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The Case for Symmetry in Creditors' Rights

ABSTRACT. Using an original framework for evaluating bankruptcy rules, this Article casts doubt on the efficiency of legal arrangements that give some creditors an absolute advantage over others in the division of a debtor's assets. Such arrangements, which I classify as *asymmetrical*, are widely used in the modern economy, and include the secured loan, American general partnership, and guaranty contract. In contrast, *symmetrical* arrangements, which include the corporation and common law partnership, confer no absolute advantage, because they give each creditor group a prior claim to a distinct debtor asset pool. I demonstrate that symmetrical arrangements produce lower debt appraisal costs, more efficient creditor monitoring, and speedier bankruptcy proceedings; they also are less conducive to exploitation of creditors such as tort victims who do not adjust to subordination of their claims. These results indicate that lawmakers could create social wealth by reforming asymmetrical arrangements to be symmetrical. The Article concludes by showing how symmetry is superior to previous proposals for reforming the secured loan.

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INTRODUCTION

The foundation of modern bankruptcy systems is the pro rata rule, which pays all creditors an equal percentage on their claims. But debtors can, and often do, override the pro rata rule through *asset partitioning*, which is the nonconsensual subordination of creditor claims to particular debtor assets.¹ Legal arrangements that partition assets are both varied and ubiquitous, ranging from the corporation and partnership to the secured loan.

Because partitioning arrangements forcefully subordinate creditor claims, they transfer wealth away from claimants such as tort victims who do not adjust when their claims are impaired.² Despite the social costs of these wealth transfers, previous scholarship has argued that partitioning arrangements can create value by providing various economic efficiencies.³ In weighing costs and benefits, however, this literature has taken little account of key differences in the ways that partitioning arrangements prioritize creditor claims.⁴

This Article provides an original framework for comparing the efficiency of different partitioning arrangements. I identify a universal distinction between two basic types of asset partitioning, which I term *symmetry* and *asymmetry*. Despite their variety, all partitioning arrangements can be categorized as either symmetrical or asymmetrical. Symmetrical arrangements divide creditors into groups and give each group a prior claim to a distinct asset pool in the debtor's estate.⁵ In contrast, asymmetrical arrangements give prior claims to some

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1. Henry Hansmann, Reinier Kraakman & Richard Squire, *Law and the Rise of the Firm*, 119 HARV. L. REV. 1333, 1343-48 (2006).
 2. See Lucian Arye Bebchuk & Jesse M. Fried, *The Uneasy Case for the Priority of Secured Claims in Bankruptcy*, 105 YALE L.J. 857, 898-902 (1996); Hansmann et al., *supra* note 1, at 1351.
 3. See, e.g., Henry Hansmann & Reinier Kraakman, *The Essential Role of Organizational Law*, 110 YALE L.J. 387, 398-405, 423-27 (2000) (describing the economic benefits of various rules of asset partitioning).
 4. For example, the corporation divides a business owner's creditors into two groups and gives each group the first claim to a distinct asset pool. In contrast, the secured loan gives one creditor a prior claim to one asset pool but confers no similar advantage on the debtor's remaining creditors. Yet previous scholarship contends that both arrangements make it easier for creditors to appraise and monitor debtors, and does not consider whether one structure provides these benefits more than the other. See Thomas H. Jackson & Anthony T. Kronman, *Secured Financing and Priorities Among Creditors*, 88 YALE L.J. 1143, 1149 (1979) (discussing the secured loan); Richard A. Posner, *The Rights of Creditors of Affiliated Corporations*, 43 U. CHI. L. REV. 499, 508-09 (1975) (discussing the corporation).
 5. Under current law, the corporation, common law partnership, limited liability company, and Delaware business trust are symmetrical. See *infra* note 14 and accompanying text.

creditors but not others, advantaging select creditors by according them both a prior claim to one asset pool and a pro rata claim to remaining debtor assets.⁶

The distinction between symmetry and asymmetry is powerful because, as Part I of this Article demonstrates, symmetry is superior to asymmetry with respect to each of the major economic benefits of asset partitioning that scholars have identified. In particular, symmetry does more than asymmetry to tie each creditor's fortunes to a discrete asset pool, thereby permitting creditors to economize on the costs they incur when appraising risk. Symmetry also encourages efficient monitoring of debtors by allowing creditors who rescue assets from debtor misconduct to keep more of those assets for themselves. Asymmetry, by contrast, undermines monitoring incentives, because it insulates some creditors from the losses they could most cheaply prevent. Finally, symmetry does more than asymmetry to expedite the distribution of assets to creditors in a bankruptcy proceeding.

If asymmetrical arrangements are categorically inefficient, why are they so common? The answer, I argue, is opportunism. It is easier to use asymmetry than symmetry to transfer wealth away from nonadjusting creditors. And the use of asymmetry to transfer wealth is a drag on the economy: not only does it forgo the social benefits of symmetry, but by distorting interest rates it encourages wasteful investment decisions.

These findings reveal that lawmakers could create social wealth by reforming asymmetrical arrangements to be symmetrical. Part II considers in depth the opportunity for reform of the secured loan, which is asymmetrical under current law. Because of its central role in modern commerce,⁷ the secured loan has been the subject of numerous reform proposals. I show that all of these proposals seek to reduce opportunism costs in a manner that would undermine the economic benefits that secured loans now provide. Symmetry, by contrast, would curtail opportunism while simultaneously enhancing rather than undermining the secured loan's economic benefits. In short, symmetry is the only reform proposal for the secured loan with no apparent economic downside.

More broadly, this Article's framework reveals opportunities for reform of other widely used asymmetrical arrangements. As I show next, the benefits of

6. Under current law, the secured loan, American general partnership, and guaranty contract are asymmetrical. See *infra* note 15 and accompanying text.

7. See Elizabeth Warren & Jay Lawrence Westbrook, *Contracting Out of Bankruptcy: An Empirical Intervention*, 118 HARV. L. REV. 1197, 1222 (2005) (finding that more than 60% of the liabilities of bankrupt commercial debtors are owed to secured creditors).

reform can be understood through a simple model that demonstrates the efficiency of symmetry in the allocation of creditors' rights.

I. THE ECONOMICS OF SYMMETRY AND ASYMMETRY IN ASSET PARTITIONING

This Part begins by presenting a simple model of a lending arrangement that illustrates the difference between symmetry and asymmetry. I then use the model to evaluate symmetry and asymmetry in terms of each of the important social benefits and costs of asset partitioning.

A. A Simple Model of Asset Partitioning

The simple model has three parties: Debtor, and two creditors—Creditor 1 and Creditor 2—who have claims against Debtor.⁸ Debtor owns two asset pools—Asset 1 and Asset 2.⁹ Three versions of the model can be imagined, reflecting in turn the pro rata rule, symmetry, and asymmetry.¹⁰

The pro rata rule, which is the modern bankruptcy default rule in the absence of asset partitioning,¹¹ pays all creditors an equal percentage on their claims. Thus, in the pro rata version of the simple model, if Debtor owes Creditor 1 and Creditor 2 \$100 each, and defaults when Asset 1 is worth \$50 and Asset 2 is worth \$90, then each creditor recovers \$70, or 50% of Debtor's overall estate.

Symmetry departs from the pro rata rule by dividing creditors into groups and giving each group a prior claim to a distinct debtor asset pool. Thus, in the symmetrical version of the model, Creditor 1 has a prior claim to Asset 1, and Creditor 2 has a prior claim to Asset 2. If once again each creditor is owed \$100

8. To help distinguish among the parties, I will refer to Creditor 1 as a "he," Creditor 2 as a "she" and Debtor as an "it."

9. Debtor also has a claim to the asset pools, but it is an equity claim and therefore is subordinate to the creditors' claims.

10. One might imagine a fourth version, in which Creditor 1 has a prior claim to both asset pools. Such a configuration could result, for example, from a subordination agreement between the creditors. I do not analyze this possibility here because strictly speaking it is not an example of a partitioning arrangement: there is no practical distinction between the asset pools, and—when there is a subordination agreement—the impairment of Creditor 2's claim is consensual. A nonconsensual analog to this structure exists, however, in the form of the "blanket lien," which is a secured claim to a debtor's entire estate. I address the blanket lien in my discussion of secured lending in Subsection II.F.2, *infra*.

11. See, e.g., 11 U.S.C. § 726(b) (2000) (providing for pro rata payment of unsecured claims).

and Debtor defaults when Asset 1 is worth \$50 and Asset 2 is worth \$90, then under symmetry Creditor 1 recovers \$50 and Creditor 2 recovers \$90. As this example illustrates, it is possible under symmetry for either creditor to recover a higher percentage on his or her claim than the other does, depending on the relative values of the asset pools in bankruptcy.

An additional feature of symmetrical arrangements is that they give at least some creditors a “deficiency claim,” which is a right to levy on the debtor’s remaining assets to the extent of any shortfall in the creditor’s designated asset pool. Deficiency claims in symmetrical arrangements are always subordinated. This means that, in the symmetrical version of the simple model, Creditor 2 can levy on Asset 1 if there is a shortfall in Asset 2, but only if Creditor 1 is first paid in full. Conversely, Creditor 1 can collect from Asset 2 if there is a shortfall in Asset 1, but only if Creditor 2 is first paid in full. Another possibility under symmetry is that the debtor enjoys limited liability, and therefore that some creditors lack a deficiency claim altogether. In the model, this would mean that Creditor 2 has a deficiency claim but Creditor 1 does not. When I discuss the symmetrical version of the simple model in this Article, I generally assume that both creditors have deficiency claims, but I comment on the implications of the limited liability alternative where relevant.

Finally, asymmetry also divides creditors into groups, but unlike symmetry it gives only one group a prior claim to a distinct asset pool. Thus, in the asymmetrical version of the model, Creditor 1 has a prior claim to Asset 1, and he also has a deficiency claim to Asset 2 that is paid pro rata with Creditor 2’s claim. This structure ensures Creditor 1 that he will always recover a higher percentage on his claim than Creditor 2 does if Debtor falls bankrupt (unless Asset 1 drops in value to nothing, in which case the two creditors recover pro rata). As an illustration, assume once more that each creditor is owed \$100 and Debtor defaults when Asset 1 is worth \$50 and Asset 2 is worth \$90. Under asymmetry, Creditor 1 recovers the full \$50 in Asset 1, and he then asserts a \$50 deficiency claim against Asset 2. Because Creditor 1’s deficiency claim is half the size of Creditor 2’s \$100 claim, his share of Asset 2 is half as big as hers: Creditor 1 gets \$30, bringing his total recovery to \$80, and Creditor 2 gets the remaining \$60.¹² I also will assume in the asymmetrical version of the model

12. This method of computing creditor recoveries under asymmetry reflects the common law rule of marshaling and is expressly required by the Bankruptcy Code for the secured loan. 11 U.S.C. § 506(a); see also William H. Widen, *Corporate Form and Substantive Consolidation*, 75 GEO. WASH. L. REV. 237, 303-04 (2007) (describing the marshaling rule). Under an alternative approach, which one might call the “anti-marshaling” rule, Creditor 1’s pro rata recovery from Asset 2 remains capped at the deficiency in Asset 1, but subject to that cap is calculated using the amount of his original claim rather than the deficiency. Applying this

that Creditor 2 has a deficiency claim to Asset 1, but it is subordinated to Creditor 1's claim.¹³

Despite their variety, all asset partitioning arrangements can be characterized as either symmetrical or asymmetrical. The symmetrical version of the model illustrates creditor priorities in the common law's "jingle-rule" partnership, as well as in limited liability entities such as the corporation, limited liability company (LLC), limited liability partnership (LLP), and Delaware business trust. In each of these commercial arrangements, the firm's creditors have a prior claim to the firm's assets, and the personal creditors of each owner have either a prior (under the jingle rule) or exclusive (under limited liability) claim to that owner's personal assets.¹⁴ The asymmetrical version of the model, in turn, represents the general partnership as modified by statute in the United States, where partnership creditors enjoy both a prior claim to partnership assets and, to the extent of any deficiency in those assets, a claim to personal assets paid pro rata with the claims of personal creditors.¹⁵

rule to my numerical example causes Creditor 1 to recover (in addition to the full value in Asset 1) half the value of Asset 2, due to the fact that his original claim of \$100 is equal to Creditor 2's claim. Thus, Creditor 1's total recovery becomes \$95, and Creditor 2's becomes \$45. As this example illustrates, the anti-marshaling rule results in a more extreme form of asymmetry, as it further increases Creditor 1's percentage recovery relative to Creditor 2's (unless Asset 1 drops to nothing, in which case the two again recover pro rata). Although the anti-marshaling rule contradicts the common law principle that a creditor may not "double prove" the same claim, Widen, *supra*, at 304, it is expressly required by the Bankruptcy Code for calculating a partnership creditor's recovery when both the partnership and an individual partner are bankrupt. See *infra* note 15.

13. The disadvantaged creditors in asymmetrical arrangements usually enjoy subordinated deficiency claims. For example, unsecured creditors can levy on any surplus in the secured assets, and personal creditors of partners in an American general partnership may seize the partners' equity interest in the partnership assets. But not all asymmetrical arrangements follow this pattern. See *infra* note 20.
14. See Hansmann et al., *supra* note 1, at 1397 (describing modern commercial entities as combining "entity shielding," whereby firm creditors enjoy the first claim to firm assets, and limited liability); see also *Ex parte* Crowder, (1715) 23 Eng. Rep. 1064 (Ch.) (establishing the "jingle rule" for partnership bankruptcies, so named because its symmetry makes it easy to remember); UNIF. P'SHIP ACT § 40(h), 6 U.L.A. 902 (1914) (codifying the jingle rule in the United States).
15. See Bankruptcy Reform Act of 1978, Pub. L. No. 95-598, § 723(c), 92 Stat. 2606 (codified as amended at 11 U.S.C. § 723(c)) (overriding the jingle rule to provide for payment of partnership creditor deficiency claims on parity with claims of personal creditors); UNIF. P'SHIP ACT § 807(a) (amended 1997), 6 U.L.A. 206 (2001) (same). In addition to rejecting the jingle rule, Congress also ignored the common law's preference for marshaling, instead providing that a partnership creditor may "double prove" the full amount of his claim against the estates of both a bankrupt partnership and a bankrupt individual partner, with the qualification that the recovery from the partner's estate cannot exceed the deficiency in

And it represents the secured loan, which gives the secured creditor a prior claim to the secured assets plus a deficiency claim to the unsecured assets that is paid pro rata with the claims of the unsecured creditors.¹⁶

In most cases, a partitioning arrangement's symmetry or asymmetry is the product of a default rule. Thus, parties often use contract law to switch an arrangement from one configuration to the other. For example, owners of closely held corporations often issue personal guaranties on the firm's debt,¹⁷ and managers of corporate groups frequently cause one company in the group to guaranty the debt of another.¹⁸ In both cases, the guaranty makes an otherwise symmetrical arrangement (the corporation) asymmetrical: the corporate creditor who receives the guaranty enjoys both a prior claim to the corporate assets and a deficiency claim against the guarantor that, if the guarantor is bankrupt, is paid pro rata with the claims of the guarantor's other creditors.¹⁹ In this way, the guaranty contract can be characterized as another asymmetrical arrangement.²⁰ Conversely, parties sometimes create "nonrecourse" secured loans in which the secured creditor waives his deficiency

the partnership estate. 11 U.S.C. § 723(c)-(d). For a numerical example using this anti-marshaling rule, see *supra* note 12.

16. 11 U.S.C. §§ 506(a)(1), 726(a)-(b).
17. See Marshall E. Tracht, *Insider Guaranties in Bankruptcy: A Framework for Analysis*, 54 U. MIAMI L. REV. 497, 517 (2000) (observing that approximately half of small business loans are personally guarantied).
18. See Phillip I. Blumberg, *Intragroup (Upstream, Cross-Stream, and Downstream) Guaranties Under the Uniform Fraudulent Transfer Act*, 9 CARDOZO L. REV. 685, 686-87 (1987).
19. A guaranty on a loan gives the lender the option upon the borrower's default to proceed against the borrower, the guarantor, or both. At the same time, the equitable right of contribution enables the guarantor to assert a claim against the borrower for any amount paid on the guaranty. See Avery Wiener Katz, *An Economic Analysis of the Guaranty Contract*, 66 U. CHI. L. REV. 47, 60 (1999). The lender's claim against the guarantor is therefore the economic equivalent of a deficiency claim, as its net impact on the guarantor is capped at the amount of the deficiency in the borrower's estate. If the guarantor is insolvent when the lender asserts his claim on the guaranty, the rule favored by the common law (and reflected in the doctrine of marshaling) computes the lender's pro rata recovery from the guarantor based on the deficiency in the borrower's estate. See, e.g., *In re Wilson*, 9 B.R. 723, 726 (Bankr. E.D.N.Y. 1981) (reducing a claim against a guarantor by amounts paid by the primary obligor).
20. A cross-guaranty within a corporate group is a type of asymmetrical arrangement where the creditors in the position of Creditor 2 lack a deficiency claim to Asset 1. Those creditors are the guarantor's other creditors, who lack a claim against the borrower (unless the guarantor owns the borrower).

claim, thereby converting an otherwise asymmetrical arrangement into a symmetrical one.²¹

Given that symmetrical and asymmetrical arrangements are both so common, one might expect that symmetry and asymmetry generate different economic efficiencies, and that parties choose between them based on whichever efficiencies will predominate in a particular setting. But direct analysis using the simple model indicates that this is untrue. As the discussion that follows demonstrates, symmetry outperforms asymmetry in terms of each of the major social benefits of asset partitioning that scholars have identified.²² The implication is that, when parties opt for asymmetry, they do so for reasons other than wealth creation.

B. Asset Partitioning and Appraisal Costs

The economic efficiency that scholars have most frequently attributed to various partitioning arrangements is the reduction of what I will call *appraisal costs*, which are the costs that creditors incur when evaluating a prospective debtor to decide whether to extend credit and on what terms. Creditors will be particularly interested in the value of the debtor's assets, as asset values will determine the creditors' recoveries if the debtor falls bankrupt.²³

The first scholar to discuss appraisal costs was Richard Posner, who argued that the doctrine of piercing the corporate veil, which abrogates limited shareholder liability, makes it more expensive for creditors to evaluate lending risk.²⁴ Although Posner's argument was (in effect) a defense of the

21. See discussion *infra* Section II.G.

22. Although I examine the primary benefits of asset partitioning emphasized in the literature, other potential efficiencies have been noted in specific contexts. For example, Henry Hansmann and Reinier Kraakman have observed that many commercial entities exhibit "liquidation protection," meaning that personal creditors of owners cannot force dissolution of the entity to levy on its assets. Hansmann & Kraakman, *supra* note 3, at 394. Liquidation protection can generate wealth by protecting a firm's going-concern value and permitting investment diversification and transferable shares. Hansmann et al., *supra* note 1, at 1348-50. I do not analyze liquidation protection here because its benefits are unlikely to depend on whether the commercial entity is symmetrical or asymmetrical.

