Strategic Liability in the Corporate Group

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The typical large corporation divides itself into numerous subsidiaries but then overrides the liability barriers between them by having the subsidiaries and the parent company cross-guarantee each other's major debts. Previous scholarly theories of the corporate group cannot explain why. The leading theory posits that the subsidiaries make it easier for creditors to evaluate risk because they enable each creditor to lend against a discrete asset pool within the broader enterprise. But any such efficiency would be undercut by the guarantees, which transmit credit risk across subsidiary boundaries. This Article argues that the combination of subsidiaries and intragroup guarantees reflects a type of shareholder opportunism termed correlation-seeking. *Because the insolvency risks of the entities in the typical corporate group are highly correlated, the intragroup guarantees provide the group's shareholders with a one-way bet. The guarantees lower the interest rates on the guaranteed debts, thus enriching the shareholders as long as the group stays solvent. And if the group falls insolvent, the triggering of liability on the guarantees makes no difference to the shareholders, whose equity stakes are wiped out anyway. The guarantees instead dilute the recoveries of the group's nonguaranteed creditors. This separation of burden and benefit induces firms to form too many subsidiaries and to overuse guarantees, thereby undermining transparency, complicating bankruptcy proceedings, and introducing other distortions. Current fraudulent transfer doctrine perversely upholds those guarantees that are most likely to be overused. Doctrinal reform based on risk correlations would deter guarantee overuse and would reduce bankruptcy courts' dependence on the controversial remedy of substantive consolidation.*

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INTRODUCTION

When a business firm gets big enough, it reliably does two things. First, it reconfigures itself into a corporate group by dividing itself into a multitude of commonly owned subsidiaries.[1] Second, it causes the various entities in this group to guarantee each other's major outside debts.[2] Previous scholarly theories of the corporate group can explain either the subsidiaries or the guarantees, but not both. Thus, one theory argues that firms form subsidiaries in order to

1 In 2010, the one hundred US public companies with the highest annual revenues reported an average of 245 major subsidiaries, with 114 as the median. Only five reported fewer than five major subsidiaries. These figures are based on the companies' most recent annual reports as of August 17, 2010, and for many firms do not include nonsignificant subsidiaries that need not be disclosed under SEC rules. See SEC, Regulation S-K, 17 CFR § 229.601(b)(21). The set of public companies with the highest revenues was drawn from data published by Fortune and excludes General Motors, Fannie Mae, and Freddie Mac, which on the data collection date were in bankruptcy or conservatorship. See *Fortune 500*, Fortune (May 3, 2010), online at http://money.cnn.com/magazines/fortune/fortune500/2010/full_list/ (visited Apr 26, 2011).

2 In their latest annual reports as of August 17, 2010, sixty-three of the one hundred US public companies with the highest annual revenues reported current use of intragroup guarantees. However, companies that report on a consolidated basis generally are not required to disclose intragroup guarantees under standard accounting rules. See Financial Accounting Standards Board (FASB), *FASB Interpretation No. 45: Guarantor's Accounting and Disclosure Requirements for Guarantees, Including Indirect Guarantees of Indebtedness of Others* 27 (2002), online at http://www.fasb.org/cs/BlobServer?blobcol=urldata&blobtable=MungoBlobs&blobkey=id&blobwhere=1175820925751&blobheader=application/pdf (visited Feb 4, 2011). A limited exception applies under SEC rules to intragroup guarantees issued on the performance of registered securities. See SEC, Regulation S-K, 17 CFR § 210.3-10(b). For these reasons, the proportion of large firms that use intragroup guarantees is likely to be significantly higher than the 63 percent figure implied here.

compartmentalize credit risk, thus reducing the cost of information for creditors by enabling them to lend against only those divisions of the firm they understand best.[3] But this theory is contradicted in practice by the heavy use of the intragroup guarantee, which causes the creditors of one group member to bear the risk that another member will fall insolvent. Meanwhile, a second theory argues that firms issue intragroup guarantees because the guarantees permit creditors to *ignore* the subsidiary structure, lending instead based on the creditworthiness of the group as a whole.[4] This second theory, however, raises the question of why firms form so many subsidiaries in the first place, and why they maintain them in a manner that, but for the guarantees, makes it harder rather than easier for creditors to evaluate risk.

This Article offers a theory of the corporate group that can explain both of its salient features: the swarm of subsidiaries that partitions the group's assets and the web of guarantees that pierces the asset partitions on behalf of select lenders. The theory argues that the perforated internal structure of the corporate group reflects a type of shareholder opportunism termed *correlation-seeking*. When a corporation engages in correlation-seeking, it intentionally incurs contingent liabilities that are especially likely to come due when the corporation is insolvent.[5] Corporate groups are able to engage in correlation-seeking because the entities in such groups tend to thrive or fail in unison. This commonality of fate means that intragroup guarantees, at the time they are issued, transfer value from the group's nonguaranteed creditors to its shareholders. As long as the group stays solvent, the guarantees benefit the shareholders by lowering the interest rates on the guaranteed loans. And if the group falls insolvent and defaults on its loans, the triggering of the

3 Richard A. Posner, *The Rights of Creditors of Affiliated Corporations*, 43 U Chi L Rev 499, 507–09, 516–17 (1976). For other articles that develop Posner's theory, see Henry Hansmann, Reinier Kraakman, and Richard Squire, *Law and the Rise of the Firm*, 119 Harv L Rev 1333, 1344–45 (2006); Henry Hansmann and Reinier Kraakman, *The Essential Role of Organizational Law*, 110 Yale L J 387, 399–401 (2000).

4 See, for example, William H. Widen, *Corporate Form and Substantive Consolidation*, 75 Geo Wash L Rev 237, 265 (2007); Phillip I. Blumberg, *Intragroup (Upstream, Cross-Stream, and Downstream) Guaranties under the Uniform Fraudulent Transfer Act*, 9 Cardozo L Rev 685, 728 (1987); Robert J. Rosenberg, *Intercorporate Guaranties and the Law of Fraudulent Conveyances: Lender Beware*, 125 U Pa L Rev 235, 235 & n 1 (1976). Commentators often refer to intragroup guarantees as "intercompany" guarantees. Like Phillip Blumberg, I prefer the term "intragroup," which better distinguishes such guarantees from those between unaffiliated companies. Indeed, the etymology of "intercompany" implies an arrangement between distinct enterprises, which is the opposite of the intended meaning. Most corporate groups, while constituted of multiple entities, are in practice a single "company" or firm.

5 See Richard Squire, *Shareholder Opportunism in a World of Risky Debt*, 123 Harv L Rev 1151, 1156–58 (2010) (defining correlation-seeking).

guarantees makes no difference to the shareholders, because their equity stakes in the guarantor entities are wiped out anyway. Instead, liability on the guarantees dilutes the bankruptcy recoveries of the group's nonguaranteed creditors.

This separation of burden and benefit generates social costs because it distorts how firms organize themselves. It gives firms an incentive to issue intragroup guarantees even when doing so undercuts the informational benefits to creditors of risk compartmentalization. And once those benefits are forgone, the firms lose the incentive to organize their subsidiaries along functional lines that demarcate real differences in credit risk. Rather, the incentive is to form too many subsidiaries, because each new entity interposes a liability barrier between assets that tend to move together in value, thereby providing another correlation-seeking opportunity. Finally, firms lose the incentive to keep track of which assets and liabilities properly belong to which constituent entities. This incentive disappears because firms have more subsidiaries than logical organizational divisions, and because their most sophisticated lenders—who otherwise would penalize them for sloppy internal accounting—are issued guarantees that make the lenders indifferent to the allocation of value among entities.

These distortions become evident when a corporate group fails and a bankruptcy court is tasked with sorting out its internal affairs. Formally, the court is supposed to calculate each creditor's recovery based on the financial status of the creditor's particular debtor entity. But the combination of entity overgrowth and apathetic internal recordkeeping often makes this task infeasible. Bankruptcy judges therefore resort to the doctrine of substantive consolidation, a kind of Gordian knot solution that cuts through the partitions between subsidiaries and pays out all creditors based on the value of the group's combined assets. Commentators and appellate courts worry that this doctrine gives bankruptcy judges too much power to abrogate contracts and override the corporate form, and they admonish them to use it sparingly.[6] Yet the judges often have little practical choice in the matter, as the administrative costs of untangling the typical group instead of collapsing it would consume much of its remaining value.

Creditors who anticipate that their bankruptcy recoveries will be diluted by intragroup guarantees can try to protect themselves by contract. Such defensive measures may, however, not fully deter correlation-seeking and will entail social costs of their own. For example, creditors can demand higher interest rates up front to offset

6 See note 100.

the losses they expect to incur if the guarantees are triggered. But a higher interest rate that is fixed when a loan is issued does not deter the debtor from issuing guarantees to subsequent lenders or further subdividing its assets. To actually prevent such conduct, creditors must write loan covenants that expressly forbid it. But a loan covenant does not provide an effective remedy if a breach is not discovered until the debtor has filed for bankruptcy. This is because bankruptcy blocks enforcement of the standard remedy for a covenant breach, which is acceleration of the debtor's payment obligations.[7] Therefore, if loan covenants are to be effective, the creditor must actively monitor the debtor while the loan is outstanding. Yet monitoring is itself costly, and hence may not be a viable option for creditors who are unsophisticated or who have relatively small claims.

The ability for many creditors to offset anticipated losses by charging higher upfront interest rates suggests that a change in the distribution of wealth is not the main problem presented by correlation-seeking via the intragroup guarantee. The main problem, rather, is wealth destruction, which occurs because of the higher borrowing costs attributable to the opportunism risk, and because of the distortions in firms' internal structures that higher interest rates alone do not prevent. These social costs mean that a firm's mere opportunity to use intragroup guarantees to capture value from creditors can make *all* of the firm's investors worse off. The question, then, is whether courts can employ an equitable remedy that would help parties reach a result they collectively prefer but cannot arrange, at least in a cost-effective manner, by contract alone.

Unlike substantive consolidation, fraudulent transfer law provides an equitable remedy that could eliminate the value transfers generated by intragroup guarantees without also collapsing the debtor's subsidiary structure. Fraudulent transfer statutes enable a court to set aside a claim against a debtor—including a claim on a guarantee—if the claim results from a contract that when created was likely to harm creditors. If bankruptcy courts used this remedy to police overuse of intragroup guarantees, then creditors could cut back on their own monitoring efforts, and the cost of credit would fall. In addition, firms would be forced to streamline their subsidiary structures, as they could no longer use intragroup guarantees to insulate their most sophisticated lenders from the consequences of artificial asset boundaries and slipshod internal accounting. Firms

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7 See Marcel Kahan and Edward Rock, *Hedge Fund Activism in the Enforcement of Bondholder Rights*, 103 Nw U L Rev 281, 302 (2009).

would then be more likely to form their subsidiaries along functional lines, and would arrive in bankruptcy with internal boundaries that were both fewer in number and easier for courts to honor. In this way, fraudulent transfer law offers a surgical alternative to the sledgehammer provided by substantive consolidation.[8]

Unfortunately, the special doctrines that courts have developed for fraudulent transfer challenges to intragroup guarantees bear no relationship to the actual economics of the arrangement. Those doctrines assume that the fee a lender pays in exchange for a guarantee—conventionally known as the "premium"—will be large enough to offset the guarantee's expected burden on the guarantor's general creditors. As a result, the doctrines focus on whether the premium, which normally is paid to the borrower in the form of an interest-rate discount on the guaranteed loan,[9] was somehow passed on to the guarantor.[10] If it was, perhaps because the guarantor and borrower were financially or operationally interlinked, then courts deem the guarantee to be enforceable in full.

The problem with this approach is that the premium paid for an intragroup guarantee will be large enough to neutralize the expected burden on the guarantor's creditors only in one special case: when the insolvency risks of the guarantor and borrower are uncorrelated. If instead their fortunes are positively correlated, then the expected recoveries of the guarantor's creditors will fall even if the full premium is paid directly to the guarantor. Moreover, the fates of a borrower and a guarantor will be correlated whenever the two entities are financially or operationally interlinked. In this way, current doctrine causes courts to uphold precisely those intragroup guarantees that are most likely to transfer value from creditors to shareholders.

Courts could both simplify fraudulent transfer law and do a much better job preventing overuse of intragroup guarantees if they decided challenges to such arrangements based on the following question: Was a strong positive correlation between the fortunes of the borrower and the guarantor evident when the guarantee was issued? If the answer is yes, then the court can be sure that the cost to the borrower

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8 Consider William H. Widen, *Report to the American Bankruptcy Institute: Prevalence of Substantive Consolidation in Large Public Company Bankruptcies from 2000 to 2005*, 16 Am Bankr Inst L Rev 1, 15 (2008) (finding that courts are more likely to use substantive consolidation as the number of affiliated bankrupt entities increases).

9 See, for example, Posner, 43 U Chi L Rev at 505 (cited in note 3).

10 Consider, for example, *Rubin v Manufacturers Hanover Trust Co*, 661 F2d 979, 991–92 (2d Cir 1981) ("If the consideration given to [a borrower] has ultimately landed in the [guarantor's] hands . . . then the [guarantor's] net worth has been preserved.").

of the guaranteed loan was artificially low because the loan was subsidized by a value transfer from creditors to shareholders. The guarantee therefore should be avoided as a fraudulent transfer. A strong positive correlation would be easy to establish, as it will exist whenever a guarantor and borrower are financially interconnected or produce the same or complementary outputs. And a correlation-based doctrine for intragroup guarantees could be developed that is fully consistent with fraudulent transfer statutes as they are now written.

The remainder of this Article has four main Parts. Part I reviews the scholarly literature on corporate groups and shows why no previous account can explain both the division of firms into numerous subsidiaries and those firms' heavy reliance on intragroup guarantees. Part II analyzes correlation-seeking in the particular context of the intragroup guarantee, taking account of variations in how such guarantees are enforced and structured. Part III describes how intragroup guarantees destroy social wealth by, among other things, increasing appraisal and monitoring costs for creditors and complicating bankruptcy proceedings. Lastly, Part IV shows how current fraudulent transfer rules for intragroup guarantees encourage their overuse and explains how the theory of correlation-seeking points toward a better doctrine.

I. GROUPS AND GUARANTEES IN THE SCHOLARLY IMAGINATION

One line of academic commentary has tried to explain why big firms self-divide into subsidiaries; a second has tried to explain why those firms rely so heavily on intragroup guarantees. For the most part, the two have ignored each other. And this is unfortunate, because the subject of each contradicts the account offered by the other. Thus, the leading scholarly theory of subsidiaries is controverted by the presence of so many cross-subsidiary guarantees, while the main theory of the guarantees calls into question why firms have so many subsidiaries in the first place, and why they maintain them in ways that make the guarantees necessary.

A. Shell Games and Tidy Bundles: Landers versus Posner

As corporate lawyers well know, the typical large business corporation breaks itself down. It sub-incorporates, dividing itself into a group of affiliated entities. The division is legal but not real: all group members continue to be controlled by the same senior managers and owned by the same ultimate shareholders. Like the Christian Trinity they are multiple (legal) persons but one being, one going concern. On top is a parent (or "holding") company whose shares are traded on a stock exchange. The parent is the firm's public face, the only group

member that normally discloses financial results. Below are the subsidiaries, which hold most of the firm's operational assets, and which often have their own subordinate entities that can extend layers deep and interlock in brain-teasing ways. This array of subsidiaries lies as if below a waterline, its structure hidden from public view.

Skeptics see something sinister in all that complexity. The troublesome element is the corporate rule of limited liability, which encases each subsidiary in a legal barrier that prevents its unpaid creditors from seizing assets held elsewhere in the firm. The suspicion is that the hyper-fragmented corporate group is just an elaborate judgment-proofing device, a scheme to deny shareholder wealth to creditors if the group defaults on its debts.

One such skeptic is Professor Jonathan Landers. In a 1975 article published in *The University of Chicago Law Review*, Landers argued that managers of corporate groups abuse the subsidiary boundaries by playing a kind of carnival shell game, shifting assets around to keep them away from creditors.[11] For example, if managers know that a particular subsidiary is doomed for failure, they might pull assets out of it to minimize shareholder losses. Or they might shift assets *into* a struggling subsidiary to shore it up and enable it to take on new debt. In either case creditors are seemingly exploited, because they have lent to a particular entity in reliance on its store of assets, only to discover in bankruptcy that those assets have been appropriated for use elsewhere. Landers concluded that creditors would be better off if bankruptcy courts relied more heavily on doctrines like substantive consolidation, which erases the liability barriers within a corporate group and permits creditors to seize the group's assets wherever they might be located.[12]

Nonsense, replied then-Professor Richard Posner, famously. In a response to Landers that also appeared in *The University of Chicago Law Review*, Posner argued that the liability barriers between affiliated corporations actually make life *easier* for creditors.[13] Posner pointed out that a creditor will often appraise a prospective debtor's assets and liabilities to ensure that the interest rate on the proposed loan is high enough to compensate the creditor for the debtor's default risk. And the creditor also might monitor while the loan is outstanding to ensure the debtor's compliance with loan covenants that forbid conduct that makes default more likely. If large firms were not divided into subsidiaries, creditors would have to appraise and

11 Jonathan M. Landers, *A Unified Approach to Parent, Subsidiary, and Affiliate Questions in Bankruptcy*, 42 U Chi L Rev 589, 622 (1975).

12 See id at 625–26, 630–31.

13 See Posner, 43 U Chi L Rev at 507–09 (cited in note 3).

monitor the enterprise in its entirety, which according to Posner would be an expensive undertaking.[14] Subsidiaries reduce the amount of information that creditors need to gather, because they tie each creditor's recovery in bankruptcy to a discrete asset bundle within the broader firm.[15] And subsidiaries also promote the benefits of specialization, as they permit creditors to lend against only those divisions of the firm they understand best. In a competitive market, creditors will pass these benefits back to debtors in the form of lower interest rates. But these efficiencies will not be realized if creditors expect bankruptcy courts to disregard the subsidiaries when calculating the creditors' recoveries.[16]

And what about Landers's fear that corporate managers will themselves disregard subsidiary boundaries by shifting assets around? Posner thought it was overblown. He argued that the senior executives in most corporate groups use subsidiary-level profit reports to evaluate the group's midlevel managers.[17] But those reports would not accurately reflect managerial performance if the managers regularly shifted assets from one subsidiary to another to frustrate creditors. In this way, the division of the firm into neat asset bundles facilitates monitoring by creditors and senior executives alike. The shell game that Landers feared should therefore, according to Posner, be rare in practice.[18]

Posner's notion that the corporate rule of limited liability reduces information costs for creditors has proven to be highly influential. It is often invoked by scholars who attribute similar efficiencies to other legal arrangements that partition assets, such as the partnership and the secured loan.[19] And, at least formally, now-Judge Posner seems to

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14 Id.

