ARTICLES

The Role of Secured Credit in Small-Business Lending*

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The traditional perspective holds that large firms in our economy use unsecured credit and small firms use secured credit. Existing scholarship, however, has provided little explanation of that pattern. In a recent article, I attributed the use of unsecured credit by large firms to the limited capacity of secured credit to lower the lending costs of creditworthy companies. This article uses data from a dozen interviews with small-business bankers to explain the small-business half of that lending pattern. To the extent small-business lenders require secured credit, they do so largely for one significant benefit: secured credit allows small-business lenders to obtain a credible commitment that borrowers will refrain from excessive future borrowing. Secured credit provides little in the way of liquidation value, because the assets of small businesses tend to have low liquidation values. Similarly, it does little to improve the borrower's incentives, because the lender can accomplish the same goal by taking a guaranty from the borrower's principal.

As it happens, however, much small-business borrowing is unsecured. I identify four circumstances that explain that fact: the relatively high transaction costs of secured debt; the declining enforceability of constraints on future lending (brought on by the ready availability of credit-card debt); the ambiguous value of constraints on future lending; and technological developments in credit-scoring and early-warning systems that dramatically reduce lending costs and risks. I argue that those developments presage a marked shift of small-business lending from secured debt to unsecured debt.

Finally, I argue that those developments cast doubt on the dominant academic view that businesses use secured debt as a device for externalizing risk to third parties. The decline of secured debt at a time when legal liability risks appear to be increasing suggests that the transaction costs I discuss provide greater insight into the pattern of secured and unsecured lending to small businesses than the ability of small businesses to externalize risk.

INTRODUCTION

If you asked the average commercial law academic what kind of businesses use secured credit, you probably would be told that larger firms generally use unsecured credit[1] and that smaller firms generally use secured credit.[2] If you asked why, you would probably get one of several abstract theoretical explanations that have appeared in the commercial law and finance literature over the last fifteen years.[3] Unfortunately, those explanations are difficult to reconcile with actual lending patterns, a problem doubtless caused by the lack of empirical investigation of the pattern of secured and unsecured credit.[4]

I recently have addressed the first part of that problem, the relatively infrequent use of secured credit by large companies.[5] In my article focused on that question, I used existing statistical studies and a series of interviews with knowledgeable industry participants to present a general explanation of that part of the lending pattern. Specifically, I argued that the key to the pattern was not the size of the company but its creditworthiness. Working from that premise, I reasoned that the financial strength of our country's most creditworthy companies leaves relatively little room for secured credit to enhance the attractiveness of a financing transaction. Because the costs of secured credit are just as significant for large, creditworthy companies as they are for smaller or riskier companies, the relatively low benefits that secured credit offers large creditworthy companies lead those companies to use secured credit infrequently.[6]

In this article, I turn to the other side of the pattern: the use of secured credit by relatively small businesses. As with my prior work, I write against the

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1. *See, e.g.*, Barry E. Adler, *An Equity-Agency Solution to the Bankruptcy Priority Puzzle*, 22 J. LEGAL STUD. 73, 89-98 (1993) (arguing that large firms issue unsecured debt so that holders of that debt can monitor for benefit of dispersed holders of equity); Lynn M. LoPucki, *The Unsecured Creditor's Bargain*, 80 VA. L. REV. 1887, 1926 n.149 (1994) [hereinafter LoPucki, *The Unsecured Creditor's Bargain*] ("That loans should be unsecured when they are to the largest, financially strongest firms is not particularly startling."); Robert E. Scott, *A Relational Theory of Secured Financing*, 86 COLUM. L. REV. 901, 941 (1986) (arguing that only large companies can "exploit the economies of scale necessary" to issue unsecured debt profitably).

2. *See, e.g.*, Lynn M. LoPucki, *The Death of Liability*, 106 YALE L.J. 1, 14 (1996) [hereinafter LoPucki, *The Death of Liability*] ("Secured debt strategies . . . are employed primarily by small, relatively uncreditworthy businesses . . . ."); Scott, *supra* note 1, at 940 ("Most secured debt is issued by relatively small, young and growing firms.").

3. *See* Ronald J. Mann, *Explaining the Pattern of Secured Credit*, 110 HARV. L. REV. 625, 628-29 (1997) (summarizing theoretical explanations for use of secured credit).

4. *See id.* at 628-30 (summarizing problems with prior theories); *id.* at 669-71 (criticizing particular theories).

5. *Id.*

6. *See id.* at 668-74.

background of previous explanations that are difficult to reconcile with existing statistical evidence. In particular, the existing statistical evidence shows a relatively muddied pattern, with significant amounts of both secured and unsecured lending.[7] The significant amount of unsecured lending to relatively small businesses is inconsistent with several existing theories of secured credit, which tend to predict secured lending to small businesses and cannot explain why such lending ever would be unsecured.[8]

For several reasons, however, the task here is more analytically challenging than the large-company problem. First, unlike lending in the large-company context, the existing statistical evidence shows a much less uniform pattern, with significant amounts of both secured and unsecured lending.[9] That lack of uniformity makes it harder to discern the connections among the relevant driving forces. Second, because commercial law scholarship traditionally has focused on the experiences of the largest companies,[10] I cannot take advantage of the analysis of prior scholars: discussion of small-business lending in existing work is almost uniformly a side issue.

Small-business lending, however, is an important institution in its own right.[11] Although the academic preoccupation with Wall Street and the country's largest businesses has left small-business lending largely unexamined in the voluminous literature on debtor-creditor issues, the crucial role of small businesses in our nation's economic growth[12] has not escaped the notice of the

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7. *See* James R. Booth, *Contract Costs, Bank Loans, and the Cross-Monitoring Hypothesis*, 31 J. FIN. ECON. 25, 32 (1992) (presenting findings of study of almost 800 commercial loans indicating that about 40% of debt issued by privately held firms is unsecured); John D. Leeth & Jonathan A. Scott, *The Incidence of Secured Debt: Evidence from the Small Business Community*, 24 J. FIN. & QUANTITATIVE ANALYSIS 379, 387 (1989) (suggesting, based on random sampling of 500,000 members of small-business trade organization, that almost 40% of those small businesses' loans were unsecured).