23. Other important considerations will be the debtor's credit history and amount of current indebtedness.

24. Posner, *supra* note 4, at 516-17.

corporation's symmetry,²⁵ scholars subsequently have cited appraisal efficiencies as a benefit of various asymmetrical arrangements, including the secured loan,²⁶ guaranty contract,²⁷ and American general partnership.²⁸

Analysis using the simple model suggests that these extensions of Posner's original argument should have come with an important caveat. Yes, asymmetrical arrangements may generate some appraisal benefits relative to the pro rata rule. But the benefits are smaller than they are under symmetry. In particular, asymmetry does not tie lending risk to particular asset pools to the same extent that symmetry does, nor does it enable all creditor groups to specialize by lending against only a portion of a debtor's estate. Therefore, appraisal efficiencies alone cannot explain why parties would choose asymmetry when a symmetrical alternative is available. Nor can they justify a decision by lawmakers to make an arrangement asymmetrical as a default rule.

To understand the relationship between asset partitioning and appraisal costs, it is useful to observe that a debtor's insolvency can take different forms, as the simple model will serve to illustrate. Thus, assume that both of Debtor's asset pools are initially "above water"—meaning that Asset 1 is worth more than Creditor 1's claim, and Asset 2 is worth more than Creditor 2's claim. Assume further that there is some risk that the pools will drop in value, which in turn may cause Debtor to fall insolvent and default before it repays its debts. It follows that Debtor's insolvency could take three different forms. First, Asset 1 might devalue far enough to render Debtor insolvent even though Asset 2 remains above water. Second, Asset 2 might devalue far enough to render Debtor insolvent even though Asset 1 remains above water. And third, both asset pools might drop underwater. The riskiness of each creditor's lending position is therefore a product of the probabilities of these three insolvency outcomes and the amount the creditor recovers in each.

Under the pro rata rule, both creditors recover from both asset pools in all three insolvency outcomes. Therefore, to get an accurate risk assessment under the pro rata rule, the creditors must spread their appraisal efforts evenly across

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25. *Id.* at 517 ("Acquiring the necessary information will become even more complicated if we allow not only the subsidiary's creditors to reach the assets of the parent, but the parent's creditors to reach the assets of the subsidiary . . .").
26. See, e.g., F.H. Buckley, *The Bankruptcy Priority Puzzle*, 72 VA. L. REV. 1393, 1424-25 (1986).
27. See Katz, *supra* note 19, at 85.
28. See Hansmann & Kraakman, *supra* note 3, at 427-28; see also Hansmann et al., *supra* note 1, at 1392-93; Henry Hansmann, Reinier Kraakman & Richard Squire, *The New Business Entities in Evolutionary Perspective*, 2005 U. ILL. L. REV. 5, 10 (arguing that the American partnership rule, whereby partnership creditors enjoy first claim to partnership assets, is a source of informational efficiencies).

Debtor's estate. The question is whether asset partitioning can permit the creditors to economize on their appraisal costs by rationally narrowing their focus.

Consider symmetry first. Regardless of the form of Debtor's insolvency, Creditor 1 recovers from Asset 1, just as he does under the pro rata rule. But under symmetry he recovers from Asset 2 only in the insolvency outcome where Asset 1 alone is underwater, as that is the only outcome where there is both a deficiency in Asset 1 and a surplus in Asset 2. Moreover, in that outcome he recovers less from Asset 2 under symmetry than he does under the pro rata rule, because under symmetry his claim to Asset 2 is subordinated. (And in the limited liability alternative he recovers nothing from Asset 2, because then his deficiency claim is eliminated altogether.) Therefore, if Creditor 1 were to conserve on his appraisal efforts by focusing solely on Asset 1, he would know more about his overall risk exposure under symmetry than he would under the pro rata rule.

Because of the nature of symmetry, the same analysis applies in mirror-image form to Creditor 2. She now recovers from Asset 1 only in the insolvency outcome where Asset 2 alone is underwater, and she recovers less from it under symmetry than she does under the pro rata rule. If she were to focus her appraisal efforts solely on Asset 2, she too would know more about her overall risk exposure under symmetry than she would under the pro rata rule.

Symmetry will be especially beneficial to both creditors if Debtor's assets are used for different purposes, thereby permitting the creditors to specialize in lending against the type of asset they can appraise more cheaply. Consider an example of a sole proprietor who owns both a grocery store and some personal assets. Assume that the proprietor has one trade creditor and one personal creditor. Because of his industry experience, the trade creditor will naturally find the grocery assets cheaper to value. If the proprietor were to form a corporation and assign to it both the grocery assets and the trade creditor's claim, the corporation's symmetry would tie the trade creditor's fortunes to the grocery assets, thereby reducing the trade creditor's appraisal costs. In a competitive lending market, this benefit would be captured by the proprietor in the form of a lower interest rate on the trade debt. Incorporation of the grocery business also would automatically tie the personal creditor's risk exposure to the personal assets, which the personal creditor also would probably be able to appraise more cheaply. Similar benefits from specialization

would arise if, to use a different example, joint owners of two distinct businesses incorporated them separately, thereby forming a corporate group.²⁹

The potential for an asymmetrical arrangement to generate appraisal efficiencies is much more limited. In the asymmetrical version of the simple model, Creditor 1 recovers from Asset 1 in all three insolvency outcomes, just as he does under symmetry. And because his deficiency claim to Asset 2 is not subordinated, he recovers from that asset pool not only in the outcome when Asset 1 alone is underwater, but also when both asset pools are underwater. Finally, when Asset 1 alone is underwater, he takes a larger portion of Asset 2 under asymmetry than he does under symmetry. Therefore, if Creditor 1 were to conserve on his appraisal efforts by focusing solely on Asset 1, he would know less about his overall risk exposure under asymmetry than he would under symmetry. He would, however, know more than he would under the pro rata rule, where as noted he recovers from Asset 2 in all three outcomes.

A potential objection at this point is that nothing forces Creditor 1 to value his deficiency claim; even under asymmetry, he could choose to appraise only Asset 1 and disregard Asset 2. But it must be remembered that Creditor 2 will demand a higher interest rate from Debtor under asymmetry to compensate her for the risk that Creditor 1's deficiency claim will cut into her own recovery. Debtor therefore will insist that Creditor 1 either subordinate his deficiency claim or pay for it through an interest rate concession. And Creditor 1 cannot know how large a concession to make without some sense of the value of Asset 2.

Asymmetry is even less beneficial to Creditor 2. Once again, she recovers directly from Asset 2 in all three insolvency outcomes. And under asymmetry the value of Asset 1 also affects her recovery in all three outcomes, just as is true under the pro rata rule. Thus, when Asset 2 alone is underwater, her (subordinated) deficiency claim causes her to recover from Asset 1 directly. And in the two insolvency outcomes where Asset 1 is underwater, the value of Asset 1 determines the size of Creditor 1's deficiency claim, which under asymmetry determines her recovery from Asset 2.³⁰ The only difference with the pro rata

29. In theory, symmetry might also allow creditors to pay less attention to the amounts owed other creditors. For example, the size of Creditor 2's overall claim is less likely to affect Creditor 1's recovery under symmetry than under the pro rata rule. But the process of appraising a debtor's liabilities may not be subject to efficiencies in the same way that the appraisal of asset values is. Debt amounts are usually specified contractually, and therefore—once discovered—not as difficult to value as are assets.

30. This is true regardless of whether the marshaling or anti-marshaling rule is used to compute Creditor 2's recovery, because in either case Creditor 1's recovery from Asset 2 is capped at the amount of the deficiency in Asset 1. See *supra* note 12.

case is that the impact on her of Asset 1's value is somewhat smaller because under asymmetry Creditor 1 is paid out of that pool first. The implication is that, if Creditor 2 were to conserve on her appraisal efforts by focusing solely on Asset 2, she would know little more about her overall risk exposure under asymmetry than she would under the pro rata rule.

The fact that the values of both asset pools affect Creditor 2's recovery under asymmetry regardless of the form of Debtor's insolvency also hampers specialization. Consider again the example of the sole proprietor who owns a grocery store. To create asymmetry, the proprietor could give the trade creditor a secured claim to the grocery assets. Although this would (partially) tie the trade creditor's risk exposure to the grocery business, it would not capitalize on the personal creditor's corresponding advantage in appraising the personal assets, because her exposure to the risks associated with the grocery business would be almost as great as it would be under the pro rata rule.

In sum, asymmetry also generates appraisal benefits relative to the pro rata rule. But the benefits are smaller than under symmetry, because asymmetry does not create tight links between particular creditors and particular assets, nor does it permit specialization by all creditors.

C. Asset Partitioning and Creditor Monitoring

Another purported benefit of partitioning arrangements is that they make it easier for creditors to monitor debtors and thus to prevent wealth-destroying debtor misconduct. Scholars have claimed monitoring efficiencies as a benefit of symmetrical arrangements: for example, Larry Ribstein has advocated the jingle rule for partnership bankruptcies on grounds that it reduces creditor monitoring costs by allowing "separate groups of creditors to focus on separate piles of assets."³¹ As with appraisal efficiencies, however, monitoring efficiencies are more often touted as an advantage of asymmetrical arrangements.³² Thus, several scholars have argued that the secured loan promotes efficient creditor monitoring—although, as Part II discusses, they disagree about *which* creditors it encourages to monitor.³³ Similarly, Avery Katz

31. Larry E. Ribstein, *The Illogic and Limits of Partners' Liability in Bankruptcy*, 32 WAKE FOREST L. REV. 31, 66 (1997).

32. See, e.g., sources cited *supra* note 28 (arguing contra Ribstein that monitoring efficiencies also arise under the rule of asymmetry now applied to the American general partnership).

33. See, e.g., Jackson & Kronman, *supra* note 4, at 1149-50 (arguing that the secured loan encourages unsecured creditors to monitor); Saul Levmore, *Monitors and Freeriders in*

has argued that the guaranty contract is superior to alternative arrangements when the lender whose claim is guaranteed can monitor the borrower more cheaply than the guarantor's other creditors can.³⁴

Taken as a whole, this scholarly commentary suggests that the difference between symmetry and asymmetry has little impact on creditor monitoring incentives. But analysis using the simple model shows that this is inaccurate, and in fact that only symmetry makes efficient monitoring more likely. Symmetry has what I will call a *focusing effect*, meaning that it increases the degree to which a creditor's recovery is determined by the value of a particular asset pool. This focusing effect promotes the benefits of specialization, an observation consistent with Ribstein's defense of the jingle rule. And symmetry's focusing effect also permits creditors to capture more of the benefits of their own monitoring efforts, thereby ameliorating a collective action problem caused by the pro rata rule. Asymmetry, in contrast, provides neither of these benefits. This is because asymmetry has what I will call an *insulating effect*, meaning that it shields creditors from devaluation of the assets to which the creditors enjoy prior claims. As a result, asymmetry discourages monitoring by those creditors who could most cheaply prevent a loss. In addition, asymmetry does little to overcome the collective action problem, and makes it harder for creditors to determine whether monitoring will be cost-justified. Asymmetry therefore does not improve monitoring incentives relative to the pro rata rule—and indeed in many situations may make efficient creditor monitoring *less* likely.

Before analyzing creditor monitoring incentives under each version of the simple model, it will be useful to consider in general terms why creditors monitor a debtor after they extend credit.

1. *Monitoring as a Response to Debtor Misconduct*

A debtor and its creditors normally share an interest in preserving the value of the debtor's estate. But when a debtor's liabilities exceed its assets, further deterioration in the debtor's estate harms only its creditors, opening a gap between debtor and creditor interests that the debtor might try to exploit. The resulting debtor conduct—which from the perspective of creditors is surely “misconduct”—can be divided into two types. The first, which I will call *asset depletion*, is action by a debtor that reduces the value of its assets to its

Commercial and Corporate Settings, 92 YALE L.J. 49, 56 (1982) (arguing instead that the secured loan encourages the secured creditor to monitor).

34. Katz, *supra* note 19, at 84 (discussing guaranty contracts).

creditors. An example is when an insolvent debtor consumes its assets or gives them away to family members or charity. Another example is when a debtor engages in “asset substitution,” meaning that the debtor converts its assets to a riskier form.³⁵ Riskier assets are less valuable to creditors because creditors are owed fixed amounts, and they therefore suffer the deeper downswings more than they profit from the higher upswings when their collateral becomes more volatile. The second type of debtor misconduct, which I will call *debt dilution*, occurs when a debtor takes on new liabilities that are not offset by a contribution of recoverable assets to the debtor’s estate. An example is when a debtor incurs liability to a tort victim or to a governmental claimant such as a tax authority.³⁶

One way to conceptualize the difference between asset depletion and debt dilution is to observe that creditors recover based on the ratio between a debtor’s assets and liabilities. Asset depletion harms creditors by reducing the numerator of this ratio, and debt dilution harms them by increasing the denominator.

Besides potentially changing the distribution of wealth, debtor misconduct generates various social costs that destroy wealth. First, asset depletion can cause assets to be assigned to socially inferior uses, because insolvency gives a debtor reason to consume or shunt away assets even if the debtor gets less benefit from doing so than its creditors would get from seizing the assets. Second, asset substitution in particular can produce “overinvestment,” which occurs when a debtor’s ability to shift downside risk onto creditors induces the debtor to invest in risky projects whose expected social value is negative.³⁷ Third, tort law will underdeter wasteful conduct if either asset depletion or debt dilution prevents tort creditors from recovering the full amounts of their claims.³⁸ And fourth, contract creditors who anticipate debtor misconduct will demand higher interest rates as compensation, thereby producing a

35. Alan Schwartz, *Security Interests and Bankruptcy Priorities: A Review of Current Theories*, 10 J. LEGAL STUD. 1, 11 (1981).

36. Debt dilution can also occur, albeit to a lesser extent, even if a contract creditor contributes recoverable assets to the debtor’s estate that are worth as much as the creditor’s claim. This is because such a loan adds another claim against the debtor’s equity interest in its estate, causing the debtor’s assets-to-debt ratio to fall if the debtor is solvent. See Alan Schwartz, *A Theory of Loan Priorities*, 18 J. LEGAL STUD. 209, 228-34 (1989).

37. See Clifford W. Smith, Jr. & Jerold B. Warner, *On Financial Contracting: An Analysis of Bond Covenants*, 7 J. FIN. ECON. 117, 118-19 (1979).

38. See Bebchuk & Fried, *supra* note 2, at 899. This cost can be seen as a special case of overinvestment, because an expectation that tort creditors will not recover in full may lead to excessive investment in hazardous activities.

deadweight loss by causing debtors to forgo wealth-creating projects that would be profitable but for the increase in borrowing costs.³⁹

The fact that misconduct risk can create a deadweight loss means that both debtors and creditors often would be better off if debtors could make credible promises not to misbehave. But debtors usually cannot do this, because misconduct typically is not apparent until a debtor has fallen insolvent and thus is judgment proof. This is why some lenders insist on loan covenants that require immediate repayment if the debtor fails to maintain specified financial ratios (a sign of insolvency, when misconduct is most likely) or sells most of its assets (a sign of asset substitution).⁴⁰ But creditors must incur monitoring costs to enforce loan covenants, which include the costs of scrutinizing the debtor's activities, possible litigation expenses, and the risk that the disruptive effect of an enforcement action will induce further misconduct or otherwise compromise the debtor's ability to pay.

Although monitoring costs are (yet) another social cost of debtor misconduct, creditor monitoring can nonetheless be wealth creating. Creditors who are active enough to monitor will impute their expected monitoring costs into the interest rates they demand, just as they will demand higher interest rates to offset any losses from debtor misconduct they do not expect monitoring to prevent. Therefore, as long as each dollar spent on monitoring prevents enough debtor misconduct to increase expected creditor recoveries by at least one dollar, the prospect of monitoring will reduce borrowing costs and hence the deadweight loss caused by misconduct risk. And successful monitoring will also prevent the direct costs of misconduct, including asset misallocation, overinvestment, and underdeterrence of tortious conduct.⁴¹

This discussion suggests that creditor monitoring can be conceptualized as a two-step process: first, the creditor assesses the debtor's estate to determine if loan covenants have been breached; second, the creditor decides whether to act on any breaches that are detected. The first step can be characterized as a

39. In particular, a debtor will fail to borrow if the increase in its borrowing costs due to misconduct risk is greater than the expected profits from the project that the loan will fund plus the utility the debtor expects to derive from misbehaving. Importantly, if the debtor borrows anyway, its higher borrowing costs will not deter misconduct *after* the loan is extended. To the contrary, the higher interest rate will make misconduct more likely by increasing the debtor's chance of insolvency.

40. See Buckley, *supra* note 26, at 1443.

41. Cf. Frank H. Easterbrook & Daniel R. Fischel, *Limited Liability and the Corporation*, 52 U. CHI. L. REV. 89, 100 (1985) (observing that the corporate rule of limited liability may create social wealth by shifting the risk of managerial misconduct onto the corporation's creditors, who may have an advantage over shareholders in monitoring the managers).

midcourse reappraisal of the debtor's assets, the economics of which are likely similar to those of pre-loan appraisal efforts. In this way, the analysis of creditor monitoring builds on the discussion of appraisal costs in the previous section. But the second step introduces an important new element. Information that a creditor acquires through appraisal efforts is generally not shared with other creditors.⁴² The same is not true, however, of assets a creditor rescues from debtor misconduct. This is especially true under the pro rata rule, which divides rescued assets among all creditors in proportion to the amounts of their claims. Therefore, when deciding whether to monitor, a creditor must consider not only the costs it will incur, but also what portion of the benefits it will capture for itself. In this way, the pro rata rule can discourage creditors from monitoring at efficient levels. Rules of asset partitioning, in turn, can mitigate or exacerbate this problem.

2. *Monitoring Under the Pro Rata Rule*

The simple model can be used to illustrate how the pro rata rule discourages efficient creditor monitoring. Consider a three-period scenario with the following assumptions. In period one, Debtor borrows \$100 from each of Creditors 1 and 2, with the proceeds of the two loans becoming Assets 1 and 2, respectively. In period two, Debtor engages in asset substitution unless Creditor 1 monitors to prevent it. In period three, Debtor either remains solvent, in which case it repays both loans in full, or it falls insolvent, in which case it defaults and its assets are liquidated. Insolvency occurs 25% of the time. If Debtor engages in asset substitution in period two, the liquidation value of Asset 1 in period three is \$70; otherwise, it is \$90.⁴³ Creditor 1 can prevent Debtor from misbehaving in period two by engaging in monitoring that would cost him \$3. Assume all parties know each of these parameters. Assume also that the lending market is competitive, meaning that the interest rates demanded by the creditors in period one reflect any monitoring costs the creditors expect to incur plus any losses from misconduct they do not expect monitoring to prevent.

