delta U = \Delta Q + \Delta W$$

This may be expressed in an integrated form as:

$$\int_A^B (\Delta Q - \Delta W) = U_B - U_A$$

Here, ΔU, unlike ΔQ or ΔW, is a perfect differential. Thus, for any cycle, it will be the case that $\oint \Delta U = 0$.

change of state. That is, in an isolated System, you can neither create nor destroy energy.

For illustration consider Richard Feynman's famous example involving "Dennis the Menace." Imagine a child who has a certain number of blocks that can neither be destroyed nor divided. The child is in a room playing with the blocks. Each day, his mother comes in. Irrespective of the nature of the boy's play, the same number of blocks appear. One day, his mother finds one less block. However, after carefully examining the situation, she finds a block under a rug. The next day, two blocks appear to be missing, but eventually turn up outside an open window. The following day, there are two extra blocks. However, one of Dennis's friends brought the extra blocks and left them in the room. Several days later, several blocks are missing. However, the room contains a closed box, and the boy has discouraged his mother from looking inside this box. The mother does not open the box. She does however weigh the box. When she adds the weight of the missing blocks to the weight of the box when empty, she arrives at a figure that equals the weight of the closed box. A number of other situations arise, but in each case there is a formula to explain the apparently "destroyed" or "created" blocks.[128]

Feynman's analogy explains the First Law in several important respects. First, sometimes energy leaves or enters a System. In order to show that energy is conserved, this fact must be considered. Second, energy—be it be gravitational, kinetic, or heat—may change form. However, when all the forms of energy are added, the total energy for a System always will be a constant, except for energy entering or leaving the System.[129]

The Second Law describes the existence of stable equilibrium states. The basic idea is that Systems, when left to themselves, do not remain inertly in their initial pre-existing condition. Rather, after a series of changes, they settle into essentially uniform Systems. Once this occurs, the System can be changed only by some external force—that is, only by altering the isolated state of the System. All isolated Systems operate in this fashion.[130] For example, when a change occurs in a System's Surroundings—or when two Systems come into thermal contact—the System or Systems themselves will undergo a change. Consider for

128. *See* FEYNMAN, *supra* note 120, at 4-2.

129. *See id.*

130. *See* P.W. BRIDGMAN, THE NATURE OF THERMODYNAMICS 116-17 (1969). Any macroscopic system—meaning that properties are averages over small macroscopic spaces and times—that is isolated and closed, over time, will approach an equilibrium state that is constant over time. *See* BAILYN, *supra* note 121, at 20.

example two systems in thermal contact. Place some tepid water in a chilled glass and place them in an insulated container to isolate them from the Surroundings. The temperatures of each will become equal. After a period of time, however, change ceases to occur: The System has reached a state of thermodynamic equilibrium. With multiple non-isolated Systems, if two or more Systems interface, the same process is observed in each System. When the changes cease, the Systems are said to be in a state of thermal equilibrium.[131] This stable equilibrium state can be changed to a different state only by alterations that leave a net effect on the environment of the System. Thus, if a System is in stable equilibrium,[132] there cannot be a spontaneous reversible change of state process, since any change must involve alteration of the environment.

To appreciate the Second Law, one also needs to distinguish between reversible and irreversible processes. During a transformation process, a System can perform positive or negative external work, meaning that either the System can do work on the Surroundings or the Surroundings can do work on the System.[133] A reversible process is one in which the System and the Surroundings can be restored to their respective initial states without producing any changes in the rest of the universe.[134] A reversible process is an idealized process where all friction, electrical resistance, and other sources of dissipation are eliminated. Such a reversible System, while imaginable, does not exist in nature.[135]

Conversely, a process is irreversible if it cannot be performed in a way such that both the System and the Surroundings can be restored to

131. In reality, there are several types of thermodynamic equilibrium. A System that returns to its initial state after having been slightly displaced is deemed to be in a state of stable equilibrium. A System which is stable for small changes but unstable for larger changes is said to be in metastable equilibrium. A System affected by even minute displacements is said to be in unstable equilibrium. *See* ADKINS, *supra* note 121, at 7.

132. An equilibrium state means a state that is macroscopically in equilibrium—that is, one that would suffer no further observable change over an indefinite period of time. This is not to say that individual particles undergo no change.

133. *See* ENRICO FERMI, THERMODYNAMICS 5 (1936).