8. *See, e.g.*, Adler, *supra* note 1, at 89 n.66 (acknowledging that his theory of unsecured credit cannot explain use of unsecured credit by small firms); LoPucki, *The Death of Liability*, *supra* note 2, at 14-19 (arguing that small, relatively uncreditworthy businesses use secured credit because it allows them to shift risks to involuntary creditors); George G. Triantis, *Secured Debt Under Conditions of Imperfect Information*, 21 J. LEGAL STUD. 225, 256-57 (1992) (predicting that the best small, private firms in developing industries will issue secured debt).

9. *See supra* note 7 (citing statistical studies).

10. The only major commercial law scholarship focusing on the problems of small companies is Lynn LoPucki's empirical study of small Chapter 11 bankruptcies. *See* Lynn M. LoPucki, *The Debtor in Full Control—Systems Failure Under Chapter 11 of the Bankruptcy Code?* (pts. 1, 2), 57 AM. BANKR. L.J. 99, 247 (1983); *see also* Lucian A. Bebchuk & Jesse M. Fried, *The Uneasy Case for the Priority of Secured Claims in Bankruptcy*, 105 YALE L.J. 857, 903 (1996) (passing reliance on data regarding small-business financing). For a study of the costs of small-business bankruptcies, see Robert M. Lawless & Stephen P. Ferris, *Professional Fees and Other Direct Costs in Chapter 7 Business Liquidation*, WASH. U. L.Q. (forthcoming).

11. One banker estimated that 97% of all bank loans are made to companies with annual revenues below $10,000,000. Telephone Interview with Carl Forsythe, Director of Personal Financial Services, and Susan Holt, Director of Business Banking, Home Savings of America, transcript at 1 (Oct. 28, 1996) [hereinafter Forsythe/Holt Interview] (transcript on file with author).

12. The Small Business Administration estimates that small businesses employ 54% of the private work force, contribute 52% of all sales, and are responsible for 50% of private-sector products. U.S. SMALL BUSINESS ADMINISTRATION, PUB. NO. FS0040, THE FACTS ABOUT . . . SMALL BUSINESS (1996)

lending industry.[13] The industry's attention to small businesses is best reflected in a widely recognized effort by banks to increase the availability of loans to small businesses that traditionally have been underserved by banks.[14] That effort has not been ineffective: by the middle of 1996, institutions insured by the Federal Deposit Insurance Corporation (FDIC) held more than $180 billion in small-business loans.[15]

My analysis proceeds in four steps. In Part I, I explain the evidence and methodology on which my study rests. As in much of my prior work,[16] I rely heavily on interviews with knowledgeable industry professionals: in this case a series of interviews with small-business lenders at various banks, large and small, spread throughout the country. Part I also explains the model of small-business lending I use to present the evidence from those interviews: a decision-based model that focuses on the relative benefits of a secured-lending transaction.

[hereinafter SBA Brochure] (on file with author). The role of small businesses in job creation is crucial. *See id.* (attributing over 65% of net new job growth from 1976 to 1990 to small businesses).

13. *See, e.g.*, Robin Wantland, *Best Practices in Small Business Lending for any Delivery System*, J. LENDING & CREDIT RISK MGMT., Dec. 1996, at 16, 25 (article by banking executive advocating commitment to lending to "this most dynamic part of the U.S. economy").

14. Several of my interview subjects made that point directly. *See, e.g.*, Telephone Interview with Mark Lliteras, President, Business Banking, First Security Corporation, transcript at 4 (Jan. 30, 1997) [hereinafter Lliteras Interview] (transcript on file with author) ("We are making an effort to increase [our small-business portfolio]."); Telephone Interview with Michael Stoudt, Senior Credit Officer and Risk Manager, Business Banking Division, BankAmerica, transcript at 3 (Dec. 7, 1996) [hereinafter Stoudt Interview] (transcript on file with author) ("Recently, over the last few years, banks across the country have been looking at this [i.e., small-business lending] as an opportunity, you know, a new marketplace . . . .").

The secondary literature supports those statements. *See, e.g.*, Cynthia A. Glassman, *Nonbank Competition for Small Business: The Race Is on*, J. LENDING & CREDIT RISK MGMT., Dec. 1996, at 28, 28 ("Over the past several years, banks and nonbanks have increasingly turned their attention to serving small business customers."); Mark Zmiewsky & Beverly Foster, *Credit-Scoring Speeds Small Business Loan Processing*, J. LENDING & CREDIT RISK MGMT., Nov. 1996, at 42, 42 ("The vast growth of the nation's small businesses has been met with an equal increase in the attention that this market has received from commercial credit grantors."); Sara Oppenheim, *Chase Pares down Loan Application to One Page*, AM. BANKER, Oct. 28, 1996, at 12 (discussing efforts by Chase Manhattan Corp. to "attract more [small-business] borrowers in its increasingly competitive market"); Sara Oppenheim, *Former Natwest Exec to Run Dime's Small-Business Unit*, AM. BANKER, Oct. 14, 1996, at 13 ("The thrifts that have survived are looking for opportunities to expand their revenue base, and the small-business market is a natural." (quoting Donald P. Schwartz, Executive Vice-President, Dime Bancorp)); Sara Oppenheim, *Northeast Growth a Pleasant Surprise for 1st Union*, AM. BANKER, Nov. 12, 1996, at 26 (discussing rapid growth in small-business lending by 1st Union Corp.); Michael Selz, *Financing Small Business: Some Big Banks Lose out in Small-Business Loan Surge*, WALL ST. J., Dec. 17, 1996, at B2 (describing the "intense competition" to make loans to small companies);

15. *See Top 75 FDIC-Insured Commercial and Savings Banks in Small-Business Loans*, AM. BANKER, Jan. 13, 1997, at 10. That amount represented a net increase of more than $10 billion in the preceding year. *See id.*

16. *See* Mann, *supra* note 3 (using interviews to derive general framework for use of secured credit); Ronald J. Mann, *Searching for Negotiability in Payment and Credit Systems*, 44 UCLA L. REV. 951 (1997) [hereinafter Mann, *Searching for Negotiability*] (using interviews to explain why negotiability is disappearing from payment and credit systems); Ronald J. Mann, *The First Shall Be Last: A Contextual Argument for Abandoning Temporal Rules of Lien Priority*, 75 TEX. L. REV. 11 (1996) [hereinafter Mann, *The First Shall Be Last*] (using interviews to support proposal for subordinating priority of construction lenders).