On these assumptions, Debtor's borrowing costs will depend on whether Creditor 1 intends to monitor. If he does, he will demand \$3 more in interest

42. The benefits of appraisal efforts may not be fully internalized, however, because the mere fact (if discovered) that one creditor is willing to lend at a particular interest rate constitutes information to others about the debtor's creditworthiness.

43. No assumption about the liquidation value of Asset 2 is required except that it is not greater than the original value of \$100.

payments to offset his expected monitoring costs (ignoring the time value of money). And since monitoring will fully prevent Debtor from misbehaving, neither creditor will demand any additional compensation for expected misconduct losses. Therefore, if Creditor 1 intends to monitor, misconduct risk will cause Debtor's borrowing costs to be \$3 higher than they would be otherwise.

Under the pro rata rule, however, Creditor 1 will not monitor. It was assumed that monitoring increases the liquidation value of Asset 1 by \$20 if insolvency occurs, and that insolvency is 25% likely. The expected combined benefit to the creditors of monitoring is thus \$5. But because the pro rata rule divides Asset 1 evenly between the two creditors (on the assumption they are owed the same amount), the "private" benefit to Creditor 1—that is, the benefit he captures for himself—is only \$2.50, which is less than his \$3 monitoring cost. Creditor 1 therefore will not monitor, and Debtor will misbehave. Instead of charging \$3 more in interest payments to offset his monitoring costs, Creditor 1 will charge \$2.50 more to offset his expected losses from misconduct. And because Creditor 2 knows that Creditor 1 will not monitor, she also will charge \$2.50 more. Therefore, misconduct risk will increase Debtor's borrowing costs by \$5, as contrasted with \$3 if Creditor 1 intended to monitor. This \$2 difference might make it unprofitable for Debtor to borrow in the first place, creating a deadweight loss by causing Debtor to forgo a socially valuable project.⁴⁴

This example shows how the pro rata rule can cause creditors to fail to monitor when monitoring would create social wealth. But the pro rata rule can just as easily lead to excessive monitoring as well. This can be seen using the same scenario, but with two changes. First, assume now that either creditor could prevent Debtor from misbehaving in period two by spending \$2 on monitoring. Second, assume that neither creditor knows the costs the other would have to incur to monitor successfully. With these new assumptions, Creditor 1 will likely monitor, because his costs from doing so are less than his expected private benefit. But there is a good chance that Creditor 2 will monitor as well, because she will be unsure whether Creditor 1 intends to monitor. And her monitoring efforts will be duplicative, in the sense that Creditor 1's efforts alone are sufficient to prevent the misconduct.⁴⁵ Therefore,

44. In particular, this would happen if the expected benefit to Debtor of engaging in asset substitution plus the expected profits from the project were less than \$2. See *supra* note 39.

45. Saul Levmore has also observed that the pro rata rule can lead to duplicative creditor monitoring. See Levmore, *supra* note 33, at 54.

misconduct risk might increase Debtor's borrowing costs by \$4, even though only \$2 worth of monitoring is needed to protect both creditors.⁴⁶

Regardless of whether the result is too much monitoring or too little, the underlying problem with the pro rata rule is that it prevents each creditor from capturing the full benefits of his or her monitoring efforts. Put another way, under the pro rata rule the costs of monitoring are private but the benefits are social.⁴⁷ As the scenario illustrates, this collective action problem results in too little monitoring when monitoring is expensive, and too much when it is cheap.⁴⁸

3. *Monitoring Under Symmetry*

Symmetry improves creditor monitoring incentives relative to the pro rata rule. Not only does it ameliorate the collective action problem, but it also enhances the benefits of specialization.

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46. Several commentators have focused on the alternative possibility under the pro rata rule that creditors whose private monitoring benefits exceed their monitoring costs might refrain from monitoring in hopes of free riding on the efforts of others. *See id.* at 53-54; Randal C. Picker, *Security Interests, Misbehavior, and Common Pools*, 59 U. CHI. L. REV. 645, 665 (1992).
 47. Creditors may try to "privatize" the benefits of their monitoring efforts by removing assets from the debtor's estate before the debtor enters bankruptcy. *See* Picker, *supra* note 46, at 670. The prevention of such creditor misconduct is the province of bankruptcy law and especially the doctrine of voidable preferences. By ignoring this possibility here, the implicit assumption in my hypothetical is that these areas of law are operating effectively.
 48. In theory, a debtor could try to overcome the pro rata rule's collective action problem by hiring one creditor to monitor on behalf of all creditors. Under such a monitoring contract, the designated monitor would promise to police the debtor's estate for misconduct, and the promise would be enforceable by the debtor's trustee in bankruptcy. Such a contract would, however, present several difficulties. First, creditors would have to incur costs to observe such a contract and verify its ongoing enforceability. Second, creditors would have to incur costs confirming the creditworthiness of the monitor. And third, a bankruptcy court may be unable to distinguish losses in the debtor's estate due to misconduct from losses due to normal business risk. This last possibility creates the risk that the monitor will in essence be treated as the guarantor of all the debtor's obligations—a risk the monitor may be unwilling to undertake at any interest rate the debtor is willing to pay. In the alternative, unsecured creditors could hire a "bondholders' trustee" to monitor on their behalf—an arrangement that has some precedent as a matter of practice. *See* Levmore, *supra* note 33, at 72-73. Such arrangements present problems of their own, however, as the costs of contracting among numerous unsecured creditors may be high, especially because individual creditors will prefer to stay out of the contract but free ride on the benefits it provides. In addition, the arrangement substitutes the risk that the trustee will misbehave for the risk that the debtor will. *See id.*

To see how symmetry ameliorates the collective action problem, consider again the three-period scenario described above, where Creditor 1 could protect \$5 of expected value in Asset 1 by spending \$3 on monitoring.⁴⁹ As previously noted, Debtor's borrowing costs would be lower on these assumptions if Creditor 1 intended to monitor. And, under symmetry, he will. Symmetry causes Creditor 1 to absorb the full impact of a drop in the value of Asset 1 whenever Debtor is insolvent and Asset 1 is underwater. Creditor 1 would therefore capture the full \$5 in expected benefits from his monitoring efforts, making it worthwhile for him to monitor.

This example shows how symmetry reduces the risk that creditors will monitor at suboptimal levels. But symmetry discourages excessive monitoring as well. Note in the same scenario that depletion of Asset 1 has no impact on Creditor 2 under symmetry, because her recovery now depends solely on the value of Asset 2. Therefore, even if she could also monitor to prevent depletion of Asset 1, she will not do so. And this is efficient because her monitoring efforts would merely duplicate those of Creditor 1.

The manner in which symmetry allocates the impact of debtor misconduct also creates efficiencies through specialization. Creditors are more likely to monitor at efficient levels if a partitioning arrangement causes them to bear the impact of the particular type of debtor misconduct they can most cheaply prevent. The first step in creditor monitoring is the detection of misconduct, which—as was previously observed—can be conceptualized as a mid-loan reappraisal. And, as the discussion of appraisal costs indicated, symmetry rewards Creditor 1 for specializing in appraising Asset 1, and Creditor 2 for specializing in appraising Asset 2. This implies that it would be efficient if symmetry also focused the impact of depletion of Asset 1 onto Creditor 1 and the impact of depletion of Asset 2 onto Creditor 2. And symmetry does achieve this result. Whenever Debtor is insolvent and Asset 1 is underwater, depletion of Asset 1 harms only Creditor 1. And the same is true with respect to Creditor 2 and Asset 2. Symmetry therefore encourages creditor monitoring in

49. In analyzing both symmetry and asymmetry, I will continue to assume that Creditors 1 and 2 are owed the same amount. A debtor could reduce the collective action problem under both symmetry and asymmetry by increasing the degree to which it borrows from a single creditor—just as it could under the pro rata rule. But this strategy will often be impracticable, and it also precludes the efficiencies of specialization. By assuming that the two creditors are owed the same amount, I focus the analysis on the relevant question for my purposes: does asset partitioning improve monitoring incentives in situations where the pro rata rule performs poorly—that is, where a debtor cannot easily borrow from just one creditor, or the debtor's assets are differentiated enough to make specialization attractive?

a way that builds upon the efficiencies it generates by enabling creditors to specialize in their appraisal efforts.⁵⁰

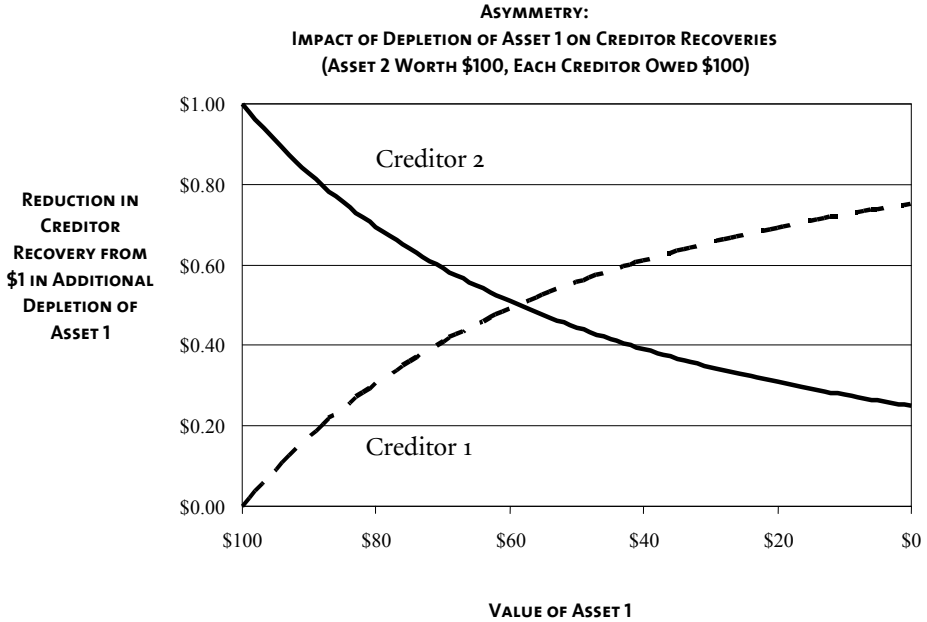
4. *Monitoring Under Asymmetry: Asset 1*

The nature of asymmetry makes it necessary to analyze the impact of depletion of the two asset pools separately. I consider Asset 1 first.

Because asymmetry gives Creditor 1 a prior claim to Asset 1, we might expect it to increase his incentive to monitor that pool, just as symmetry does. Indeed, scholars have argued that various asymmetrical arrangements have exactly this effect.⁵¹ But the opposite is true, as Figure 1 reveals.

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50. The only exception to this conclusion is when Debtor is insolvent but depletion occurs in an asset pool that has remained above water. For example, when Debtor is insolvent but Asset 2 is worth more than Creditor 2's claim, depletion of Asset 2 under symmetry is absorbed entirely by Creditor 1 (unless Creditor 1 lacks a deficiency claim, in which case it is absorbed by Debtor). Conversely, in the insolvency outcome where Asset 1 is above water, depletion of Asset 1 under symmetry is suffered by Creditor 2. In those situations, the creditor who usually will be better at detecting the depletion will have less incentive to do something about it. There are, however, several reasons to believe that this problem will be relatively minor. First, it never arises in the insolvency outcome where both pools are underwater. Second, in the outcomes where only one pool is underwater, it arises only with respect to depletion of the above-water pool. And third, the problem is self-limiting because the act of depletion tends to push the pool underwater, at which point the impact of any further depletion shifts to the "right" creditor.
51. See, e.g., DOUGLAS G. BAIRD & THOMAS H. JACKSON, *CASES, PROBLEMS, AND MATERIALS ON SECURITY INTERESTS IN PERSONAL PROPERTY* 324-28 (2d ed. 1987) (arguing that the secured loan encourages the secured creditor to specialize in monitoring the secured assets); Katz, *supra* note 19, at 85 (arguing that a guaranty on a loan is efficient when the lender can monitor the borrower more cheaply than the guarantor's other creditors can).

Figure 1.



The figure shows the impact on each creditor of depletion of Asset 1 under asymmetry when Debtor is insolvent.⁵² The horizontal axis represents declining values of Asset 1 from \$100 to \$0, and the vertical axis represents the reduction in creditor recoveries caused by one dollar in additional depletion of

52. Figure 1 assumes that each creditor is owed \$100 and Asset 2 is worth \$100. Its results are derived as follows. Let C_1 and C_2 be the amounts owed Creditors 1 and 2, respectively, and a_1 and a_2 be the respective values of the asset pools when liquidated. Further, let X_a be Creditor 1's recovery and Y_a be Creditor 2's recovery under asymmetry when Debtor is insolvent. X_a will equal C_1 whenever C_1 is less than or equal to a_1 . Otherwise,

$$(1) X_a = a_1 + a_2 * ((C_1 - a_1) / (C_1 - a_1 + C_2)).$$

Y_a will equal $a_2 + (a_1 - C_1)$ if $a_1 > C_1$. Otherwise,

$$(2) Y_a = a_2 * (C_2 / (C_1 - a_1 + C_2)).$$

The curves in Figure 1 chart the first derivatives with respect to a_1 of X_a and Y_a , which are as follows:

$$(3) dX_a/da_1 = 1 + (-a_2 * C_2) / (C_1 - a_1 + C_2)^2;$$

$$(4) dY_a/da_1 = (a_2 * C_2) / (C_1 - a_1 + C_2)^2.$$

that asset pool. The figure's two curves show, at each value of Asset 1, the marginal impact of depletion on each of Creditors 1 and 2.⁵³

Figure 1 reveals that, at higher values of Asset 1, asymmetry causes Creditor 2 rather than Creditor 1 to bear the brunt of Asset 1's depletion.⁵⁴ The burden shifts, however, as Asset 1 drops in value, with additional depletion being absorbed increasingly by Creditor 1. The result is a crossover point, which in Figure 1 occurs at \$59. When the value of Asset 1 is below that point, further depletion harms Creditor 1 more than Creditor 2.⁵⁵ But even at low values of Asset 1, Creditor 2 continues to bear a significant portion of the impact of marginal depletion.

These results can be explained as follows. By giving Creditor 1 a prior claim to Asset 1, asymmetry (like symmetry) has a focusing effect, meaning that it increases the degree to which the value of Asset 1 determines Creditor 1's recovery. All other things being equal, this will cause Creditor 1 to absorb more of the impact of Asset 1's depletion. But asymmetry also gives Creditor 1 a deficiency claim to Asset 2 that is paid pro rata with Creditor 2's claim. And that deficiency claim has an insulating effect, meaning that it protects Creditor 1 from depreciation of the assets to which he enjoys his prior claim.⁵⁶ Creditor

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53. Figure 1 assumes the common law rule for asymmetrical arrangements, which is expressly required by the Bankruptcy Code for secured loans. *See supra* note 12. For the general partnership, the Bankruptcy Code instead dictates an anti-marshaling rule when both the partnership and a partner are bankrupt. *See supra* note 15. Under this alternative rule, and assuming the two creditors are owed the same amount, Creditor 1's recovery from Asset 2 is equal to the lesser of the deficiency in Asset 1 and 50% of the value of Asset 2. Charting the impact of depletion of Asset 1 under this rule would produce a figure qualitatively similar to Figure 1 but with more extreme differences in the relative positions of the creditors. Thus, when the value of Asset 1 was above the crossover point, \$1 in its depletion would harm Creditor 2 by \$1 and Creditor 1 by \$0. Below the crossover point the creditors would again switch places, with further marginal depletion reducing Creditor 2's recovery by \$0 and Creditor 1's by \$1. Finally, the crossover point would be at \$50 rather than (as in Figure 1) \$59, reflecting an increase in the overall burden of depletion borne by Creditor 2.
 54. For example, on the assumptions used in Figure 1, one dollar of marginal depletion reduces Creditor 2's recovery by \$0.91 and Creditor 1's recovery by \$0.09, when Asset 1 is worth \$95. These results are computed using equations (3) and (4) in note 52.
 55. When the value of Asset 1 is at the crossover point, the two creditors divide the marginal impact of depletion based on the ratio between the amounts of their original claims, just as they do under the pro rata rule.
 56. The deficiency claims creditors enjoy under symmetry also have an insulating effect, but it is weaker, discouraging monitoring only when Debtor is solvent. Thus, in the limited liability alternative, Creditor 1 has no deficiency claim to Asset 2 and consequently absorbs the full impact of depletion of Asset 1 whenever Asset 1 is underwater. By contrast, in the version of symmetry where Creditor 1 has a deficiency claim, underwater depletion of Asset 1 does not

1's deficiency claim to Asset 2 is in essence an insurance policy on Asset 1, and like any insurance policy it shifts loss from the beneficiary (Creditor 1) to the insurer (Creditor 2, who would otherwise keep Asset 2 for herself when Debtor fell bankrupt). When Asset 1 is worth \$100, the insulating effect dominates the focusing effect, causing Creditor 2 to absorb most of Asset 1's depletion. But the insulating effect weakens as Asset 1 drops in value, which is why Creditor 1 eventually takes over as the primary victim of Asset 1's depletion. The insulating effect weakens because, as Asset 1 drops in value, Asset 2 becomes increasingly inadequate to cover both Creditor 2's claim and Creditor 1's (growing) deficiency claim. But the fact that there is value in Asset 2 prevents the insulating effect from disappearing altogether, which is why, even at low values of Asset 1, Creditor 2 continues to bear a significant fraction of the impact of Asset 1's marginal depletion.⁵⁷

Three features of Figure 1 are particularly important to the analysis of creditor monitoring incentives. First, we see that asymmetry does little to overcome the collective action problem created by the pro rata rule. Over most values of Asset 1 depicted in this figure, each creditor suffers significantly less than 100% of the impact of one dollar in marginal depletion, just as is true under the pro rata rule.⁵⁸ Asymmetry therefore will, like the pro rata rule,

harm him as long as there is a surplus in Asset 2 large enough to keep Debtor solvent. In that case, Creditor 1 is insulated from the impact of marginal depletion, which instead is borne by Debtor.