134. To avoid irreversible behavior, the System must be at a quasi-equilibrium state—that is, the System must be very near but not at equilibrium, for were it at equilibrium it would stay there and not experience a process. Thus, the test for reversibility is whether an infinitesimal change will cause the System to reverse. *See* BAILYN, *supra* note 121, at 94.

135. *See* GILBERT NEWTON LEWIS & MERLE RANDALL, THERMODYNAMICS AND THE FREE ENERGY OF CHEMICAL SUBSTANCES 112 (1923). In the real world, all processes we observe are irreversible processes. Arguably, reversible processes are not processes at all, but rather are sequences of states of equilibrium. *See* ARNOLD SOMMERFIELD, THERMODYNAMICS AND STATISTICAL MECHANICS 19 (1956).

their respective initial states.[136] An example of an irreversible process would be the burning of fuel in an isolated vessel containing oxygen. The product of this cannot be then separated into fuel and oxygen without leaving net effects on the Surroundings.[137] The macroscopic state of all isolated Systems approaches a state of equilibrium and remains there.

The Second Law of Thermodynamics explains much of what we actually observe in nature. A variety of counterintuitive events could occur consistent with the First Law of Thermodynamics because the First Law places no limitations on the possibility of transferring energy from one form into another. While work always can be transformed into heat—a body can always be heated by friction—there are limitations on the ability to transfer heat into work. Because the Second Law expresses certain such limitations, it serves to explain why we do not in fact observe certain phenomena that are consistent with the First Law. Thus, even when energy is conserved, the Second Law determines whether an action consistent with the First Law can be observed in nature.[138]

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136. *See* ELIAS P. GYFTOPOULOS & GIAN PAOLO BERETTA, THERMODYNAMIC FOUNDATIONS AND APPLICATIONS 59 (1991). For a process to be reversible, such a restoration must be possible. For example, consider a System, A, and its environment B, which undergo a process α, as a result of which A changes its state from A_1 to A_2 and B changes from B_1 to B_2. If, upon restoring the state of A to A_1, the state of B also can be restored to B_1, the process of α is a reversible process. *See id.*

137. *See id.*

138. *See* STANLEY W. ANGRIST & LOREN G. HEPLER, ORDER AND CHAOS 145 (1967):

> Rivers could flow uphill if the river beds in which they flow were to cool slightly, giving up thermal energy to the river water and thus conserving the energy of the universe. But they don't.
>
> The water in the river might dissociate spontaneously into hydrogen and oxygen at the expense of the thermal energy of the surroundings. But it doesn't.
>
> The air above the river might spontaneously liquefy, liberating thermal energy to its surroundings; or it might separate, spontaneously, into pure oxygen and nitrogen. But it doesn't.
>
> Furthermore, an old man sitting on the river bank watching the river flow by might grow young—his wrinkles might disappear, his hair might grow thick and black, and his muscles might become taught and resilient. But alas, none of these things happen.
>
> In each case the first law of thermodynamics could be satisfied without difficulty. Each event hypothesized above is the reverse of an actual happening. Rivers flow downhill, hydrogen and oxygen form water (sometimes explosively) and liberate thermal energy to the surroundings, liquid air absorbs thermal energy from its surroundings (unless they are very cold) and evaporates. Man inevitably grows old, and in the process he frequently acquires wrinkles, gray hair, and a flabby paunch. . . . In each case the answer comes down to the statement that the second law of thermodynamics says that while each of the events described is

The Second Law stands for the proposition that the entropy of a System increases. There exists a thermodynamic function which characterizes the state of a System. Entropy[139] is a movement toward disorder in a System.[140] While entropy is defined in terms of reversible processes, it has a fundamental relationship to irreversible processes. For reversible systems, the change in entropy is zero. For any irreversible process, however, the change in entropy due to internal systemic changes is always greater than zero.[141] Thus, events happen within a System spontaneously and irreversibly, and these events always result in an increase in entropy.[142] Because no process is absolutely reversible, the entropy of the universe must always increase.[143]

> conceivable, each is so highly unlikely that it is practically impossible.

Id.

139. The word entropy derives from the greek εν τ ρωπη meaning "evolution." *See* I. PRIGOGINE, THERMODYNAMICS OF IRREVERSIBLE PROCESSES 15 (1961).

140. Mathematically, entropy is a state function whose differential equals dQ/T, where Q represents heat and T represents temperature. The thermodynamic function whereby the difference in values for two states is equal to dQ/T along an arbitrary reversible path connecting the two states is the thermodynamic entropy S of the System. That is, where S is the entropy level:

$$S_C - S_A = \int_A^C dQ/T$$

This equation for $S_C - S_A$ applies only to reversible paths. *See* KING, *supra* note 123, at 93-94.