15 Henry Hansmann and Reinier Kraakman have argued that these same informational benefits also are generated by the rule of corporate law that gives the corporation's creditors priority over the shareholders' creditors in the division of corporate assets. See Hansmann and Kraakman, 110 Yale L J at 401–03 (cited in note 3). In a subsequent work, this rule was termed "entity shielding." Henry Hansmann, Reinier Kraakman, and Richard Squire, *The New Business Entities in Evolutionary Perspective*, 2005 U Ill L Rev 5, 11.

16 Another benefit of sub-incorporation that Posner identified is the shifting of risk from shareholders to creditors in situations where the creditors are in a better position to diversify their investments. See Posner, 43 U Chi L Rev at 502 (cited in note 3). As Posner acknowledged, this benefit applies primarily to separate businesses owned by the same entrepreneur and thus is inapplicable to publicly traded corporations, whose shareholders can diversify by holding broad stock portfolios. Id at 511.

17 Id at 513.

18 Strictly speaking, a firm's various "profit centers" need not follow subsidiary boundary lines, a possible objection that Posner acknowledged. Id.

19 For the partnership, see Richard Squire, *The Case for Symmetry in Creditors' Rights*, 118 Yale L J 806, 845 (2009); Hansmann and Kraakman, 110 Yale L J at 394, 399–403 (cited in note 3); Larry E. Ribstein, *The Illogic and Limits of Partners' Liability in Bankruptcy*, 32 Wake

have won the debate in the eyes of his colleagues on the bench as well. Most appellate courts continue to hold that the formal distinctions among commonly controlled corporations should be respected and that boundary-busting doctrines like substantive consolidation should be used sparingly.[20]

B. Holes in the Partitioning Theory: Guarantees and Sloppy Accounting

There can be little doubt that one reason for the influence of Posner's theory of the corporate group is its elegance. The theory implies that the corporate group is like a sturdy ocean freighter, neatly divided into watertight compartments that prevent a failure in one division from flooding the cargo stowed elsewhere. In reality, however, the insides of most corporate groups are not nearly so orderly. Instead of following clean functional lines, their bulkheads often are jumbled and in a state of disrepair. And, rather than being watertight, the partitions leak—indeed, they are *rigged* to leak—in rough financial seas.

The seeming saboteurs are the group's managers, who compromise the integrity of the cargo holds by causing the entities in the group to guarantee each other's major outside debts. Each such guarantee gives the lender who receives it the right, if its own borrower entity defaults, to assert a claim against the guarantor entity and, if the guarantor is bankrupt, to recover a portion of the guarantor's assets at the expense of the guarantor's own creditors. The consequence is that the legal boundary between the borrower and the guarantor no longer compartmentalizes risk. The creditors of the guarantor are exposed not only to the risk that the guarantor will fail, but also to the risk that the borrower will. And in the typical corporate group, the original borrower issues a reciprocal guarantee to the guarantor's own major lender, thereby compromising the liability barrier in the reverse direction as well. The result is a web of crisscrossing obligations that makes a hash of the group's internal

Forest L Rev 31, 66 (1997). For the secured loan, see Douglas G. Baird and Robert K. Rasmussen, *Private Debt and the Missing Lever of Corporate Governance*, 154 U Pa L Rev 1209, 1230 (2006); Saul Levmore, *Monitors and Freeriders in Commercial and Corporate Settings*, 92 Yale L J 49, 56 (1982).

20 See *In re Owens Corning*, 419 F3d 195, 208–09 (3d Cir 2005) (describing a consensus among appellate courts that substantive consolidation should rarely be used); Steven L. Schwarcz, *Collapsing Corporate Structures: Resolving the Tension between Form and Substance*, 60 Bus Law 109, 114–15 (2004) ("Substantive consolidation is [ ] generally disfavored, though the recent trend has been to allow it more liberally in response to increasingly complex corporate structures.").

asset partitions and leaves each entity thoroughly exposed to the risk that other group members will fail.[21]

While Posner did not recognize the widespread use of intragroup guarantees, he nonetheless effectively acknowledged that their presence would undermine the informational efficiencies he attributed to limited liability.[22] He did this in his discussion of a judge-made doctrine that has the same practical effect as an intragroup guarantee: the doctrine of veil-piercing. When a court pierces the corporate veil, it sets aside the rule of limited liability and permits the corporation's creditors to seize the wealth of controlling shareholders, including wealth held in other corporations that those shareholders own.[23] Landers had argued that veil-piercing is a doctrine that, like substantive consolidation, courts should use more aggressively to aid creditors.[24] Posner disagreed, reasoning that heavy use of veil-piercing would raise information costs by forcing creditors to appraise and monitor all group members rather than only their particular debtor.[25]

It turns out, however, that private parties voluntarily "pierce the veil" all the time, at least for the benefit of select lenders. They do this with the intragroup guarantee, which like veil-piercing enables a corporate creditor to claim not just its own debtor's assets, but also the assets of an affiliated entity. Intragroup guarantees are, in other words, veil-piercing by contract.[26] Posner's theory implies that firms will use intragroup guarantees rarely. But the opposite is true, casting doubt on his notion that one of the primary functions of the legal boundaries within most corporate groups is to permit creditors to economize on their appraisal and monitoring costs.

There is a second widely observed attribute of corporate groups that also is difficult to reconcile with Posner's theory: their internal accounting practices. Most publicly traded groups report financial results on a consolidated basis, meaning that distinctions among

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21 See William H. Widen, *Lord of the Liens: Toward Greater Efficiency in Secured Syndicated Lending*, 25 Cardozo L Rev 1577, 1584 (2004) (describing how in the typical corporate group the "system of guarantees . . . breaks down the boundaries of limited liability created by the myriad legal entities . . . and creates a single economic unit").

22 Landers also did not address intragroup guarantees in his original article, though he did mention them in his surresponse. See Jonathan M. Landers, *Another Word on Parents, Subsidiaries and Affiliates in Bankruptcy*, 43 U Chi L Rev 527, 531 n 11 (1976).

23 See, for example, *Sea-Land Services, Inc v Pepper Source*, 941 F2d 519, 520 (7th Cir 1991).

24 Landers, 42 U Chi L Rev at 619 (cited in note 11).

25 Posner, 43 U Chi L Rev at 517 (cited in note 3).

26 Professor William Widen has similarly argued that intragroup guarantees can be compared to "substantive consolidation by contract." Widen, 75 Geo Wash L Rev at 265 (cited in note 4). Substantive consolidation, however, places all creditors on equal footing. In contrast, a creditor with a guarantee enjoys an advantage over creditors without one, suggesting that veil-piercing is the closer analogy.

constituent members are ignored, and the parent publishes a single set of financial statements that reflects the performance and status of the group as a whole.[27] The consolidated reports of public companies are required to be accurate as a matter of federal securities law. But Posner's theory predicts that groups will also prepare accurate subsidiary-level reports, so that creditors can tailor lending terms to individual subsidiary default risks, and senior executives can better evaluate the performance of each subsidiary's managers.

In the real world, however, corporate groups are notoriously bad at keeping track of which assets and liabilities properly belong to which of their constituent members.[28] Indeed, it is sloppy or apathetic internal recordkeeping, rather than the deliberate shell game described by Landers, that bankruptcy judges cite as the main reason they so often are forced to collapse groups through the doctrine of substantive consolidation.[29] Commentators in the Posner tradition naturally bemoan that doctrine's frequent use,[30] and appellate courts admonish bankruptcy judges to apply it sparingly.[31] Yet the bankruptcy judges feel compelled to resort to it as a kind of necessary evil, for otherwise the administrative costs of untangling group affairs based on neglected internal records would often be prohibitive.[32]

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27 See, for example, Monsanto Corporation, *Form 10-K for the Year Ended August 31, 2008* 46, online at www.monsanto.com/investors/Documents/Pubs/2008/10-K.pdf (visited Feb 4, 2011).

28 See *Rubin v Manufacturers Hanover Trust Co*, 661 F2d 979, 995 n 18 (2d Cir 1981); *In re Owens Corning*, 316 BR 168, 171 (Bankr D Del 2004) (noting the group's failure to keep accurate subsidiary-level records), revd and remd, 419 F3d 195 (3d Cir 2005) (refusing to apply the doctrine of substantive consolidation even though the group could not provide financial statements from each subsidiary). For sources collecting cases, see note 29. Not only do groups fail to keep close accounts at the subsidiary level, but many apparently find it difficult to provide lenders with an accurate tally of how many subsidiaries they have. See Widen, 75 Geo Wash L Rev at 261 n 79 (cited in note 4).

29 See Christopher W. Frost, *Organizational Form, Misappropriation Risk, and the Substantive Consolidation of Corporate Groups*, 44 Hastings L J 449, 456 & n 26 (1993) (collecting cases in which consolidation was ordered because "the assets of the corporate group cannot be segregated and identified with any particular entity within that group"); Mary Elisabeth Kors, *Altered Egos: Deciphering Substantive Consolidation*, 59 U Pitt L Rev 381, 416 & n 206 (1998) (citing cases in which consolidation was required due to the lack of accurate subsidiary-level records); Widen, 75 Geo Wash L Rev at 268–69 & n 100 (cited in note 4) (collecting cases that cite "hopeless entanglement" as grounds for consolidation and observing that "[t]he entanglement metaphor [ ] relates primarily to the failure to maintain business records that properly identify assets with particular corporate names").

30 See, for example, Hansmann, Kraakman, and Squire, 119 Harv L Rev at 1402 (cited in note 3).

31 See Kors, 59 U Pitt L Rev at 410 & n 179 (cited in note 29) (collecting cases holding that substantive consolidation should be used only in extreme circumstances). See also note 20.

32 Despite the rhetoric that substantive consolidation should be used sparingly, bankruptcy courts apply it in more than half of large-company bankruptcies. See Widen, 16 Am Bankr Inst L Rev at 5 (cited in note 8) (reporting that substantive consolidation was applied in 178 out of 315 large bankruptcies). The likelihood of consolidation is even higher in "jumbo" bankruptcies

Note that the two features of corporate groups that contradict Posner's theory—intragroup guarantees and slipshod internal accounting—go hand in hand. Thus, lenders to corporate groups regularly claim that they demand guarantees from all major subsidiaries because they set lending terms based on the creditworthiness of the group as a whole.[33] This is exactly what we would expect in a world in which a public company's consolidated reports must be accurate under federal securities law, but subsidiary-level reports can be unreliable or even nonexistent. In this way, the guarantees are the result of the sloppy accounting. But the causation goes the other way as well. Without the guarantees, major lenders would pressure group managers to keep better records for each constituent entity, or to pare away extraneous subsidiary boundaries if maintaining separate accounts is not worth the effort.

C. The Guarantees' Defenders: Boundary Abuse Revisited

At about the same time that Landers and Posner were facing off in the pages of *The University of Chicago Law Review*, other commentators began noticing the widespread use of the intragroup guarantee.[34] Most took a sanguine view of the arrangement, arguing that it serves an economically valuable function by reducing a corporate group's overall cost of credit.[35] To make this argument, however, these commentators had to paint a picture of the corporate group that is essentially the opposite of Posner's. Thus, Posner argued that the legal boundaries between affiliated corporations demarcate real, functional distinctions among asset bundles, thereby compartmentalizing the credit risks of what are, for practical purposes, separate enterprises. By contrast, the argument of the intragroup guarantee's defenders is that the typical corporate group is actually a single enterprise, and that its internal boundary lines are not informationally useful to creditors.[36] For this reason, their argument goes, confining a creditor's bankruptcy recovery to a

involving firms with at least $1 billion in total assets. Id (reporting that substantive consolidation was applied in 77 out of 124 jumbo bankruptcies).

33 See Widen, 25 Cardozo L Rev at 1583–84 (cited in note 21) (explaining that a creditor that lends to a primary debtor and is guaranteed by the debtor's affiliates sees itself "as making loans to the borrowing group rather than to individual legal entities").

34 See, for example, Rosenberg, 125 U Pa L Rev at 235–36 (cited in note 4).

35 See note 37.

36 See, for example, Blumberg, 9 Cardozo L Rev at 728 (cited in note 4) (arguing that the prevalence of intragroup guarantees reflects the "economic reality of corporate groups," which in effect operate as a single "enterprise"). See also Landers, 42 U Chi L Rev at 592 (cited in note 11) (noting the "free commingling of funds and properties" in corporate groups "in order to maximize overall productive use of the capital and resources of the enterprise").

discrete group member would make that creditor's appraisal and monitoring efforts artificially complex.[37] It follows that creditors are better off if the group's internal boundaries are waived, which is what the intragroup guarantee accomplishes. Taking a page from Landers, some of these commentators have also argued that intragroup guarantees create economic value by insulating creditors from the hazard that managers will shuffle assets around.[38] A guarantee does this by giving the lender recourse to a second asset pool if the borrower's assets have been siphoned off.

It is surely true that an intragroup guarantee ties a lender's fortunes more closely to the performance of the group as a whole. There are reasons, however, to doubt the claim that the arrangement therefore promotes economic efficiency. For one thing, corporate groups tend to give guarantees to those creditors who are least vulnerable to the hazards that the guarantees allegedly protect against. Thus, firms typically extend intragroup guarantees to banks and bank syndicates, which as a class are expert risk bearers.[39] Such lenders have both the means and the incentive to appraise and monitor a particular corporate debtor accurately and set the terms of lending accordingly. In other words, among a corporate group's various creditors, the banks are usually in the best position to adjust to the risks presented by the group's subsidiary structure. And yet the banks get the intragroup guarantees, which relieve them of the need to pay attention to particular subsidiaries rather than the group as a whole. Meanwhile, intragroup guarantees are unlikely to go to public bondholders, and are especially unlikely to be issued to trade creditors.[40] Monitoring is less cost-effective for such creditors because they suffer from collective action problems and a lack of expertise, and because they individually tend to have smaller claims. In short,

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37 See, for example, Kenneth J. Carl, *Fraudulent Transfer Attacks on Guaranties in Bankruptcy*, 60 Am Bankr L J 109, 111 (1986) (arguing that intragroup guarantees reduce information costs by making it unnecessary for lenders to analyze "each affiliate's financial statement" rather than a consolidated report). See also Widen, 75 Geo Wash L Rev at 265 (cited in note 4) (noting the high information costs to creditors of keeping track of a group's separate entities).

38 See Blumberg, 9 Cardozo L Rev at 686–87 (cited in note 4) (arguing that intragroup guarantees protect lenders from "possible intragroup manipulation of [the borrower's] affairs"). See also Avery Wiener Katz, *An Economic Analysis of the Guaranty Contract*, 66 U Chi L Rev 47, 73–74 (1999) (noting that a guarantee from a corporate affiliate of the borrower may protect the lender against asset shifting).

39 See *Owens Corning*, 419 F3d at 201 (noting how the debtor's upstream guarantees were given to a syndicate of banks but not to public noteholders); Widen, 75 Geo Wash L Rev at 248 (cited in note 4) (noting that intragroup guarantees typically are extended to "lending syndicates," which usually are groups of sophisticated bank lenders).

40 See Randolph J. Haines, *The Unwarranted Attack on New Value*, 72 Am Bankr L J 387, 434 (1998).

corporate groups typically deny intragroup guarantees to those creditors that seemingly would benefit from them the most. Something other than efficient risk allocation appears to be determining which debts are guaranteed and which are not.

A second reason to doubt the defenders' efficiency-based explanation for intragroup guarantees is that it depends on a seemingly irrational theory of how groups structure themselves. Thus, Posner described how large firms can reduce creditor information costs, and hence their own cost of credit, by laying subsidiary boundaries along functional lines that correspond to real differences in credit risk. The defenders of the intragroup guarantee, by contrast, assert that firms maintain a subsidiary network that is confusing to creditors, and that therefore would *raise* the firms' borrowing costs if not for the guarantees. Why firms would form and maintain subsidiaries in a way that squanders an opportunity for lower borrowing costs and hence higher profits, the defenders do not say. Yet such an explanation is necessary for their story to be plausible, as it otherwise presupposes that corporate groups structure themselves in a manner that is contrary to shareholder interests.

To be sure, Posner's theory is not the only explanation for why firms might form and maintain subsidiaries. The subsidiaries might be created for tax or regulatory reasons, or they might result from a history of mergers and acquisitions. But these alternative explanations do not provide much support for the defenders' argument that intragroup guarantees are economically efficient, as these explanations and Posner's theory are not mutually exclusive. In other words, there is no obvious reason why subsidiaries formed for one of these other reasons could not also be designed and maintained in a manner that simplifies creditor appraisal and monitoring efforts.

For example, many multinational firms reduce their tax bills and avoid regulatory conflict by forming a distinct legal entity in each state or national jurisdiction where they own major assets.[41] Similarly, firms in regulated industries may have to establish separate subsidiaries in each state where they operate. These observations are consistent with the fact that, in 2010, the 100 largest US public companies by revenues

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41 See Widen, 16 Am Bankr Inst L Rev at 29 (cited in note 8) (noting the possible tax-planning benefits of forming multiple subsidiaries); id ("External regulatory regimes, such as those applicable to banks, insurance companies and public utilities, similarly may provide another type of supplement to the legal entity form that helps preserve the integrity of an asset partition created by a legal entity."). In terms of US federal income tax, by contrast, the division of a firm into subsidiaries generally confers no advantage. To the contrary, it would create a disadvantage if the Internal Revenue Code did not allow affiliated corporations to file consolidated returns and thereby offset losses in some subsidiaries against gains in others. See IRC §§ 1501–02 and regulations enacted thereunder.

maintained an average of 109 foreign-nation subsidiaries, and that within the US they had an average of 62 major subsidiaries outside Delaware (in addition to 74 incorporated in Delaware).[42] It is intuitive that assets that are geographically co-located will be cheaper for creditors to evaluate. For this reason, the tax and regulatory explanations for corporate groups seem to buttress rather than contradict Posner's theory that subsidiary boundary lines will be informationally useful to creditors.

Another explanation for subsidiaries that complements the informational theory is one that Posner himself mentioned: a legacy of mergers and acquisitions.[43] When two incorporated firms combine, they typically structure the transaction to preserve the liability boundary between them. And the fact that the entities were once separate firms would, once again, imply that they are naturally distinct focal points for monitoring purposes. This is especially true if the firms were in different industries and were merged to form a conglomerate. But it could also be true if the firms were in the same industry but after the merger will maintain separate physical locations or, in the case of a "vertical" merger, play sequential roles in a production process. On the other hand, if a corporate combination is to result in a thorough commingling of assets and operations, nothing prevents the companies from being merged into a single entity.[44] Thus, as with the tax and regulatory explanations, the merger explanation for corporate groups is fully compatible with the notion that the subsidiary boundary lines that groups choose to preserve will be valuable to creditors.