Like the framework I presented in my work focusing on large-firm lending, the model rests on the premise that parties decide whether to use secured credit by comparing the net benefits of the most promising potential secured-lending transaction to those of the most promising potential unsecured-lending transaction.[17]

To make sense of lending in the small-business context, however, I extend that model to analyze the effect that guaranties have on the dynamics of secured and unsecured lending. Because prior scholarship has focused on the practices of the largest companies, it has not considered the landscape of small-business lending, in which the guaranty is a major force.[18] My interviews suggest that guaranties play a crucial role in forming the pattern of secured and unsecured lending in this context. Most interestingly, those interviews indicate a role for the guaranty much like the role played by secured credit itself, a role in which the most important effect of the guaranty is not the direct enhancement of the creditor's right to collect payment forcibly, but is instead the improvement of the borrower's incentives.[19]

Part II, the first substantive part of the study, analyzes the possible reasons for the use of secured credit in small-business lending. As mentioned above, existing statistical evidence shows that small businesses use a substantial amount of secured credit. Part II attempts to use the framework summarized in Part I to explain that pattern. My interviews suggest that a desire by lenders to avoid transaction costs leads much general small-business secured lending to occur in a stripped-down transactional form that I call the "bare-blanket lien," a lien that extends to all of the borrower's assets accompanied by minimal or nonexistent covenants with little or no monitoring. Because that transactional form limits the ability of the parties to obtain most of the common benefits of secured credit, I conclude that the dominant reason the parties take a lien at all is the desire to limit the borrower's ability to obtain future loans from other lenders.

Part III looks at small-business lending from the opposite perspective. Given the benefits identified in Part II, why do we observe so much unsecured borrowing by small businesses? Why don't all small-business bank lenders use the bare-blanket lien transaction? Relying primarily on evidence from my interviews, I present four separate answers. First, some lenders believe that they can lower fixed transaction costs by using unsecured lending. Second, the increased availability of credit-card lending is decreasing the effectiveness of a security interest as a tool for limiting future borrowings. Why use secured credit if its major benefit is becoming less and less effective? Third, lenders perceive

17. *See* Mann, *supra* note 3, at 634-37 (explaining the decision-based model).

18. The only significant scholarly discussion of the role of the guaranty in lending of which I am aware is Douglas G. Baird, *Security Interests Reconsidered*, 80 VA. L. REV. 2249, 2263-66 (1994). Avery Katz, however, is in the midst of a project designed to provide a general economic analysis of guaranties. *See* Avery W. Katz, *An Economic Analysis of the Guaranty Contract* (Nov. 14, 1996) (draft on file with author).

19. For explanation of that point with respect to secured credit, see Mann, *supra* note 3, at 638-58.

the effects of limiting future borrowing by their small-business customers to be ambiguous. Fourth, and probably most important, advances in information technology are enhancing the relative attractiveness of unsecured small-business lending.

Part IV considers two implications of the analysis set forth in Parts II and III. The first is empirical: my analysis provides a glimpse of the future pattern of institutional secured lending. As I see it, the effects discussed in Part III are likely to increase—especially advances in information technology and in the ease with which small-business owners can use credit cards to obtain large amounts of personal debt to fund their businesses. As those effects increase the relative attractiveness of unsecured credit, they will erode the comparative advantage of secured credit and steadily marginalize its role in the market. Indeed, I think it is likely that in the next decade institutional small-business secured lending will come to be limited to purchase-money loans for limited types of highly liquid assets (motor vehicles and the like). Only larger "middle-market" businesses will have loans large enough to support the costs of effective secured transactions.

The second implication is more theoretical. My evidence and analysis directly contradict the dominant perspective in secured-credit scholarship, which explains small-business secured lending (if not all secured lending) as a device to shift costs to unsuspecting involuntary creditors that cannot protect themselves against the risk of the borrower's insolvency.[20] If that perspective were correct, relatively risky small businesses would be using secured credit with increasing ubiquity. My evidence of a shift from secured to unsecured lending to small businesses, however, indicates that the dominant reason for using secured credit is not the desire to externalize insolvency risks to third parties, but the transaction-cost savings that I identified generally in my prior article and specify in Part II of this article. Accordingly, my analysis casts serious doubt on the explanatory value of the dominant view.

I. NOTES ON METHODOLOGY

A. AN INTERVIEW-BASED EMPIRICAL INQUIRY

Because the decisions I analyze in this article turn on the interplay of multiple strategic considerations as well as the details of the institutional environments in which the decisions are made, I decided that interviews with knowledgeable individuals would be the most practicable tool for obtaining useful informa-

20. The dominant perspective dates to a suggestion in a 1981 article by Alan Schwartz. *See* Alan Schwartz, *Security Interests and Bankruptcy Priorities: A Review of Current Theories*, 10 J. LEGAL STUD. 1, 30-31, 33-34 (1981). The most recent exponents of that perspective are Lucian Bebchuk, Jesse Fried, and Lynn LoPucki. *See* Bebchuk & Fried, *supra* note 10; LoPucki, *The Death of Liability*, *supra* note 2; LoPucki, *The Unsecured Creditor's Bargain*, *supra* note 1. The papers by Bebchuk, Fried, and LoPucki were the focus of a February 1997 symposium on secured credit at the Harvard Law School. *See* 82 CORNELL L. REV. (forthcoming Sept. 1997).