141. *See* PRIGOGINE, *supra* note 139, at 16. That is, where S again is the level of entropy and where Q represents heat and T represents temperature, for any irreversible process, you instead have the following inequality:

$$S_C - S_A \geq \int_A^C dQ/T$$

For a completely isolated System, this equation becomes simpler in form:

$$S_C \geq S_A$$

See FERMI, *supra* note 133, at 54-55.

142. Where S symbolizes entropy, such a movement may be described as:

$$(S_{total})_{final\ state} \succ (S_{total})_{initial\ state} \text{ and } \Delta S_{total} \succ 0.$$

For many years it was thought that an absolute rate of entropy was meaningless—that one that could be defined were changes in the level of entropy. The formulation of the Third Law changed this. The Third Law holds that the entropy of any object at absolute zero K is zero. *See* FEYNMAN, *supra* note 120, at 44-11.

143. In addition, entropy, unlike energy, is not conserved. Rather, it may increase. But like energy, entropy is additive—the entropy of a System is equal to the sum of the entropies of the

For an isolated System, its equilibrium will be its state of maximum entropy. Such a System cannot undergo any further change because any transformation could only result in a decrease of entropy, which cannot occur in an isolated System. Thus, all actions of an isolated System move toward maximum entropy. Once this equilibrium is reached, only through the influence of external agents can there be a move away from the equilibrium.

The central issue to appreciate is that the notion that a System's entropy always increases is true only for an isolated System. For the entropy of a final state always to exceed the entropy of the initial state, the System must be both isolated and undergo an irreversible process. If the System is not isolated, that System's entropy can decrease with the aid of an external System. The entropy of both Systems taken together, however, cannot decrease.[144] This is an important point to which I will return in the discussion of bankruptcy reorganization that follows.

So what does the Second Law tell us? It describes possible changes within a System that undergoes no other changes from other Systems or from the Surroundings. This limitation on other changes is key. Consider the following example derived from the Shakespearean quote at the beginning of this Article.[145] A garden is increasingly becoming overgrown with weeds. An orderly garden is thus growing disorderly. Is it possible to reverse this flow and return the garden to an ordered state? The Second Law tells us that it is not so long as everything else in the System and the Surroundings remains constant. Of course, it is possible to restore order to the garden, but to do so requires extra work infused from an external source (a gardener). If it were possible to restore order without additional external work, it would mean that all sorts of processes could happen which experience tells us do not occur.[146]

System's parts. *See* BENT, *supra* note 125, at 30. For example, if the change in entropy due to interactions with the exterior is defined as ΔeS, and the change of entropy due to internal reactions within the system defined as ΔiS, then:

$$\Delta S = \Delta eS + \Delta iS$$

144. *See* FERMI, *supra* note 133, at 55.

145.

"How weary, stale, flat, and unprofitable
Seem to me all the uses of this world!
Fie on't, ah fie, 'tis an unweeded garden
That grows to seed. Things rank and gross in nature
Possess it merely."

WILLIAM SHAKESPEARE, HAMLET, act I, sc. ii, lines 133-37.

146. Feynman puts it as follows:

Thus, the Second Law describes the fact that all natural processes are irreversible.[147] As a result, time—accompanied by the ever increasing entropy of a process—has a direction. Time moves from the less probable state of affairs to the more probable. Consider a simple example of a container with a divider in the middle. Each side of the container is filled with liquid—one side with water, the other with ink. When the divider is lifted, the resulting System will not remain carefully segregated. Rather, the water and ink will mix. Once they have mixed, they will never naturally re-segregate. Thus, the Second Law explains that in the natural world there is only one direction for Systems to move. That direction is toward a state of maximum entropy.[148]

The laws of thermodynamics provide a number of illustrative guidelines through which corporate bankruptcy can be examined. I focus on five of those that I believe shed light on concerns of creditor protection in corporate reorganization. Taken collectively, these elements indicate that certain results, on a probabilistic level, must accompany the reorganization of troubled firms. These results, which centrally include the erosion of creditor protections in reorganizations, are frequently understated or undervalued in the reorganization process.