57. The relative strengths of the insulating and focusing effects determine the location of the crossover point, which can be shifted by changing the values of the asset pools. For example, the insulating effect would be weaker if depletion of Asset 1 occurred when Asset 2 were underwater. Like any insurance policy, Creditor 1's deficiency claim will provide less protection if the assets backing the policy drop in value. Devaluation of Asset 2 would thus shift the crossover point in Figure 1 to the left, reflecting a transfer from Creditor 2 to Creditor 1 of the impact of depletion of Asset 1. Conversely, if Asset 2 were above water, the insulating effect would be stronger, shifting the crossover point to the right. Assuming that Asset 2 is above water would also cause Debtor to be solvent at the higher values of Asset 1 depicted in the figure, in which case Debtor rather than the creditors would suffer the impact of marginal depletion. These observations are equally true under the anti-marshaling rule applied to the American general partnership. *See supra* note 52.
58. An exception, not shown in the graph, is that Creditor 2 bears the full impact of depletion of Asset 1 when it is above water but Debtor is insolvent. The difference with symmetry is that, once depletion pushes Asset 1 underwater, under symmetry the impact of further depletion shifts entirely to Creditor 1. *See supra* note 50. In contrast, Creditor 2 continues to bear the brunt of depletion of Asset 1 under asymmetry, as Figure 1 shows.

produce too little monitoring when monitoring is expensive, and too much when it is cheap.⁵⁹

Second, when asymmetry does overcome the collective action problem—that is, at relatively high values of Asset 1—it does so by concentrating the impact of Asset 1’s depletion onto the “wrong” creditor: Creditor 2. As I observed when discussing appraisal costs, asymmetry encourages the creditor who can appraise Asset 1 more cheaply to assume the position of Creditor 1. Because the first step of monitoring can be likened to a midcourse reappraisal, it follows that Creditor 1 rather than Creditor 2 will also usually be the low-cost protector of Asset 1’s value. Therefore, when asymmetry concentrates the impact of depletion of Asset 1 onto a particular creditor, it concentrates it onto the one who will find that depletion relatively expensive to prevent.⁶⁰

Third, Figure 1 shows that the marginal impact of depletion on each creditor changes as the value of Asset 1 falls. For example, one dollar in depletion reduces Creditor 1’s recovery by \$0.41 when Asset 1 is worth \$70, but by \$0.65 when Asset 1 is worth \$30.⁶¹ And the impact on Creditor 2 is different at these two points as well. This marks a departure from both the pro rata rule and symmetry, under which the marginal impact of depletion does not depend on the value of Asset 1 as long as Debtor is insolvent.⁶² For this reason, asymmetry puts an additional burden on a creditor who wishes to estimate whether monitoring will be cost justified. Under both the pro rata rule and symmetry, a creditor who seeks to calculate the private benefit of monitoring to

59. This defect of asymmetry is less severe under the anti-marshaling rule applied to the American general partnership, which causes one creditor or the other to suffer the full impact of marginal depletion as long as the depletion range does not include the crossover point. But when depletion does cause the value of Asset 1 to cross that point, its impact is split between the creditors, precluding the efficiencies of full loss internalization. *See supra* note 52.

60. This problem is even worse under the anti-marshaling rule applied to the American general partnership, which further increases Creditor 1’s percentage recovery on his deficiency claim and hence the degree to which Creditor 2 suffers the impact of depletion of Asset 1. *See supra* note 52.

61. These results are rounded to the nearest penny, and are computed using equation (3) in note 52.

62. For example, in the scenario used previously to analyze monitoring under both the pro rata rule and symmetry, the impact of a \$20 drop in Asset 1 on both creditors would not have depended on whether Asset 1 depreciated from \$90 to \$70 or from \$50 to \$30. In either case, the impact would have been split between the creditors equally under the pro rata rule, and would have been borne entirely by Creditor 1 under symmetry. A qualification is that the marginal impact of depletion under symmetry depends not only on whether Debtor is insolvent, but also on whether the pool being depleted is underwater.

prevent a given amount of depletion needs only to estimate the probability that the debtor will fall insolvent.⁶³ But to make the same calculation under asymmetry, a creditor must estimate not only the insolvency risk, but also the precise value to which the debtor's assets will fall before they are liquidated.⁶⁴ As a consequence, monitoring under asymmetry is costlier for all creditors, which will translate into higher borrowing costs for the debtor.

In combination, these observations cast doubt on scholarly claims that various asymmetrical arrangements generate monitoring efficiencies, at least with respect to monitoring of Asset 1.⁶⁵ Instead of improving the incentives of creditors to monitor Asset 1 at efficient levels, a switch from the pro rata rule to asymmetry is more likely to undermine them.

5. *Monitoring Under Asymmetry: Asset 2*

The story on monitoring under asymmetry only slightly improves when we turn to Asset 2. In particular, a switch from the pro rata rule to asymmetry causes Creditor 2 to capture more of the benefits of monitoring Asset 2, though not to the same extent that a switch to symmetry would. This sole benefit of asymmetry with respect to monitoring Asset 2 is unlikely to offset asymmetry's strong diseconomies with respect to monitoring of Asset 1.

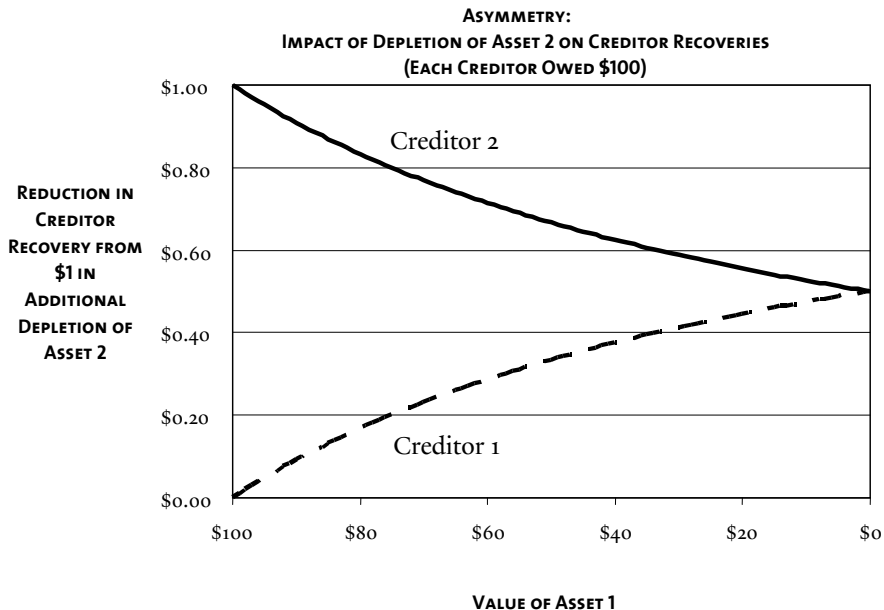
As was true of symmetry, asymmetry causes Creditor 2 to bear the full impact of Asset 2's depletion when Debtor is insolvent but Asset 1 is above water. Otherwise, the creditors divide the impact of Asset 2's depletion based on the relationship between Creditor 2's claim and the deficiency in Asset 1. Interestingly, this means that the marginal impact of Asset 2's depletion depends not on the value of Asset 2, but rather on the value of Asset 1, which determines the size of Creditor 1's deficiency claim. Figure 2 charts this relationship.

63. Under symmetry, the creditor must also consider the probability that the asset pool to which the creditor enjoys a prior claim will fall underwater.

64. This problem also arises under the anti-marshaling rule applied to the American general partnership, which causes the marginal impact of depletion on each creditor to depend not only on whether Debtor falls insolvent, but also on whether the depletion occurs when Asset 1 is above or below the crossover point. *See supra* note 53.

65. *See sources cited supra* notes 28 and 51.

Figure 2.



The horizontal axis represents declining values of Asset 1 from \$100 to \$0, and the vertical axis represents the reduction in creditor recoveries caused by one dollar in additional depletion of Asset 2.⁶⁶ The figure's two curves show, for each value of Asset 1, the marginal impact of depletion of Asset 2 on each creditor.⁶⁷

66. Figure 2 assumes that each creditor is owed \$100. No assumption is made about the value of Asset 2 save that it is not above water. The results in the figure are derived as follows: Equations (1) and (2) in *supra* note 52 give creditor recoveries under asymmetry. Figure 2 graphs the first derivatives of these equations with respect to a_2 , which are as follows:

$$(5) \frac{dX_a}{da_2} = (C_1 - a_1) / (C_1 - a_1 + C_2);$$

$$(6) \frac{dY_a}{da_2} = C_2 / (C_1 - a_1 + C_2).$$

67. As was true of Figure 1, Figure 2 reflects the rule for asymmetrical arrangements preferred by the common law and explicitly required by the Bankruptcy Code for the secured loan. Once again, a chart showing the impact of the anti-marshaling rule that the Bankruptcy Code applies to the general partnership would reflect a more severe version of asymmetry. See *supra* notes 12, 15. In that case, and with the other assumptions used in Figure 2, \$1 in depletion of Asset 2 would harm Creditor 2 by \$1, and Creditor 1 by \$0, as long as the value of Asset 2 were more than twice the amount of the deficiency in Asset 1. But if that crossover point were passed because of a decrease in the value of either asset pool, further marginal depletion of Asset 2 would reduce each creditor's recovery by \$0.50.

Figure 2 reveals that, as Asset 1 drops in value, depletion of Asset 2 is absorbed increasingly by Creditor 1. The analogy to an insurance policy is again useful: the larger the insurance claim asserted by the policyholder (Creditor 1, whose deficiency claim grows as Asset 1 drops in value), the more the policyholder suffers from devaluation of the assets backing the policy (Asset 2). The main difference with Figure 1 is that there is no point at which Asset 2's depletion harms Creditor 1 more than Creditor 2. This is because of the assumption that both creditors are owed the same amount, which means that Creditor 1's deficiency claim can never be larger than Creditor 2's claim.⁶⁸

These results suggest that a switch from the pro rata rule to asymmetry may slightly improve creditor incentives to monitor Asset 2. This is because of loss internalization: Creditor 2 bears more of the impact of depletion of Asset 2 under asymmetry than she does under the pro rata rule. But the effect is weaker than under symmetry, where she absorbs the full impact of Asset 2's depletion whenever Debtor is insolvent and Asset 2 is underwater. And the fact that her private benefits from protecting Asset 2 depend on the precise value of Asset 1 is perverse given that Creditor 1 usually will be able to appraise Asset 1 more cheaply.

For these reasons, the social benefits that asymmetry might generate in terms of monitoring Asset 2 are unlikely to offset its strong diseconomies with respect to monitoring of Asset 1. Taken as a whole, these observations suggest that a switch from the pro rata rule to asymmetry will rarely provide a net improvement in creditor monitoring incentives, and indeed in many situations will raise monitoring costs in a manner that destroys social wealth.

6. *A Separate Note on Debt Dilution*

The discussion of monitoring incentives to this point has addressed only the first of the two types of debtor misconduct I previously defined: asset depletion. But the relative monitoring benefits of the pro rata rule, symmetry, and asymmetry are the same with respect to debt dilution. As defined previously, debt dilution occurs when a debtor takes on liabilities without at the same time acquiring recoverable assets worth enough to prevent its ratio of assets to liabilities from falling. The paradigmatic example is tort liability. As is true for asset depletion, the pro rata rule distributes the impact of tort liability among creditors based on the relative amounts of their claims. Symmetry, in turn, focuses the impact of tort liability on particular creditors in a way that

68. These conclusions are equally true under the anti-marshaling rule applied to the American general partnership. *See supra* note 67.

reinforces the benefits of creditor specialization. For example, the corporate form concentrates the impact of business torts onto the corporate creditors, and it likewise focuses the impact of torts committed by shareholders in their personal capacities onto personal creditors.⁶⁹ Finally, the impact of tort liability under asymmetry roughly tracks the impact of asset depletion as depicted in Figures 1 and 2. For example, the asymmetry of the American general partnership will often cause the partners' personal creditors rather than the partnership creditors to absorb the brunt of tort liability incurred by partnership agents.⁷⁰ And these same personal creditors will also suffer most of the impact of tort liability incurred by partners in their personal capacities, though not to the same extent they would under the (symmetrical) jingle rule.

There is, however, an important difference between debt dilution and asset depletion that may make creditors less likely to monitor to prevent debt dilution generally. As was noted previously, asymmetry raises monitoring costs by causing the marginal impact of asset depletion to depend on the precise value of the debtor's estate. When it comes to debt dilution, this problem arises not only under asymmetry but also under the pro rata rule and symmetry. Thus, under the pro rata rule, a tort claimant's percentage recovery falls as the size of its claim increases. This means that a contract creditor who wishes to calculate the private benefit from monitoring to prevent a \$1 increase in the debtor's tort liability must estimate not only the risk of the debtor's insolvency, but also the amount of the total tort claims against the debtor.⁷¹ And debt dilution under symmetry displays the same pattern.⁷² This means that,

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69. See Hansmann et al., *supra* note 1, at 1346 (arguing that creditors who have prior claims to a firm's assets but only subordinated claims to the owners' other assets will monitor to prevent excessive borrowing by the firm's managers).
70. Assume under asymmetry that Assets 1 and 2 are worth \$100 each and Creditors 1 and 2 are owed \$100 each. Assume further that a tort victim who is owed \$80 is given a claim equivalent to Creditor 1's: a prior claim to Asset 1 plus a pro rata deficiency claim to Asset 2. On these assumptions, and using the anti-marshaling rule applied to the American general partnership, *see* sources cited *supra* note 12, Creditor 1 would recover \$91 while Creditor 2 would recover only \$36 (with the rest of the value in Debtor's estate—\$73—going to the tort claimant).
71. Assume that Assets 1 and 2 are worth \$100 each, Creditors 1 and 2 are owed \$100 each, and Debtor incurs a tort liability of \$50. Under the pro rata rule, that tort liability would reduce the recoveries of each of Creditors 1 and 2 in a liquidation proceeding by \$20, from \$100 to \$80. But if the tort claim were doubled to \$100, the recoveries of each of Creditors 1 and 2 would further decline from \$80 to \$67, for a marginal impact of \$13. In other words, the marginal impact of the tort claim falls as the amount of the claim rises.
72. For example, assume under symmetry that Asset 1 is worth \$100 and Creditor 1 is owed \$100. If a \$50 tort claim were assigned to Asset 1 and then Debtor's assets were liquidated,

regardless of the partitioning arrangement, a creditor will find it relatively expensive to estimate whether monitoring to prevent debt dilution will prove worthwhile.

D. Asset Partitioning and Speedier Bankruptcy Proceedings

Hansmann, Kraakman, and I previously identified a third economic benefit of asset partitioning: quicker distribution of assets to creditors in bankruptcy proceedings.⁷³ Faster liquidation of debtor assets generates social wealth on the assumption that creditors can earn higher returns on a bankrupt debtor's capital by reinvesting it elsewhere. This assumption is justified because the fact of default implies a failure to put capital to optimal use, and because the disruptive effect of bankruptcy tends to reduce the value of a debtor's business as a going concern.⁷⁴

Analysis using the simple model indicates that the three partitioning variations fall along a continuum with respect to bankruptcy speed. Symmetry is more efficient than asymmetry, especially as applied to multiowner entities such as partnerships. And asymmetry in turn is more efficient than the pro rata rule. This roughly parallels the results with respect to appraisal costs, but not creditor monitoring, for which only symmetry offers a general efficiency improvement over the pro rata rule.

To analyze how asset partitioning can expedite a liquidation proceeding,⁷⁵ I will again use the pro rata version of the simple model to mark a baseline.

Creditor 1 would recover \$67, which would mean that the marginal impact on him of the tort claim would be \$33. But if the tort claim were doubled to \$100, Creditor 1 would recover \$50, making the marginal impact of the additional \$50 in tort liability only \$17.

73. Hansmann et al., *supra* note 1, at 1346. Although we focused on speedier bankruptcies as a benefit of entity shielding, we noted how rules that shield owner assets (such as limited liability) can provide similar benefits. *Id.* at 1381-82.
74. For example, bankruptcy subjects the debtor to court oversight and distracts managers by making them fear for their jobs. Steven L. Schwarcz, *The Easy Case for the Priority of Secured Claims in Bankruptcy*, 47 DUKE L.J. 425, 454 (1997).
75. Most bankruptcies end in liquidation. See Warren & Westbrook, *supra* note 7, at 1212 (finding that two-thirds of federal bankruptcies are liquidations rather than reorganizations). Asset partitioning is less likely to matter to the speed of a reorganization since the goal is to salvage the debtor as a going concern rather than divide its assets. Nevertheless, symmetry may expedite reorganizations by permitting the assignment of asset pools to different courts, such as when a corporate reorganization is handled separately from the bankruptcy of individual shareholders. In that situation, the corporation's symmetry would reduce the reorganization's informational complexity, which might speed its resolution.

Assume that Debtor has entered bankruptcy, and the bankruptcy court needs six days to verify the claim of Creditor 1, plus another four days to verify the claim of Creditor 2.⁷⁶ Because the pro rata rule pays each creditor the percentage of Debtor's assets equal to the amount owed that creditor divided by the amount owed both creditors, the court must verify the claims of both creditors before it can distribute assets to either. If we also assume for simplicity's sake that valuation of asset pools does not require any marginal expenditure of court time—perhaps because, while the court is verifying creditor claims, assets are converted to cash in an auction supervised by a clerk—then ten days must pass under the pro rata rule before any value in Debtor's estate can be distributed to either creditor.

Now switch to symmetry. Creditor 2's recovery from Asset 2 no longer depends on the amount of Creditor 1's claim, which means that a court would have to verify only Creditor 2's claim before making the first asset distribution. If Assets 1 and 2 are of equal value when Debtor falls insolvent, then the court could distribute half the value of Debtor's assets after four days.⁷⁷ The court would then spend another six days verifying Creditor 1's claim, meaning that the other half of the value in Debtor's estate could be distributed after a total of ten days. The average expected time to distribute any given dollar of value in Debtor's estate would therefore be seven days, in contrast with ten days under the pro rata rule.

Finally, consider asymmetry. Because Creditor 2's recovery from Asset 2 depends on the size of Creditor 1's deficiency claim, a court cannot determine the amount of Creditor 2's recovery from Asset 2 before it both verifies Creditor 1's claim and determines the value of Asset 1. This is a disadvantage relative to symmetry whenever, as is assumed here, Creditor 2's claim can be verified more quickly. In the numerical example used above, the court will now spend six days before distributing Asset 1, and another four days (or ten total) before distributing Asset 2. The average expected time to distribute any given dollar of value in Debtor's estate is eight days, in contrast with seven under symmetry and ten under the pro rata rule.⁷⁸

76. Verification of creditor claims is time consuming because, for example, the claims might be challenged as fraudulent conveyances.

77. If Asset 2 is above water, its surplus will be distributed to Creditor 1 after his claim is verified, unless Debtor enjoys limited liability. And the converse is true if Asset 1 is above water.

78. This would be true regardless of whether the marshaling or anti-marshaling rule were used to determine recoveries from Asset 2. *See supra* note 12.