tion.[21] Accordingly, I conducted about a dozen interviews with small-business bank lending officers during 1996 and 1997.[22] Although the number of interviews may seem small, the concentration of the small-business lending market allowed me to cover a significant portion of the market with a relatively small number of interviews. Based on 1996 industry statistics, the lenders whose officers I interviewed controlled about 9.9% of the small-business bank-loan market.[23] To enhance the robustness of my survey, I attempted to make my interview subjects as diverse as possible. Thus, I included lenders from some of the largest banks in the country (Chase Manhattan and BankAmerica),[24] as well as some relatively small banks (1st Source Bank in Indiana and Bank of Oklahoma). I also included lenders from banks with different market niches: a major money-center institution (Chase Manhattan), some superregional banks (NationsBank and SouthTrust), and institutions located in relatively small markets (1st Source Bank in South Bend, Indiana). I also included lenders from diverse areas of the country: California (Home Savings and BankAmerica), the Southwest (NationsBank of Texas), the Midwest (Boatmen's Bank, KeyBank, and 1st Source Bank), the Southeast (SouthTrust), and the Northeast (Chase Manhattan).[25] Finally, to test the boundaries of my analysis, I added two interviews with "middle-market" lenders that lend to businesses larger than the small-business lenders that are the subject of this article (Magna Bank and ComericA Bank-Texas). The interviews lasted about twenty to thirty minutes each. A few of the interviews were conducted in person, but most were conducted by telephone. I led the interview subjects through a script of about twenty questions, but freely allowed the interview subjects to direct the conversation to other topics they found interesting. To enhance the likelihood of frank

21. *See* Mann, *supra* note 3, at 631-33 (explaining why interviews are particularly useful for learning about the pattern of secured credit).

22. I did a total of 15 interviews, but two were with middle-market lenders, rather than small-business lenders. As I discuss below, *see infra* notes 138-142 and accompanying text, those interviews were part of an effort to test the boundaries of my analysis of small-business lending practices. To be sure, small businesses have many lending opportunities from entities other than banks. I focused on banks, however, because the large size and relative homogeneity of the market made it easier to construct a sufficiently large group of interviews to get a solid picture of the market.

23. The institutions represented by my interview subjects held about $17.95 billion of the $180.94 billion of small-business loans outstanding from FDIC-insured institutions as of June 30, 1996. *See Top 50 Banking Companies in Small Business Loans*, AM. BANKER, Jan. 13, 1997, at 11. Those statistics are somewhat misleading, because their cutoff for small-business loans is quite high ($1 million). They appear, however, to be the best industry-wide statistics available.

24. According to mid-year 1996 statistics, my sample included five of the ten largest small-business lending banks (NationsBank, Wells Fargo, KeyBank, BankAmerica, and one lender that asked to remain unidentified) and seven of the fifteen largest (the five previously mentioned institutions, as well as Chase Manhattan and Boatmen's). *See id.* Although that concentration of large lenders might seem to skew the representativeness of my interviews, the rapidly increasing concentration of the industry (discussed in Sara Oppenheim, *Top 50's Share of Small Business Bank Lending Market Nearing 50%*, AM. BANKER, Jan. 13, 1997, at 11) suggests that an emphasis on the practices of the largest and most rapidly growing lenders is necessary to get a good understanding of trends in the industry.

25. I identified a few of the interview subjects through personal contacts, but most were identified by reading items in the *American Banker* reporting on small-business lending initiatives.

and unstudied responses, I generally did not provide the questions to the subject in advance. In a few cases, however, I provided a script of the questions in advance to reassure the interview subject about the noncontroversial nature of my inquiries. Similarly, to improve my ability to recall the substance of the conversations, I recorded all of the interviews.[26]

Because of the important role small-business borrowers play in the lending process, I considered interviewing small-business borrowers as well as small-business lenders. I decided, however, that interviews with borrowers would not significantly further my inquiry. My main topics of inquiry concerned the benefits lenders can obtain from secured credit in the small-business context and the ways lenders obtain those benefits. Although I might gain further insights by talking to borrowers (as I have done in my earlier projects),[27] my impression is that most borrowers in the small-business market have a relatively limited grasp of the details of the system for administering their loans.[28] Thus, borrowers are likely to have a relatively impressionistic understanding of the relevant aspects of the process. Moreover, borrowers are much less likely to have a sense for the big picture—which includes both good and bad transactions—because the overwhelming majority of borrowers (especially those with a sufficiently visible and stable business presence for me to identify them as interview subjects) will have an unrepresentatively low number of unsuccessful loan transactions.

B. A DECISION-BASED MODEL OF SECURED AND UNSECURED LENDING

Because I seek to understand why parties choose to use secured or unsecured credit in particular transactions, I focus on the considerations that are apparent to the decisionmaker at the time of the loan.[29] To analyze the justifications for choosing secured credit, I evaluate the ways in which a secured transaction can reduce the aggregate costs of a lending transaction below the level of costs for an analogous unsecured transaction. As I have explained in earlier work, secured credit can lower those costs in four separate ways. The first is the direct benefit conferred by the legal system: enhancing the lender's recovery in forced liquidation.[30] The other three potential benefits are more indirect: enabling the parties to affect the borrower's post-borrowing activities by enhancing the

26. Transcripts of the interviews are available on request. In one case, the interview subject requested anonymity. The transcript for that interview is redacted to remove information identifying the individual subject and the institution for which he works.

27. *See* Mann, *supra* note 3, at 631-32 (discussing types of borrowers interviewed in study of general pattern of secured credit); Mann, *The First Shall Be Last*, *supra* note 16, at 32 (discussing interviews with borrowers in study of lien priority in construction-lending context).

28. As I explain below, small-business lenders have worked to make the system as streamlined and invisible to the borrower as possible. *See infra* notes 70-81 and accompanying text.

29. *See* Mann, *supra* note 3, at 634-37 (explaining why a decision-based model is useful as a general tool for analyzing the pattern of secured credit).

30. In a forthcoming article, I present empirical evidence to support the argument that the lender's ability to force liquidation is rarely if ever significant in business lending because of the limited likelihood that a business lender ever will liquidate collateral by force. *See* Ronald J. Mann, *Strategy and Force in the Liquidation of Secured Debt*, 96 MICH. L. REV. (forthcoming Nov. 1997).

lender's leverage over the borrower's operations; repairing the borrower's risk-preferent incentives; and limiting future borrowings.[31] I start here from the premise that parties who use secured credit do so because of its ability to provide those four benefits.