There is a final potential reason for subsidiary networks that scholars often note: the avoidance of tort liability. The idea is that subdividing a firm into multiple legal entities minimizes recoveries for tort victims by confining a claimant's relief to the assets held by the particular subsidiary responsible for the claimant's injury.[45] Unlike other explanations for subsidiaries, the tort explanation is consistent with an argument that subsidiary boundary lines do not map out the

42 For a description of how these data were collected, see note 1.

43 See Posner, 43 U Chi L Rev at 510 (cited in note 3).

44 Indeed, under most state corporation statutes—including Delaware's—the merger of two corporations produces a single legal entity. See 8 Del Code Ann §§ 251(a), 259(a). A merger that preserves the corporations' distinct status generally requires a "triangular" arrangement in which the acquiring corporation forms a wholly owned shell subsidiary whose only function is to merge into the target and disappear. See William T. Allen, Reinier Kraakman, and Guhan Subramanian, *Commentaries and Cases on the Law of Business Organization* 461–62 (Aspen 3d ed 2009).

45 See, for example, Lynn M. LoPucki, *The Death of Liability*, 106 Yale L J 1, 20 (1996) (arguing that sequestering liability-generating operations in a separate subsidiary keeps tort and other claims from reaching a firm's most valuable assets).

firm's real, functional divisions. Fear of tort liability would cause firms to overpartition their operations, forming subsidiaries even when doing so segregates assets that serve a common function.

Denying recovery to tort victims is not, however, a socially efficient undertaking, which is probably why the intragroup guarantee's defenders do not emphasize it. Tort liability is supposed to give individuals and firms an incentive to take precautions that reduce the risk that they will injure third parties. But if firms can manipulate legal structures to avoid tort liability, they will underinvest in precautions that reduce the risk of injury.[46] Intragroup guarantees, in turn, can aid a firm in avoiding tort liability by insulating the firm's major lenders from the artificial complexity that arises when the firm tries to thwart tort claimants by overpartitioning its assets. Without the guarantees, the firm would have to pay for this complexity through higher interest rates, which would goad it toward reducing its tort exposure through the socially preferable means of investing in precautions. In this way, intragroup guarantees can abet firms in what is generally seen as an abuse of the corporate rule of limited shareholder liability.

As a practical matter, large-scale corporate tort liability is probably not common enough to be the main reason why modern firms form as many subsidiaries as they do.[47] The tort explanation does, however, raise the possibility that something other than economic efficiency is shaping the internal liability structures of corporate groups.

At bottom, then, we have two leading scholarly explanations for the corporate group: one that emphasizes the subsidiary structure, and another that emphasizes the guarantees between the subsidiaries. While each explanation seems persuasive standing on its own, they fall apart when we try to put them together. A comprehensive theory of the corporate group—one that can reconcile all its salient components—remains to be articulated.

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46 See, for example, Henry Hansmann and Reinier Kraakman, *Toward Unlimited Shareholder Liability for Corporate Torts*, 100 Yale L J 1879, 1886 (1991). But see Larry E. Ribstein, *The Deregulation of Limited Liability and the Death of Partnership*, 70 Wash U L Q 417, 447 (1992) (arguing that the corporate rule of limited liability may be a kind of second-best solution to the need for tort reform).

47 See Douglas G. Baird and Robert K. Rasmussen, *Antibankuptcy*, 119 Yale L J 648, 653 (2010) (noting that empirical findings demonstrate that most bankruptcy proceedings involve no tort claimants at all).

II. THE PERFORATED CORPORATE GROUP AS CORRELATION-SEEKING

This Part presents an alternative explanation for the internal liability structures of corporate groups, one that can account both for the myriad subsidiaries and for the intragroup guarantees that perforate the asset partitions between them. The theory is based on a type of shareholder opportunism that in a previous article I termed *correlation-seeking*.[48] Correlation-seeking occurs when a corporation sells contingent claims against itself that are especially likely to be triggered in future states when the corporation is insolvent. At the time the corporation incurs these contingent liabilities, there is an increase in the expected value of the shareholders' equity stake, and a commensurate decrease in the expected recoveries of the corporation's general creditors. Such conduct is opportunistic because it enriches shareholders not through the creation of wealth, but rather by taking value from creditors who are not parties to the guarantee. Indeed, correlation-seeking will typically deplete the store of social wealth, for reasons discussed in Part III.

In the context of the corporate group, the instrument of correlation-seeking is the intragroup guarantee, which creates a contingent claim against one group member that is triggered if another member defaults on a debt. Since group members tend to thrive or fail in unison, the borrower entity is especially likely to stop paying its debts in situations when the guarantor entity is also broke. As a result, there tends to be a strong positive correlation between the risk that liability on the guarantee will be triggered and the risk that the guarantor will be insolvent. This correlation drives demand for intragroup guarantees by creating, at the time the guarantee is issued, an expected value transfer from the guarantor's general creditors to the group's shareholders. And the possibility of a value transfer, in turn, spurs demand for further subdivisions of the firm, because each new subsidiary interposes a liability barrier between assets that tend to move together in value. In this way, correlation-seeking is consistent with both of the salient features of the modern corporate group. If there is one point on which commentators on corporate groups seem to agree, it is that the fortunes of group members tend to be highly correlated.[49] But no previous scholarship has analyzed the

48 Squire, 123 Harv L Rev at 1153 (cited in note 5).

49 See, for example, Douglas G. Baird, *Elements of Bankruptcy* 158–59 (Foundation 5th ed 2010); Mark J. Roe, *Bankruptcy and Corporate Reorganization: Legal and Financial Materials* 227 (Foundation 2d ed 2007).

implications of this correlation for how groups choose to structure themselves.

The discussion that follows has three sections. The first explains in general terms why a positive correlation between the fortunes of a borrower and of the borrower's guarantor causes the guarantee to transfer expected value from the guarantor's creditors to its shareholders. The second section presents a simple model that addresses variations in how intragroup guarantees are enforced and structured. The model shows that, even when these variations are taken into account, it remains true that the key factor in terms of the guarantee's impact on creditors is the correlation between the borrower's and guarantor's insolvency risks—a correlation that is reliably high in the intragroup setting. Finally, the third section addresses several arguments that commentators have made in defense of intragroup guarantees, and explains why none refutes the thesis that such guarantees tend to produce, at the time they are issued, a value transfer from creditors to shareholders.

A. Why Intragroup Guarantees Are Always Underpriced (and Also Overpriced)

In a previous article, I used the term *internal correlation* to refer to the relationship between the risk that a contingent liability will be triggered and the risk that the liable corporation will fall insolvent.[50] For an intragroup guarantee, the internal correlation corresponds to the correlation between the insolvency risks of the borrower and the guarantor. If that correlation is low, the guarantor's shareholders capture most of the expected benefit of the arrangement, and they shoulder most of its expected burden as well. But if the internal correlation is high, the expected benefit still goes primarily to the shareholders, while the burden is concentrated on the guarantor's general creditors.

To see why the internal correlation can decouple a guarantee's upside from its downside, consider the upside first. A guarantee on a loan is, in essence, an insurance contract that protects the lender from the risk that the borrower will fail to repay the loan in full. In exchange for this insurance policy, the lender pays a fee, conventionally known as the "premium."[51] The amount of the premium

50 See Squire, 123 Harv L Rev at 1159 (cited in note 5).

51 See, for example, FASB, *FASB Interpretation No. 45* at 10 (cited in note 2) (referring to the amount received by a guarantor in exchange for the guarantee as the "premium").

normally reflects the lender's expected recovery on the guarantee.[52] As an illustration, consider a hypothetical borrower who owes its lender $100. Suppose the lender knows there is a 10 percent chance that the borrower will default, in which case the borrower will be unable to repay any of its debt. Suppose further that the lender can acquire a guarantee from a corporation that promises to make the lender whole if the borrower defaults. Under those assumptions the expected value of the guarantee to the lender (ignoring the time value of money) is $100 × .10 = $10.[53] Therefore, if we assume that the lender is risk-neutral, $10 is the largest premium that the lender would be willing to pay for the guarantee. The most straightforward approach would be for the lender to pay this premium in cash directly to the guarantor. With intragroup guarantees, a different payment practice is sometimes followed, but I will set this detail aside for the moment.

Given that the premium is paid to the guarantor, how is this benefit divided between the guarantor's shareholders and creditors? The answer depends on the risk that the guarantor will fall insolvent. As long as the guarantor remains solvent, its shareholders enjoy the benefit of the premium, which enhances the guarantor's equity value. But if the guarantor becomes insolvent, its equity value is by definition wiped out, and the rule of limited liability prevents the shareholders from suffering further losses. The premium then accrues to the benefit of the guarantor's creditors because it augments the assets in the guarantor's bankruptcy estate. For example, if we continue with our earlier hypothetical guarantee and assume further that there is a 90 percent chance that the guarantor will remain solvent, we can say that the expected benefit of the premium to the guarantor's shareholders is $10 × .90 = $9, and the expected benefit to the guarantor's creditors is $10 × .10 = $1.[54]

Now consider the guarantee's downside. The guarantee creates a contingent liability that is triggered if the borrower defaults on the loan, which generally occurs only if the borrower falls insolvent. In terms of the guarantor's net worth, the expected value of this

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52 See id (assuming that, in an arm's length transaction, the expected liability on a guarantee will equal the premium amount).

53 An implicit assumption, which is not essential to the point being illustrated, is that the lender expects to collect $100 on the guarantee even if it is triggered when the guarantor is insolvent. This could happen if, for example, the guarantee were secured. But a discount for the guarantor's insolvency risk would not change the correlation-seeking dynamic. See text accompanying note 65.

54 I am for now ignoring the possibility that the premium will depreciate along with the rest of the guarantor's assets if the guarantor becomes insolvent. The model developed in Part II.B, however, adjusts for this possibility. See text accompanying note 66.

contingent liability is $100 × .10 = $10. Our concern here, however, is the impact of the liability not on the guarantor per se, but rather on the guarantor's shareholders and creditors. To calculate the implications for them we need an additional piece of information: the probability that, *if* the guarantee is triggered, the guarantor will also be insolvent.

This last piece of information is what is provided by the internal correlation. To illustrate, I will compare two opposing cases: one in which the internal correlation is 0, and a second in which the correlation is a perfect 1. In the first case, the borrower's and guarantor's insolvency risks are uncorrelated, and therefore the probability that both parties will fall insolvent is simply the product of their independent insolvency risks: .10 × .10 = .01. Since the overall chance that the borrower will fall insolvent is 10 percent, this necessarily means that the probability that the borrower will fall insolvent but the guarantor will remain solvent is 9 percent. These probabilities tell us how the guarantee's expected burden is divided between the guarantor's shareholders and creditors. If the guarantor remains solvent when the guarantee is triggered, the burden of the lender's $100 claim falls on the shareholders. Therefore, in the case where the internal correlation is zero, the guarantee's expected cost to the shareholders is $100 × .09 = $9. But if the guarantor is insolvent when the guarantee is triggered, the guarantee's burden is borne by the guarantor's general creditors, because the lender's claim dilutes their recoveries from the guarantor's bankruptcy estate. The expected cost to the creditors is therefore $100 × .01 = $1.

Note that, in this case of a guarantee with an internal correlation of zero, the distribution of the guarantee's expected cost ($9 for the shareholders, $1 for the creditors) exactly matches the distribution of its expected benefit. This means that a guarantee with a zero internal correlation has no expected *distributional* impact on the guarantor's various investors. It follows that the guarantor's managers cannot use such a guarantee to transfer value from one investor group to the other. They have incentive to issue such a guarantee only if it *creates* value in some way. Value could be created if, for example, the lender is risk-averse and the guarantor's investors are better diversified with respect to the borrower's default risk than the lender is.[55]

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[55] In that case the lender might be willing to pay a slightly larger premium than the one I am assuming here, though the difference would not be of the order of magnitude necessary to obviate the expected wealth transfer when the internal correlation is positive. In Part II.C, I consider in greater depth the possibility that a lender will be willing to pay a larger premium for a guarantee that creates additional economic benefits.

The second case I consider reflects the opposite extreme, in which the default risks of the borrower and guarantor have a perfect positive correlation, meaning that the guarantor becomes insolvent if and only if the borrower does. Now the probability that *both* entities will become insolvent is 10 percent, equal to the probability that each will fall insolvent individually. This increase in the risk of a joint insolvency from 1 percent to 10 percent shifts the guarantee's expected burden from the guarantor's shareholders to its creditors. The shareholders no longer bear any downside risk on the guarantee, because there is no longer a possibility that the guarantee will be triggered when the guarantor has a positive equity value. Therefore, the guarantee when issued confers a $9 windfall on the shareholders: the $9 expected benefit due to the premium minus an expected cost of zero. The downside from this guarantee is shouldered entirely by the creditors, imposing an expected cost on them of $100 × .10 = $10. Subtracting out the $1 expected benefit that the creditors derive from the premium yields a net burden of $9.

Note that this guarantee's expected value to the guarantor's shareholders (+$9) exactly mirrors its expected value to the guarantor's creditors (–$9). Because of this parity of outcomes, the guarantee can fairly be described as producing, at the time it is issued, a $9 wealth transfer from the creditors to the shareholders. The parity of outcomes will occur whenever the lender pays a premium equal to the lender's full expected recovery on the guarantee. If the guarantor instead sells the guarantee at a discount, then the lender and the guarantor's shareholders split the wealth transfer between them.

As might be expected, correlation levels between the two extreme cases considered here produce wealth transfers of intermediate amounts. For example, if the probability that the guarantor and borrower both fall insolvent is 5 percent rather than 10 percent, then our hypothetical guarantee produces a transfer from the creditors to the shareholders of $4 rather than $9. Therefore, even in that case the guarantor's managers have incentive to issue the guarantee in order to transfer wealth rather than create wealth. Indeed, any positive correlation acts like a thumb on a scale, tilting the managers' incentives away from the goal of wealth creation.

Commentators generally agree that when the entities in a corporate group fall bankrupt, they tend to do so en masse. This commonality of fate makes sense, as group members typically work together to make the same or complementary goods and services, and hence are subject to the same market supply and demand conditions. Group members also tend to be financially interlinked, which further binds their fortunes. One such linkage is the intragroup guarantee itself, which creates the risk that a default by one member will pull

down an otherwise healthy affiliate. But other financial arrangements link group members as well. Parent entities own equity stakes in their subsidiaries, causing the parents to suffer a loss whenever the rest of the group experiences a downturn. And group members often make direct loans to one another.[56] For these reasons, if a business downturn causes one constituent entity to default on a loan to an outside creditor, there is a good chance that the same downturn has caused a second group member who guaranteed that loan to fall insolvent as well.

The high internal correlations on intragroup guarantees mean that the arrangements will be, in the eyes of the guarantor's creditors, consistently underpriced. Staying with the hypothetical discussed above, in the case where the internal correlation is a perfect 1, the guarantor would have to receive a premium of $100 to prevent the guarantor's creditors from suffering an expected loss. But no rational lender would pay $100 for a $100 contingent claim that has only a 10 percent chance of coming due. The most a risk-neutral lender would pay for such a claim is $10, meaning that the guarantee will be, from the creditors' perspective, underpriced by a factor of ten.

The flip side of the creditors' perspective is that of the shareholders. To them, an intragroup guarantee will always be *overpriced*. This is because the shareholders can suffer a loss only if the guarantee is triggered when their equity stake in the guarantor has value, and the chances of that event shrink as the internal correlation grows. In the extreme case of a perfect correlation, the shareholders would rationally accept any nonnegative premium amount, because they bear no downside risk on the guarantee at all. A premium of $10 for such a guarantee represents a pure windfall for the shareholders, a bounty collected on the sale of assets that would otherwise go to other claimants—namely, the guarantor's creditors.

I now return to the point set aside earlier regarding the typical payment practice for intragroup guarantees. Our hypothetical assumed that the guarantee's premium was paid directly to the guarantor. While this is the normal practice for guarantees among unaffiliated entities, with intragroup guarantees a different arrangement is usually followed. Because many such guarantees are negotiated at the same time the underlying loan is issued, the lender often simply deducts the premium from the interest rate it charges the borrower.[57] In other words, the premium takes the form of an interest-rate discount rather than a lump sum cash payment, and it goes to the borrower rather than the guarantor. Whether the guarantor or borrower receives the

56 See Blumberg, 9 Cardozo L Rev at 686 (cited in note 4).

57 See id at 687.

premium makes no difference to the group's shareholders, who hold the ultimate equity interest in both entities. And, importantly, it typically will not make much difference to the guarantor's creditors either. Recall from the hypothetical that the expected benefit to the guarantor's creditors of the premium, assuming it was paid to the guarantor, was $1. Therefore, if we changed the hypothetical to assume that the premium was paid to the borrower instead, those creditors would be $1 worse off. By contrast, raising the guarantee's internal correlation from 0 to 1 causes those creditors to suffer an expected loss of $9. We thus see that, relative to the internal correlation, the question of who receives the premium is of decidedly secondary importance.

The relative unimportance of who receives the premium may come as a surprise to readers familiar with the special fraudulent transfer rules that courts have developed for intragroup guarantees. Those rules are supposed to protect the guarantor's general creditors from opportunism by the group's managers. Yet the rules ignore the guarantee's internal correlation, even though it is the variable that matters to those creditors the most. Instead, the rules place the question of who receives the premium at the center of a court's analysis.[58]

As the earlier numerical example can be used to illustrate, fraudulent transfer rules that focus on who receives the premium will produce perverse results. Consider again the case of the guarantee with a perfect internal correlation. Even though that guarantee imposes an expected loss on the guarantor's creditors of $9, it would be fully enforceable under current fraudulent transfer doctrine, because the premium was paid to the guarantor. By way of contrast, consider again the guarantee with an internal correlation of zero, but change the hypothetical to assume that the premium is paid to the borrower rather than the guarantor. This change exposes the guarantee to avoidance as a fraudulent transfer, even though the guarantee now imposes an expected loss on the guarantor's creditors of only $1. We thus see that a fraudulent transfer doctrine for intragroup guarantees that ignores correlations, and instead inquires only into who received the premium, will make big mistakes in both directions. It will give a pass to many guarantees that represent large opportunism hazards, while invalidating other guarantees that are relatively innocuous. I revisit current fraudulent transfer doctrine in Part IV, where I also explain how courts could use a guarantee's internal correlation as the basis for a better approach.

58 Current fraudulent transfer doctrine is discussed at greater length in Part IV.

B. Intragroup Guarantee Diversity and Why It Does Not Matter

Most academic commentary on the intragroup guarantee has focused on variations in how payouts on the arrangement are calculated and in how the arrangement is structured. Payouts can vary depending on whether the guarantee is secured or unsecured, and if unsecured on whether the court allows the lender to "double prove" its claim. And structures can vary based on the relationship between the borrower and the guarantor, with intragroup guarantees traditionally classified as "downstream" (the guarantor owns the borrower), "upstream" (the borrower owns the guarantor), or "cross-stream" (the borrower and guarantor are sibling entities under common ownership). This classification schema has legal import: as Part IV describes, a downstream guarantee is far more likely than the other two types to survive a fraudulent transfer challenge.