The five elements I focus on are the following: First, the energy of an isolated System is conserved. Energy may be added to a System, but only if that System is not isolated, and the energy comes from external

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> "If it were possible, it would mean, among other things, that we could take heat out of a cold body and put it into a hot body at no cost, as it were. Now we know that it is natural that a hot thing can warm up a cold thing; if we simply put a hot body and a cold one together, and change nothing else, our experience assures us that it is not going to happen that the hot one gets hotter, and the cold one gets colder! But if we could obtain work by extracting the heat out of the ocean, say, or from anything else at a single temperature, then that work could be converted back into heat by friction at some other temperature. . . . Now, the hypothesis of Carnot, the second law of thermodynamics, is sometimes stated as follows: heat cannot, of itself, flow from a cold to a hot object. But, as we have just seen, these two requirements are equivalent: first, that one cannot devise a process whose only result is to convert heat to work at a single temperature, and second, that one cannot make heat flow by itself from a cold to a hot place."

FEYNMAN, *supra* note 120, at 44-4.

147. For all natural processes, either one or both of the following conditions is satisfied. First, the conditions for thermal equilibrium are not satisfied; second, dissipative elements, such as friction or inelasticity, are present. Reversible processes must not possess these qualities. Since at least one of these qualities always exists in all natural processes, all natural processes are irreversible. *See* MARK W. ZEMANSKY, HEAT AND THERMODYNAMICS 155 (1957).

148. One thing the Second Law does not tell us is how long this process will take. The law indicates the direction of time, but does not indicate a strict time table for that direction to run its course.

sources. Second, isolated Systems undergoing irreversible processes necessarily move toward an equilibrium state at their point of maximum entropy. Third, all natural processes are irreversible in the sense that a System cannot be restored to its original state following a process without some change in the rest of the universe. Fourth, it is possible for the entropy of a System to decrease, but only if that System is not isolated. Under these circumstances, the decrease in the entropy of the System *A* will be accompanied by a corresponding increase in the entropy of both System *B* and of the universe. Finally, these rules lead to a global analysis based on statistical probabilities that do not factor in the actions of individual molecules in a System. Individual morecular action is functionally irrelevant to the behavior of the System as a whole. With these five elements as guidelines, I turn now to formulate a "thermodynamic model" through which to consider certain results of corporate reorganization.

V. THE THERMODYNAMIC MODEL AND A MACROSCOPIC APPROACH TO BUSINESS REORGANIZATION

Based on the laws of thermodynamics, I turn now to create a "thermodynamic model" through which I examine both the nature of corporate reorganization and the question of whether the erosion of creditor protection is a necessary outgrowth of any attempt to stem the movement toward liquidation of a troubled firm. The thermodynamic model suggests a certain form of analysis, one that explains the effects of the Doomsday Principle[149] long employed in reorganization cases. To apply this model, it is necessary to derive reorganization analogues to the five principles derived from thermodynamics that I have previously identified.[150]

The first concept derived from thermodynamics is that the energy of an isolated System is conserved. Energy may be added to a System, but only if that System is not isolated and the energy comes from external sources. The reorganization analogue to this rule is that a troubled firm's resources will not spontaneously increase from within. I have focused this Article on firms that are truly troubled in the sense that they lack adequate cash flow to meet their obligations.[151] These firms will not

149. The idea that the pending doomsday of the firm causes judges to employ their equitable powers to prevent liquidations was set forth in Festersen, *supra* note 4, at 317-18.

150. I do not mean to suggest by proposing this thermodynamic paradigm that the process a firm undergoes in Chapter 11 is necessarily dependent upon the physical laws of the natural world. Rather, the paradigm forms an interesting and, I hope, useful analogy by which the process of corporate reorganization can be analyzed.

151. In some sense, the analogy I am drawing is imperfect. Firms—unlike thermodynamic

internally generate adequate resources. Rather, any increase in their resource base to allow for reorganization and survival must come from an external source. This external infusion of resources is likely to be derived involuntarily from the firm's creditors despite the bankruptcy protections afforded these creditors to protect them from this very prospect.

The second principle provided by physics is that isolated Systems undergoing irreversible processes move toward an equilibrium state at their point of maximum entropy. The reorganization analogue is that troubled firms left to their own will move toward an equilibrium state of maximum disorder—that is, they will liquidate. Thermodynamics tell us that this is natural; all Systems eventually reach this state. A firm that cannot pay its creditors, that is experiencing negative cash flow, that is hemorrhaging money, clearly is headed in the direction of liquidation. Only through special intervention can such a firm be saved. The third and fourth postulates tell us the results mandated by such intervention.