Before discussing the ability of small-business collateral to provide those benefits, I mention a major feature of the small-business lending transaction that was not part of the general model articulated above: the guaranty. As my interviews indicate, the guaranty plays a crucial role in the structuring of small-business lending transactions. Two introductory points about the guaranty are important. The first concerns the relation between guaranties and secured credit in determining the optimal structure of a loan transaction. Guaranties and collateral are two functionally similar mechanisms that parties can use to lower the costs of lending transactions. Both lower the pre-loan perception of the costs of the transaction by allowing borrowers to commit to repayment with more credibility and a higher likelihood of repayment than a transaction involving an unadorned unsecured loan. The guaranty accomplishes this by offering a second source of repayment (the assets of the guarantor), and secured credit does so by earmarking a particular source of repayment (the collateral). Despite that functional similarity, the two mechanisms are entirely independent; lenders can take guaranties whether or not they also take collateral. Accordingly, aspects of a guaranty that allow parties to use unsecured transactions to replicate the traditional benefits of secured transactions lower the relative benefits of a secured lending transaction. When an unsecured transaction (with a guaranty) can provide the same cost-lowering benefits as a secured transaction, then the secured transaction has lost any comparative advantage. To put it more colloquially, why bother to use collateral if you can accomplish the same thing more cheaply with a guaranty?

The second point concerns the type of benefits conferred by a guaranty. A guaranty is less likely to be valuable for its direct legal benefit—the enhancement of the borrower's credit strength—than for its indirect effect on the borrower's incentives. Specifically, as I explain in detail below, the guaranty substantially mitigates problems arising from the borrower's excessively risk-preferent incentives.[32] By enhancing the likelihood that the principal of the borrower will be held personally responsible for any unfortunate business reverses, the guaranty enhances the likelihood that the principal will operate the borrowing business with due respect for risk.[33]

31. *See* Mann, *supra* note 3, at 638-58 (outlining general benefits of secured lending).

32. *Id.* at 649-50 (discussing how loan transaction causes the borrower to have excessive appetite for risk).

33. As Douglas Baird puts it: "[T]he institutional lender does not use the guarantee as a means of recovering what it is owed. The security interest is best seen as a hostage-taking device. The institutional lender wants to ensure that the owner-manager pays attention to its interests in times of financial distress." Baird, *supra* note 18, at 2263 (citation omitted); *see also* Katz, *supra* note 18 (arguing that the guarantor's superior monitoring ability is one of the principal motivations for guarantied transactions). That analysis of the guaranty directly parallels an analysis of secured credit I

II. WHY SECURED CREDIT?

This Part analyzes five possible reasons parties might choose secured credit. I first consider (and reject) the possibility that a general market failure deprives the small-business borrower of any realistic choice in the matter. I then consider the four reasons identified in my general model of secured credit: enhancing the lender's recovery in forced liquidation; enhancing the lender's leverage over the borrower's operations; repairing the borrower's risk-preferent incentives; and limiting future borrowings. Although all five of those reasons undoubtedly play some role in small-business lending, my research suggests that the most prevalent motivation for the use of collateral is the last consideration: limiting the borrower's ability to obtain funds from future lenders.

A. MARKET FAILURE: DO THEY HAVE A CHOICE?

The first question to ask is whether the frequent use of collateral in the small-business arena is the result of rational choice. After all, it is at least logically possible that small-business borrowers grant collateral for reasons not wholly reducible to utility-maximizing considerations. Perhaps the willingness of small businesses to grant collateral to their lenders rests on some combination of custom and lack of bargaining power: borrowers grant collateral to their lenders because the lenders ask for it and because the borrowers have no realistic alternative.[34] The plausibility of that scenario is buttressed by the relative levels of sophistication of the parties. Many small-business owners have relatively limited financial expertise. They might be ill-prepared to evaluate with care the costs and benefits of alternative secured and unsecured lending transactions. If that were the case, banks could obtain collateral without due regard for any burdens the transaction might impose on the borrower, because the borrower would not be evaluating those burdens accurately in deciding whether to accept the terms proffered by the bank.[35]

Whatever truth there might be to that scenario in some cases, two obvious facts lead to the conclusion that it is not useful in explaining the general use of secured credit in small-business lending: the ready availability of unsecured credit from banks, and the wide variety of financing options other than bank loans.

1. Unsecured Bank Loans

The first problem with the suggestion that small businesses lack any realistic alternative to secured bank loans is the massive amount of unsecured bank

offered in earlier work. *See* Mann, *supra* note 3, at 649-58 (arguing that one of secured credit's main benefits is its ability to repair borrower's risk-preferent incentives).

34. *See, e.g.*, Steven L. Harris & Charles W. Mooney, Jr., *A Property-Based Theory of Security Interests: Taking Debtors' Choices Seriously*, 80 VA. L. REV. 2021, 2043 (1994) ("[M]any borrowers cannot obtain credit without giving security . . . .").

35. *See* Mann, *supra* note 3, at 673 (suggesting that more sophisticated borrowers might be more averse to secured credit because they are more sensitive to its costs).

lending to small businesses. For example, one of the most prominent bank lending programs of the last few years is Wells Fargo's BusinessLine program, which offers unsecured debt to small businesses nationwide. Relying on publicly available credit information analogous to the information credit-card issuers use in preapproving potential credit-card customers, Wells Fargo identifies large numbers of small businesses that are potential loan customers. It then sends unsolicited mailings to those businesses offering a hassle-free unsecured line of credit, ranging from $5,000 to $75,000, requiring only a one-page mail-in application. Because the borrower's signature on the application includes a promise to repay funds advanced under the line and a personal guaranty of that obligation, the signature on the application completes the documentation process. There are no separate promissory notes, guaranties, loan agreements, or financing statements.[36]

Those mailings have enabled the BusinessLine program to create a large portfolio that gives Wells Fargo a nationwide presence in the small-business lending market.[37] Competing lenders (many of whom require collateral) doubt Wells Fargo's ability to cut significantly into their market share, and are quick to point out that Wells Fargo's loans are more expensive than more conventional, individually priced small-business loans.[38] Nonetheless, Wells Fargo has tapped into a significant preference of many small-business owners. The small-business lending program brought Wells Fargo $1.4 billion in new loans in 1995[39] and has increased its total portfolio of unsecured small-business loans to about $3 billion.[40] Apparently, many small-business owners are happy to pay more for money that comes with fewer strings attached.[41]

36. My description of the BusinessLine program is based on a set of sample documentation generously provided to me by Wells Fargo, a telephone interview with a senior lender at Wells Fargo, *see* Telephone Interview with Michael R. James, Executive Vice-President, Wells Fargo, transcript at 2-5 (Mar. 5, 1997) [hereinafter James Interview] (transcript on file with author), and two news articles describing the program, *see* Sara Oppenheim, *Wells' Small-Business Lending Via Mail Pays Off*, AM. BANKER, Dec. 23, 1996, at 10 (discussing Wells Fargo's mail-out program); Michael Selz, *Struggling Entrepreneurs Find Bankers More Willing to Lend*, WALL ST. J., Jan. 13, 1997, at B1 (same).