Symmetry is also the most efficient arrangement if each asset pool is assigned to a different court, such as when a partnership and its partners fall bankrupt and different tribunals handle the estates of the partnership and of each individual partner.⁷⁹ As an illustration, take again the same numerical example, but assume that Creditor 1 and Asset 1 are assigned to Judge 1, and Creditor 2 and Asset 2 are assigned to Judge 2. Under the pro rata rule, neither judge could distribute any of Debtor's assets until both had verified the claims before them. Therefore, Judge 2 would verify Creditor 2's claim after four days, but she could not distribute any assets until Judge 1 had finished verifying Creditor 1's claim two days later, with the consequence that none of Debtor's assets could be distributed before the end of the sixth day. Asymmetry would produce the same result, because again Judge 2 would be unable to distribute any assets until Judge 1 had verified the amount of Creditor 1's claim. This example shows that, when Debtor's estate is split between courts, asymmetry is more efficient than the pro rata rule only when Creditor 1's claim can be verified more quickly. Under symmetry, in contrast, Judge 2 would not need to wait on Judge 1, and could distribute Asset 2 after four days. Two days later, Judge 1 would distribute Asset 1. Assuming again that the values of the two asset pools are the same, the average expected time before any given dollar is distributed is five days under symmetry, as contrasted with six days under both the pro rata rule and asymmetry.

The relative inefficiency of asymmetry will be even greater when there are multiple Asset 2s, such as in the partnership context, where Asset 2 corresponds to the personal estates of individual partners. When an American general partnership fails, its asymmetry prevents courts that are handling concurrent bankruptcies of individual partners from distributing any assets until the court handling the partnership estate has confirmed the validity and amount of each partnership creditor's claim.⁸⁰ Because commercial affairs tend to be more complex than personal affairs, a rule that makes the final recovery of personal creditors from personal assets wait on the settlement of the partnership estate is particularly wasteful.⁸¹ And the inefficiency of the American partnership rule

79. Indeed, the opportunity to divide up partnership bankruptcies in this fashion was probably the impetus for the creation of the jingle rule by English courts after Parliament introduced a formal bankruptcy system in the sixteenth century. See Hansmann et al., *supra* note 1, at 1381-82.

80. See 11 U.S.C. § 723(c) (2000) (providing that courts handling the estates of individual partners must make pro rata distributions based on "the full amount of all claims of creditors allowed in the case concerning such partnership").

81. See *id.* § 723(d) (providing that the final distribution of personal assets to personal creditors is not made until the amount of each partnership creditor's deficiency claim is determined).

risers with the number of partners because all personal proceedings must await determination of the amounts of the partnership creditors' claims.⁸²

E. Asymmetry as a Means for Debtor Opportunism

The preceding discussion brings us to this question: why would debtors ever choose an asymmetrical arrangement? Symmetry is superior in terms of appraisal costs, creditor monitoring, and bankruptcy speed, and in a competitive market creditors will pass these benefits back to the debtor in the form of lower interest rates. The implication is that business organizers in the United States will always choose a symmetrical entity (such as a limited liability company) over the asymmetrical American general partnership. And debtors who borrow on a secured basis will always negotiate for clauses that subordinate or waive the secured creditors' deficiency claims, rendering the loans symmetrical.⁸³ Yet American general partnerships and (asymmetrical) secured loans abound, and thus demand explanation.

One explanation is transaction costs. Debtors must contract around default rules of asymmetry, and there will be settings where the costs of doing so exceed symmetry's relative efficiencies. The costs of contracting into symmetry are probably trivial for a secured loan, which can be made symmetrical by inserting a one-line subordination or waiver clause into a loan agreement that is likely to be negotiated anyway. But contracting costs may often be important in the context of the general partnership, which arises by default whenever individuals share the profits of a business venture,⁸⁴ and whose alternatives,

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82. Frank Kennedy noted that under the American rule, "distribution of any dividends in the partner's case would be hazardous in view of the uncertainty pending the arrival of that time when the amount of what will ordinarily be the largest claim against the estate [that is, the partnership creditors' claim] has been determined." Frank R. Kennedy, *Partnerships and Partners Under the Bankruptcy Code: Claims and Distribution*, 40 WASH. & LEE L. REV. 55, 71 (1983). Despite this disadvantage, Kennedy endorsed the American rule, arguing that the jingle rule constitutes "a serious departure from the basic rule of the common law of partnerships that the separate property of each partner is as fully liable for the payment of partnership debts as for his individual debts." Frank R. Kennedy, *A New Deal for Partnership Bankruptcy*, 60 COLUM. L. REV. 610, 631 (1960). Kennedy's characterization of the jingle rule is misleading. A partner's personal property is "fully liable" for partnership debt under both the jingle rule and the American rule. The only difference is in how the shortfall is apportioned among creditors when that rule of full liability causes the claims against the property to exceed its value.
83. Secured creditors in fact often do agree to waive their deficiency claims, making their loans nonrecourse. See *infra* Section II.G.
84. UNIF. P'SHIP ACT § 202(a) (amended 1997), 6 U.L.A. 92 (2001).

such as the corporation, require a formal agreement, public registration, and payment of franchise taxes and other fees.⁸⁵

A second explanation is that a debtor who chooses symmetry does not capture all the social benefits for itself. Some creditors will be unaware of the debtor's partitioning arrangement when they extend credit and hence will not reward the debtor for choosing symmetry. But these creditors may nonetheless benefit if symmetry causes another creditor to monitor. Perhaps more importantly, symmetry speeds the distribution of debtor assets to all creditors in a bankruptcy proceeding, regardless of whether the creditors were aware of the partitioning rules when they extended credit. In these ways, symmetry generates positive externalities, and thus will be underutilized (unless lawmakers subsidize it, such as by making it the default rule).

A third, and likely most important, explanation for the widespread use of asymmetry is opportunism, by which I mean the use of asset partitioning to transfer wealth away from creditors who will not adjust to subordination of their claims. The division of debtor assets in a liquidation proceeding is a zero-sum game, and asymmetry tilts the playing field to favor some creditors over others. In the terms of the simple model, asymmetry ensures that Creditor 1 will recover a higher percentage on his claim than Creditor 2 does when Debtor falls bankrupt (unless Asset 1 has depreciated to nothing, in which case the creditors recover pro rata). For this reason, a creditor will charge a lower interest rate if the debtor adopts an asymmetrical arrangement and slots that creditor into the advantaged position. And if this interest rate discount is greater than the relative social benefits of symmetry that the debtor captures (minus symmetry's higher transaction costs, if any), the debtor will choose the asymmetrical arrangement even though symmetry would be more efficient.

Importantly, an attempt to use asymmetry to transfer wealth would be foiled if the disadvantaged creditors responded to the debtor's adoption of an asymmetrical arrangement by demanding a higher interest rate, or by refusing to lend in the first place. But many creditors are "nonadjusting," meaning that they cannot or will not punish a debtor who acts opportunistically toward them.⁸⁶ To deter opportunistic use of asymmetry, creditors must screen to

85. See Delaware Limited Liability Company Act § 18-201(b), DEL. CODE ANN. tit. 6, § 18-201 (2005) (detailing the filing requirement to form an LLC); DEL. CODE ANN. tit. 8, § 103 (2001) (detailing the filing, fee, and tax requirements for incorporation); *Franchise*, 1 St. Tax Guide: All Sts. (CCH) ¶¶ 5-200 to -955 (2006) (summarizing franchise fees for incorporation in each state).

86. The term "nonadjusting creditor" was coined by Lucian Bebchuk and Jesse Fried. See Bebchuk & Fried, *supra* note 2, at 864. But the idea has roots in the works of others. See, e.g.,

make sure they are not lending into the short end of an asymmetrical arrangement, and they must negotiate and enforce loan covenants prohibiting adoption of asymmetry after credit is extended. Such steps are unavailable to involuntary tort claimants, and they are of limited use to government bodies and regulated firms, such as utilities, who charge statutory interest rates that do not vary with credit risk.⁸⁷ Finally, contract creditors with small claims will be “rationally” nonadjusting if the screening and monitoring costs they would have to incur to prevent opportunism are greater than the amounts they stand to lose from subordination of their claims.⁸⁸ Rationally nonadjusting creditors will instead impute subordination risk into the interest rate they charge all debtors—a strategy that does not deter opportunism because the debtor pays these creditors the same interest rate regardless of whether it acts opportunistically. Research by Elizabeth Warren and Jay Westbrook suggests that nonadjusting creditors hold a significant fraction of the total debt owed by bankrupt debtors.⁸⁹ They must: there is no other reason for asymmetrical asset partitioning to persist.

As was noted in the earlier discussion of creditor monitoring, debtors do not need asset partitioning to privilege some creditors over others. Even under the pro rata rule, a debtor can advantage a creditor by deliberately engaging in debt dilution—that is, by promising to pay that creditor more in present value terms than the value of the recoverable assets the creditor has contributed to the debtor’s estate. But such misconduct, at least in its most egregious forms, is policed by the law of fraudulent conveyances.⁹⁰ In contrast, asymmetry ensures that some creditors will recover a higher percentage on their claims than others do in a bankruptcy proceeding even if all creditors have contributed assets

BAIRD & JACKSON, *supra* note 51, at 327; Lynn M. LoPucki, *The Unsecured Creditor’s Bargain*, 80 VA. L. REV. 1887, 1897 (1994).

87. See Bebchuk & Fried, *supra* note 2, at 884; Warren & Westbrook, *supra* note 7, at 1216.

88. Bebchuk & Fried, *supra* note 2, at 885-87.

89. In particular, Warren and Westbrook found that more than a quarter of unsecured debt was owed to creditors whom the authors deemed likely to be nonadjusting. Warren & Westbrook, *supra* note 7, at 1236. The actual percentage may be higher because the authors excluded all trade debt, even though trade creditors are the most common type of unsecured creditor, *id.* at 1224, and at least some of them are likely to be nonadjusting.

90. UNIF. FRAUDULENT TRANSFER ACT § 5(a), 7A U.L.A. 129 (2006) (allowing an obligation to be set aside if the debtor was insolvent when it was incurred and did not receive “reasonably equivalent value” in exchange).

worth as much as their claims.⁹¹ And fraudulent conveyance doctrine does not forbid this type of wealth transfer.

Because it transfers wealth, asymmetry also destroys wealth. I have already observed how the chance to seize wealth from nonadjusting creditors will cause debtors to forgo symmetry's relative appraisal, monitoring, and bankruptcy-speed efficiencies. But there are direct social costs of opportunistic use of asymmetry as well. Thus, the expected wealth transfer produced by asymmetry will lead to overinvestment by artificially depressing the interest rate demanded by the advantaged creditor.⁹² In addition, creditors who are "adjusting" will incur screening and monitoring costs to protect themselves from subordination risk. Importantly, adjusting creditors will incur these costs regardless of whether the debtor in fact adopts an asymmetrical arrangement, which means that the availability of asymmetry imposes social costs even when all creditors are adjusting and hence no wealth transfer occurs. Moreover, adjusting creditors will demand higher interest rates to reflect their anticipated monitoring costs, which will produce a deadweight loss by making it unprofitable on the margin for debtors to secure funding for wealth-creating projects. These direct costs of opportunism mean that, even in settings where appraisal, monitoring, and bankruptcy-speed efficiencies are unimportant, the debtor's mere option to adopt asymmetry will destroy social wealth.

F. Asset Shifting and "Imbalanced" Debtors

Unlike asymmetry, symmetry does not ensure some creditors that they will fare better than others if their debtor falls bankrupt. Thus, whether Creditor 1 recovers a higher percentage on his claim than Creditor 2 does under symmetry depends on the relative values of Debtor's asset pools when bankruptcy occurs, and the future value of a debtor's assets is uncertain at the time of lending. This does not mean, however, that debtors cannot manipulate symmetrical arrangements opportunistically. In particular, debtors can engage in what I will call *asset shifting*, meaning that they can transfer value among asset pools to alter the relative riskiness of creditor claims.⁹³ For example, Debtor might shift

91. See Steven L. Harris & Charles W. Mooney, Jr., *A Property-Based Theory of Security Interests: Taking Debtors' Choices Seriously*, 80 VA. L. REV. 2021, 2030 (1994) (summarizing literature which argues that secured borrowing reduces unsecured creditors' expected recoveries).

92. See Bebchuk & Fried, *supra* note 2, at 919 (arguing that the secured loan causes overinvestment).

93. A third form of opportunism is caused by limited liability in particular, which gives business organizers incentive to form corporations (and other limited liability entities) to reduce tort

value from Asset 2 to Asset 1 in exchange for an interest rate discount from Creditor 1. Although asset shifting is also a hazard under asymmetry, it is more likely under symmetry, where Creditor 1 has more to lose from a shortfall in Asset 1 and therefore will offer Debtor a larger inducement to shift value into that pool.

Like the expected wealth transfer produced by asymmetry, asset shifting can destroy social wealth. To see this, imagine under symmetry that Creditors 1 and 2 each lend \$100, and Debtor then engages in asset shifting that makes Asset 1 worth \$120 and Asset 2 worth \$80. The resulting arrangement is symmetrical as I define that term, because each creditor enjoys a prior claim to a distinct asset pool. But the arrangement is imbalanced, with the ratio of Asset 1's value to Creditor 1's claim being 50% larger than the ratio of Asset 2's value to Creditor 2's claim. And this imbalance undercuts two social benefits of symmetry. First, it increases the likelihood that Asset 1 will remain above water, and hence contribute to Creditor 2's recovery, when Debtor falls insolvent. Therefore, if Creditor 2 were to conserve on her appraisal efforts by focusing solely on Asset 2, she would know less about her overall risk exposure than she would in a "balanced" symmetrical arrangement.⁹⁴ Second, if Debtor were to deplete Asset 1, the initial \$20 of depletion would be borne by Creditor 2 rather than Creditor 1, which undermines monitoring efficiencies since Creditor 1 will usually be able to appraise Asset 1 more cheaply.⁹⁵ In addition, opportunistic asset shifting under symmetry will generate the same direct social costs that asymmetry does. Thus, the interest rate discount Creditor 1 offers in exchange for the asset shift may produce overinvestment, and the risk of asset shifting will cause creditors to incur monitoring costs to protect themselves, which in turn may result in a deadweight loss in the credit market.

The fact that asset shifting can destroy wealth presents an important practical question to my argument that symmetry is more efficient than

claimant recoveries. See Henry Hansmann & Reinier Kraakman, *Toward Unlimited Shareholder Liability for Corporate Torts*, 100 YALE L.J. 1879, 1882 (1991). I do not focus on this form of opportunism here because I do not advocate that asymmetrical arrangements be reformed to provide limited liability as a default rule.

94. On the other hand, Creditor 1 by appraising only Asset 1 might learn somewhat more about his overall risk exposure than he would in a balanced arrangement, because the imbalance in his favor makes it less likely that he will have to resort to his deficiency claim. This efficiency may be offset, however, by the fact that Asset 1 is larger and thus potentially more expensive to appraise.
95. The impact of the asset shift on bankruptcy speed is ambiguous. If Creditor 1's claim can be verified more quickly, then shifting value into Asset 1 speeds the distribution of assets; otherwise, the asset shift slows it.

asymmetry. If lawmakers were to reform asymmetrical arrangements to be symmetrical as a default rule,⁹⁶ would debtors rechannel their opportunism efforts into asset shifting on a scale that fully nullified symmetry's relative social benefits?

There is good reason to conclude that the answer is no. To see this, consider that asymmetry (on the one hand) and symmetry plus asset shifting (on the other) are alternate routes to the same goal: a wealth transfer away from nonadjusting creditors.⁹⁷ When both routes are open, a debtor will choose whichever is cheaper for the debtor per dollar of wealth transferred. In either case, the costs of opportunism borne by the debtor are the transaction costs of arranging the transfer plus any efficiencies that the debtor would capture but that opportunism undermines. Under current law, both routes are available, and both are used. Legal reform that closed the asymmetry route would have no effect on debtors for whom symmetry plus asset shifting is cheaper, as they would opt against asymmetry in any event. But debtors who prefer asymmetry would experience the loss of that option as an increase in their wealth-transfer costs. And these debtors necessarily would cut back on the volume of wealth they transfer, because a debtor will only engage in opportunism as long as the benefit exceeds the marginal cost. In short, denying access to asymmetry would raise the price of opportunism for some debtors without lowering it for others, causing the quantity of opportunism demanded to fall.

Smaller wealth transfers, in turn, would mean less destruction of social value from overinvestment and deadweight loss, which are the social costs of opportunism the debtor does not bear.⁹⁸ Both overinvestment and deadweight losses result from interest rate distortions, and hence will be a linear function of the amount of wealth transferred opportunistically.

96. Asymmetry presents an opportunism problem only when it is a default rule, because in that case it enables a debtor to transfer wealth away from creditors without their consent. Under a regime where symmetry is the default rule, debtors could still opt into asymmetry by contracting for it expressly. But the need to obtain consent from the disadvantaged creditors would eliminate the opportunism problem. In the terms of the simple model, Debtor cannot use asymmetry to transfer wealth away from Creditor 2 if Debtor needs her express consent to create an asymmetrical arrangement, because in that case Creditor 2 can demand up-front compensation for the impairment of her claim.

97. This is not to imply that asset shifting will not occur under asymmetry; the point is that it will occur on a larger scale under symmetry.

98. Overinvestment costs are borne by the debtor's nonadjusting creditors, and by third parties who are denied access to the capital that has been diverted to the wealth-destroying project. A deadweight loss is borne by debtors who would be able to invest in profitable projects but for the increase in their borrowing costs due to opportunism risk.

The fact that asymmetrical arrangements are so prevalent is evidence that asymmetry does provide the cheaper opportunism route for many debtors. As a formal matter this seems unsurprising, as Debtors need only adopt an asymmetrical arrangement to privilege Creditor 1 at the expense of Creditor 2. To achieve the same wealth transfer through symmetry plus asset shifting, Debtors would first have to adopt a partitioning arrangement, and then take the additional step of assigning assets contributed by Creditor 2 to Asset 1. And this second step may impose burdens the first does not. For example, debtors are reluctant to “oversecure” secured loans, because by so doing they surrender control over their estates and may have to forgo profitable investments. Section II.F explores this feature of secured lending. For present purposes, the important point is that the widespread use of asymmetry reveals that many debtors see symmetry plus asset shifting as an inferior opportunism substitute. As a consequence, legal reform that rendered asymmetrical arrangements symmetrical as a default rule would curtail wealth transfers, thereby reducing the loss of social wealth from opportunistic use of asset partitioning.⁹⁹

II. SYMMETRY APPLIED: REFORMING THE SECURED LOAN

The conclusions reached in Part I have clear policy implications. Past scholarship has sought to identify economic benefits of partitioning arrangements that might counterbalance the social costs they impose by inviting debtor opportunism. Part I has shown that, while these benefits might justify asset partitioning generally, they cannot justify asymmetry in particular, which relative to symmetry brings both lower benefits and more opportunism.