The third concept derived from the laws of thermodynamics is that all natural processes are irreversible in the sense that a System cannot be restored to its original state following a process without some change in the Surroundings. The reorganization analogue that follows from this is twofold. First, the irreversibility of processes means that resources can be expended only once. If the process were reversible, resources could be used over and over, as they could be converted and then re-converted back to their original form. Because processes are irreversible, though, there are definite limits on the resources available to a given System.[152] The second element that follows from the principle of irreversibility is that financial processes impacting a firm cannot be reversed without altering the financial universe in which the firm is situated. This means that intervention in a firm cannot be made without cost to the surrounding financial universe. Thus, the third analogue indicates that ramifications of irreversible processes must be felt by others because the universe in question cannot be returned undisturbed to its prior state following such a process. The fourth postulate indicates what these ramifications are.

The fourth concept which thermodynamics provides is that entropy can decrease for a given non-isolated System, but only at the cost of

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Systems—can generate resources (i.e., profits) internally. But firms that consistently generate profits arguably should not be in bankruptcy. This Article has applied its analysis only to a particular kind of entity in bankruptcy, a firm that may have attempted internal restructuring but still is unable to fulfill its obligations. *See supra* note 3.

152. *See, e.g.*, NICHOLAS GEORGESCU-ROEGEN, THE ENTROPY LAW AND THE ECONOMIC PROCESS 6 (1971).

increased entropy to another System and the universe at large. The reorganization analogue is that the move toward liquidation for a troubled firm can be reversed, and a firm can be rehabilitated, but only at a cost both to other parties (the firm's creditors) and to society at large that equals or exceeds the benefit to the firm. This postulate is central. Creditors can voluntarily save a troubled firm.[153] If creditors refuse to do so, it is because the creditors believe that such action is not in their economic self-interest. But the fourth postulate tells us something further. It indicates that there are externalities that go beyond the risks and resultant costs to creditors. Such involuntary transfers do not just result in the firm being made better and the creditors being made correspondingly worse. Rather, the financial universe of these parties as a whole will suffer. This is best illustrated by the fact that creditors will not absorb these costs. Rather, future borrowers will feel the impact of these actions, as creditors pass on their increased costs to them. What is clear, then, is that the price of aiding a troubled firm are costs for all other parties in the financial universe in which the firm operates, and this cost will at least equal the benefits attained by the debtor.

Finally, the fifth thermodynamic principle is that the preceding rules lead to a global analysis based on a consideration of the most likely state of affairs. Because of the vast number of molecules in a thermodynamic System, the action of individual molecules is functionally irrelevant to the behavior of the System as a whole. The reorganization analogue is that in considering corporate reorganization, one must take a global, systemic approach. While some individual troubled firms may successfully reorganize without exacting significant costs on others, these firms will be in a distinct minority. In looking at the reorganization system as a whole, one can say that such costs are so statistically likely as to be considered part of the process.

To appreciate this thermodynamic model, consider again the description of a troubled firm with which this Article commenced. It is a firm that cannot generate enough cash flow to meet its obligations. It is a firm that has tried to allocate resources more efficiently, perhaps by attempting to restructure or scale back operations somewhat, but it is failing nonetheless. It finds itself on the brink of being disassembled

153. Creditors will in fact do so by voluntarily transferring assets to a failing debtor when the creditor believes there is economic self-interest in doing so. For example, a creditor who believes that an infusion of cash will sufficiently strengthen the debtor to the point the debtor will ultimately be able to repay its obligations in full will likely voluntarily make such a transfer. The creditor protections in the Bankruptcy Code allow for this. It is involuntary transfers that exact the kind of costs described herein.

under state law. It thus files a bankruptcy petition in the hopes of holding off its creditors until it can find other infusions of capital.

The thermodynamic model of reorganization describes several important aspects of this firm's future in bankruptcy. Once a bankruptcy petition has been filed, the first thing that transpires is that the automatic stay is imposed under section 362 of the Code.[154] The automatic stay under section 362 accomplishes something that both science and common sense suggest is impossible. This impossibility is the temporary freezing of time while the parties' rights and obligations are sorted out in bankruptcy.