37. *See* Oppenheim, *supra* note 24, at 1, 9 (reporting that Wells Fargo's small-business portfolio grew by 110% between June 1995 and June 1996, making it the second largest small-business bank lender).

38. *See* Interview with Carmen Mastroianni, Senior Vice-President, Chase Manhattan Corp., transcript at 9-10 (Nov. 5, 1996) [hereinafter Mastroianni Interview] (transcript on file with author) (explaining that Chase Manhattan's regular small-business program was offering loans to small businesses at the prime rate, several points lower than rate on Wells Fargo's standardized mail-out program).

39. *See* Selz, *supra* note 36, at B1.

40. *See* James Interview, *supra* note 36, at 5.

41. *See* Sara Oppenheim, *Bank Financing up, Loans from Relatives down*, AM. BANKER, Mar. 10, 1997, at 5 (reporting survey by National Federation of Independent Businesses indicating that "collateral arrangements" are among small-business borrowers' "top concerns when shopping for a loan").

Nor is it easy to dismiss Wells Fargo's program as an odd fad that will pass when cooler heads prevail. On the contrary, other major players recognize the desire of borrowers for hassle-free lending and have begun to follow suit.[42] Most prominently, two of the largest lenders in my study—BankAmerica and Chase Manhattan—have altered their small-business lending programs to eliminate the use of collateral from large segments of their programs. The borrowers eligible for those unsecured loans are selected not because they are the safest or most creditworthy borrowers in the portfolio. Rather, those programs extend unsecured loans to all borrowers in the portfolio whose loans are under \$100,000.[43] If that sounds like a small segment of the market, consider that it is more than half of BankAmerica's business banking portfolio and represents more than a billion dollars at that institution alone.[44] Finally, even banks that typically take collateral on small-business loans make a substantial number of those loans without taking a lien.[45] Whatever the reasons for the trend toward unsecured small-business lending (and I have much to say about that below), the trend demonstrates that small-business borrowers have an opportunity to borrow unsecured from a bank if that is what they prefer.

42. Indeed, I argue in Part IV that much, if not all, small-business lending will become unsecured in the next few years.

43. *See* Mastroianni Interview, *supra* note 38, at 1, 5 (stating that his institution does not take security interests on loans under \$100,000); Stoudt Interview, *supra* note 14, at 6 (stating that his bank "never" files financing statements on loans below \$50,000 and "rare[ly]" does so on loans under \$100,000); *see also* James Interview, *supra* note 36, at 3 (explaining that the policy of not taking collateral does not depend on the credit profile of the particular borrower).

44. *See* Stoudt Interview, *supra* note 14, at 3, 9 (stating that 60% of his bank's \$2 billion business-banking portfolio is in unsecured small-business loans); *see also* Mastroianni Interview, *supra* note 38, at 1, 5 (stating that unsecured loans below \$100,000 constitute the "vast majority—I would say over 80%" of portfolio that he manages, but stating that competitive concerns made him unwilling to estimate total size of portfolio).

45. *See* Telephone Interview with Marc Angle, Senior Vice-President, SouthTrust Bank, transcript at 1 (Dec. 3, 1996) [hereinafter Angle Interview] (transcript on file with author) ("We will look at unsecured lines or loans, although those are a lot harder for us to do."); Telephone Interview with Joe DeKunder, Vice-President, NationsBank of Texas, N.A., transcript at 1 (June 12, 1996) [hereinafter DeKunder Interview] (transcript on file with author) (mentioning unsecured small-business loans available from NationsBank); Telephone Interview with Anonymous East-Coast Lender, transcript at 1 (Nov. 18, 1996) [hereinafter East-Coast Lender Interview] (transcript on file with author) ("We tend to discourage unsecured loans, except in smaller amounts and to very solid companies."); Forsythe/Holt Interview, *supra* note 11, at 1 (stating that Home Savings offers both secured and unsecured loans for small businesses); Lliteras Interview, *supra* note 14, at 2 (describing his institution as "*principally* a secured lender" (emphasis added)); Telephone Interview with James D. Magera, Vice-President, 1st Source Bank, transcript at 2 (July 17, 1996) [hereinafter Magera interview] (transcript on file with author) ("The lion's share [of our loans] would be secured. If someone has a strong net worth, obviously they might qualify for unsecured . . . ."); Telephone Interview with Sergio Ora, National Credit Administrator for Small Business, KeyBank, N.A., transcript at 2, 4-5 (Feb. 4, 1997) [hereinafter Ora Interview] (transcript on file with author) (stating that unsecured loans are "more exceptions rather than the norm" and explaining the circumstances in which his institution makes unsecured loans). As those comments suggest, many of those institutions limit their unsecured lending to borrowers identified as the most creditworthy in the portfolio. Thus, unsecured lending from those banks is not available to the broad spectrum of borrowers that can get unsecured lending from the other banks discussed in the text.

2. Financing Other Than Bank Loans.

Small businesses also have ready alternatives to bank loans as ways to satisfy their financing needs. As recently as 1987, 24% of small businesses used no bank financing whatsoever.[46] Although recent initiatives have increased the market share held by banks, the competing opportunities remain significant. For example, even though 83% of small businesses now borrow some money from banks, only 34% use banks as the primary source of working capital.[47] Personal savings aside, the most visible borrowing alternative is credit-card debt;[48] current market conditions make it relatively easy for entrepreneurs to use credit cards to borrow tens of thousands of dollars to finance their businesses.[49] By borrowing in that market, businesses frequently avoid the need to grant collateral to secure their business debt.

Even businesses whose financing needs are too large to be satisfied by haphazard credit-card borrowing have alternatives to bank financing.[50] Those alternatives include such well-known entities as the Money Store,[51] AT&T

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46. *See* Oppenheim, *supra* note 41, at 5.