This section presents a simple model of an intragroup guarantee that takes account of these variations. The model shows that the variations, while not irrelevant, are not nearly as important to the parties affected by the guarantee as is the internal correlation. Moreover, to the extent that the variations do matter, their consequences are often the opposite of what most observers assume. Thus, the model shows that courts have been wrong to conclude that downstream guarantees are innocuous and hence merit a special dispensation under fraudulent transfer law. In fact, an equity stake that the guarantor holds in the borrower increases the correlation of the two entities' insolvency risks, making the guarantee's impact on the guarantor's creditors worse than it would be if the guarantor and borrower were unrelated. Courts therefore should be more rather than less likely to deem a guarantee a fraudulent transfer if the guarantee is downstream.

1. Payout variation: security and double proof.

I will model first the simplest type of intragroup guarantee, which is the cross-stream guarantee between subsidiaries under common ownership. Suppose that Borrower, a subsidiary in a corporate group, has the following characteristics. It has $150 in assets and one liability, a $100 debt to Bank that matures in one year.[59] Before that debt comes due Borrower will either thrive or suffer a downturn, and the downturn if it occurs will be either moderate or severe. The probability that Borrower will thrive is 90 percent, in which case its assets will increase in value by 10 percent. The probability that

59 The full obligation is to pay $100, including principal and any interest.

Borrower will suffer a moderate downturn is 5 percent, in which case its assets will depreciate 40 percent. And the probability that Borrower will experience a severe downturn is 5 percent, in which case its assets will depreciate 80 percent. If Borrower thrives, it will repay its $100 debt to Bank in full. If it suffers a downturn, it will default on its debt and enter bankruptcy. Under either type of downturn, Bank—as Borrower's sole creditor—will recover the assets in Borrower's estate. But those assets will not be worth enough to cover Bank's full claim, with the amount of the deficiency depending on whether Borrower's downturn is moderate or severe.

Assume that Bank, to protect itself against the risk that Borrower will default, approaches the managers of Borrower's corporate group and negotiates for a second subsidiary, Guarantor, to guarantee Borrower's debt. Assume further that Guarantor is nearly identical to Borrower: It also has $150 in assets, and it has a $100 one-year unsecured debt to Bondholder, an outside creditor. Like Borrower, Guarantor will either thrive or suffer a downturn in the coming year, and the downturn could be either moderate or severe. The probabilities of Guarantor's three possible outcomes, and the percentage change in Guarantor's asset value under each, are assumed to be the same as they are for Borrower.

Finally, assume that Bank, in exchange for the guarantee, pays a cash premium to Guarantor equal to Bank's full expected recovery on the guarantee.[60] In combination with the assumption that the premium is paid directly to Guarantor, this last assumption can be seen as creating something close to the best-case scenario for Guarantor's general creditors, represented here by Bondholder. If Bank instead paid a smaller premium, or paid it to Borrower rather than Guarantor, then the guarantee's expected impact on Bondholder would be worse.

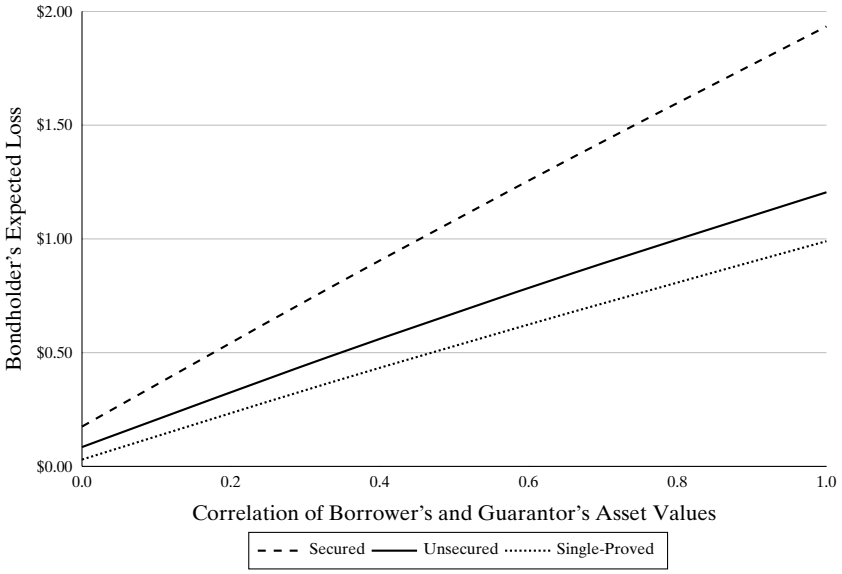
The guarantee creates an asset (the premium paid to Guarantor) and a liability (Bank's contingent claim). The question of interest is: What is the net effect of these two elements on the expected value of Bondholder's $100 claim against Guarantor? To answer this question we need to specify another variable, which is the guarantee's internal correlation. This correlation, plus a few additional simplifying assumptions about the relationship between Borrower's and Guarantor's downturn risks, can be used to produce the probabilities of the model's various joint outcomes.[61] Since Borrower and

60 I am thus assuming that Bank knows all relevant facts regarding Borrower's and Guarantor's net values and downturn risks. Because the time value of money is not relevant to the points being illustrated, the model assumes that the risk-free interest rate is zero.

61 The nine joint outcomes can be diagrammed as follows:

Guarantor each have three possible individual outcomes (thrive, moderate downturn, severe downturn), the model has nine possible joint outcomes. When the internal correlation is low, there is a relatively high probability of the joint outcomes in which one of these entities suffers a downturn but the other does not. And when the internal correlation is high, there is a relatively high probability of the joint outcomes in which both entities thrive or both fail. Based on the probabilities of the various joint outcomes, we can calculate the premium that Bank pays, and then the guarantee's expected impact on Bondholder. Figure 1 shows the results.

FIGURE 1. CROSS-STREAM GUARANTEE WEALTH TRANSFERS



		Guarantor	
	(Thrive, Thrive)	(Thrive, Moderate)	(Thrive, Severe)
Borrower	(Moderate, Thrive)	(Moderate, Moderate)	(Moderate, Severe)
	(Severe, Thrive)	(Severe, Moderate)	(Severe, Severe)

The model assumes that the dependence between Borrower's and Guarantor's asset values is linear and hence can be represented by a correlation coefficient. This linearity has two aspects. The first is that the distribution of the outcome probabilities is symmetrical as between Borrower and Guarantor. This means, for example, that the probability of (Moderate, Thrive) always equals the probability of (Thrive, Moderate). The second aspect is that the probabilities of the three parallel outcomes—(Thrive, Thrive), (Moderate, Moderate) and (Severe, Severe)—change in constant proportion to each other as the internal correlation increases from 0 to 1. A formal description of the relationship between the internal correlation and the outcome probabilities is provided in the Appendix.

Figure 1's x-axis represents the relationship between changes in Borrower's and Guarantor's asset values across the model's possible outcomes. This relationship, which for ease of demonstration is assumed to be linear, is expressed as a correlation coefficient that ranges from 0 (no correlation) to 1 (a perfect positive correlation).[62] The Figure's y-axis, in turn, represents the amount by which the guarantee reduces Bondholder's expected recovery on her $100 claim against Guarantor.

I will discuss the line marked "Unsecured" first. Its results are calculated by assuming that Bank's and Bondholder's claims are paid pro rata from Guarantor's estate when the estate lacks enough value to cover both claims in full. Since Bank and Bondholder both have $100 claims, the pro rata rule means that, if Borrower defaults, Bank recovers 50 percent of Guarantor's assets (in addition to whatever remains of Borrower's assets).[63] As the Unsecured line indicates, the expected value of Bondholder's claim decreases as the correlation level rises. When the correlation is zero, the guarantee has almost no expected impact on Bondholder, reducing the expected value of her claim by only $0.09. Put another way, the guarantee's net effect at that correlation level is to cause Bondholder to expect to recover $0.09 less on her $100 claim than she would if the guarantee had not been issued. When, however, the correlation is a perfect 1, the guarantee reduces the claim's expected value by $1.21, more than a twelvefold increase.[64]

The primary reason a higher internal correlation harms Bondholder is the dynamic described earlier: as the correlation rises, the guarantee's expected burden shifts from the guarantor's shareholders to its general creditors. And in the particular context of an unsecured guarantee, there is a second factor at work that is also adverse to the guarantor's general creditors. This dynamic is that the premium shrinks as the internal correlation increases, which occurs because a higher correlation means an increase in the risk that the guarantor will be insolvent if the guarantee is triggered and hence a

62 In theory, the correlation could also be (slightly) negative, with the lowest possible correlation coefficient on the assumptions used for the model being –0.05. This possibility is ignored here for ease of exposition.

63 An exception occurs when 50 percent of Guarantor's asset value exceeds the deficiency in Borrower's estate, in which case Bank's recovery from Guarantor is capped at the amount of that deficiency. This proviso ensures that Bank's total recovery does not exceed the $100 face value of its claim, a limitation consistent with the rule against double recoveries followed by US bankruptcy courts. See, for example, *In re F.W.D.C., Inc*, 158 BR 523, 527 (Bankr SD Fla 1993).

64 The graph also shows Bondholder's expected losses at correlation levels that are intermediate between these two extremes. The formulas for the losses at all correlation levels are provided in the Appendix.

decrease in the guarantee's expected value to the lender.[65] In this way, a higher internal correlation in our model harms Bondholder on both the asset side and the liability side of the ledger. The impact on the asset side is of secondary importance since the premium is many times smaller than the face value of Bank's claim even at an internal correlation of zero. But this aspect of the value proposition nonetheless underscores the pivotal role of the internal correlation in the economics of the arrangement.

The losses the guarantee imposes on Bondholder have a converse: the gains it confers on the shareholders who hold the equity interest in Guarantor. For example, while the guarantee with an internal correlation of 1 reduces the expected value of Bondholder's claim by $1.21, it simultaneously increases Guarantor's equity value by $1.24.[66] The shareholders' expected gains are slightly greater than Bondholder's expected losses because the premium, once paid to Guarantor, appreciates or depreciates along with the rest of Guarantor's assets before the debts to Bondholder and Bank come due. Putting this difference aside, we can characterize the guarantee as producing a value transfer from Bondholder to the shareholders, with the magnitude of the transfer indicated by Figure 1. Note that a higher correlation yields a larger windfall for the shareholders even though it also means a smaller premium. The shareholders are better off despite the smaller premium because, as the correlation rises, the expected cost of the guarantee to the shareholders shrinks more quickly than the premium does.[67]

For purposes of comparison, Figure 1 also has a line marked "Single-Proved," which reflects the guarantee's impact if we use an alternative method for calculating Bank's pro rata recovery from Guarantor. As noted above, the results along the Unsecured line reflect an assumption that Bank is allowed, upon Borrower's default, to recover the assets in Borrower's estate and, at the same time, to recover a pro rata portion of Guarantor's assets that is based on the full $100 face amount of Bank's claim. This particular method for calculating recoveries on a guarantee is the one followed by US bankruptcy courts.[68] Professor William Widen has argued that

65 For example, Bank pays a premium of $3.80 when the correlation is zero, but $1.26 when the correlation is perfect. See the Appendix for the premium formula.

66 The formula for changes in the equity value is provided in the Appendix.

67 Consider that, at a perfect positive correlation, the downside impact of the guarantee on the shareholders is zero, but the premium still has a positive value that reflects Bank's expected recovery from Guarantor's bankrupt estate.

68 See, for example, *In re National Energy & Gas Transmission, Inc*, 492 F3d 297, 301 (4th Cir 2007) (holding that a creditor may assert the full face value of its claim even though the claim has already been paid in part by a guarantor); *F.W.D.C.*, 158 BR at 527 (holding that a

allowing guaranteed lenders to "double prove" the full face amounts of their claims in this way is unfair to a corporate group's nonguaranteed creditors.[69] According to Widen, an approach more consistent with common law doctrines such as marshaling would be to allow the guaranteed lender to "prove" the face value of its claim only once; recovery on the second claim would be calculated based on the "smaller, residual amount" that the lender is still owed after the first claim is paid out.[70]

One possible response to Widen's critique is to observe that a lender will pay a larger premium for a guarantee that the lender knows will be governed by a rule of double proof, and that this larger premium will cushion the guarantee's impact on the guarantor's other creditors. As with any other contingent liability contract, then, we need to consider the expected distribution of both the burden and the benefit before we can draw a conclusion about the net expected impact on creditors. And this distribution is driven by the internal correlation. Once we hold that constant, we find that it only makes a marginal difference whether a court applies a rule of double proof or instead follows Widen's proposed alternative, which I am calling here a rule of "single" proof.

The relative unimportance of the double-proof rule can be seen in Figure 1. The results along the Single-Proved line are calculated assuming that Bank recovers from Guarantor based not on its full $100 claim, but rather on the remaining amount it is owed after it has recovered the assets in Borrower's estate. This reduction in Bank's claim against Guarantor means a smaller pro rata recovery at Bondholder's expense.[71] Comparing the Single-Proved line with the Unsecured line shows that this change in the method of calculating Bank's recovery makes only a slight difference to Bondholder. For example, when the internal correlation is a perfect 1, a switch from double proof to single proof reduces Bondholder's expected loss by

claim against a guarantor is not reduced to reflect a creditor's receipt of collateral to secure the debt of the original borrower), citing *Ivanhoe Building & Loan Association v Orr*, 295 US 243, 245 (1935).

69 See Widen, 75 Geo Wash L Rev at 304–07 (cited in note 4) (describing the historical origins and modern practice regarding rules of single and double proof). The question whether a claim is single-proved or double-proved does not arise with a secured guarantee, because a guaranteed lender will always recover the full amount of the deficiency to the extent of the secured assets.

70 Id at 303.

71 For example, when Borrower suffers a severe downturn, its assets depreciate to $30, leading Bank to assert a $70 claim on the guarantee, which is paid pro rata with Bondholder's $100 claim. Bank gets $70 / ($100 + $70) = 41 percent of Guarantor's assets, and Bondholder gets the remaining 59 percent.

about 20 percent, from $1.21 to $0.99.[72] The implication is that even if bankruptcy courts adopted the single-proof rule that Widen advocates, most of the opportunism hazard presented by intragroup guarantees would remain. By way of comparison, the loss that Bondholder suffers from the double-proved guarantee drops more than 90 percent, to $0.09, if the internal correlation is reduced to zero. These results suggest that if a guarantor's unsecured creditors could choose between a guarantee with a low internal correlation that would be subject to a rule of double proof, and an otherwise identical guarantee with a high internal correlation that would be subject to a rule of single proof, they would prefer the former arrangement several times over.

Finally, Figure 1 has a line marked "Secured," which represents the guarantee's expected impact on Bondholder if we assume that Bank is granted a security interest in all of Guarantor's assets. Such a secured claim would give Bank priority over Bondholder in the division of Guarantor's estate.[73] As the Figure shows, securing the guarantee increases Bondholder's expected losses even though it also makes Bank willing to pay a larger premium. This result will not surprise readers familiar with the extensive scholarly literature on the secured loan, much of which argues that a security interest tends to harm the debtor's unsecured creditors.[74] But the Figure also suggests that, as between the two variables, the guarantee's internal correlation remains more important to the guarantor's general creditors than whether the guarantee is secured. Thus, if the guarantee is secured but the internal correlation is zero, the guarantee imposes an expected loss on Bondholder of $0.18, as contrasted with the $1.21 expected loss that Bondholder suffers when the guarantee is unsecured but the internal correlation is perfect.

These results indicate that it is the internal correlation rather than the particular rule for calculating recoveries that is the main driver of the expected wealth transfers produced by intragroup guarantees. With their reliably high internal correlations, such guarantees will transfer expected value from creditors to shareholders

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72 The formulas for calculating recoveries under the rule of single proof are provided in the Appendix.

73 I have assumed that Bank's secured claim covers all of Guarantor's assets; an intermediate possibility would be that only some of those assets are pledged to Bank as collateral.

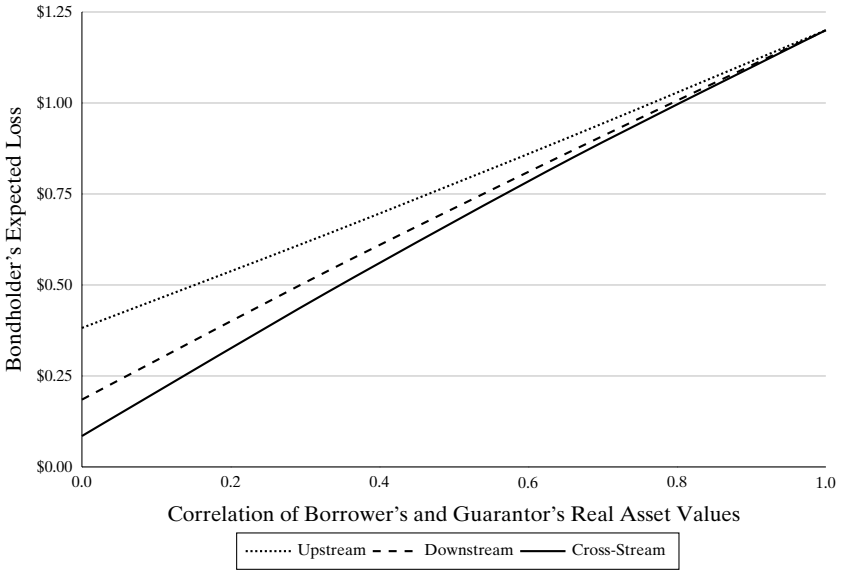
74 See, for example, Squire, 118 Yale L J at 853–54 (cited in note 19); Elizabeth Warren, *An Article 9 Set-Aside for Unsecured Creditors*, 51 Consumer Fin L Q Rep 323, 325 (1997); Lucian Arye Bebchuk and Jesse M. Fried, *The Uneasy Case for the Priority of Secured Claims in Bankruptcy*, 105 Yale L J 857, 891–95 (1996); David W. Leebron, *Limited Liability, Tort Victims, and Creditors*, 91 Colum L Rev 1565, 1643–46 (1991).

regardless of how the lender's recovery is calculated, so long as the lender is paid at least on parity with the guarantor's general creditors.

2. Structural correlation: upstream and downstream guarantees.

The second important dimension along which intragroup guarantees can vary is the structural relationship between the guarantor and the borrower. The model to this point has considered a cross-stream guarantee—that is, a horizontal arrangement between two affiliated subsidiaries, neither of which owns an equity stake in the other. Such guarantees tend to have high internal correlations because affiliated subsidiaries typically make the same or complementary goods or services, causing their asset values to be governed by the same market conditions.[75] But the internal correlation will be higher still if the guarantee is vertical—that is, if it is between a parent and subsidiary (regardless of whether the "parent" is itself a subsidiary of another entity higher up in the group's entity hierarchy). The consequence is even larger expected losses for the guarantor's general creditors, as Figure 2 indicates.

FIGURE 2. UP-, DOWN-, AND CROSS-STREAM TRANSFERS



75 See Jack F. Williams, *The Fallacies of Contemporary Fraudulent Transfer Models as Applied to Intercorporate Guaranties: Fraudulent Transfer Law as a Fuzzy System*, 15 Cardozo L Rev 1403, 1420 (1994).