The automatic stay is commonly viewed as serving two related functions. First, it gives the debtor a breathing spell to sort out its affairs. Second, it prevents the creditors from individually dismantling the debtor and forces creditors instead to act collectively. The stay is allegedly a procedural measure that is relatively substantively neutral. But does the automatic stay work to freeze time in a relatively costless manner? The thermodynamic analogy indicates that this cannot be the case. It is axiomatic that the automatic stay is needed because a crumbling firm is not in an equilibrium state. Rather, without the stay, the firm's disordered state would continue to grow as creditors move to enforce their rights and dismember the firm. We know from the thermodynamic analogy that the only way to reverse the firm's disorder is to draw resources away from another System. The automatic stay draws those resources away from creditors by effectively denying them the time value of their money in that their right to seize and sell the property in question is delayed. Thus, the parties' rights are not in fact held in abeyance while time stands still for the bankruptcy process. Time does not stand still. As a result, the creditors' reinvestment opportunities are lost, and this forces them to bear part of the cost of the debtor's reorganization. This is not a substantively neutral result.

Following the imposition of the automatic stay, the firm begins to consider how it can recoup lost value to help it successfully emerge from Chapter 11. Its first step in this process is to exercise its avoiding powers[155] as debtor in possession in order to reverse transfers and avoid liens. While the automatic stay tries to freeze time, the avoiding powers are designed to accomplish something equally impossible—the turning back of the clock and reversing time to a point when the necessity of bankruptcy was not clearly on the horizon.

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154. *See* 11 U.S.C. § 362.

155. The avoiding powers include the preference provision of the Code found in § 547, the fraudulent conveyance provision found in § 548, and the trustee's strong-arm power found in § 544(a).

The thermodynamic analogy also is instructive about the success of reversing time through the avoiding powers of the debtor in possession. For time to be reversed, the processes in question must be reversible in the sense that both the System and the environment can be returned to their initial state. But it follows from the Second Law that this cannot happen in the natural world.[156] That is, time is a one-way street, and thus the avoiding powers cannot create a reversible process. Consider, for example, the preference provision of the Code.[157] Preferences avoid eve-of-bankruptcy transfers. They do not, however, reverse time, for nobody knows what the world would have looked like if these transfers initially had not been made.[158] Thus, while preference law

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156. *See supra* note 138 and accompanying text.

157. The preference provision is found in § 547 of the Code. Under this section, a transfer is presumptively preferential if it is made to or for the benefit of a creditor, on account of antecedent debt, while the debtor was insolvent, during the relevant preference period, provided the transfer leaves the creditor better off than if the transfer had not been made. If a transfer is preferential, the trustee can avoid it and return the transferred asset to the bankruptcy estate. The ability to avoid the transfer is linked to § 550, which governs liability of the transferee. Under § 550, a trustee can recover the amount of a preferential transfer from either the initial transferee or from the party for whose benefit the transfer was made. If the transfer was in cash, the amount recovered becomes property of the estate. *See, e.g.*, 11 U.S.C. § 541(a)(1). If the preference was the creation of a lien, the lien will be nullified, which will have the effect of increasing the value of the estate for the unsecured creditors, because more unencumbered assets will exist and be available for the unsecured creditors. The result is that time is effectively turned back, and the parties are returned to the positions they were in before bankruptcy was on the horizon.

Not all payments that meet the § 547(b) requirements are avoidable preferences. Section 547 is designed primarily to promote the *pro rata* treatment of unsecured creditors and to discourage pre-bankruptcy creditor collection efforts that would force a company into bankruptcy prematurely. Financially troubled companies, though, need to be able to pay their bills to continue to operate, and to obtain credit. As a result, the Code sets out a number of exceptions for transfers that meet the requirements of § 547(b), but are not preferential. Perhaps the most significant of these is the ordinary course of business exception found in 11 U.S.C. § 547(c).

By contrast, the strong arm power of the trustee under § 544(a) gives the trustee the power of certain hypothetical creditors to avoid various liens. The purpose of this provision is to provide a bankruptcy equivalent to certain state law rights. Outside of bankruptcy, general creditors sometimes have greater rights than do secured creditors. The most obvious example is a creditor with an unperfected but attached security interest against the debtor. The debtor has no rights against the unperfected creditor in the event of a default. A general creditor, however, could reduce its claim to judgment, levy on the collateral in question, and take priority over the unperfected secured creditor. To insure that creditors can look to the same assets inside bankruptcy that they can look to outside of bankruptcy, § 544(a) gives the trustee rights not only to what the debtor owns, but also to that which the general creditors could have reached under non-bankruptcy law. Another use of the strong-arm power is the avoidance of unrecorded mortgages on real property.

158. Strategic behavior might have been altered. Activities of the parties might have changed.

transfers value, it does not restore the System and its Surroundings to their initial states.