47. *See id.*

48. Credit cards appear to provide the primary source of working capital for 5% of small businesses. *See id.* For the smallest of small businesses, the market share of credit-card lending appears to be much higher, in the range of 15-20%. *See* Rodney Ho, *Credit-Card Use to Finance Business Is Soaring, Says Survey of Small Firms*, WALL ST. J., Sept. 25, 1997, at B2 (reporting results of a survey indicating that one-third of responding businesses with less than 20 employees use credit cards "as one of their financing options," but that 60% of responding businesses that use credit cards pay off their balances each month).

49. *See, e.g.*, Angle Interview, *supra* note 45, at 3, 9 (describing credit cards as competing source of small-business lending and discussing ready availability of "30 or 40 thousand dollars of credit card debt" even to troubled small businesses); Interview with E. Tracy Beckette, Vice-President and Business Banking Director, The Boatmen's National Bank of St. Louis, in St. Louis, Missouri, transcript at 14 (July 18, 1996) [hereinafter Beckette Interview] (transcript on file with author) (describing new customer who had previously funded her tennis-court repair business on credit-card debt); East-Coast Lender Interview, *supra* note 45, at 3 ("A lot of times we find these small business owners have $50,000 to $100,000 of credit card debt that they have accumulated to fund the business."); Forsythe/Holt Interview, *supra* note 11, at 4 (suggesting that "a lot of times the principals . . . will finance the business by credit cards"); James Interview, *supra* note 36, at 6 (stating that consumer loans in form of credit-card loans and home equity loans are "the number one competitor"); Lliteras Interview, *supra* note 14, at 4 (describing competition from credit cards); Mastroianni Interview, *supra* note 38, at 2 (stating that for alternative financing his borrowers "would probably go to credit cards—personal credit cards—or mortgages or home equity lines"); Ora Interview, *supra* note 45, at 4 (stating that sole proprietorships initially "use primarily credit cards" until they grow large enough to borrow money from banks and finance companies); Stoudt Interview, *supra* note 14, at 3 (describing personal credit card financing of small businesses as having been "typica[l] . . . in the past" for customers needing amounts from $2,500 to $50,000).

50. *See* Michael Selz, *Finance Firms Targeting Small Business Are on the Rise*, WALL ST. J., Aug. 6, 1996, at B2 ("The number of commercial-finance companies targeting small business is rising as financiers spot niches sometimes underserved by newly merged big banks.").

51. "The Money Store has been the largest SBA lender in the U.S. for 13 years . . . ." Glassman, *supra* note 14, at 12. Actual competition from the Money Store is difficult to gauge. One knowledgeable executive told me that the Money Store's only significant small-business product is an SBA-supported real-estate loan. *See* James Interview, *supra* note 36, at 6 ("No matter what they tell you, that's what they really do.").

Capital,[52] GE Capital Services,[53] and American Express.[54] Equity financing is also available.[55] To be sure, most of the nonbank borrowing alternatives—finance companies, accounts receivable factors, and other noninstitutional lenders—require collateral. Even so, the presence of those competitors prevents banks from having too free a hand in setting the terms of their lending transactions: if banks impose collateral-related requirements without a price-based justification, borrowers have every opportunity to take their business to other lenders that stand ready to compete with the bank lenders.

B. THE LIMITED UTILITY OF LIQUIDATION

Assuming that the significant market share for small-business secured debt does not reflect market failure, I turn now to possible economic justifications for the use of collateral in that market. The traditional, most direct reason for taking a grant of collateral is to enhance the likelihood that the lender will be able to recover its loan through forcible liquidation of the collateral. If the borrower does not pay willingly, the theory goes, the lender can take possession of the collateral and sell it in satisfaction of the debt.[56] The foreclosure option, however, has quite a limited value for the small-business lender.[57]

The option to foreclose is least valuable against businesses for which the primary assets are inventory and accounts receivable.[58] For a variety of reasons,

52. *See* Glassman, *supra* note 14, at 30, 32 (discussing small-business financing by AT&T Capital, second largest SBA lender in the country in 1996); *see also* Lisa Fickensher, *Amex, AT&T Capital Form Small-Business Lending Partnership*, AM. BANKER, Jan. 9, 1997, at 1, 22 (discussing program to offer equipment financing to American Express's 1.6 million small-business customers).

53. *See* Glassman, *supra* note 14, at 30, 32 (discussing small-business financing by GE Capital Services); Selz, *supra* note 36, at B1 (stating that GE Capital has $700 million in outstanding small-company loans).

54. *See, e.g.*, Glassman, *supra* note 14, at 34 (discussing small-business financing by American Express); Fickensher, *supra* note 52, at 1, 22 (discussing small-business financing partnership between American Express and AT&T Capital); Angle Interview, *supra* note 45, at 3 (describing competition from American Express); James Interview, *supra* note 36, at 6 (stating that "American Express is making a big push to get into this business").

55. *See, e.g.*, Sara Oppenheim, *In Fight with Nonbanks, More Banks Forming SBICs*, AM. BANKER, Dec. 9, 1996, at 12 (stating that about $4.5 billion, constituting 15% of all the venture capital in the United States, has been invested through small-business investment companies ("SBICs")—venture-capital firms targeted at small businesses); Sara Oppenheim, *Small Business Scoring on End Runs Around Banks with New Kind of Stock*, AM. BANKER, Dec. 2, 1996, at 8 (discussing small-business financing through small corporate offering registrations ("SCORS")).

56. *See* Mann, *supra* note 3, at 639 (discussing capacity of secured credit to enhance lender's ability to recover a debt forcibly).

57. *See* DeKunder Interview, *supra* note 45, at 2 (explaining that "collateral values for the most part would not be a factor in [a very] small . . . loan"); James Interview, *supra* note 36, at 4 ("[W]ith these small businesses, when they get in trouble, they tend to go down hill very quickly because they have limited financial flexibility and by the time you get to the collateral there's nothing there."); Stoudt Interview, *supra* note 14, at 8 ("[W]hen these very small loans go bad—whatever general filings you might take on assets, those assets are generally gone.").