99. There is another reason that reforming asymmetrical arrangements to be symmetrical should create wealth notwithstanding an increase in asset shifting: bankruptcy speed. To see this, imagine an asymmetrical version of the simple model where Assets 1 and 2 are worth \$100 each and Creditors 1 and 2 are owed \$100 each. As I have noted, the arrangement's asymmetry prevents a court from distributing value from Asset 2 before verifying the amount of Creditor 1's claim, which is inefficient whenever Creditor 2's claim can be verified more quickly. Now, assume that the arrangement is reformed to be symmetrical, and Debtors react by shifting \$20 from Asset 2 to Asset 1. If Creditor 2's claim can be verified more quickly, the change to symmetry permits the court to distribute value from Asset 2 before verifying Creditor 1's claim. And if Creditor 1's claim can be verified more quickly, the asset shift means that there is more value in Asset 1 to distribute to him. In either case, the switch from a balanced asymmetrical arrangement to an imbalanced symmetrical one speeds the distribution of debtor assets. But because debtors might not fully capture such efficiencies, they will discount them when choosing between opportunism mechanisms. For this reason, it is likely that asset shifting is the lesser of the two social evils, even if we hold constant the volume of opportunistic wealth transfers.

If this is right, then the burden should be on those who would defend the asymmetry of current arrangements to identify additional social benefits of asset partitioning, and to show that asymmetry provides those benefits more than symmetry does. Otherwise, lawmakers should consider reforming asymmetrical arrangements to be symmetrical as a way of creating social wealth.

Perhaps the most straightforward application of Part I's analysis is to the American general partnership, which was symmetrical under the common law's jingle rule for more than two centuries until amendments to the Bankruptcy Code in 1978 rendered it asymmetrical.¹⁰⁰ In previous work, Hansmann, Kraakman and I defended the modern American rule for partnerships on grounds that it is the default rule that most business owners probably prefer.¹⁰¹ By equating the interests of business owners with efficiency, our argument overlooked the negative externalities that asymmetrical partnerships generate by transferring wealth away from nonadjusting creditors and slowing bankruptcy proceedings. We also did not recognize how the American rule undermines appraisal efficiencies and shifts the impact of misconduct by partnership agents onto personal creditors, a perverse result given that partnership creditors have (by definition) transacted with partnership agents and therefore will naturally be in a better position to monitor them. Our previous arguments notwithstanding, the analysis in Part I suggests that America's abandonment of the jingle rule was a mistake.¹⁰²

Rather, however, than exploring the social benefits of restoring the jingle rule, or considering the implications of Part I for the (asymmetrical) guaranty contract, Part II of this Article will focus on the secured loan. There are three reasons the secured loan deserves particular attention. First, it is, next to the business corporation, the most important partitioning arrangement in the

100. Why Congress overrode the jingle rule is a mystery. According to the Senate report, repeal of the jingle rule "more closely tracks generally applicable partnership law." S. REP. NO. 95-989, at 95 (1978), *reprinted in* 1978 U.S.C.C.A.N. 5787, 5881. But the opposite was the case, as state law at the time reflected the Uniform Partnership Act, which codified the jingle rule. UNIF. P'SHIP ACT § 40(h), 6 U.L.A. 901, 902 (1914). Nonetheless, to close the gap between state and federal law created by the 1978 amendments, the 1997 revision to the UPA also provides for asymmetry. UNIF. P'SHIP ACT § 807(a) (amended 1997), 6 U.L.A. 206 (2001).

101. *See* sources cited *supra* note 28. In particular, we observed that business owners who wish to give personal creditors first claim to personal assets can utilize limited liability entities such as the corporation and LLC. We then argued that remaining owners presumably wish to maximize business creditor recoveries from personal assets, and that the default rule should cater to this preference in order to reduce transaction costs. *See id.*

102. The partnership continues to be governed by the jingle rule under English law. *See* Hansmann et al., *supra* note 1, at 1381.

modern economy, with approximately 70% of the assets of bankrupt commercial debtors pledged to secured creditors.¹⁰³ Second, the secured loan gives the secured creditor certain privileges—namely, protection against debt dilution, and a right to retrieve debtor assets conveyed to third parties—that are not provided by other asymmetrical arrangements, and that make the case for symmetry even more compelling. And third, the secured loan is the partitioning arrangement that has been the subject of the largest number of reform proposals. Unlike symmetry, however, all previous proposals would scale back the secured creditor’s priority right in the secured assets, a change that would undermine appraisal and bankruptcy-speed efficiencies while doing nothing to improve monitoring incentives. Symmetry is novel because it alters the secured creditor’s deficiency claim rather than priority right, and for this reason is the only reform that would curtail opportunism while at the same time enhancing rather than undermining the secured loan’s economic efficiencies.

A. *The Secured Loan Under Current Law*

Secured lending is governed primarily by state law, and especially by Article 9 of the Uniform Commercial Code.¹⁰⁴ To create a secured claim under Article 9, a creditor signs a security agreement with a debtor and files notice of the agreement in a public registry.¹⁰⁵ These steps give the secured creditor a prior claim—commonly known as the “priority right”—to the assets the parties have agreed to designate as secured,¹⁰⁶ which is why the secured loan is a partitioning arrangement. But the rights enjoyed by secured creditors go

103. See Warren & Westbrook, *supra* note 7, at 1210, 1222 n.91 (finding that the average bankruptcy debtor has assets worth 73% of liabilities, and that 51% of liabilities are fully covered by secured collateral, implying that 70% of assets are secured). The percentage of secured assets is probably somewhat lower for debtors outside bankruptcy, as debtors are more likely to issue secured debt when on the brink of insolvency. See Schwarcz, *supra* note 74, at 448.

104. Article 9 covers secured interests in most types of property other than real estate. U.C.C. § 9-109 (2005). Secured interests in land—that is, mortgages—are covered by statutes that vary in detail from state to state. See CHARLES DONAHUE, JR., THOMAS E. KAUPER & PETER W. MARTIN, PROPERTY: AN INTRODUCTION TO THE CONCEPT AND THE INSTITUTION 590-605 (3d ed. 1993). But the principles of secured lending are the same in both contexts, with the important exception that mortgages are more likely to be nonrecourse. See *infra* text accompanying note 154.

105. U.C.C. §§ 9-203(b), 9-310(a) (2005). Another option is for the secured creditor to take possession of the secured assets, thereby providing “constructive” notice. *Id.* § 9-313.

106. *Id.* § 9-201.

beyond those conferred by other partitioning arrangements in two important ways. First, the secured creditor's priority right is dilution-proof, meaning that no subsequent creditor can acquire an interest in the secured assets as senior as his.¹⁰⁷ Second, a secured creditor enjoys a property right in the secured assets, in the sense that he can seize those assets upon the debtor's default even if the debtor has conveyed them to a third party.¹⁰⁸ In combination, these features of the secured loan tighten the link between the secured creditor's fortunes and the value of the secured assets.¹⁰⁹

A final right that Article 9 confers on secured creditors is a deficiency claim to the debtor's unsecured assets.¹¹⁰ Article 9 does not, however, specify the priority status of the deficiency claim relative to claims of unsecured creditors. And neither do statutes enacted by several states that contemplate orderly insolvency proceedings outside federal bankruptcy.¹¹¹ The question is explicitly addressed only in the Bankruptcy Code, which requires that secured creditor

107. A creditor of an American general partnership, by contrast, can be diluted by subsequent borrowing at the partnership level, even though his claim to partnership assets remains prior to claims of partners' personal creditors. Also, an exception to the rule that a secured claim is dilution-proof is the "purchase money security interest" (PMSI), which is a secured claim to goods purchased with the proceeds of the loan the claim secures. *Id.* § 9-103. A PMSI takes priority over previous secured interests issued by the debtor in the same assets, which can occur if a previous creditor has been given security in after-acquired assets.
108. *Id.* § 9-315(a)(1). An exception applies to the debtor's sale of goods that the debtor sells in the ordinary course of its business. Such goods pass to buyers free of security interests created by the debtor. *Id.* § 9-320(a).
109. A third special right enjoyed by a secured creditor is the repossessory right, which permits him to seize secured assets without first seeking court approval. *Id.* § 9-609(b)(2). The practical import of this right is limited, however, because secured creditors may not exercise it if the debtor is in bankruptcy or if doing so would breach the peace. *Id.*; see also Douglas G. Baird & Robert K. Rasmussen, *Private Debt and the Missing Lever of Corporate Governance*, 154 U. PA. L. REV. 1209, 1229 (2006) (commenting on the limited practical significance of the repossessory right).
110. U.C.C. § 9-615(d)(2). An exception applies to loans secured by various types of commercial paper, which are made nonrecourse. *Id.* § 9-615(e).
111. Several state statutes contemplate orderly liquidations in the form of assignments for the benefit of creditors. See Benjamin Weintraub, Harris Levin & Eugene Sosnoff, *Assignments for the Benefit of Creditors and Competitive Systems for Liquidation of Insolvent Estates*, 39 CORNELL L.Q. 3, 14-15 (1953); John Hanna, Note, *Contemporary Utility of General Assignments*, 35 VA. L. REV. 539 (1949). But even the most comprehensive state regimes do not address the status of secured creditor deficiency claims, see, e.g., N.Y. DEBT. & CRED. LAW § 12(1) (McKinney 2001 & Supp. 2008), nor do state codes that prescribe a method for corporate liquidations, see, e.g., DEL. CODE ANN. tit. 8, § 281(a)(4) (2001) (requiring liquidating corporations to pay creditor claims "according to their priority, and, among claims of equal priority, ratably," but not specifying which claims are "equal").

deficiency claims be paid pro rata with unsecured claims.¹¹² The secured loan's asymmetry is therefore dictated by federal law. And as is described below, this result is wasteful, because it causes the deficiency claim to undermine the efficiencies that would otherwise be generated by the secured creditor's various rights in the secured assets. In this way, the state and federal law of secured lending work at cross-purposes, destroying social wealth.

B. The Secured Loan and Appraisal Costs

Several scholars have argued that the secured loan reduces appraisal costs. For example, Richard Posner has suggested that the secured loan permits unsecured creditors to economize on their appraisal efforts because "the pool of unsecured creditors is smaller and the pool of assets available to satisfy the unsecured creditors is also smaller."¹¹³ Cast in this way, Posner's argument implies that unsecured creditors can disregard both the amount owed the secured creditor and the value of the secured assets. But this is untrue: because of the secured creditor's deficiency claim, a drop in the value of the secured assets often will harm the unsecured creditors even more than it harms the secured creditor.¹¹⁴ More broadly, the secured loan's asymmetry causes the value of the secured assets to affect unsecured creditor recoveries regardless of the form the debtor's insolvency takes.¹¹⁵ For this reason, the degree to which the secured loan currently permits unsecured creditors to economize on their appraisal efforts is slight at best.

The secured loan now provides somewhat greater appraisal economies to the secured creditor, whose prior claim to the secured assets reduces his exposure to the risk that the unsecured assets will depreciate. This benefit is heightened by the secured creditor's property right in the secured assets, which makes it more likely that those assets will be available if the debtor defaults. These considerations suggest that a debtor can reduce overall appraisal costs by giving a creditor a secured claim to those assets the creditor can appraise more cheaply than other creditors can. But the secured loan's asymmetry then works against this potential source of efficiency, because it makes the value of the unsecured assets an important component of the secured creditor's overall risk

112. 11 U.S.C. §§ 506(a), 726(a)-(b) (2000).

113. RICHARD A. POSNER, *ECONOMIC ANALYSIS OF LAW* 428 (7th ed. 2007); *see also* Jackson & Kronman, *supra* note 4, at 1160-61 (arguing that the secured loan reduces "informational" costs).

114. *See supra* Figure 1.

115. *See supra* Section I.B.

exposure. Put another way, a debtor's cost of borrowing on an unsecured basis will be lower if the debtor's secured creditors agree to subordinate or waive their deficiency claims, and therefore the debtor will make the secured creditors pay—typically in the form of an interest rate discount—for secured claims that are asymmetrical rather than symmetrical. But the secured creditors cannot determine how large a discount to provide without taking some account of the value of the unsecured assets.

Symmetry would enable both secured and unsecured creditors to incur lower appraisal costs than they do now. If the secured creditor's deficiency claim were subordinated, the value of the unsecured assets would affect the secured creditor's recovery only if the unsecured assets were above water even though the debtor was insolvent. And this would be rare, because dilution-causing creditors such as tort claimants are automatically treated as unsecured. Moreover, even if the secured creditor did recover from the unsecured assets, his share would be smaller under symmetry than under asymmetry. Symmetry therefore would further reduce the need for a secured creditor to value the unsecured assets when appraising a debtor's estate. And unsecured creditors similarly could be less concerned with the value of the secured assets, because under symmetry the secured creditor's deficiency claim could not affect their recoveries.

The dilution-proof nature of a secured claim also decreases the secured creditor's need to pay attention to the risk that the debtor will erode the net value of its estate by incurring subsequent liabilities.¹¹⁶ As a matter of efficiency, however, this is a mixed blessing. One of the primary ways a debtor can dilute its estate is by incurring tort liability. For this reason, contract creditors will normally charge lower interest rates if the debtor reduces its tort risk by, for example, avoiding ultrahazardous activity or investing in safety equipment.¹¹⁷ To the extent that tort liability results from socially wasteful conduct, this connection between the debtor's tort risk and borrowing costs is efficient. But secured lending frays this tie by causing a debtor's contract creditors to recover more, and tort claimants less, than they would if all claims were unsecured. Symmetry would increase tort recoveries by privileging tort claimants over the secured creditor in the division of the unsecured assets. This might make the secured creditor even less concerned with tort risk, because it would reduce his likelihood of recovering from the unsecured assets in any event. But the debtor's contract creditors as a whole would be more worried about tort liability because the increase in tort claimant recoveries would come

116. See Buckley, *supra* note 26, at 1424-25; Schwartz, *supra* note 36, at 244.

117. See Bebchuk & Fried, *supra* note 2, at 898-99; LoPucki, *supra* note 86, at 1898-99.

at their expense. In this way, symmetry would partly restore the salutary link between tort risk and borrowing costs.¹¹⁸

C. *The Secured Loan and Creditor Monitoring*

Although several scholars have argued that the secured loan promotes creditor monitoring efficiencies, they have disagreed about *which* creditors it encourages to monitor. Thomas Jackson and Anthony Kronman began the debate by observing that a secured loan shifts risk onto the unsecured creditors, and then concluding from this observation that debtors issue security in order to increase the unsecured creditors' incentive to monitor.¹¹⁹ Alan Schwartz criticized the Jackson-Kronman theory for contradicting practice: the theory predicts that debtors would deny security to those creditors who can monitor most cheaply, but debtors in fact tend to give security to sophisticated creditors, such as banks, who presumably are talented monitors.¹²⁰ In response to Schwartz's objection, Saul Levmore theorized that a secured loan instead encourages the *secured* creditor to monitor. Levmore argued that creditors will naturally try to free-ride on the monitoring efforts of others, but that a creditor will not mind monitoring on behalf of all creditors as long as he receives the priority right as compensation.¹²¹

In the language of this Article, the Jackson-Kronman theory emphasizes the insulating effect of the secured creditor's deficiency claim, and the Levmore theory emphasizes the focusing effect of the priority right. And, because it is asymmetrical, the secured loan has both effects. The problem is that the two effects work at cross-purposes, with each undercutting the monitoring incentives the other might create. This is especially true with respect to the incentives of the secured creditor. As the discussion of monitoring in Part I suggests, the secured loan's asymmetry makes the secured creditor less likely to

118. A possible objection is that unsecured contract creditors are less sophisticated than most secured creditors, *see* Schwartz, *supra* note 35, at 11 n.28, and therefore are less likely to impute tort risk into the interest rate they demand. But it should be kept in mind that the tie between borrowing costs and tort risk does not require that unsecured contract creditors be adjusting in the sense that they monitor to prevent tort liability after they extend credit. The only requirement is that they factor some estimation of the debtor's likely tort liability into their initial terms of lending.

119. Jackson & Kronman, *supra* note 4, at 1143; *accord* Barry E. Adler, *An Equity-Agency Solution to the Bankruptcy-Priority Puzzle*, 22 J. LEGAL STUD. 73, 89 (1993) (arguing that debtors use security to shift risk onto unsecured creditors and thus to encourage them to monitor).

120. *See* Schwartz, *supra* note 35, at 11 n.28.

121. Levmore, *supra* note 33, at 56-57.

monitor either the secured assets or the unsecured assets than he would be under the pro rata rule. The Levmore theory therefore appears incorrect, as debtors would not try to reward a creditor for monitoring by giving the creditor a type of claim that discourages it.¹²²

The fact that the secured loan's asymmetry discourages the secured creditor from monitoring the secured assets in particular is perverse, for several reasons. First, the secured creditor is likely to be the creditor who can appraise the secured assets most cheaply, which implies that he also would be best able to monitor them for depreciation. Second, the dilution-proof nature of the priority right minimizes the risk that the secured creditor will have to share the secured assets with other creditors in a liquidation proceeding.¹²³ This means that the secured loan is unique among partitioning arrangements in its potential to overcome the collective action problem created by the pro rata rule. And third, the secured creditor's property right in the secured assets prevents third parties from expropriating the benefits of efforts by the secured creditor to protect those assets' value. In combination, these common law rights ensure both that the secured creditor is the low-cost monitor of the secured assets and that he in many instances would be able to keep all of the benefits of monitoring those assets for himself. But the secured loan's asymmetry then squanders the opportunity for optimal monitoring incentives, because it insulates the secured creditor from a drop in the secured assets' value.

On the other hand, the secured loan's asymmetry might encourage monitoring by the unsecured creditors, an observation that lends support to the Jackson-Kronman theory. But the support is weak at best. Relative to the pro rata rule, the secured loan's asymmetry only moderately increases the degree to which the unsecured creditors capture the benefits of monitoring the unsecured assets. And it likely discourages them from monitoring the secured assets, because their payoff from doing so is highly sensitive to the secured assets' precise value, and it is the secured creditor who typically will be able to assess that value most cheaply.

122. *Accord* Buckley, *supra* note 26, at 1443 (noting that "secured parties do not in fact appear to do much actual monitoring of collateral value"). Another problem with Levmore's theory is that secured creditors do not make promises to monitor in the contracts they sign with debtors. The promises might be implied, but it is hard to believe that a debtor would transfer something as valuable as a security interest in exchange for a tacit and legally unenforceable promise, or that unsecured creditors would forgo efforts to protect themselves in reliance on such a promise.

123. The risk is not zero because of the possibility that the secured creditor will be oversecured even if the debtor falls bankrupt, in which case the excess value of the secured assets will go to the unsecured creditors.