The Figure compares the wealth transfers produced by the cross-stream guarantee discussed earlier to those that result if we consider instead an upstream or downstream arrangement. All results in the Figure assume that the guarantees are unsecured and governed by the standard bankruptcy rule of double proof.[76]

I will address the "Downstream" results first. These are calculated by taking the cross-stream guarantee modeled earlier and assuming that Guarantor has an additional asset: a 100 percent equity stake in Borrower. This financial asset does not make the guarantee more valuable to Bank, because the asset by definition is wiped out whenever Borrower falls insolvent, which is the only time that Bank makes a claim on the guarantee. Bank therefore pays the same premium for the downstream guarantee that it pays for the cross-stream guarantee. Guarantor's equity stake in Borrower does, however, reduce the value of that premium to Bondholder. This is because Bondholder derives a net benefit from the guarantee only in future states when Guarantor falls insolvent but Borrower does not. And Guarantor's equity stake in Borrower makes these outcomes less likely. The stake acts like a buoy, keeping Guarantor above water in some instances when Guarantor's real assets suffer a loss of value. For this reason, the guarantee's downstream structure makes Guarantor less likely to be insolvent unless Borrower is as well. The guarantee thus imposes consistently larger expected losses on Bondholder, as Figure 2 demonstrates. However, as the Figure also shows, the difference is relatively slight, and tapers off as the correlation level approaches 1.[77]

The finding that the downstream version of the intragroup guarantee is worse for the guarantor's general creditors than the cross-stream type contradicts the conventional view among courts and commentators. Under that view, an equity interest that the guarantor owns in the borrower benefits the guarantor's general creditors by ensuring that any value the borrower derives from the guarantee enriches the guarantor as well. Based on this logic, most judges hold that downstream guarantees are outright immune from attack as constructive fraudulent transfers, a position that most scholars

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76 To permit direct comparison with Figure 1, Figure 2's x-axis shows only the correlation between the values of Guarantor's and Borrower's real assets—meaning the correlation exclusive of changes in the value of the equity stake that either Guarantor or Borrower holds in the other. The formulas for the wealth transfers produced by the upstream and downstream guarantees are provided in the Appendix.

77 At a correlation of 1 the guarantee is never triggered unless Guarantor is insolvent, and Guarantor is never insolvent unless the guarantee is triggered, making Guarantor's equity interest in Borrower irrelevant to the guarantee's impact.

endorse.[78] Yet Figure 2 shows that this position gets the economics of the downstream guarantee backward. The guarantor's equity interest in the borrower is a source of correlation, causing the guarantee to harm the guarantor's general creditors even when changes in the guarantor's and borrower's real asset values are uncorrelated. And this is true even when (contrary to practice) the premium is paid directly to the guarantor, as Figure 2 assumes. If the premium were paid to Borrower instead, Bondholder's expected losses would be even greater, because Bank would then get the first claim to the premium when both Borrower and Guarantor fell insolvent.

The expected loss that the guarantee imposes on the guarantor's general creditors is larger still when the guarantee is upstream, as Figure 2 also shows. The results along the "Upstream" line reflect the assumptions used for the downstream guarantee except that Borrower now owns a 100 percent equity interest in Guarantor rather than vice versa, making Borrower the parent and Guarantor the subsidiary. This upstream structure harms Bondholder by reducing the value of the guarantee to Bank and hence the premium that Bank is willing to pay. To see why Bank pays less, consider that a guarantee is normally most valuable to a lender when the borrower suffers a downturn but the guarantor does not, because then the guarantor is most likely to be able to cover the deficiency in the borrower's estate. If, however, the borrower owns the guarantor, the borrower's equity stake in the guarantor tends to keep the borrower afloat when the borrower's real assets have suffered a loss in value but the guarantor's have not, making it more likely that the lender would be repaid in full even without the guarantee. Thus, in terms of the model, the guarantee benefits Bank only when Guarantor and Borrower both suffer a downturn or when Borrower alone suffers a downturn deep enough to render it insolvent notwithstanding its equity stake in Guarantor.[79] This narrowed set of outcomes in which the guarantee is valuable to Bank translates into a smaller premium and hence an even larger expected loss for Bondholder.[80]

The idea that the upstream version of an intragroup guarantee is the worst of the three types for the guarantor's general creditors becomes intuitive once one recognizes that such a guarantee pledges no shareholder wealth to the lender that the lender did not have a claim against already. The default rule in bankruptcy is to apply a

78 See note 127 and accompanying text.

79 This means that the upstream guarantee is the only one of the three arrangements depicted in Figure 2 for which the premium increases rather than decreases with the correlation level.

80 Except, again, at a perfect internal correlation, where the differences between the three guarantee types disappear.

subsidiary's assets first to pay the subsidiary's creditors, and second to pay the parent's creditors. Only if value is left over after both sets of creditors have been paid can assets then be distributed to the group's ultimate shareholders. It follows that an upstream guarantee—that is, a guarantee that the subsidiary gives to one of its parent's creditors—does not increase the amount of liability borne by the group's shareholders, because those shareholders are already subordinate to the parent's creditor in the distribution of the subsidiary's assets. All the guarantee does is elevate the parent creditor's claim to the subsidiary's assets at the expense of the subsidiary's own creditors. For this reason, the burden of an upstream guarantee is always borne entirely by the subsidiary's creditors, regardless of the guarantee's internal correlation. The arrangement is a pure example of betting with other people's money, with the group's ultimate shareholders realizing the upside benefit so long as the parent entity remains solvent, but losing nothing they would not have lost anyway if the borrower defaults on its debt and liability on the guarantee is triggered.

C. Why Other Putative Benefits Do Not Prevent the Wealth Transfer

The simple model presented in the previous section treats the premium as the only benefit from a guarantee that might neutralize the arrangement's dilutive effect on the guarantor's general creditors. Commentators and litigants who defend the intragroup guarantee, however, usually do not mention the premium, which is unsurprising given that the premium is rarely paid to the guarantor. Nor do they assert that the guarantor's creditors benefit from the guarantee's alleged capacity to deter managers from shifting assets out of the borrower. Again, their silence on this score makes sense: even if intragroup guarantees really did discourage managers from smuggling assets out of borrowers—and, as will be discussed in Part IV, there is good reason to doubt they do—this is hardly a benefit to creditors of other group members, who otherwise would be on the receiving end of the asset shifts.

Even though the intragroup guarantee's defenders rarely mention the premium, it is nevertheless true that a lender would be willing to pay a larger premium for a guarantee that discourages managers from pulling assets out of the borrower. And this additional value could reduce the expected wealth transfer if the premium is paid to the guarantor. However, the impact of any such increase in the premium is unlikely to be meaningful, as the model from the previous section can be used to demonstrate. Consider again the unsecured cross-stream guarantee in Figures 1 and 2, and assume a moderate correlation level of 0.6. Bank is willing to pay a premium of $2.33 for

this guarantee, which, as the Figures show, imposes an expected loss on Bondholder of $0.77.[81] Assuming that this guarantee's ostensible anti-shifting function induces Bank to pay an even larger premium, we can ask how large the increase would have to be to eliminate the expected wealth transfer from Bondholder altogether. The answer, given the model's other assumptions, is $13.32, or more than five times the premium's baseline value.[82] Such an increase would imply that the asset-shifting threat the guarantee protects against is several times greater than all other sources of default risk faced by Bank, including the credit risk associated with Borrower's underlying business, combined. Not even the intragroup guarantee's staunchest supporters argue that the asset-shifting threat is that great or that the guarantee is that effective in reducing it. And at higher correlation levels the bump-up in the premium would have to be even greater. It thus seems safe to conclude that any ostensible anti-shifting benefits do not prevent the typical intragroup guarantee from transferring value away from the guarantor's general creditors.

Instead of citing premium values, the intragroup guarantee's defenders often argue that, without the guarantees, corporate groups would be frozen out of credit markets altogether. For example, Professor Philip Blumberg has argued that all intragroup guarantees should be exempt from fraudulent transfer attack because they often are "required to make the borrowing possible at all."[83] The notion is that, without the guarantees, lenders would deem group borrowers too risky and would deny credit outright or—what amounts to the same thing—would demand an interest rate that is beyond the group's ability to pay.

Actually, there is good reason to believe that a guarantee is *worse* for the guarantor's general creditors when it is necessary to make the underlying loan possible. To see why, suppose that a corporate subsidiary normally can borrow at a 10 percent interest rate, but this rate drops to 6 percent if the subsidiary's parent provides a guarantee. By definition this means that the guarantee's premium is 4 percent. What would it mean to say that a guarantee is necessary for this subsidiary to borrow? It could mean only that the subsidiary intends to invest the loan proceeds in a project that is expected to generate

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81 To be precise, these results correspond to a correlation coefficient of 0.58, which occurs when the probability that both Borrower and Guarantor will suffer severe downturns is 3 percent.

82 This result is obtained by taking Equation 26 in the Appendix, setting T^{CU} to 0, and solving for P^{CU}. The equation produces a premium of $15.65, representing a net increase in the premium amount of $13.32.

83 Blumberg, 9 Cardozo L Rev at 687 (cited in note 4).

less than a 10 percent return and hence that would not be profitable but for the guarantee. This would be the case if, for example, the intended project is expected to yield only a 9 percent return, which becomes 3 percent after the subsidiary's borrowing costs (the interest payments on the guaranteed loan) are deducted. The subsidiary in that case would have only a 3 percent expected profit to pass on to the parent as compensation for the guarantee. By contrast, the subsidiary would have at least 4 percent in expected profits if the guarantee was *not* necessary to make the loan worthwhile. It follows that the benefits that guarantors receive in exchange for "necessary" guarantees are smaller than those they receive for unnecessary guarantees, causing the expected wealth transfers away from their general creditors to be even larger.

A variant on this "necessity" defense of intragroup guarantees has been offered by Professor Robert Rasmussen, who has argued that a fraudulent transfer challenge to an intragroup guarantee should be rejected if, for example, the borrower is the guarantor's "only source for an essential raw material" and the borrower "would have been forced into liquidation without the proceeds of a new loan."[84] Rasmussen's hypothetical seems designed to illustrate the strongest possible case for full enforcement of an intragroup guarantee. We might call it the "triple necessity" case: the guarantee is (presumably, as this part is only implied) necessary to make the loan happen, the loan is necessary to save the borrower from liquidation, and saving the borrower is necessary to save the guarantor. Surely in that case, Rasmussen suggests, the guarantee must be good for the guarantor's general creditors.

Once we recognize the key role of the internal correlation in the economics of a guarantee, we can see that this triple necessity case actually illustrates something close to a worst-case scenario for the creditors of the guarantor. Note that whenever the borrower in Rasmussen's hypothetical fails the guarantor does as well. Therefore, the internal correlation on his hypothetical guarantee is close to perfect. The guarantee imposes no downside risk on the guarantor's shareholders; its burden is borne entirely by the guarantor's creditors. Moreover, the only benefits that a new loan can confer on a distressed borrower are to delay bankruptcy in hopes that sales will improve, or to provide the funds the borrower needs to "gamble for resurrection" by investing in a risky project that, if profitable, will lift the borrower

84 Robert K. Rasmussen, *Guarantees and Section 548(a)(2) of the Bankruptcy Code*, 52 U Chi L Rev 194, 216 (1985).

into solvency.[85] Pursuing these options is certainly good for the borrower's shareholders, who get nothing if the borrower fails. But the guarantee's expected impact on the guarantor's creditors will almost certainly be negative since they suffer the dilutive effect of the guarantee if—consistent with the borrower's past performance—market conditions fail to improve or the new, risky project is unsuccessful.

One might object that my response to Rasmussen's hypothetical fails to recognize the degree to which a debtor's liquidation can harm creditors by destroying going concern value. Regardless, however, of how value-destroying liquidation may be, it remains true that the only effect of a loan guarantee is to reduce the risk borne by the lender by an amount equal to the maximum premium the lender is willing to pay. It follows that the guarantor in Rasmussen's hypothetical, instead of issuing a guarantee, could have obtained a loan for the borrower at the same interest rate by making a direct cash payment to the lender for an amount equal to the premium value. And we already know that the premium the guarantor obtains by giving the guarantee instead will be inadequate to offset the guarantee's dilutive effect on the guarantor's creditors whenever, as in this case, there is a high correlation between the borrower's and guarantor's insolvency risks.

There is one final putative benefit of guarantees that should be addressed. Commentators sometimes argue that, when weighing the benefits a party receives in exchange for giving a guarantee, a court should include the guarantor's so-called "equitable" rights, which go by the names of subrogation, reimbursement, exoneration, and contribution.[86] Except for the last of these, which has to do with duties among co-guarantors,[87] these common law rights provide guarantors with means for limiting their net liability on a guarantee to the portion of the underlying loan that the borrower itself cannot repay. The Bankruptcy Code compromises these rights by forbidding a guarantor from asserting them until it has already paid out on the guarantee,[88] at which point the borrower's estate may be exhausted. Nonetheless, the simple model from the previous section gives Guarantor the full potential benefit of its equitable rights by assuming that Bank's

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85 See Thomas Romer and Barry R. Weingast, *Congress: The Genesis of the Thrift Crisis*, 2 Stan L & Pol Rev 37, 38 (1990) (describing the "gamble for resurrection" as a mechanism by which insolvent "zombie" corporations attempt to lift themselves out of insolvency by making high-risk investments).

86 See Williams, 15 Cardozo L Rev at 1441 (cited in note 75); Carl, 60 Am Bankr L J at 122 (cited in note 37).

87 Carl, 60 Am Bankr L J at 114 (cited in note 37).

88 11 USC § 502(e)(1)(B).

recovery from Guarantor can never exceed the deficiency in Borrower's estate. Even with this assumption, the modeled guarantee transfers value away from Bondholder whenever the fortunes of Borrower and Guarantor are positively correlated. The implication is that a guarantor's equitable rights, even when fully enforced, do not prevent the guarantor's creditors from suffering an expected loss when the guarantee has a positive internal correlation.

III. THE SOCIAL COSTS OF INTRAGROUP GUARANTEE OVERUSE

Because intragroup guarantees have the capacity to transfer wealth, they end up destroying wealth. Wealth is lost because the prospect of a windfall for shareholders induces managers to overuse the guarantee and its related elements and causes creditors to take costly defensive measures to protect themselves against dilution. Overuse of intragroup guarantees is thus an example of rent-seeking: a socially wasteful activity in which parties expend resources trying to increase their share of a fixed store of wealth rather than trying to create wealth.[89] In addition to generating the standard social costs of debtor opportunism, correlation-seeking via the intragroup guarantee makes corporate groups more complex and opaque, thereby forcing courts to collapse the groups in order to render bankruptcy proceedings manageable.

A. Overuse and Forgone Efficiencies

An intragroup guarantee has three constituent elements: the guarantee itself, the underlying loan, and the corporate entity that interposes the liability barrier between the guarantor and the borrower. The use of each element consumes resources and creates opportunity costs. Ideally, a group's managers will not use these elements unless their costs are outweighed by the amount of new wealth created. But a value transfer away from the group's creditors distorts this calculus, creating a benefit to shareholders that has nothing to do with wealth creation. In other words, the transfer acts like a subsidy, stimulating demand for the guarantee and its related elements beyond efficient levels.

Overuse of the guarantee contract itself is socially costly because, as was described in Part I, intragroup guarantees undercut the informational benefits to creditors of asset partitioning. Each guarantee increases the number of group members that the guarantor's creditors must appraise and monitor to get an accurate

89 See Richard A. Posner, *Economic Analysis of Law* 36 n 4 (Aspen 7th ed 2007).

sense of the risk they bear. Creditors who anticipate this increase in their information costs will seek compensation by charging higher interest rates. But the group's managers will issue guarantees anyway as long as the increase in borrowing costs attributable to the forgone efficiencies is smaller than the decrease in interest costs on the guaranteed loans attributable to the value transfer.

Overuse of the second element—the underlying loan—occurs because the expected wealth transfer artificially reduces the firm's borrowing costs. Intragroup guarantees with high internal correlations reduce interest rates on the guaranteed loans primarily by pledging creditor wealth rather than shareholder wealth, and the group's managers will ignore this burden to creditors when determining whether the loan is worthwhile. Because borrowing seems cheaper, firms will engage in more of it, producing higher debt-to-equity ratios and hence greater risk of financial distress.[90] Another potential result is that firms will engage in overinvestment because their overall cost of capital is lower than it would be if the borrowing were not subsidized by wealth transfers. Overinvestment reduces social wealth by causing firms to consume capital that would earn higher overall returns if invested elsewhere.[91]

Finally, correlation-seeking via the intragroup guarantee encourages overuse of the corporate form because it requires a corporation (or some other limited liability entity) to introduce a partition between assets whose changes in value are correlated. The resultant entity overgrowth in corporate groups destroys wealth due to the legal and administrative costs of forming and maintaining each separate subsidiary and because of underdeterrence of tortious conduct due to limited liability.[92] And the overdivision of assets further undermines appraisal and monitoring efficiencies because it breaks down the relationship between the subsidiary structure and the real, functional distinctions among the firm's assets.

B. How Creditors Can Protect Themselves and Why Wealth Is Lost Anyway

To be sure, not all of a corporate group's creditors will sit idly by while its managers use intragroup guarantees to sell off their future bankruptcy recoveries. Some creditors will charge higher interest

90 See Squire, 123 Harv L Rev at 1181 (cited in note 5) (describing the various social costs of financial distress).

91 See Clifford W. Smith Jr and Jerold B. Warner, *On Financial Contracting: An Analysis of Bond Covenants*, 7 J Fin Econ 117, 118–19 (1979).

92 See Hansmann and Kraakman, 100 Yale L J at 1882 (cited in note 46).

rates as compensation for opportunism risk, and some may also monitor to prevent opportunism after they extend credit. However, while these defensive measures may prevent or neutralize the expected wealth transfers, they entail costs of their own and thus constitute another means by which the possibility of correlation-seeking can reduce total social wealth.

In terms of their responses to opportunism risk, creditors can be divided into three broad categories. The first consists of creditors who are wholly passive, neither appraising before they extend credit nor monitoring afterward. The archetype is the involuntary tort claimant who lacks any contractual relationship with the debtor. But passive claimants may also include contract creditors who are unsophisticated or whose claims are too small to make a careful investigation of their debtor worthwhile.[93] By failing to take defensive measures, such creditors are particularly likely to invite overuse of the intragroup guarantee and its related elements.

The second category consists of creditors who might be called "ex ante adjusters."[94] These creditors make an initial appraisal of their prospective debtor and adjust their interest rates accordingly, but they do not continue to monitor after credit is extended. In the typical corporate setting, this is probably the largest of the three creditor categories.[95] Many relatively sophisticated creditors, such as public bondholders, will commit funds only after they first assess the borrower's creditworthiness, either directly or via a rating agency. If a corporate group has partitioned its assets too finely, or has intragroup guarantees already in place, then these creditors may adjust by charging higher interest rates. Although such appraisal efforts are themselves costly, they may also pay social dividends. The higher interest rates charged by the ex ante adjusters may counterbalance the artificially low rates that firms can capture through intragroup guarantees. In this way, these creditors can blunt the tendency for groups that engage in correlation-seeking to grow too large and to take on too much debt relative to equity.