As a result, preference laws express both a thermodynamic impossibility and a thermodynamic certainty. The impossibility is that time can be turned back in the natural world. The certainty is that any infusion of resources to the debtor is linked necessarily with an equal or greater detrimental action to creditors and to the world at large.

Having exercised its avoiding powers, the debtor now contemplates its plan of reorganization. In doing so, it is faced with a major obstacle. It is unable to generate sufficient resources to reverse the entropic flow absent external intervention. This was true under state law. It will be true in bankruptcy. Left on its own, and absent a significant infusion of capital by investors, the firm will continue to spiral uncontrollably toward an equilibrium state of maximum disorder at which point it will liquidate. This process is in a scientific sense irreversible, meaning that the financial processes that have affected the firm (the System) cannot be reversed without altering the financial universe (the Surroundings) in which the firm is situated. In other words, saving this firm necessarily equates with increasing disorder in other Systems. This process likely will be sizable, for in order to confirm a plan, the debtor must not only fulfill the confirmation requirements of the Code,[159] it also must be able to survive post-confirmation.[160] Thus, it must find sufficient resources elsewhere to allow it to do this. Creditors are the obvious source. They have an existing relationship with the firm. Their rights are already intertwined with the firm's survival. The debtor's problem stems from the Code's repeated requirement that creditors be protected.[161] A tension thus exists. This debtor's reorganization chances can be enhanced or the protections afforded creditors can be fully recognized. Both cannot simultaneously be the case.

VI. THE THERMODYNAMIC MODEL AND THE EROSION OF CREDITOR PROTECTION

The thermodynamic model suggests the fundamental incompatibility between protecting creditors and facilitating reorganization. The core elements of the thermodynamic model are present both in the Supreme

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159. *See* 11 U.S.C. § 1129.

160. *See* 11 U.S.C. § 1129(a)(11) (requiring for plan confirmation that "the plan is not likely to be followed by the liquidation, or the need for further financial reorganization, of the debtor or any successor to the debtor under the plan, unless such liquidation or reorganization is proposed under the plan").

161. The concept of the adequate protection of secured creditors appears repeatedly in the Code. *See, e.g.*, 11 U.S.C. §§ 362, 363 & 364.

Court's decision in *Timbers* and in the lower court's increasingly common treatment of the viability of the new value exception to the absolute priority rule.

A. *Adequate Protection of Secured Creditors and* Timbers of Inwood Forest

In *Timbers*,[162] again, the Court considered the question of whether an undersecured creditor in bankruptcy statutorily denied interest on its claim is entitled to compensation for the lack of the use value of the collateral it loses by not being allowed to foreclose immediately.[163] The pertinent facts of *Timbers* were not complicated. The creditor held a security interest in an apartment building. The security interest included an assignment of rents. The debtor had agreed to pay the creditor post-petition rents, but the creditor claimed it was entitled to additional compensation.[164] The Bankruptcy Court agreed; it conditioned continuance of the automatic stay on the debtor's making monthly payments to the creditor at the market rate of twelve percent on the estimated realizable value from the foreclosure.[165] The Supreme Court ultimately disagreed with the bankruptcy court's holding and ruled that the creditor was not entitled to the use value of the collateral.[166] In so doing, the Court effectively redistributed assets and imposed some of the reorganization costs upon the secured creditor.[167] This resulted in sharing of the risks of bankruptcy among the various parties.[168]

The impetus for the *Timbers* holding seems reasonably evident. Had *Timbers* been decided to the contrary, the most immediate impact would have been a greatly enhanced need for cash flow on the part of any debtor who hoped to reorganize in these circumstances. Most bankruptcy debtors do not have sizable excess cash flow. Thus, the result of an adverse ruling would have been to make reorganizations significantly less likely. By contrast, the impact that the *Timbers* ruling has on creditors seems relatively nominal—they are denied some of the interest for which they have contracted. With the costs to potential reorganiza-

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162. 484 U.S. 365 (1988).

163. *See id.* at 368.

164. *See id.* at 368-69.

165. *See id.* at 369.

166. *See id.* at 382.

167. As noted, the reorganization statute does not expressly contemplate redistribution of assets, unlike Chapter 7 discharge of individual debts. Rather, Chapter 11's discharge provision replaces old debts with new ones. *See supra* note 2.