The secured loan would, however, encourage efficient monitoring by secured and unsecured creditors alike if it were reformed to be symmetrical. If the secured creditor's deficiency claim were subordinated, the insulating effect would recede, leaving the focusing effect to predominate. This would give the secured creditor greater incentive to protect the secured assets, thereby reinforcing rather than undermining the monitoring incentives created by the secured creditor's various common law rights. And symmetry would also encourage efficient monitoring by the unsecured creditors, because it would reduce the overlap between the secured creditor's claim and their own claims, thereby permitting them to keep more of the benefits of monitoring the unsecured assets for themselves.¹²⁴

In discussing his monitoring theory, Levmore raised but then rejected the possibility that subordinating or eliminating the secured creditor's deficiency claim would encourage the secured creditor to monitor. Secured creditors would respond to such a change by charging higher interest rates,¹²⁵ and Levmore believed that this increase in the secured creditors' compensation for risk would undermine their incentive to guard against debtor misconduct.¹²⁶ Levmore in this analysis seems to have had in mind the moral hazard created by an insurance policy, which reduces a policyholder's incentive to prevent a loss because it pays the policyholder if the loss occurs. But ex ante compensation for risk, as contrasted with ex post compensation for loss, creates no such hazard. Thus, workers in dangerous occupations receive a risk premium in their wages, but this premium will not make the workers careless on the job. To the contrary, they will be more careful because their opportunity cost of injury is greater. In the same way, a higher interest rate will make a secured creditor more rather than less likely to monitor because he will be

124. This observation necessarily applies only to *voluntary* unsecured creditors. No partitioning arrangement can encourage monitoring by involuntary creditors such as certain tort claimants. Also, symmetry would increase the incentive for unsecured contract creditors to monitor to prevent debt dilution. This effect may be slight, however, due to the fact that creditors are less likely to monitor to prevent debt dilution than asset depletion even under symmetry. See *supra* Subsection I.C.6.

125. Levmore, *supra* note 33, at 57 ("If the secured creditor in bankruptcy has recourse only to the collateralized asset, then the secured creditor will be unlikely to agree to an interest rate lower than that agreed to by unsecured creditors . . ."). Of course it is this lower interest rate, rather than a promise to monitor, that the debtor receives from the secured creditor in exchange for the grant of security.

126. *Id.* ("[T]he secured creditor's incentive to monitor derives solely from the premium it has paid in the form of agreeing to lend at a lower interest rate . . .").

owed more when the debtor defaults and therefore will have more to lose from the debtor's misconduct.

D. The Secured Loan and Bankruptcy Speed

The secured loan's asymmetry slows liquidation proceedings by preventing a court from distributing unsecured assets without first determining the amount of each secured creditor's deficiency claim, which requires verification of secured creditor proofs of claim and valuation of the secured assets.¹²⁷ Symmetry would remove this impediment to distribution of the unsecured assets.

Symmetry would also speed up bankruptcy proceedings by cutting down on litigation over the enforceability of secured claims. The absolute advantage that secured creditors now enjoy means that unsecured creditors can always increase their recoveries by proving a violation of the numerous technical requirements for "perfecting" a secured lien under state law.¹²⁸ For this reason, legal challenges to the enforceability of secured loans are a staple of bankruptcy proceedings.¹²⁹ Symmetry would reduce the incentive for unsecured creditors to contest secured claims, and indeed would eliminate it in situations where the secured assets had dropped further underwater than the unsecured assets had. In this way, symmetry would not only expedite distribution of secured assets, but also save on legal fees and free up judicial resources.

E. The Secured Loan's Asymmetry as a Source of Opportunism

Like other asymmetrical arrangements, the secured loan invites debtor opportunism by ensuring that one creditor will recover a higher percentage on his claim than others will if the debtor falls bankrupt. It is this feature of the secured loan, rather than purported monitoring efficiencies, that explains why

127. 11 U.S.C. § 506(a)(1) (2000) (providing that a secured creditor's claim is unsecured to the extent of any deficiency in the secured assets); *id.* § 726(b) (providing for payment of unsecured claims on a pro rata basis).

128. *See* U.C.C. § 9-301(1) (2005) (providing that an unperfected security interest is invalid as against a creditor with a judicial lien); *id.* §§ 9-310 to -316 (2005) (describing the requirements for perfecting a security interest).

129. *See, e.g.,* *Pearson v. Salina Coffee House, Inc.*, 831 F.2d 1531 (10th Cir. 1987) (involving a financing statement listing the debtor's trade name rather than its legal name); *In re Bollinger Corp.*, 614 F.2d 924 (3d Cir. 1980) (involving an unsigned security agreement); *In re Flagstaff Foodservice Corp.*, 16 B.R. 132 (Bankr. S.D.N.Y. 1981) (involving an alleged failure of a town clerk to index a properly submitted financing statement).

debtors typically give security to sophisticated lenders such as banks.¹³⁰ Sophisticated creditors will be best able to value the expected wealth transfer produced by asymmetry, and therefore will be at an advantage when bidding for it. And the pursuit of the wealth transfer generates a host of social costs. For example, the interest rate discount the secured creditor gives in exchange for the transfer will encourage overinvestment. And the availability of secured lending will force creditors to incur costs to protect themselves against subordination, which in turn will cause a deadweight loss by raising borrowing costs for those debtors who wish to borrow solely on an unsecured basis. Alternatively, creditors will demand security to ensure that they are not themselves subordinated, thereby incurring transaction costs that serve no positive social purpose.

Another way to understand the expected wealth transfer produced by the secured loan is to observe that the arrangement's asymmetry makes the secured creditor's returns less volatile, and the unsecured creditors' returns more volatile, than they would be under either symmetry or the pro rata rule. In theory, such a transfer of risk would create wealth if secured creditors were relatively risk-averse. But the opposite in fact tends to be the case, as the large commercial lenders who usually obtain security are better able to diversify their investment risk than are many unsecured creditors, such as trade creditors and tort claimants. The secured loan's asymmetry therefore shifts risk in the wrong direction, making risk misallocation another social cost of the arrangement.¹³¹

Symmetry would reduce each of these social costs of secured lending. Subordination of the secured creditor's deficiency claim would increase recoveries for nonadjusting creditors, thereby reducing the amount of the expected wealth transfer. And smaller wealth transfers, in turn, would mean a reduction in the interest rate distortions that cause overinvestment¹³² and less need for creditors to incur costs to protect themselves. To be sure, a

130. See *supra* note 120 and accompanying text.

131. See Hansmann et al., *supra* note 1, at 1353 (identifying de-diversification of creditor claims as a social cost of entity shielding).

132. Consistent with this analysis, George Triantis has argued that a purchase money security interest (PMSI) will not cause overinvestment in a situation where a debtor's prior creditors "hold security interests in all assets . . . and [a subsequent] pmsi holder is subordinate with respect to all assets other than its collateral." George G. Triantis, *Financial Slack Policy and the Law of Secured Transactions*, 29 J. LEGAL STUD. 35, 50 (2000). The scenario Triantis describes reflects symmetry, because each creditor enjoys a prior claim to a distinct debtor asset pool. But overinvestment will still occur because the fact that all contract creditors are secured means that none will impute the debtor's tort risk into the interest rate they demand.

symmetrical secured loan would still be dilution-proof, and so the secured creditor would retain a distributional advantage. But the advantage would no longer be absolute, as subordination of the deficiency claim would make it possible for the unsecured creditors to recover a higher percentage on their claims than the secured creditor does.

Although several other scholars have argued that the secured loan produces an uncompensated wealth transfer,¹³³ the point is not universally accepted. In particular, Steven Schwarcz has argued that unsecured creditors are not prejudiced if the secured creditor takes security in nothing more than the assets purchased with the proceeds of the secured loan.¹³⁴ Schwarcz reasons that unsecured creditors are protected in that case because the debtor's estate has received assets whose value offsets the liability created by the secured claim. But Schwarcz ignores the effect of the secured creditor's deficiency claim, which in his scenario would dilute the unsecured claims in bankruptcy whenever the secured assets had dropped in value,¹³⁵ which of course will be likely if bankruptcy has occurred.¹³⁶ Contrary to Schwarcz's argument, an asymmetrical secured loan prejudices unsecured creditors even if the secured creditor takes security in only a fraction of the loan proceeds—that is, even if he starts out undersecured. Only if it were symmetrical would the arrangement Schwarcz describes be distributionally neutral.

F. Oversecurity and Blanket Liens

As the preceding discussion implies, asymmetry is not the only feature of the secured loan that invites opportunism. Debtors currently enjoy wide latitude to oversecure a loan—that is, to grant security in assets worth more than the secured creditor's claim. Like asymmetry, oversecurity transfers wealth away from nonadjusting creditors, and for this reason produces the same opportunism costs: overinvestment, defensive costs incurred by creditors

133. For a partial list of such scholars and a review of their reform proposals, see *infra* Section II.H.

134. Schwarcz, *supra* note 74, at 435.

135. The secured assets might also appreciate, but in that case insolvency is unlikely, and—as Schwarcz acknowledges—the benefit of the appreciation accrues to the debtor rather than the unsecured creditors. *Id.* at 440.

136. Indeed, Schwarcz employs a model which assumes that debtor assets lose 50% of their value when the debtor is liquidated. *Id.* at 441.

to protect against subordination,¹³⁷ and a possible deadweight loss in the credit market. In addition, oversecurity can undermine appraisal and monitoring efficiencies by causing an imbalance in the value of secured and unsecured assets relative to creditor claims.¹³⁸

Although debtors regularly oversecure loans currently, they would be more likely to do so if the secured loan were reformed to be symmetrical. This is because subordination of their deficiency claims would cause secured creditors to offer larger inducements for protection against a shortfall in the secured assets. But would oversecurity increase on a scale that fully nullified symmetry's social benefits?

In this section, I address this question in two ways. First, I consider the costs to debtors of oversecurity; second, I consider whether oversecurity might provide offsetting efficiencies, in particular when it takes the form of a blanket lien on a debtor's entire estate.

1. *Oversecurity Under Symmetry*

There are at least two reasons to conclude that parties would not respond to symmetry by expanding the scope of secured claims on a scale that fully restored the secured creditors' distributional advantage. The first is that parties are circumscribed in their ability to oversecure one of the most common types of secured loan—the purchase money security interest (PMSI)—because it by definition extends only to assets purchased with the loan proceeds.¹³⁹ Although a secured creditor could convert a PMSI to a regular secured loan, this would forfeit the special advantages that a PMSI holder enjoys against the debtor's other secured creditors, which are the PMSI's primary appeal.¹⁴⁰

The second, and likely more important, reason that an increase in oversecurity would not neutralize the full benefits of symmetry is that oversecurity imposes higher costs on debtors than asymmetry does per dollar transferred opportunistically. In particular, secured assets are subject to the secured creditor's property right, which permits the secured creditor to seize those assets upon the debtor's default even if they have been conveyed to third

137. Asset shifting in the opposite direction—for the benefit of unsecured creditors—is more difficult because a debtor cannot formally reduce the scope of a secured lien without the secured creditor's consent.

138. See *supra* Section I.F.

139. U.C.C. § 9-103 (2005).

140. See *supra* note 107.

parties.¹⁴¹ As a consequence, a debtor can sell secured assets to third parties only at a deep discount, which fetters the debtor's discretion to manage its own affairs. The secured creditor can waive his property right by consenting to a sale, but he often will be disinclined to do so because creditors and debtors are structurally at odds in their preference for risk. A secured creditor will be especially likely to veto an asset sale whenever the debtor is seeking to raise funds to invest in a risky project, or—in the case of a corporate debtor—to distribute cash to shareholders. This veto may pay social dividends to the extent that the secured creditor uses it to block overinvestment.¹⁴² As Robert Scott and others have observed, however, the fact that secured creditors are owed fixed amounts—and hence do not share fully in upside returns—will also cause them to veto some risky projects that are socially worthwhile.¹⁴³ Empirical research by Ronald Mann suggests that the burden to debtors of the property right explains why many do not secure all of their assets even though they could enrich themselves at the expense of nonadjusting creditors by doing so.¹⁴⁴ By contrast, secured creditors enjoy no property right in unsecured assets, even though they can reach those assets through their deficiency claim. A debtor therefore would rather transfer wealth to a secured creditor by enhancing the creditor's claim to the unsecured assets (which is what asymmetry accomplishes) than by granting the creditor a secured interest in more of the debtor's estate.

These observations suggest that most debtors would be unable or unwilling to substitute wealth transfers via oversecurity for those via asymmetry on a dollar-for-dollar basis. Therefore, if secured loans were reformed to be symmetrical, net wealth transfers away from nonadjusting creditors would fall. And smaller wealth transfers would mean lower social costs from overinvestment, creditor defensive efforts, and deadweight loss in the credit market.

The fact that most debtors consider oversecurity to be inferior to asymmetry as a wealth-transfer mechanism does not mean that oversecurity is

141. An exception sometimes applies to goods sold by the debtor in the ordinary course of business. See *supra* note 108.

142. Accord Adler, *supra* note 119, at 79 (observing that the secured creditor's property right in the secured assets deters asset substitution).

143. Robert E. Scott, *A Relational Theory of Secured Financing*, 86 COLUM. L. REV. 901, 929 (1986); see also Ronald J. Mann, *Explaining the Pattern of Secured Credit*, 110 HARV. L. REV. 625, 664 & n.153 (1997) (observing that creditors may discourage debtors from pursuing "value-increasing risky transactions").

144. Mann, *supra* note 143, at 673.

nothing for lawmakers to worry about. To the contrary, the capacity for oversecurity to generate the full spectrum of opportunism costs raises the question why debtors enjoy such broad powers to engage in it. Interestingly, courts at one time used fraudulent conveyance law to police oversecurity,¹⁴⁵ but they stopped doing so after the drafters of the Uniform Fraudulent Transfer Act (UFTA) argued in a comment that oversecurity is unproblematic because a secured creditor can never recover more than the amount of his claim.¹⁴⁶ This argument is specious: fraudulent conveyance law is supposed to protect unsecured creditors, and expanding the scope of a secured claim decreases their expected recoveries whenever there is a risk that the debtor will fall insolvent, which of course is the only time that a creditor has reason to seek more security in the first place.

Are there better arguments for the law's current hands-off approach to oversecurity? Although scholars not have addressed this question directly, a few have claimed social benefits for the "blanket lien," which is a secured claim that extends to all of a debtor's estate. Strictly speaking, a blanket lien does not create asset partitioning, because the secured creditor enjoys an undifferentiated prior claim to all debtor assets. It therefore will be necessary to analyze blanket liens using a modified version of the simple model before drawing conclusions about their social utility.

2. *A (Brief) Economic Analysis of the Blanket Lien*

In a blanket lien there are no asset pools: Creditor 1 enjoys a prior claim to all of Debtor's assets, and Creditor 2 takes whatever is left after Creditor 1 has been paid in full. The status of Creditor 1's deficiency claim is thus irrelevant, which means that reforming the secured loan to be symmetrical would have no impact on blanket liens (except to make them more common by raising demand for oversecurity). One clear consequence of the lack of asset partitioning is that the expected wealth transfer away from Creditor 2 is maximized: as Debtor's estate drops in value, Creditor 2's recovery shrinks to zero before Creditor 1's decreases at all. Blanket liens therefore will generate each of the various costs of debtor opportunism to a greater degree than will a lending arrangement that features distinct asset pools.

145. See, e.g., *Am. Fid. Co. v. Harney*, 217 N.E.2d 905, 911 (Mass. 1966).

146. UNIF. FRAUDULENT TRANSFER ACT § 3 cmt. 3, 7A U.L.A. 651 (1985); see also Richard J. Sabella, *When Enough Is Too Much: Overcollateralization as a Fraudulent Conveyance*, 9 CARDOZO L. REV. 773, 777-78 (1987) (summarizing the Uniform Fraudulent Transfer Act position).

In terms of potentially offsetting efficiencies, the lack of asset partitioning means that a blanket lien does not reward creditors for focusing on particular assets as a way of economizing on appraisal efforts. On this efficiency metric, then, the blanket lien is no improvement on the pro rata rule. Somewhat contrary to this conclusion, Alan Schwartz has argued that a default rule which automatically gave a debtor's first major lender a blanket lien to all current and after-acquired assets might provide an efficient form of protection against debt dilution.¹⁴⁷ However, as was noted previously, dilution-proof claims for contract creditors are problematic because they weaken the link between tort risk and borrowing costs.¹⁴⁸ And, as George Triantis has observed, Schwartz's proposed rule would discourage debtors from subsequently investing in low-risk, socially valuable projects, because the rule would give the prior lender a windfall share in those projects' returns.¹⁴⁹ Finally, Schwartz does not explain why a prior claim limited to the lender's loan proceeds plus the assets purchased with the debtor's equity investment would not fully protect against debt dilution, making unnecessary a blanket lien that also covers assets purchased with funding from subsequent lenders.¹⁵⁰

With respect to monitoring efficiencies, a blanket lien is in effect the opposite of symmetry. Thus, while a switch from asymmetry to symmetry would weaken the insulation effect and strengthen the focusing effect, a blanket lien achieves the converse: neither creditor's interest is focused on any particular asset, and Creditor 1 is fully insulated from asset depletion as long as remaining assets are sufficient to cover his claim. This shift of depletion risk onto Creditor 2 will cause her to capture more of the benefits of her own monitoring efforts, which in theory would mitigate the collective action

147. Schwartz, *supra* note 36, at 218-19. Along similar lines, Douglas Baird and Robert Rasmussen have argued that a blanket lien, by making it costly for a debtor to borrow elsewhere, enables the debtor to bind itself to the supervision of the lienholder. Baird & Rasmussen, *supra* note 109, at 1230. But the authors do not explain why a secured claim limited to the assets purchased with the lender's loan proceeds, plus a covenant forbidding additional borrowing, would not achieve the same result. To be sure, loan covenants require monitoring to be effective, but active monitoring by the lender is already central to the supervision story that Baird and Rasmussen tell. *Id.*

148. See *supra* Section II.B.

149. Triantis, *supra* note 132, at 47.

150. Indeed, Schwartz effectively concedes that a blanket lien is unnecessary when he acknowledges that a prior lender is not diluted by a subsequent PMSI as long as the PMSI holder does not end up undersecured. Schwartz, *supra* note 36, at 242. In focusing on the possibility of undersecurity, Schwartz is evidently concerned about the PMSI holder's deficiency claim, which could dilute the prior lender if the lender were unsecured. *Accord* Triantis, *supra* note 132, at 50.

problem. A few scholars have made the related argument that blanket liens create value by enabling parties to build a hierarchy of secured claims, with the junior positions assigned to secured creditors who—because of monitoring skills or otherwise—are the most efficient risk bearers.¹⁵¹ But it must be remembered that pinned underneath such a claim stack always will be the unsecured creditors, many of whom will be nonadjusting. Therefore, a blanket lien—either in isolation or as part of a hierarchy of secured claims—ultimately shifts the impact of debtor misconduct onto the creditors who are least able to monitor to prevent it. In this way, a blanket lien like asymmetry will undermine monitoring incentives relative to the pro rata rule.¹⁵²

Finally, a blanket lien is comparable to asymmetry in terms of bankruptcy speed: it requires a court to verify Creditor 1's claim before distributing any debtor assets, which is an improvement over the pro rata rule only when Creditor 1's claim can be verified more quickly than can Creditor 2's claim. Although a court typically should be able to verify a single secured claim more quickly than a multitude of unsecured claims, the extreme distributional advantage enjoyed by a blanket lienholder makes litigation over enforceability highly likely. A blanket lien therefore may only moderately expedite a bankruptcy proceeding relative to the pro rata rule.¹⁵³

In combination, these observations suggest that a blanket lien generates higher social costs than asymmetry does while being no better in terms of potential social benefits. Previous scholarly defenses of the blanket lien therefore do not seem to justify the law's lax approach to oversecurity—nor, as

151. See, e.g., James J. White, *Efficiency Justifications for Personal Property Security*, 37 VAND. L. REV. 473, 491 (1984) (“[I]t is probably efficient to give security to those creditors displaying the greatest risk aversion.”).