What the ex ante adjusters do not do is deter opportunism *after* they extend credit. To see why, imagine that Creditor A is an ex ante

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93 See Bebchuk and Fried, 105 Yale L J at 885 (cited in note 74).

94 Professors Lucian Bebchuk and Jesse Fried introduced the term "nonadjusting creditor." Id at 864. I modify their term here to emphasize the distinction between creditors who adjust before credit is extended and those who monitor afterward. (Only the second group would be called "adjusting" by Bebchuk and Fried.) This modification can be seen as harmonizing the concept of the nonadjusting creditor with the distinction introduced by Posner between creditor appraisal and monitoring efforts. See Posner, 43 U Chi L Rev at 507–08 (cited in note 3).

95 See Levmore, 92 Yale L J at 53, 57 (cited in note 19).

adjuster who boosts the interest rate he demands from a particular group subsidiary by 2 percent to reflect the risk posed to him by correlation-seeking. Suppose also that, once the loan from Creditor A is in place, the group's managers can cause the subsidiary to issue an intragroup guarantee with a high internal correlation to Creditor B. In that situation, Creditor A's ex ante adjustment provides no disincentive: the higher interest rate on Creditor A's loan is now locked in place, but Creditor B will pay a premium in exchange for the guarantee, liability on which is likely to be borne by Creditor A rather than the firm's shareholders. Thus, despite Creditor A's defensive action, the group still has an incentive to issue too many intragroup guarantees and to form too many subsidiaries in order to do so. In this way, correlation-seeking via the intragroup guarantee may destroy social wealth even in situations where upfront adjustments by creditors leave shareholders on net no better off than they would be if correlation-seeking were not an option in the first place.

For creditors actually to deter guarantee overuse, they must adjust after the fact—that is, they must continue to monitor after extending credit and punish debtors who issue intragroup guarantees to other creditors. In the real world, this last category of creditors—we might call them the "ex post adjusters"—is probably relatively small. To monitor successfully, a creditor first must negotiate for a loan covenant that forbids its debtor from issuing intragroup guarantees. Then, while the debt is outstanding, the creditor must keep a close eye on the debtor to catch it in a covenant breach before the debtor becomes insolvent and defaults on the loan. Active monitoring is necessary because the standard remedy for breach of a loan covenant is acceleration of the debtor's payment obligations, but this remedy is blocked by bankruptcy's automatic stay. The costs of monitoring are exacerbated by the creditor collective action problem: the creditor who monitors bears all the costs but must share the benefits with the debtor's other creditors.[96] As an empirical matter, banks are the creditors who are most likely to demand strict loan covenants and to enforce them actively. Bondholders, by contrast, tend to demand covenants that are less restrictive and also are less likely to enforce them.[97]

Finally, even in situations in which creditor monitoring does deter correlation-seeking, the fact that the ex post adjusters must

96 See Squire, 118 Yale L J at 822–23 (cited in note 19).

97 See Raghurma Rajan and Andrew Winton, *Covenants and Collateral as Incentives to Monitor*, 50 J Fin 1113, 1134 (1995) (noting that covenants for private debt are more detailed and restrictive than those for public debt, and are more likely to lead creditors to declare a violation).

incur monitoring costs means that wealth is still being consumed. These creditors will demand compensation for their anticipated monitoring costs by charging higher interest rates, thereby creating a deadweight loss by making it unprofitable on the margin for firms to invest in otherwise worthwhile projects. In this way, the mere possibility that firms will use intragroup guarantees to capture value from creditors leads to a loss of social wealth, even if the creditors successfully block any transfers from occurring. By analogy, expensive home security systems may prevent burglaries, but society is still poorer than it would be if burglaries were not a threat and hence the security systems were unnecessary.[98]

C. Making the Tangles Worse: Guarantees and Substantive Consolidation

The foregoing discussion implies that investors as a whole would be better off if firms could credibly commit to refraining from correlation-seeking via the intragroup guarantee. This would reduce many firms' net borrowing costs, as their creditors would no longer demand higher interest rates to offset their anticipated monitoring expenses, their losses from residual opportunism that they do not expect monitoring to prevent, and their higher information costs due to lost asset partitioning efficiencies. But firms typically cannot make such commitments except through loan covenants, which require active monitoring and hence may not be cost-effective for many creditors to enforce.[99] The question, then, is whether courts can help parties reach a more efficient result by employing an equitable remedy that is effective after a debtor has filed for bankruptcy and that therefore does not depend on expensive creditor monitoring.

One candidate is the doctrine of substantive consolidation, which cancels all intragroup guarantees and hence nullifies the wealth transfers that they would otherwise produce. The problem, however, is that consolidation erases a group's other internal structures as well, including the subsidiary network. It is for this reason that substantive consolidation is among the most controversial doctrines in contemporary bankruptcy law, with commentators and appellate

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98 See Maurice E. Stucke, *Morality and Antitrust*, 2006 Colum Bus L Rev 443, 477 n 127 (collecting literature on deadweight loss and explaining the problem, in which certain wealth transfers have social costs, using the example of alarm systems).

99 See Mitchell Berlin and Jan Loeys, *Bond Covenants and Delegated Monitoring*, 43 J Fin 397, 398 (1988) (noting that "investigations [of borrowers] are costly, and bondholders holding diversified portfolios have limited private incentives to monitor, even when monitoring is worthwhile for all investors taken together").

courts maintaining that the doctrine gives bankruptcy judges too much power to abrogate contracts and disregard the corporate form.[100]

Although the academic commentary on substantive consolidation is extensive,[101] it has overlooked how correlation-seeking via the intragroup guarantee increases demand for the doctrine by making the clutter inside corporate groups worse. Correlation-seeking complicates a bankruptcy court's job by causing an overproliferation of subsidiaries and thereby multiplying the internal asset transfers that the court must sort out. In addition, the sophisticated lenders who receive intragroup guarantees would penalize groups for overpartitioning assets and for failing to keep better subsidiary-level records if the guarantees did not insulate them from the consequences of sloppy accounting and mispriced internal transfers. Put another way, the fact that the intragroup guarantee makes sophisticated lenders indifferent to a firm's subsidiary structure is not the virtue that the arrangement's defenders claim it is. Lender indifference leads to the inchoate masses of subsidiaries and the shoddy recordkeeping that so often make substantive consolidation a bankruptcy court's only serviceable option.

Given, however, that substantive consolidation at least has the benefit of canceling the wealth transfers produced by intragroup guarantees, is it really as harmful as its critics claim?[102] There are two reasons to think the answer is yes. One is that collapsing groups eliminates any remaining possibility that their subsidiary structures might help creditors economize on information costs in the way that Posner described. The second reason is that substantive consolidation

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100 See, for example, *In re Owens Corning*, 419 F3d 195, 208–09 (3d Cir 2005) ("No court has held that substantive consolidation is not authorized, though there appears nearly unanimous consensus that it is a remedy to be used 'sparingly.'"); *In re Gandy*, 299 F3d 489, 499 (5th Cir 2002) (noting that substantive consolidation is "an extreme and unusual remedy"); *In re Bonham*, 229 F3d 750, 767 (9th Cir 2000) (noting that "resort to consolidation should not be Pavlovian" and "should be used sparingly"); *Eastgroup Properties v Southern Motel Association, Ltd*, 935 F2d 245, 248 (11th Cir 1991) (observing that the doctrine should be used "sparingly"); *In re Augie/Restivo Baking Co*, 860 F2d 515, 518 (2d Cir 1988) (warning against "the dangers in forcing creditors of one debtor to share on a parity with creditors of a less solvent debtor"); J. Maxwell Tucker, *Substantive Consolidation: The Cacophony Continues*, 18 Am Bankr Inst L Rev 89, 89 (2010) ("Substantive consolidation obliterates the corporate form."); Hansmann, Kraakman, and Squire, 119 Harv L Rev at 1402 (cited in note 3) (encouraging courts to apply substantive consolidation "with a healthy appreciation for the history and economic functions of entity shielding"); Timothy E. Graulich, *Substantive Consolidation—A Post-modern Trend*, 14 Am Bankr Inst L Rev 527, 528–30 (2006) (arguing that substantive consolidation conflicts with corporate separateness, runs contrary to settled creditor rights, and has become "wholly unpredictable" in application).

101 See, for example, sources cited in note 29.

102 Consider Widen, 75 Geo Wash L Rev at 308–09 (cited in note 4) (defending substantive consolidation on the grounds that it cancels all intragroup guarantees and thereby prevents the unfair results that occur when lenders are permitted to "double prove" their claims).

overcorrects the opportunism hazard from intragroup guarantees by canceling even the occasional guarantee that lacks a high internal correlation. In these ways, substantive consolidation seems like overkill, a remedy that indiscriminately annuls both the efficient and the opportunistic features of corporate groups.[103]

IV. FRAUDULENT TRANSFER LAW: PATCHING UP THE WALLS INSTEAD OF COLLAPSING THEM

There is a less drastic equitable remedy for the problem of intragroup guarantee overuse, one that would deter correlation-seeking while, unlike substantive consolidation, reinforcing rather than undercutting the potential informational benefits of a group's subsidiaries. That remedy is supplied by fraudulent transfer law, which courts could use to avoid the claim on an intragroup guarantee whenever a high internal correlation was evident at the time the guarantee was issued. This approach would not render the guarantee worthless, as it would remain fully enforceable so long as the guarantor remained solvent and out of bankruptcy.[104] But if the guarantor fell bankrupt, the guarantee would not dilute the recoveries of the guarantor's general creditors. In other words, avoidance through fraudulent transfer law would mean that group managers could use intragroup guarantees to pledge shareholder wealth but not creditor wealth. The incentive to overuse intragroup guarantees would thus be blunted, as would the attendant incentive for groups to form too many subsidiaries and then fail to account for the allocation of value among them.

As this Part describes, a fraudulent transfer doctrine aimed at correlation-seeking would be consistent with both the spirit and the letter of the fraudulent transfer statutes now on the books. Courts would, however, have to scrap the special fraudulent transfer rules for intragroup guarantees that they have developed to date, as those rules bear no relationship to the actual economics of the arrangement. The

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103 As noted previously, Landers advocated substantive consolidation as a way to protect creditors against asset shifting. See note 12 and accompanying text. Note, however, that collapsing the group penalizes creditors whose monitoring efforts have prevented managers from pulling assets out of their borrower entities, because it transfers value from creditors of more solvent group members to those of less solvent members.

104 Under the Bankruptcy Code, fraudulent transfer relief is available only if the guarantor has filed for bankruptcy, in which case its shareholders are likely to be wiped out. Under the Uniform Fraudulent Transfer Act, an obligation can be avoided only to the extent necessary to permit other creditors to satisfy their claims. Uniform Fraudulent Transfer Act (UFTA) § 7(a)(1), 7A Pt II ULA 266, 339 (West 1999). In other words, the remedy under the Uniform Fraudulent Transfer Act is to subordinate the obligation to other creditor claims, not to nullify it altogether.

rules ignore the most important variable—the internal correlation—and instead focus on the secondary question of whether the guarantee's benefits were captured by the borrower or the guarantor. Besides enmeshing courts in fact-intensive disputes about a corporate group's internal cash flows, this approach is counterproductive: courts are most likely to find that the guarantee's benefits were captured by the guarantor when the guarantor and borrower were interlinked, which is precisely when their fortunes will have been highly correlated. In this way, current doctrine perversely tends to uphold precisely those guarantees that impose the largest expected losses on the guarantor's general creditors.

A. The Problem: Deciding Cases Based on Who Got the Premium

The law of fraudulent transfers—or, as they are more traditionally known, fraudulent conveyances—enables courts to reverse certain transactions that are particularly likely to harm creditors.[105] For example, a debtor on the brink of bankruptcy might convey property to a third party, such as an affiliated firm, in hopes of keeping it out of the hands of creditors. Or, more cunningly, the debtor might give a promissory note to a third party who had not actually lent the debtor money, entitling that party to an unearned recovery from the debtor's bankruptcy estate. In either case, fraudulent transfer statutes enable a court to undo the offensive transaction—to reverse the property conveyance, or to deny recovery on the sham promissory note—in order to protect the debtor's legitimate creditors.

The first fraudulent conveyance statutes permitted a court to reverse a transaction only if it found that the debtor had intended to harm creditors.[106] Those statutes' modern counterparts, however, give courts a second option. Without finding wrongful intent, a court can still set aside a transaction as a "constructive" fraudulent transfer if both of two requirements are met. First, the debtor must have given away assets or incurred an obligation without receiving "reasonably equivalent value" in exchange.[107] Second, the challenged transaction must have occurred under circumstances in which harm to creditors was particularly likely.[108] Fraudulent transfer statutes provide a menu of options for satisfying this second requirement; the one most

105 See *Rubin v Manufacturers Hanover Trust Co*, 661 F2d 979, 988–89 (2d Cir 1981).

106 See Robert A. Fogelson, *Toward a Rational Treatment of Fraudulent Conveyance Cases Involving Leveraged Buyouts*, 68 NYU L Rev 552, 555 (1993).

107 11 USC § 548(a)(1)(B)(i); UFTA §§ 4(a)(2), 5(a), 7A Pt II ULA at 301, 330 (cited in note 104).

108 11 USC § 548(a)(1)(B)(ii).

commonly selected is to show that the debtor was insolvent when the transaction occurred.[109]

Working within this statutory framework, courts have developed a few special doctrines that apply to constructive fraudulent challenges to intragroup guarantees in particular. These doctrines all relate to the first element—the requirement of reasonably equivalent value. Because intragroup guarantee premiums are usually paid to the borrower, the guarantor often seems to issue the guarantee without receiving any benefit in return. Yet rather than condemn all intragroup guarantees outright, most courts have concluded that the guarantor can benefit "indirectly"—and thus receive reasonably equivalent value—even if the guarantee's direct benefits went solely to the borrower.[110] The case that established this "indirect benefits" approach is *Rubin v Manufacturers Hanover Trust Co*.[111] The case is useful to review here not only because it has proven to be widely influential, but also because its facts illustrate well the defects of the doctrine it introduced.

Rubin involved the bankruptcy of a corporate group that was in the business of selling banking services to people who lacked checking accounts.[112] Several of the group's subsidiaries operated retail stores that sold money orders and cashed checks. These stores often ran low on working capital, which they would replenish by drawing on an open line of credit with a bank. The credit line was cross-guaranteed by two other entities in the group, whose function was to issue the money orders that the stores sold at retail.[113] Because the bank paid no premium to these entities in exchange for their guarantees,[114] their bankruptcy trustees challenged the guarantees as fraudulent conveyances.[115] In response, the bank argued that the guaranteed line of credit reduced the temptation for the cash-strapped retail stores to hold on to the proceeds from money order

109 See 11 USC § 548(a)(1)(B)(ii)(I).

110 See, for example, *In re Tryit Enterprises*, 121 BR 217, 223–24 (Bankr SD Tex 1990); *Telefest, Inc v VU-TV, Inc*, 591 F Supp 1368, 1378–87 (D NJ 1984). See also Williams, 15 Cardozo L Rev at 1469 (cited in note 75); Rasmussen, 52 U Chi L Rev at 213–14 (cited in note 84).

111 661 F2d 979 (2d Cir 1981).

112 Id at 981.

113 Id at 981–82 (discussing the "symbiotic" relationship between the check-cashing retailers and the entities that issued the money orders).

114 Id at 992. Only one of the guarantors gave a direct guarantee on behalf of the borrowers. The other guarantor provided an indirect guarantee: it guaranteed the obligations of the group's controlling shareholders, who in turn had guaranteed the debts of the borrowers. Id at 983. The court treated these two structures as equivalent for legal and practical purposes, id at 993, and I do the same here.

115 *Rubin*, 661 F2d at 987.

sales rather than forwarding the cash promptly to the guarantors.[116] In this way, the bank argued, the loans conferred an "indirect benefit" on the guarantors through the time value of money.[117] The Second Circuit found the bank's theory plausible and remanded the case for a determination of whether the lines of credit had in fact caused the retail stores to forward sales proceeds more quickly.[118]

As a practical matter, it would have been difficult to conduct the factual analysis that the Second Circuit contemplated. As is often true, the group's various entities had commingled funds, making it hard to trace cash flows for purposes of calculating how quickly sales proceeds had been forwarded from the borrowers to the guarantors.[119] In addition, the bank line of credit had been in place for many years,[120] which meant that there were no historical data to suggest how quickly the borrowers would have forwarded sales proceeds in the absence of the line of credit. For these reasons, the inquiry was bound to be fact intensive, time consuming, and ultimately speculative.

Despite these practical difficulties, the investigation ordered by the Second Circuit might have been justified if it had at least rested on a solid theoretical foundation. But the opposite was true. In essence, the court ordered an analysis of whether value equal to the reduction in the retail stores' borrowing costs attributable to the guarantees—which was the guarantees' premium—had been transferred to the guarantors.[121] The implicit assumption was that, if this benefit had in fact been passed on to the guarantors, then their creditors were protected. However, as the model presented in Part II demonstrated, a premium will be large enough to prevent a guarantor's creditors from suffering an expected loss only if the fortunes of the guarantor and borrower are uncorrelated. If instead they are positively correlated, the creditors suffer an expected loss even if the guarantor captures the full amount of the premium.

We can be confident that the fortunes of the guarantors and borrowers in *Rubin* were in fact highly correlated. Indeed, the bank defended the guarantees on that basis, arguing that the various group entities were financially interlinked, with the borrowers under a

116 Id at 992.

117 Id at 993.

118 Id at 994.

119 See *Rubin*, 661 F2d at 994.

120 Id at 983.

121 The Second Circuit's opinion actually conflates the questions of whether the line of credit benefited the guarantors and whether the guarantees did. Only the second question was relevant to the fraudulent conveyance challenge. The court might have thought that, without the guarantees, the bank would not have been willing to lend at all. If so, the court fell into the "necessity" error described in Part II.C.

constant obligation to send cash to the guarantors. The bank also emphasized that the borrowers and guarantors were in the same money-order business, implying that a failure by the borrowers would leave the guarantors without any retail outlets.[122] Yet the Second Circuit perversely held that this high degree of integration could be used to establish that the guarantees did *not* harm the guarantor's general creditors.