168. *See, e.g.*, Robert E. Scott, *Sharing the Risks of Bankruptcy:* Timbers, Ahlers, *and Beyond*, 1989 COLUM. BUS. L. REV. 183, 189-91 (arguing that rehabilitation serves risk sharing function).

tions deemed great and the harm to creditors perceived as small, it is not surprising that the Court held in a manner that decreases the likelihood of the doomsday of financially distressed firms.

Timbers yields a result suggested by the thermodynamic model. Had the Court ruled otherwise, the debtor's capital needs would have increased, and its likelihood of reorganization would have correspondingly decreased. That is, had its contractual obligations been fully enforced in bankruptcy, the firm would have been moving inexorably toward liquidation. The thermodynamic model suggests that the only way to stem the firm's spiraling entropic rise is to increase correspondingly the costs to another System, in this case the firm's creditors. By denying the creditor compensation for the lack of the use value of the collateral, the Court caused an increase in the "disorder" of the creditor while it correspondingly decreased that of the debtor. The thermodynamic model does not suggest whether these creditor costs are wise in this context. Rather, it illustrates their inevitability in an environment where saving troubled firms is considered fundamental.

B. *Unsecured Creditors and the New Value Exception to the Absolute Priority Rule*

A similar explanation applies to the frequent application by lower courts of the new value exception to the absolute priority rule. New value cases have several common threads. First, the plans are non-consensual, so the unsecured creditors do not see them as being economically advantageous. Second, the debtor's equity holders wish to retain an interest in the reorganized entity that they hope will emerge from bankruptcy. Finally, the debtor either cannot or will not pay dissenting unsecured creditors in full.[169]

New value cases classically fall within the paradigm established by the thermodynamic model. The firm has been unable to generate sufficient revenue to pay its creditors in full. It cannot do so and meet its legal and contractual obligations even with the restructuring under contemplation in bankruptcy. The firm's inability to pay its creditors has forced it to seek bankruptcy protection to stave off liquidation under state law. Its downward cycle is irreversible, absent detrimental effects on surrounding Systems. If these surrounding Systems are forced to interact with the debtor under these facts, the result will be that these Systems will both absorb the impact of this interaction and likely pass it along to their respective Surroundings.

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169. Both *Bonner Mall* and *Kham & Nate's Shoe* fit this fact pattern. *See supra* pt. II.B.

Without a new value exception, firms in this financial condition cannot be rehabilitated. The exception is a method of more expressly involving the resources of the firm's unsecured creditors; the unsecured creditors are Systems that interface with the debtor. The exception puts resources in the hands of the debtor's equity holders. It correspondingly removes resources from the unsecured creditors. The result is a resolution of a fundamental conflict—the choice between aiding rehabilitation and protecting the rights which form the basis of the contract between the parties. Courts that recognize the exception resolve this difficulty by denying unsecured creditors their one primary protection in Chapter 11—the right to take their distribution in advance of the debtor's equity holders. As noted,[170] while the Supreme Court may finally resolve the issue this term, the trend over the past several years has clearly been an upholding by the lower courts of the exception's validity.[171] Such a trend recognizes the choices that the thermodynamic model suggests are unavoidable if troubled firms are to be saved in Chapter 11.

VII. CONCLUSION

This Article has used certain thermodynamic principles to examine the erosion of creditor protections and to indicate why this is a necessary cost for our system of corporate reorganization of troubled firms to function. This Article does not take a position on whether such costs to creditors are justifiable in light of the perceived societal desire to save otherwise failing firms.[172] Rather, it has attempted to illustrate the presence of a fundamental inconsistency that is too infrequently recognized when courts take broad measures to save troubled firms. For certain types of firms, salvation in bankruptcy can come only at the cost of direct injury to others. The tension remains constant, notwithstanding the Bankruptcy Code's regular mention of creditor protections. These firms can have an increased prospect of surviving, or creditors can be given full legal protection of their interests. Both cannot simultaneously be true.

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170. *See supra* note 48.

171. *See supra* note 67.

172. Nor does this Article join the frequent cries for the major overhaul or abolition of Chapter 11. *See, e.g.*, Lucian A. Bebchuck, *A New Approach to Corporate Reorganization*, 101 HARV. L. REV. 775 (1988); Michael Bradley & Michael Rosenzweig, *The Untenable Case for Chapter 11*, 101 YALE L.J. 1043 (1992); Edith H. Jones, *Chapter 11: A Death Penalty for Debtor and Creditor Interests*, 77 CORNELL L.J. 1043 (1992); Lynn M. LoPucki, *The Trouble with Chapter 11*, 1993 WISC. L. REV. 729.