152. If blanket liens were prohibited, debtors could still prioritize claims through devices such as subordination agreements and preferred stock in lieu of debt, which are more efficient because they subordinate consensually and hence do not generate opportunism costs.

153. Another potential social benefit of the blanket lien has been suggested by Steven Schwarcz. Distressed debtors often use blanket liens to raise capital, and Schwarcz argues that this practice can benefit nonadjusting creditors if the debtor's business is fundamentally sound but is in distress due to a lack of liquidity. Schwarcz, *supra* note 74, at 442. Schwarcz acknowledges that the new lenders in such situations refuse to extend credit except in exchange for a blanket lien, *id.* at 449, but he does not acknowledge how this fact is in tension with his theory. A debtor whose business is fundamentally sound is able to earn returns on invested capital high enough to service a competitive interest rate. Therefore, even if such a debtor were illiquid, it would be able to offer an interest rate high enough to induce long-term creditors to lend either unsecured or with security limited to assets purchased with the loan proceeds. By contrast, a debtor who cannot undertake socially worthwhile projects must subsidize its borrowing by transferring wealth from nonadjusting creditors to the lender. And a blanket lien provides that subsidy, writ large.

noted previously, does the argument offered by the drafters of the UFTA. The implication is that courts again should consider policing oversecurity as a way of increasing the efficiency of secured lending. Effective rules against oversecurity would reinforce the social benefits of symmetry, even while they are not needed for symmetry to be worthwhile.

G. A Proposal for Symmetrical Secured Loans

To translate symmetry into a specific proposal, a threshold question must be addressed. To this point I have spoken of symmetry in terms of subordinating the secured creditor's deficiency claim. But symmetry also would be achieved by eliminating the deficiency claim entirely. That alternative has more precedent as a matter of practice, as debtors frequently issue a "nonrecourse" loan, which gives the secured creditor a prior claim to the secured assets but no deficiency claim to the debtor's remaining estate.¹⁵⁴ Although nonrecourse lending provides the general efficiency benefits of symmetry, it also produces moral hazard, because without a deficiency claim the debtor lacks incentive to maintain the value of the secured assets when they are underwater but the debtor is nonetheless solvent.¹⁵⁵ This problem explains why creditors tend to accept nonrecourse claims against assets whose value the debtor is unlikely or unable to impair, such as real estate.¹⁵⁶ Most commercial assets are not similarly resistant to debtor misconduct. On the theory that transaction costs are minimized if the rule preferred by the majority is the default rule,¹⁵⁷ reform of the secured loan should avoid the moral hazard problem by subordinating rather than eliminating the deficiency claim.¹⁵⁸ Those who prefer a nonrecourse arrangement could continue to contract for one directly.

Under federal law, subordination of the deficiency claim would require changes to two sections of the Bankruptcy Code. The first is section 506, which

154. See BLACK'S LAW DICTIONARY 1083 (8th ed. 2004) (defining "nonrecourse").

155. See Gregory M. Stein, *The Scope of the Borrower's Liability in a Nonrecourse Real Estate Loan*, 55 WASH. & LEE L. REV. 1207, 1239 (1998). Courts sometimes use the doctrine of waste to punish debtors who fail to maintain secured real estate assets. *Id.* at 1224-28.

156. *Id.* at 1209-10.

157. POSNER, *supra* note 113, at 96.

158. As I noted in my discussion of the American general partnership, a majoritarian default rule that generates negative externalities can be inefficient. See *supra* text accompanying note 101. But neither type of symmetrical secured loan would generate meaningful negative externalities.

defines the nonsecured portion of a secured creditor's claim as an "unsecured claim."¹⁵⁹ Under my proposal, this instead would be defined as a "secured creditor deficiency claim." The second is section 726, which requires payment of most unsecured claims on a pro rata basis.¹⁶⁰ Under my proposal, this section would provide for payment of secured creditor deficiency claims after payment of general unsecured claims.¹⁶¹ These amendments would make secured loans symmetrical in both liquidations and reorganizations.¹⁶² And they would preserve the right recognized in the Bankruptcy Code for parties to contract around priority rules as long as all negatively affected creditors consent.¹⁶³ Symmetry therefore would be a default rule in both directions: secured creditors could waive their deficiency claims altogether, or they could contract directly with unsecured creditors for asymmetry. It is unclear how often parties would choose the second option given that the primary current motive for the use of asymmetry is opportunism. Nevertheless, the lack of an opportunism risk makes consensual asymmetry unproblematic. In essence, consensual asymmetry would be a side agreement between the secured creditor and an unsecured creditor to divide the unsecured creditor's share of the debtor's estate.¹⁶⁴

159. 11 U.S.C. § 506(a)(1) (2000).

160. *Id.* § 726(a)-(b).

161. Section 726(a) provides for six tiers of nonsecured claims, to be paid in this order: (1) privileged unsecured claims, such as tax and employee salary claims; (2) general unsecured claims filed on time; (3) general unsecured claims filed late; (4) claims for punitive damages or fines that do not compensate the creditor for monetary losses; (5) interest on all claims; and (6) the debtor's equity claim. *Id.* § 726(a). My proposal would insert between the third and fourth tiers a new category for "payment of any allowed secured creditor deficiency claim." Situating deficiency claims at this level would achieve symmetry without upsetting Congress's objectives of subordinating punitive damages claims, and of paying the face amounts of all claims before paying interest on any.

162. Although section 726 formally applies only to Chapter 7 liquidations, Chapter 11 ties creditor voting rights in the approval of reorganization plans to the Chapter 7 priority schedule. *Id.* § 1129(a)(7)(A)(ii).

163. *Id.* § 510(a) (providing for enforcement of subordination agreements).

164. A potential concern with my proposal is that secured creditors would circumvent it by encouraging debtors to liquidate outside the bankruptcy system. As noted previously, state law is mostly silent on the priority status of secured creditor deficiency claims, *see supra* note 111, creating an ambiguity that secured creditors might petition state courts to resolve to their advantage. Were this to occur on a large scale, parallel state-level reform might be advisable. But there is reason to doubt that strategic circumvention would be a serious problem. Although only a small fraction of defaulting debtors pass through federal bankruptcy, the percentage jumps when the debtor has secured creditors. *See* Edward R. Morrison, *Bargaining Around Bankruptcy: Small Business Workouts and State Law* 4-5 (Ctr. for

H. Symmetry Versus Previous Reform Proposals

Although symmetry is only the latest in a long line of reform proposals for the secured loan, it differs from its predecessors in one key respect: all previous proposals would scale back the secured creditor's priority right. For this reason, previous proposals demand a tradeoff: they would increase recoveries for nonadjusting creditors, but at the expense of social benefits that secured loans now provide in terms of appraisal economies and bankruptcy speed. And by leaving untouched the secured creditor's deficiency claim, these proposals would do nothing to correct how the secured loan now discourages efficient monitoring.

The proposal that seems to have won the largest number of academic supporters is a "superpriority" rule that would give tort creditors first claim to all debtor assets, including those pledged to secured creditors.¹⁶⁵ The goal would be to strengthen the link between a debtor's tort risk and borrowing costs. And superpriority undoubtedly would have this effect: while tort creditors of a bankrupt debtor now typically recover a small percentage on their claims,¹⁶⁶ superpriority would vault them to the top of the claims queue, often

Law & Econ. Studies, Columbia Law Sch., Working Paper No. 320, 2008), available at <http://ssrn.com/abstract=1065543>. Reform at the federal level would further boost this percentage by increasing the incentive for unsecured creditors to exercise their option to file a bankruptcy petition. See 11 U.S.C. § 303(b)(1) (permitting involuntary petitions signed by at least three unsecured creditors whose claims satisfy an amount-in-controversy requirement). Finally, because creditors typically do not know prospectively whether a debtor will enter bankruptcy, the shadow of symmetry at the federal level will change appraisal and monitoring efforts even for those creditors whose debtors ultimately undergo liquidation outside bankruptcy. Cf. Lucian Arye Bebchuk & Jesse M. Fried, *The Uneasy Case for the Priority of Secured Claims in Bankruptcy: Further Thoughts and a Reply to Critics*, 82 CORNELL L. REV. 1279, 1342 (1997) (making the same argument in favor of the authors' bankruptcy-only "partial priority" proposal).

165. David W. Leebron, *Limited Liability, Tort Victims, and Creditors*, 91 COLUM. L. REV. 1565, 1643-46 (1991); LoPucki, *supra* note 86, at 1907-16; Note, *Switching Priorities: Elevating the Status of Tort Claims in Bankruptcy in Pursuit of Optimal Deterrence*, 116 HARV. L. REV. 2541 (2003).
166. As noted above, *supra* note 103, Warren and Westbrook's study found that the average bankruptcy debtor has assets worth 73% of liabilities, and that 70% of the average debtor's assets are secured. They also found that 61% of the liabilities of the average debtor are owed to secured creditors. See Warren & Westbrook, *supra* note 7, at 1222. These numbers imply that secured creditors on average recover 91% on their claims and unsecured creditors recover 45%. The second figure likely overstates recoveries for tort claimants in particular because the Bankruptcy Code gives priority to general unsecured claims over claims for exemplary and punitive damages. 11 U.S.C. § 726(a)(2)-(4). Also, it should be noted that Chapter 7 liquidations, which are both smaller and more numerous than Chapter 11

increasing their recoveries to 100%. But the prospect of so dramatic an increase in tort recoveries makes superpriority a political nonstarter at a time when most tort reform proposals seek to tamp down on tort litigation.¹⁶⁷ The proposal's radicalism becomes further apparent when one realizes that tort creditors would have to be given superpriority over other creditors even when a debtor lacked secured debt, for otherwise a debtor would *increase* expected tort recoveries by borrowing on a secured basis, and secured lending would be excessively discouraged. From an efficiency perspective, superpriority would slow bankruptcy proceedings by holding a debtor's entire estate in limbo while pending tort litigation was resolved. It also would further discourage contract creditors generally, and secured creditors especially, from monitoring to prevent asset depletion, because it would shift the fruits of such efforts to tort claimants. Whether these costs would outweigh the benefit of increased tort deterrence is unclear at best, which is another reason the proposal seems unlikely to be adopted.

A second bid to aid tort claimants—and unsecured creditors generally—was made by Elizabeth Warren, whose “set-aside” proposal would invalidate secured claims to the extent that they collectively covered more than 80% of the value of a debtor's assets at the time of default.¹⁶⁸ When less than 80% of a debtor's assets were secured, the proposal would have no effect. The primary efficiency benefit would be to scale back the most egregious instances of oversecurity, such as when a debtor gives a blanket lien to a creditor with a small claim.¹⁶⁹ In this way, the proposal would reduce opportunism costs. But most oversecurity would be unaffected: a creditor who contributed 1% of a debtor's debt capital could still enforce a lien covering 80% of assets. And the proposal is overinclusive as well, because it measures oversecurity when the debtor defaults rather than when the secured claim is granted. For this reason, a deep devaluation of unsecured assets could produce a set-aside of secured

reorganizations, feature debtors who are more deeply insolvent. See Warren & Westbrook, *supra* note 7, at 1210. Liquidations therefore will yield a wider disparity between secured and unsecured recoveries.

167. See Steven L. Harris & Charles W. Mooney, Jr., *Measuring the Social Costs and Benefits and Identifying the Victims of Subordinating Security Interests in Bankruptcy*, 82 CORNELL L. REV. 1349, 1371-72 (1997) (noting political impediments to proposals to subordinate secured claims).
168. Elizabeth Warren, *An Article 9 Set-Aside for Unsecured Creditors*, 51 CONSUMER FIN. L.Q. REP. 323, 325 (1997).
169. As written, Warren's set-aside would have no effect on secured creditor deficiency claims, and therefore would enable secured creditors to reclaim some of the set-aside assets to the detriment of unsecured creditors.

assets even if the secured creditors had taken security in nothing more than the property purchased with their loan proceeds. The proposal therefore would raise secured creditors' appraisal costs and further undermine their incentive to monitor to protect the secured collateral. Finally, the set-aside would slow down the distribution of assets whenever the secured claims could be verified more quickly.

A third reform proposal is the "partial priority" plan offered by Lucian Bebchuk and Jesse Fried, under which bankruptcy courts would treat at least 25% of every secured claim as unsecured—and thus payable pro rata with the claims of unsecured creditors—regardless of the value of the secured assets.¹⁷⁰ Once again, the objective would be to reduce opportunism costs by increasing recoveries for unsecured creditors. Partial priority would be more effective in this regard than Warren's set-aside, because it would increase unsecured recoveries whenever the secured assets were worth more than 75% of the secured claim. But opportunism would still occur because secured creditors would still be ensured a higher percentage recovery than unsecured creditors in a bankruptcy proceeding.¹⁷¹ And partial priority would undercut the efficiencies that the priority right generates—a drawback that Bebchuk and Fried acknowledge.¹⁷² By making 25% of a secured claim unsecured, partial priority would shift an asymmetrical arrangement one quarter of the way back to the pro rata rule, thereby increasing appraisal costs for all creditors, slowing the distribution of secured assets in bankruptcy, and providing no clear monitoring benefits.

Symmetry avoids the tradeoff inherent in each of these proposals. Like other proposals, symmetry would reduce opportunism costs by increasing

170. More specifically, this is the "fixed-fraction" version of partial priority. Bebchuk & Fried, *supra* note 2, at 909. The authors also suggest an "adjustable priority" rule that seeks to aid nonadjusting creditors specifically rather than unsecured creditors generally. *Id.* at 905.

171. Under partial priority, secured creditors would continue to have an incentive to oversecure their loans, because they would benefit from preventing the secured assets from depreciating to less than 75% of the amounts of their claims. But partial priority would not increase the incentive to oversecure as symmetry would, which is perhaps the proposal's primary virtue. Given, however, the proposal's relative disadvantages in terms of monitoring, appraisal, and bankruptcy efficiencies, its attractiveness as a vehicle for reducing the social costs of oversecurity is doubtful. To the extent that oversecurity is a concern worth addressing, the better approach would be symmetry combined with rules that police oversecurity directly. *Cf. supra* text accompanying note 145 (discussing the use of fraudulent conveyance law to scale back oversecured claims).

172. Bebchuk and Fried observe that partial priority would raise appraisal costs for secured creditors and potentially reduce incentives for creditors to monitor to prevent asset depletion. Bebchuk & Fried, *supra* note 2, at 914-17.

recoveries for nonadjusting creditors. But symmetry would accomplish this result while preserving the priority right, thereby enhancing rather than undermining secured lending's current economic benefits in terms of appraisal efficiencies and bankruptcy speed. And only symmetry corrects how the law of secured lending now discourages efficient monitoring. In other words, symmetry is the only proposal with no evident economic downside. In addition, the fact that symmetry leaves intact the secured creditor's priority right makes it more attractive politically, as the priority right is at the core of the traditional conception of secured lending. The status of the deficiency claim, in contrast, is not even addressed in Article 9, and therefore by changing it Congress is less likely to be seen as trampling on the province of state or common law. For this reason, symmetry is the least radical proposal, and not only because it is the only one that, by reinforcing the benefits of secured lending, ensures a net increase in social wealth.

CONCLUSION

This Article has introduced a framework for comparing the efficiency of legal arrangements that enable a debtor to subordinate creditor claims to specific assets without the creditors' consent. Despite their variety, all modern arrangements that partition debtor assets in this way can be characterized as either symmetrical or asymmetrical. This distinction is powerful because, as this Article has shown, symmetrical partitioning is more efficient in terms of each of the major economic benefits of asset partitioning that scholars have identified. Asymmetrical partitioning, by contrast, is better only for transferring wealth away from nonadjusting creditors, a result that generates various social costs.

The categorical superiority of symmetrical partitioning makes the asymmetry of several widely used arrangements under current law difficult to justify. In particular, this Article has shown that the asymmetry of the secured loan is a source of multiple inefficiencies, and that the arrangement would be more socially beneficial if the secured creditor's deficiency claim to the unsecured assets were subordinated to the claims of unsecured creditors. Similar economic benefits likely would result from parallel reform of the American general partnership, which also is asymmetrical under current law. In particular, subordination of the claims of partnership creditors to partners' personal assets would discourage parties from using the partnership to transfer wealth away from the partners' personal creditors, and would pay social dividends through lower debt appraisal costs, better creditor monitoring, and faster liquidation proceedings. A third arrangement worth reexamining is the guaranty contract, which currently enables parties to contract around

symmetry to the detriment of creditors whose consent to the arrangement is not required.

Although this Article has focused on the economic consequences of rules that govern the relative priority of creditor claims, the logic of its framework makes clear that the allocation of value among debtor asset pools implicates similar social costs and benefits. In particular, an “imbalanced” partitioning arrangement may resemble an asymmetrical one in terms of its economic impact. Yet current restrictions on the shifting of value among debtor asset pools are patchy, and lack a clear relationship to economic efficiency. This is evidenced not only by the absence of rules against oversecurity, but also by similar laxity that extends to other partitioning arrangements. For example, while the Bankruptcy Code prohibits an insolvent partnership from distributing value to a partner,¹⁷³ no rule restricts asset shifting in the reverse direction, despite the hazard of opportunism toward partners’ nonadjusting personal creditors. In light of the recent financial crisis, a perhaps timelier example is a set of Bankruptcy Code provisions that exempts derivative contract counterparties from the Code’s automatic stay and from its general prohibitions on constructive fraudulent conveyances and preferences.¹⁷⁴ These exemptions enable counterparties to force insolvent debtors to make margin payments and post additional collateral, and to seize and liquidate that collateral when the debtor is bankrupt. As a consequence, exempted creditors are able to expand and enforce with impunity what is in essence a secured claim, to the direct detriment of unsecured creditors. Such examples suggest that lawmakers need to reconsider how asset shifting is best policed, and to ask in particular how changes in that regard could reinforce the benefits of reform aimed to improve the efficiency of creditor priority rules. In this way, the distinction between symmetry and asymmetry provides a framework for understanding the economic consequences of the broader set of legal doctrines that define creditors’ rights, and for asking in each case whether rules that enable debtors to engage in nonconsensual subordination of creditor claims are likely to create or destroy social wealth.

173. 11 U.S.C. § 548(b) (2000).

174. *Id.* §§ 362(b)(6)-(7), (17), 546(e).