Rubin thus illustrates how the indirect-benefits test fails on both practical and theoretical levels. The test imposes a heavy burden on courts by requiring them to assess how cash or other assets might have flowed through the tangled channels that link members of corporate groups. Besides being inherently time consuming and fact intensive, such inquiries require a heavy dose of speculation since corporate groups often lack careful internal bookkeeping. What is worse, this investigation leads courts astray. Courts are most likely to find that value flowed from the borrower to the guarantor—and hence that the guarantor received reasonably equivalent value—when the two entities were financially or operationally linked. But that is precisely when their insolvency risks will be highly correlated and therefore when the guarantee will impose a large expected loss on the guarantor's creditors. In other words, the more successful a court is in tracing a guarantee's "indirect" benefits from the borrower to the guarantor, the further it gets from the right answer. Despite these shortcomings, the indirect-benefits doctrine remains the preferred judicial approach in fraudulent transfer cases involving cross-stream and upstream guarantees.[123]

When the challenged guarantee instead is downstream, many courts have dropped indirect-benefits analysis for a more straightforward "identity of interests" test.[124] Those courts reason that any benefits a borrower derives from a guarantee automatically enrich the borrower's owner as well, which in the case of a downstream guarantee is the guarantor. The courts then conclude that the guarantor always receives reasonably equivalent value for a downstream guarantee, regardless of whether the premium was paid

122 *Rubin*, 661 F2d at 982.

123 See note 110 and accompanying text.

124 See, for example, *In re Royal Crown Bottlers of North Alabama, Inc*, 23 BR 28, 30 (Bankr ND Ala 1982) (describing "identity of interests" as an exception to the general rule that consideration given to a third party cannot be considered the receipt of reasonably equivalent value). See also *In re Lawrence Paperboard Corp*, 76 BR 866, 874 (Bankr D Mass 1987) (citing *Royal Crown Bottlers* in refusing to issue summary judgment against a parent company that made numerous guarantees on behalf of its subsidiaries).

to the borrower or the guarantor.[125] Although a few courts have balked at the notion that downstream guarantees should in essence be immune from attack as constructive fraudulent transfers,[126] the idea enjoys the nearly universal assent of commentators.[127]

The bright-line nature of the identity-of-interests approach at least has the virtue of avoiding *Rubin*-style factual inquiries. The problem, however, is that its bright line points in the wrong direction. When the guarantor owns the borrower, their fates are automatically correlated, which means that downstream guarantees reliably reduce the expected recoveries of the guarantors' general creditors. This can be seen in Figure 2, in which a downstream guarantee produces larger wealth transfers than a comparable cross-stream guarantee even though the premium is paid directly to the guarantor rather than the borrower. If the premium were paid to the borrower instead, the expected loss for the guarantor's creditors would be larger still, because then the borrower's creditors would enjoy the first claim to the premium in a bankruptcy proceeding. But the difference made by who got the premium would remain trivial;[128] the real issue, as with other guarantee types, would continue to be the internal correlation, which for a downstream guarantee will almost always be high enough to ensure a wealth transfer and therefore a high risk of overuse.[129]

At bottom, the identity-of-interests test is easier to apply than the indirect-benefits test only because it gets to the wrong answer more quickly. Both approaches rest upon a basic misunderstanding of the economics of guarantees, and both should therefore be abandoned.

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125 See, for example, *Royal Crown Bottlers*, 23 BR at 30. See also David S. Walls, *Promises to Keep: Intercorporate Guarantees and Fraudulent Transfers in Bankruptcy*, 19 UCC L J 219, 244 (1987) ("Where the parent owns all or a supermajority of shares of its subsidiary, there seems to be little doubt in the case law or the literature that the parent's guarantee of the subsidiary's debt is beyond attack under [fraudulent transfer law].").

126 See, for example, *In re First Republic Bank Corp*, 1990 Bankr LEXIS 2840, *12–13 (Bankr ND Tex).

127 See Blumberg, 9 Cardozo L Rev at 719 (cited in note 4); Carl, 60 Am Bankr L J at 115 (cited in note 86) (stating that downstream guarantees "do not pose special fraudulent transfer problems since the guarantor owns the stock of the principal debtor"); Rasmussen, 52 U Chi L Rev at 215 (cited in note 84) (stating that for downstream guarantees "there should be a rebuttable presumption that the debtor received a reasonably equivalent value" because a gain to a subsidiary is a gain to the parent); Williams, 15 Cardozo L Rev at 1468 (cited in note 75) (stating that the law presumes downstream guarantees to be immune from attack).

128 See Squire, 123 Harv L Rev at 1207 (cited in note 5) (showing that the expected wealth transfer produced by a contingent debt that is 10 percent likely to be triggered only slightly increases if the liable firm receives no premium in exchange).

129 A transfer would not occur only if the values of the guarantor's and borrower's real assets moved in opposite directions and thereby counteracted the positive correlation from the guarantor's equity stake.

B. The Proposal: Correlation Rather Than Consideration

What should replace the current fraudulent transfer rules for intragroup guarantees? One possible answer is nothing: courts could simply stretch the blanket dispensation now enjoyed by downstream guarantees to cover upstream and cross-stream arrangements as well. This would mark an improvement over the indirect-benefits doctrine, which given its speculative and often perverse results almost certainly does more harm than good. Business planning would be easier for debtors and creditors alike, and bankruptcy proceedings would move along more quickly.

There is, however, a better possible approach to intragroup guarantees: one that could be applied cheaply and predictably, and that—unlike a do-nothing approach—would advance fraudulent transfer law's purpose of discouraging debtor opportunism. That approach would recognize that it is the internal correlation, rather than who captures the premium, that determines whether an intragroup guarantee presents an opportunism hazard. If the borrower's and guarantor's insolvency risks were highly correlated when the guarantee was issued, a court can be confident that the guarantor did not receive enough value to prevent an expected wealth transfer away from the guarantor's creditors, even if (contrary to practice) the premium was paid in full to the guarantor. Not only would an approach based on correlations reflect the actual economics of intragroup guarantees, but it would be simpler and more predictable in application. Unlike under the indirect-benefits test, a finding that a guarantor and borrower were financially or operationally linked—and hence likely to have common fates—would end the court's inquiry rather than begin it.

There are several factors that courts could reference to determine that the internal correlation on a guarantee was high when the guarantee was issued and therefore that reasonably equivalent value was not provided. For downstream and upstream guarantees, the equity interest that either the guarantor or borrower holds in the other establishes that the entities' fortunes are highly correlated, as the same real assets drive the values of both.[130] In this way, downstream guarantees could continue to be governed by a bright-line rule, as they are under the identity-of-interests test. But the rule

[130] Partial ownership should not matter; for example, if *A* owns 5 percent of *B*, their insolvency risks would still be perfectly correlated if that equity interest were *A*'s only asset. Rather, the relevant factor is the size of the equity interest relative to the parent's other assets. But the size of the equity interest would not have to be particularly large to produce a sufficient correlation, given that—as the model in Part II demonstrates—any positive correlation is sufficient to produce a transfer.

would have the opposite bias, with commonality of fortunes militating for universal condemnation rather than blanket dispensation. And the same bright-line rule would extend to upstream guarantees as well.

Reasonably equivalent value would also be lacking if the guarantor was indebted to the borrower, or vice versa. A debt investment has the same effect as an equity interest, tying the fates of both parties to the value of the same real assets. And formal indebtedness should not be a requirement; for example, the borrowers' obligation in *Rubin* to forward sales proceeds to the guarantors would be sufficient to establish cross-indebtedness regardless of whether the obligation was committed to writing.

For the remaining types of intragroup guarantee—that is, cross-stream guarantees in which the borrower and guarantor are not cross-indebted—the burden should be on the guaranteed lender to show that the guarantor's and borrower's assets were *not* used to make the same or complementary products. Placing this burden on the lender is appropriate given that true corporate conglomerates are rare, with most corporate groups (like the one in *Rubin*) using their subsidiaries to divide up assets that contribute to the production of the same ultimate outputs. Only if the lender can satisfy this burden should the court hold that the issuer of a cross-stream guarantee received reasonably equivalent value in exchange. Once again, the relevant facts should be easy to establish. Except in the most opaque corporate groups, it is difficult to believe that the goods or services that a particular entity produced are likely to be a matter of serious dispute.[131]

At first blush the approach proposed here might seem unjust to those lenders who would see their recoveries on guarantees curtailed even though they paid a premium that was, from their perspective, equal to the guarantee's full expected value. But it must be remembered that a guarantee's value to a lender depends on the legal rules used to enforce it. If claims on intragroup guarantees with high internal correlations were consistently avoided in bankruptcy, lenders would adjust by paying smaller premiums, and the injustice would be corrected. Or, looked at another way, avoidance of a guarantee via fraudulent transfer law would not impair the lender's contractual right against the guarantor per se, because the guarantor would remain obligated to pay all claims against it to the extent it could. The remedy instead changes only the lender's recovery vis-à-vis the guarantor's

131 See, for example, *Rubin*, 661 F2d at 981–85 (stating clearly the functions of the group's distinct entities even though the corporate structure was so complex that the solvency of one of the guarantors could not be determined).

other creditors when the guarantor is bankrupt and cannot pay all of its obligations in full. And the guaranteed lender has no contractual rights against these other creditors that fraudulent transfer law might disappoint. Moreover, since the purpose of fraudulent transfer law is to protect the type of unsophisticated or otherwise nonadjusting creditor to whom corporate groups almost never issue intragroup guarantees, it is appropriate to define "reasonably equivalent value" from their perspective.[132]

As was noted previously, a lack of reasonably equivalent value is only the first element of a constructive fraudulent transfer case.[133] The party petitioning to have a transaction reversed must also show that the transaction occurred under circumstances in which opportunism against creditors was particularly likely. In cases involving intragroup guarantees, parties normally try to satisfy this second element by showing that the guarantor was insolvent at the time the guarantee was issued. Unfortunately, the resultant inquiries into the guarantor's past financial condition tend, once again, to be fact-intensive and speculative. Among other things, they require courts to estimate the ex ante probability that the guarantee would be triggered and the likely size of the liability if it were. Such questions are typically far more speculative than whether the guarantor's and borrower's insolvency risks were correlated. The problem is exacerbated by the failure of most corporate groups to keep good subsidiary-level records. For example, in *Rubin* more than forty accountants from a top accounting firm spent thousands of man-hours trying to prepare historical financial statements for one of the guarantors, but nonetheless were unable to reach an opinion about whether it was solvent.[134] In a triumph of doctrine over experience, the Second Circuit directed the district court to run the analysis again anyway.

Besides being burdensome as an evidentiary matter, the insolvency requirement is unsuited to arrangements that, like guarantees, create contingent liabilities.[135] The requirement assumes that a firm's managers are unlikely to give away its assets unless the managers think bankruptcy is inevitable. While this presumption makes sense for simple asset conveyances and fixed liabilities such as

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132 See Williams, 15 Cardozo L Rev at 1416 (cited in note 75) (asserting that "[f]raudulent transfer law is designed to empower the unsecured creditors of a debtor"). A more subtle objection is that avoiding the claim on an intragroup guarantee would confer a windfall on the guarantor's general creditors by giving them priority over the lender with respect to the premium. Under the approach proposed here, however, lenders would have every reason to continue their practice of paying the premium to the borrower rather than the guarantor.

133 See text accompanying notes 107–08.

134 See 661 F2d at 995 n 18.

135 See Squire, 123 Harv L Rev at 1209 (cited in note 5).

loans, its logic does not extend to contingent liabilities. In that case, the opportunism incentive arises not because the debtor's managers believe that the debtor is fated for bankruptcy, but rather because they think that the debtor probably will be bankrupt in those future states in which the contingent liability is triggered. This fact is reflected in the model from Part II, which shows intragroup guarantees with positive internal correlations that consistently produce large transfers even though the model assumes that the guarantor is solvent when the guarantee is issued. It follows that fraudulent transfer rules that avoid payment on a guarantee only if the guarantor was insolvent when the guarantee was issued will be severely underinclusive, overlooking most instances in which the opportunism hazard arises.

There is, however, a statutory alternative to the insolvency requirement, one that is both easier to apply and better suited conceptually to contingent liabilities. Instead of showing that the debtor was insolvent when it incurred a debt, a party can satisfy the second element of a constructive fraudulent transfer challenge by establishing that the debtor incurred debts knowing that they "would be beyond the debtor's ability to pay as such debts matured."[136] Courts have held that this provision can be satisfied if the obligation that is itself the subject of the fraudulent transfer challenge is one that the debtor did not expect to be able to repay when it came due.[137] This, of course, precisely describes a guarantee that the guarantor's managers know is unlikely to be triggered except when the guarantor is insolvent. In this way, a high internal correlation could serve to satisfy both elements of a constructive fraudulent transfer case. Therefore, a fraudulent transfer doctrine for intragroup guarantees based on internal correlations would be highly predictable in application, permitting corporate groups and their sophisticated lenders to adjust accordingly.

C. The Payoff: Tidy Bundles Realized

By curbing the intragroup guarantee's capacity to transfer value from creditors to shareholders, the fraudulent transfer approach proposed here would lift the thumb on the scale that encourages groups to issue too many guarantees, take on too much debt, and form too many subsidiaries. The payoff from these changes would be

136 11 USC § 548(a)(1)(B)(ii)(III). See also UFTA § 4(a)(2)(ii), 7A Pt II ULA at 301 (cited in note 104) (employing an essentially identical test).

137 See, for example, *In re Pajaro Dunes Rental Agency, Inc*, 174 BR 557, 593–95 (Bankr ND Cal 1994) (applying the corresponding provision in California's fraudulent transfer statute). For a general discussion, see Squire, 123 Harv L Rev at 1210 (cited in note 5).

most conspicuous in bankruptcy proceedings, as courts would have less need to consolidate groups in order to make reorganizing or liquidating them manageable. Corporate groups would be more streamlined, as they would no longer have an incentive to maintain subsidiaries whose only function is correlation-seeking. Groups would also be forced to keep better records for those subsidiaries that remain, as their most sophisticated lenders could no longer afford to be indifferent to the question of which subsidiaries hold which assets. In other words, corporate groups would at last begin to resemble the Posnerian ideal, with orderly compartments that organize assets into neat bundles and thus reduce information costs for creditors and bankruptcy courts alike.

There are a few potential objections to the fraudulent transfer approach proposed here that should be addressed. The simplest objection is that, by systematically avoiding claims on intragroup guarantees, the approach would raise borrowing costs for corporate groups by causing the lenders who receive such guarantees to charge higher interest rates. But the problem with current fraudulent transfer doctrine is that it keeps interest rates on the loans from such lenders artificially low because the loans are subsidized by wealth transfers from other creditors. This distortion in borrowing costs induces overuse of the guarantee and its constituent elements. Firms would thus create more wealth if their borrowing costs reflected the true social cost of credit. In the parlance of information technology, higher interest rates on loans from select lenders are a feature of the proposal, not a bug.[138]

A second possible objection is that the reform proposed here would undermine the usefulness of the intragroup guarantees as a device for protecting lenders against the risk that group managers will shift assets out of borrowers. As noted previously, managers might engage in asset shifting of this type to rescue assets if the borrower entity seems doomed for bankruptcy, or to pledge the assets to creditors of other group members in order to reduce the cost of subsequent loans. Without this protection, sophisticated lenders would be forced to protect themselves against border abuse through active monitoring, which is expensive. While this objection is subtler than the first, it also is ultimately unpersuasive. To the extent that a fraudulent transfer doctrine based on internal correlations would induce sophisticated lenders to be more watchful, this probably is once again a virtue of the approach rather than a vice.

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[138] See Fred R. Shapiro, ed, *The Yale Book of Quotations* 670 (Yale 2006) (attributing the phrase "[t]hat's not a bug, that's a feature" to a technology-related journal's spring 1981 issue).

To keep an objection based on asset shifting in perspective, it should be observed that intragroup guarantees actually deter asset shifting in only two narrow circumstances. The first is when the guarantee has been issued by an entity that the group's managers think is likely to remain solvent even if liability on the guarantee is triggered. In that case, any benefit that the managers hope to capture for the group's shareholders through the asset shift will be offset by increased liability for the shareholders through the guarantee. Given, however, that the fraudulent transfer remedy comes into play only if the guarantor is insolvent or bankrupt, intragroup guarantees would continue to deter this type of asset shifting under the reform proposed here to the same extent that they do now.

The second instance in which an intragroup guarantee can deter asset shifting is when the entity into which assets would be shifted has guaranteed the debt of the entity from which the assets would be taken. In that case, the benefit that the asset shift would confer on the recipient entity's creditors would be partly offset by an increase in expected liability on the guarantee. The importance of the intragroup guarantee in deterring this type of asset shifting is doubtful, however, since a group's managers do not need to use an existing subsidiary in order to re-pledge assets to new creditors. For example, they instead could cause the group to form a new subsidiary, shift the assets into it, and then have that subsidiary engage in the new borrowing. Because the new subsidiary would not be part of the existing network of intragroup guarantees, those guarantees would not discourage this conduct regardless of whether they would be avoided in bankruptcy. Or, if the managers wanted to circumvent the incorporation fees and franchise taxes on a new subsidiary, they could arrange for two of the existing subsidiaries to form a partnership and then have it borrow, thereby taking advantage of the rule whereby partnership creditors enjoy priority over individual partners' creditors in the division of partnership assets.[139]

For these reasons, the intragroup guarantee does not actually deter most types of asset shifting; instead it merely insulates the guaranteed lender from the impact of the asset shift by transferring the loss to the creditors of the guarantor. Indeed, because the creditors who receive intragroup guarantees tend to be more sophisticated than those who do not, the guarantees probably *increase* the volume of opportunistic asset shifts. Thus, if the guarantees did not shield sophisticated lenders from the consequences of asset shifting, those lenders would try to prevent the asset shifts directly,

139 Uniform Partnership Act § 40(h), 6 Pt II ULA 512 (West 2001).

such as by pressuring managers to keep better subsidiary-level accounts and to prune away superfluous boundaries across which assets might be smuggled. Moreover, unlike the guarantees, these monitoring efforts pay social dividends by making corporate groups more transparent and streamlined, and hence easier for a court to unwind if bankruptcy occurs. And active monitoring also creates positive externalities for the group's other creditors by actually thwarting the asset shift rather than merely insulating a select lender from the shift's consequences. For these reasons, it is likely that the intragroup guarantee's current capacity to insulate lenders from asset shifting on net destroys social wealth rather than creates it.

A final argument in favor of the status quo might go as follows. If intragroup guarantees were deprived of their capacity to transfer wealth, firms instead would give their sophisticated lenders secured loans, which similarly capture wealth from unsecured creditors. As a result, those creditors might be no better off than they are now. This possibility is not wholly far-fetched, as the secured loan's capacity to capture value from unsecured creditors has already been the subject of extensive scholarly comment. Indeed, in an earlier article I observed that a secured loan is structurally similar to an intragroup guarantee in that both arrangements give a privileged creditor a prior claim to one asset pool plus a pro rata claim to other assets ultimately owned by the same individuals.[140]

The secured loan, however, has significant drawbacks as an opportunism device. Unlike a guarantee, it requires a public filing,[141] and—more importantly—it gives the secured creditor property rights in the secured collateral that impair the debtor's ability to deploy the collateral to its most profitable use.[142] These disadvantages explain why firms do not already give secured claims to all of their sophisticated creditors, even though they could enrich shareholders at the expense of many unsecured creditors by doing so.[143] These considerations also seem to explain why intragroup guarantees are so common in corporate groups, whereas large public companies are

140 Squire, 118 Yale L J at 812–13 (cited in note 19).

141 Widen has also noted that secured loans require a public filing but intragroup guarantees do not. See Widen, 75 Geo Wash L Rev at 309 (cited in note 4).

142 See UCC § 9-315(a)(1) (restricting the use of the secured asset "unless the secured party authorized the disposition"). An exception applies to goods that the secured creditor sold to the debtor and the debtor in turn sold to a third party, if the debtor is in the business of selling such goods. UCC § 9-315, comment 2.

143 See 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 (1997) (observing how secured creditors may discourage debtors from pursuing "value-increasing risky transactions").

unlikely to issue secured debt.[144] Finally, the secured loan does not require the preexistence of a liability boundary, and thus, unlike the intragroup guarantee, does not encourage firms to form too many subsidiaries. For this reason, the social costs of secured loans are likely to be lower than those of intragroup guarantees even if we hold the volume of opportunistic wealth transfers constant.

In combination, these observations suggest that the existence of opportunism alternatives to correlation-seeking via the intragroup guarantee does not undermine the benefits of the fraudulent transfer reform proposed here. Although avoiding claims on intragroup guarantees may lead on the margin to an increase in asset shifting and secured lending, the total volume of opportunistic wealth transfers would nonetheless shrink, as would the distortions that those transfers produce. As a result, we would see reductions in overinvestment, in overuse of the corporate form, and in the other ways that opportunism against creditors causes a loss of social wealth.

CONCLUSION

This Article has shown how correlation-seeking helps explain the paradoxical internal structures of large business firms. Those firms fragment themselves into dozens of subsidiaries but then puncture the liability barriers between the subsidiaries by issuing intragroup guarantees to select lenders. These seemingly contradictory actions can be resolved by observing that the insolvency risks of group members tend to be highly correlated. This correlation means that the intragroup guarantees reduce the price of credit for shareholders without placing a commensurate burden on them, the burden instead being focused on the group's general creditors.

Besides proposing a better explanation for the legal configuration of the modern corporate group, this Article has offered a new perspective on the ongoing debate over the bankruptcy doctrine of substantive consolidation. The power that doctrine gives bankruptcy courts to erase corporate boundaries and cancel intragroup commitments makes it controversial in theory yet indispensable in practice. What has been missing from the debate is a plausible explanation for why groups' internal affairs become so convoluted in the first place. Correlation-seeking via the intragroup guarantee is a reason why subsidiary structures will become artificially complex, as each subsidiary offers another opportunity for the group to issue a contingent liability that is correlated with the group's overall

144 See Mann, 110 Harv L Rev at 658–68 (cited in note 143).

insolvency risk. And sophisticated lenders, who normally would pressure managers to keep better subsidiary-level accounts, enjoy guarantees that make them indifferent to the allocation of assets among entities. If overuse of intragroup guarantees were curtailed, firms would keep better records and eliminate unnecessary subsidiaries, thereby reducing the need for bankruptcy courts to sort out corporate groups by collapsing them. This result could be accomplished through fraudulent transfer law, although courts would have to discard current doctrines in favor of new rules that recognize the central role of correlations in the economics of contingent debt.

Although this Article's focus has been the corporate group, its thesis has implications for a broader debate regarding the proper role of lawmakers in regulating debt contracts and protecting creditors, an argument of renewed importance since the recent financial crisis. Inspired by the famous work of financial economists Franco Modigliani and Merton Miller,[145] several scholars have argued that creditors can adequately protect themselves against debtor opportunism by contract.[146] Under this view, additional efforts by lawmakers to regulate debt markets are at best unnecessary and at worst counterproductive. The notion, however, that debtor–creditor relations are self-regulating is difficult to reconcile with the academic literature's failure to explain how it could be efficient for large firms to subdivide their assets so aggressively, only then to punch holes in the asset partitions on behalf of favored lenders. Such conduct does, however, seem consistent with the thesis that transaction costs often prevent creditors from deterring strategic debtor conduct, leading to socially inferior outcomes. This Article therefore provides new support for the idea that courts have an important role in maximizing wealth creation by employing creditor-protection doctrines such as fraudulent transfer law to help debtors and creditors achieve outcomes that they collectively prefer but are unable to arrange by contract alone.

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145 See generally Franco Modigliani and Merton H. Miller, *The Cost of Capital, Corporation Finance and the Theory of Investment*, 48 Am Econ Rev 261 (1958).

146 See, for example, Frank H. Easterbrook and Daniel R. Fischel, *Limited Liability and the Corporation*, 52 U Chi L Rev 89, 104 (1985); Alan Schwartz, *Security Interests and Bankruptcy Priorities: A Review of Current Theories*, 10 J Legal Stud 1, 20 (1981).

APPENDIX

This Appendix provides a formal description of the model presented in Part II.B. The model is intended to demonstrate how changes in the correlation of a guarantor's and borrower's insolvency risks affect the guarantee's value to the lender and the distribution of the guarantee's expected impact on the guarantor's shareholders and unsecured creditors.

A. Definition of Terms

p(B): Probability that Borrower thrives
p(b): Probability that Borrower has a moderate downturn
p(*b*): Probability that Borrower has a severe downturn
p(G): Probability that Guarantor thrives
p(g): Probability that Guarantor has a moderate downturn
p(*g*): Probability that Guarantor has a severe downturn
A^b: Initial value of Borrower's real assets
S^b: Coefficient (0 to 1) for determining the value of Borrower's real assets in moderate downturn
D^b: Coefficient (0 to 1) for determining the value of Borrower's real assets in severe downturn
L: Amount Borrower owes Bank
F^s: Borrower's deficiency in a moderate downturn ($L - S^b \times A^b$)
F^d: Borrower's deficiency in a severe downturn ($L - D^b \times A^b$)
r: Growth rate of Borrower and Guarantor in nondownturn outcomes
A^g: Initial value of Guarantor's real assets
S^g: Coefficient (0 to 1) for determining the value of Guarantor's real assets in moderate downturn
D^g: Coefficient (0 to 1) for determining the value of Guarantor's real assets in severe downturn
C: Amount Guarantor owes Bondholder
P: Premium Bank pays for guarantee
T: Expected loss suffered by Bondholder due to guarantee

B. Outcome Probabilities

Because Borrower and Guarantor each have three possible individual outcomes, the model has nine possible joint outcomes. Two simplifying assumptions permit the probabilities of eight of the joint outcomes to be expressed in terms of the ninth, p(*b*,*g*), which is treated as a variable. As a result, the relationship between the probabilities of the nine joint outcomes can be expressed as a single correlation coefficient.

The first simplifying assumption is that the distribution of probabilities across both the individual and joint outcomes is symmetrical as between Borrower and Guarantor. Thus:

(1) $p(B) = p(G)$
(2) $p(b) = p(g)$
(3) $p(\not{b}) = p(\not{g})$
(4) $p(B, g) = p(b, G)$
(5) $p(B, \not{g}) = p(\not{b}, G)$
(6) $p(b, \not{g}) = p(\not{b}, g)$

The second simplifying assumption is that p(B,G), p(b,g), and $p(\not{b},\not{g})$—which are the probabilities of the three joint outcomes in which Borrower's and Guarantor's real asset values have moved in parallel—change in constant proportion to each other as the correlation between changes in Borrower's and Guarantor's real assets increases from 0 to 1. This proportionality assumption has two components. The first is that, when the correlation is 0, p(B,G), p(b,g), and $p(\not{b},\not{g})$ equal the products of their individual outcome probabilities, which because of the symmetry assumption means that they equal $p(B)^2$, $p(b)^2$, and $p(\not{b})^2$, respectively. Note that, at a correlation of 1, the probabilities of the three parallel outcomes by definition equal the probabilities of their constituent individual outcomes—that is, p(B), p(b), and $p(\not{b})$, respectively. The second component of the proportionality assumption is that, as $p(\not{b},\not{g})$ moves a given distance from its value at a correlation of 0 to its value at a correlation of 1, p(b,g) and p(B,G) move the same relative distance between their values at these two correlation levels. Thus, with respect to p(B,G), the following is true:

(7) $\frac{p(B,G)-p(B)^2}{\quad} = \frac{p(\not{b},\not{g})-p(\not{b})^2}{\quad}$

Solving for p(B,G) gives:

(8) $p(B, G) = p(B)^2 + \frac{(p(B)-p(B)^2)\times(p(\not{b},\not{g})-p(\not{b})^2)}{\quad}$

By the same logic, the formula for p(b,g) is:

(9) $p(b, g) = p(b)^2 + \frac{(p(b)-p(b)^2)\times(p(\not{b},\not{g})-p(\not{b})^2)}{\quad}$

The remaining joint outcomes can be expressed as follows. Because the nine joint outcomes are exhaustive and mutually exclusive, these equations are true:

(10) $p(b, G) = p(b) - p(b, g) - p(\not{b}, g)$
(11) $p(\not{b}, G) = p(\not{b}) - p(b, g) - p(\not{b}, \not{g})$

It remains, then, to find an expression for (b,g), which can be derived as follows. The exhaustive nature of the outcomes for each party means that the following is true:

(12) $\mathrm{p(B}, g) = \mathrm{p(B)} - \mathrm{p(B, G)} - \mathrm{p(B, g)}$

Equation 5 tells us that Equations 11 and 12 are equal:

(13) $\mathrm{p}(b) - \mathrm{p}(b, \mathrm{g}) - \mathrm{p}(b, g) = \mathrm{p(B)} - \mathrm{p(B, G)} - \mathrm{p(B, g)}$

Equation 4 tells us that the formula for p(b,G) in Equation 10 is also the formula for p(B,g). Substituting this expression into Equation 13 gives:

(14) $\mathrm{p}(b) - \mathrm{p}(b, \mathrm{g}) - \mathrm{p}(b, g) = \mathrm{p(B)} - \mathrm{p(B, G)} - [\mathrm{p(b)} - \mathrm{p(b, g)} - \mathrm{p}(b, \mathrm{g})]$

Solving for p(b,g) gives:

(15) $\mathrm{p}(b, \mathrm{g}) = \frac{\mathrm{p}(b) - \mathrm{p}(b,g) - \mathrm{p(B)} + \mathrm{p(B,G)} + \mathrm{p(b)} - \mathrm{p(b,g)}}{2}$

For any given values of p(B), p(b), p(b), and p(b,g), the formulas above provide a unique distribution of probabilities across the model's nine outcomes. Each unique distribution of probabilities, in turn, corresponds to a unique correlation coefficient for the relationship between the value of Borrower's real assets and the value of Guarantor's real assets.

C. Parameters

A structural assumption of the model is that Borrower is solvent if it thrives and insolvent if it suffers a downturn, with a severe downturn producing a greater loss of asset value than a moderate downturn. Thus:

(16) $\mathrm{A^b} \times (1 + \mathrm{r}) \geq \mathrm{L}$
(17) $\mathrm{S^b} \times \mathrm{A^b} < \mathrm{L}$
(18) $\mathrm{S^b} > \mathrm{D^b}$

A second structural assumption reflects a design goal of depicting two different sources of internal correlation on a guarantee. The first correlation source results from changes in Borrower's and Guarantor's real asset values. The second results from the possibility that Borrower will suffer a downturn deep enough to create a claim on the guarantee sufficient to render Guarantor insolvent even if Guarantor's assets do not lose value. To distinguish between these two sources of correlation, the model assumes that Guarantor is rendered insolvent only if

Borrower suffers a severe downturn or if Guarantor suffers a downturn (moderate or severe).[147] Thus:

(19) $A^g \times (1 + r) \geq C + F^s$
(20) $A^g \times (1 + r) < C + F^d$
(21) $S^g \times A^g < C$
(22) $S^g > D^g$

A final set of parameters relates to the bankruptcy rule whereby a lender's total recovery on a guaranteed loan, from all available sources, cannot exceed the amount that the lender is owed. The model accommodates this rule by assuming that Bank's recovery from Guarantor is never greater than the deficiency in Borrower's estate. A further simplifying assumption is that, under the rule of double proof used to calculate results on the "Unsecured" line in Figure 1 and all results in Figure 2, Guarantor's assets are sufficient to ensure Bank a full recovery unless both of the following are true: (1) Borrower has suffered a severe downturn, and (2) Guarantor has suffered a downturn (moderate or severe). Thus:

(23) $F^s \leq \left|\frac{L}{\quad}\right| \times D^g \times A^g$

(24) $F^d > \left|\frac{L}{\quad}\right| \times S^g \times A^g$

D. Cross-Stream Guarantee, Unsecured

For the unsecured cross-stream guarantee addressed in Figures 1 and 2, the premium value, which is assumed to equal Bank's expected recovery with the guarantee minus Bank's expected recovery without it, is calculated as follows:

(25) $P^{cu} = \frac{p(b)\times r + p(b,G)\times r + p(b,g)\times S^g + p(b,g)\times D^g \times \left|\frac{L}{L+C}\right| \times A^g}{\quad}$

Bondholder's expected loss, defined as her expected recovery without the guarantee minus her expected recovery with the guarantee, is as follows:

147 Although the assumption that Guarantor's downturn can be either moderate or severe is not strictly necessary for the results that the model is intended to demonstrate, it provides more realistic results given the general assumption that Borrower and Guarantor are similar entities within a corporate group. For a simplified model of a contingent debt that has only four possible joint outcomes rather than the nine modeled here, see Squire, 123 Harv L Rev at 1163 (cited in note 5).

(26)

$$T^{cu} = p(b,g)\times(F^{s} - S^{g}\times P^{cu}) + p(b,g)\times(F^{s} - D^{g}\times P^{cu}) + p(b,G)\times\left\{C - \left[(A^{g} + P^{cu})\times(1+r) - F^{d}\right]\right\} + p(b,g)\times S^{g}\times \left\{\left[\frac{L}{L+C}\right]\times A^{g} - \left[\frac{C}{L+C}\right]\times P^{cu}\right\} + p(b,g)\times D^{g}\times \left\{\left[\frac{L}{L+C}\right]\times A^{g} - \left[\frac{C}{L+C}\right]\times P^{cu}\right\} - P^{cu}\times[p(B,g)\times S^{g} + p(B,g)\times D^{g}]$$

The expected gain to Guarantor's shareholders, defined as Guarantor's expected equity value with the guarantee minus this value without the guarantee, is expressed as follows:

(27)

$$E^{cu} = p(B,G)\times P^{cu}\times(1+r) + p(b,G)\times[P^{cu}\times(1+r) - F^{s}] - p(b,G)\times(A^{g}\times(1+r) - C)$$

E. Cross-Stream Guarantee, Secured

For the secured cross-stream guarantee in Figure 1, an additional simplifying assumption is made: Guarantor's estate has enough value to cover Bank's claim on the guarantee unless both Guarantor and Borrower suffer severe downturns. Thus:

(28) $S^{g}\times A^{g} \geq F^{d}$
(29) $F^{d} > D^{g}\times A^{g}$

Given these parameters, the premium value is calculated as:

(30) $P^{cs} = \frac{p(b)\times F^{s} + [p(b,G) + p(b,g)]\times F^{u} + p(b,g)\times D^{g}\times A^{g}}{1 - (b,g)\times D^{g}}$

And Bondholder's expected loss is calculated as:

(31)

$$T^{CS} = p(b,g)\times[F^{s} - S^{g}\times P^{cs}] + p(b,g)\times[F^{s} - D^{g}\times P^{cs}] + p(b,G)\times\left\{C - \left[(A^{g} + P^{cs})\times(1+r) - F^{d}\right]\right\} + p(b,g)\times\left[F^{d} - S^{g}\times P^{cs}\right] + p(b,g)\times(D^{g}\times A^{g}) - P^{cs}\times[p(B,g)\times S^{g} + p(B,g)\times D^{g}]$$

F. Cross-Stream Guarantee, Single-Proved

For the single-proved guarantee in Figure 1, it is useful to define two additional terms, representing Bank's pro rata share of Guarantor's estate when Guarantor is insolvent and Borrower suffers either a moderate or severe downturn. These will be R^{s} and R^{d}, defined to equal

$F^s/_{F^s+C}$ and $F^d/_{F^d+C}$, respectively. Using these terms, the premium value on this guarantee is:

(32)

$$P^{ci} = \frac{p(b,G)\times F^s + R^s\times A^g\times[p(b,g)\times S^g + p(b,g)\times D^g] + R^d\times A^g\times[p(b,G)\times(1+r) + p(b,g)\times S^g + p(b,g)\times D^g]}{1 - R^s\times[p(b,g)\times S^g + p(b,g)\times D^g] - R^d\times[p(b,G)\times(1+r) + p(b,g)\times S^g + p(b,g)\times D^g]}$$

And Bondholder's expected loss is:

(33)

$$T^{ci} = p(b,g)\times\left[R^s\times S^g\times A^g - P^{ci}\times(1-R^s)\right] + p(b,g)\times \left[R^s\times D^g\times A^g - P^{ci}\times(1-R^s)\right] + p(b,G)\times\left[C - \left(1-R^d\right)\times\left(A^g + P^{ci}\right)\times(1+r)\right] + p(b,g)\times\left[S^g\times A^g\times R^d - P^{ci}\times\left(1-R^d\right)\right] + p(b,g)\times\left[D^g\times A^g\times R^d - P^{ci}\times\left(1-R^d\right)\right] - P^{ci}\times[p(B,g)\times S^g + p(B,g)\times D^g]$$

G. Downstream Guarantee

For the downstream guarantee in Figure 2, the premium is given by Equation 25 above. Bondholder's expected loss is as follows:

(34)

$$T^d = p(b,g)\times(F^s - S^g\times P^{cu}) + p(b,g)\times(F^s - D^g\times P^{cu}) + p(b,G)\times\left\{C - \left[(A^g + P^{cu})\times(1+r) - F^d\right]\right\} + p(b,g)\times S^g\times \left\{\left[\frac{L}{L+C}\right]\times A^g - \left[\frac{C}{L+C}\right]\times P^{cu}\right\} + p(b,g)\times D^g\times\left\{\left[\frac{L}{L+C}\right]\times A^g - \left[\frac{C}{L+C}\right]\times P^{cu}\right\} - p(B,g)\times D^g\times P^{cu}$$

H. Upstream Guarantee

For the upstream guarantee in Figure 2, the premium is calculated as follows:

(35)

$$P^u = \frac{\left[p(b,G)\times\left(L - \left(D^b\times A^b + A^g\times(1+r) - C\right)\right)\right] + [p(b,g) + p(b,g)]\times F^s + \left[\frac{L}{L+C}\right]\times A^g\times[p(b,g)\times S^g + p(b,g)\times D^g]}{\left[\frac{L}{L+C}\right]\times\left[p(b,g)\times S^g + p(b,g)\times D^g\right] + \left[\frac{L}{L+C}\right]\times\left[p(b,g)\times S^g + p(b,g)\times D^g\right]}$$

Bondholder's loss is given by Equation 26 above, substituting P^u for P^{cu}.