58. Although those businesses may have equipment, experienced lenders believe that small-business equipment "tends to be limited to office equipment, computers, etc., furniture, fixtures, stuff that really doesn't hold much value." James Interview, *supra* note 36, at 4. Thus, bankers normally rely on

bankers have little confidence in their ability to recover significant value through forced liquidation of the inventory and accounts receivable of a small business.[59] An officer at Chase Manhattan put it well:

> [T]he collateral for these small companies—the accounts receivable, the inventory, the equipment—generally aren't worth a lot for an ongoing company, but once they get into trouble, and we finally get to take possession of that collateral, there's *really* not much there. That's been our experience over a long period of time.[60]

The practical reasons for that lack of confidence are easy to understand. With respect to inventory, by the time the business fails any inventory on hand is likely to be stale or damaged, and thus have relatively little value even to the borrower, much less to the lender. After all, if the inventory were salable at its retail price, the business probably would not be failing. Moreover, the time and expense that the lender would incur locating another party to purchase the inventory might consume all or a substantial portion of whatever value the inventory retained at the time of default.[61]

The foreclosure option is even less valuable with respect to accounts receivable.[62] By the time the business fails, the borrower often will have collected many of the best accounts in an effort to obtain cash to keep the business going. Thus, the number of accounts left for the lender is likely to be relatively small. Moreover, efforts to collect the accounts of a failed business tend to face numerous obstacles. Among other things, the account payor can interpose complaints about the quality of the borrower's performance that, absent the borrower's cooperation, may be difficult for the lender to rebut in a cost-effective manner. Furthermore, the account payors themselves might be in

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accounts receivable and inventory as collateral for general lines of credit to small businesses. *See, e.g.*, Angle Interview, *supra* note 45, at 6; Lliteras Interview, *supra* note 14, at 3; *see also* James Interview, *supra* note 36, at 3 (statement of lender offering unsecured lines of credit that inventory and accounts receivable are the typical assets that small businesses would have to offer as collateral).

59. *See, e.g.*, Angle Interview, *supra* note 45, at 9, 10 ("I mean with soft collateral [i.e., inventory and accounts receivable] there's no value there really."); East-Coast Lender Interview, *supra* note 45, at 6 (contrasting the ability to recover payment by liquidating real estate, which "will still be there as opposed to accounts receivable or inventory, which could be gone"); James Interview, *supra* note 36, at 4 ("[W]ould you spend the money to enforce that type of collateral?"); Magera Interview, *supra* note 45, at 4 ("I'll tell you one thing, when a business is going under—if you've got a line of credit for receivables and inventory, by the time they are out there, there's nothing for you to collect."); Ora Interview, *supra* note 45, at 6 ("[W]hen the company gets into trouble, more often than not, receivables and inventory tend to be not necessarily worthless, but not valuable.").

60. Mastroianni Interview, *supra* note 38, at 5 (emphasis added).

61. *See* Magera Interview, *supra* note 45, at 2 ("I've got accounts receivable and inventory and they have some value—but whether you can go out and collect it and sell the inventory is another question."); Mastroianni Interview, *supra* note 38, at 6 ("[B]y the time we take possession of inventory and sell it, there usually is not much there, and then, forget about the fixed assets—equipment, desks, computers.").

62. *See* Stoudt Interview, *supra* note 14, at 9 ("[P]ast experience has told us that . . . if that business is gone, so are the receivables. It's just a practical kind of thing.").

financial difficulty, making collection troublesome even if the account payors acknowledge their obligation and are willing to pay. As one lender summed up the problem:

> From my experience what always happens in that case is that the borrower has already used that cash flow and there's not much there anyway. You would have the receivables that are marginal or even the ones that are not going to pay. The timing has to be very, very good for that to work.[63]

To be sure, some small businesses have substantial equipment (most commonly motor vehicles) that banks could liquidate with ease. Banks recognize that distinction in the products they offer. Several of the lenders to whom I spoke offered distinct products (with longer terms) for businesses purchasing a specified piece of equipment.[64] And in that context, lenders do believe that they could recover some value on liquidation.[65]

Because those loans by definition provide funds for a specific piece of equipment, they cannot satisfy the general capital needs of the bank's small-business clients. Thus, although liquidation might be important for secured credit on those loans, it does not explain the use of collateral on more general working-capital loans.

C. THE LIMITED VALUE OF THE LENDER'S LEVERAGE: EVERYBODY LOSES ON REPOSSESSION

One of the most widespread benefits of secured credit is its enhancement of the lender's leverage over the borrower: When a lender has a lien, the lender's ability to inflict damage on the borrower through repossession of the collateral gives the borrower a powerful incentive to repay the loan voluntarily, thus avoiding any need for the lender to resort to repossession. When a lender repossesses collateral from a borrower, the borrower typically suffers a significant loss. That loss is the "spread" between the value of the collateral to the borrower (which can be significant, particularly when continued use of the

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63. DeKunder Interview, *supra* note 45, at 3.

64. *See* Angle Interview, *supra* note 45, at 1 (distinguishing "hard-asset" purchase-money lending on equipment and real estate from lending secured by accounts receivable and inventory); Beckette Interview, *supra* note 49, at 1 (distinguishing between purchase-money term lending "for equipment, etc." and revolving lines of credit); Forsythe/Holt Interview, *supra* note 11, at 12 (discussing different treatment of purchase-money loans for real estate, machinery, and equipment); James Interview, *supra* note 36, at 2 (discussing separate program providing purchase-money financing for equipment); Lliteras Interview, *supra* note 14, at 3 (explaining that term loans at his institution "typically would be" purchase-money loans for "a hard asset or a pool of hard assets"); Stoudt Interview, *supra* note 14, at 2 (discussing products responding to "a specific need to buy specific equipment").

65. *See* Angle Interview, *supra* note 45, at 9 (explaining that loans secured by accounts receivable and inventory are more troublesome because "[i]t's not like a building or big piece of equipment that you can locate, and usually won't get away from you"); East-Coast Lender Interview, *supra* note 45, at 6 ("Again, the [real estate] will still be there as opposed to accounts receivable or inventory, which could be gone.").

collateral is crucial to the continuation of the borrower's business) and the amount that the lender obtains on liquidation of the collateral (which is likely to be quite small).[66]

Two factors limit the significance of that leverage in the small-business context. The first is the difficulty of exercising that leverage. In the small-business context, the lender rarely can take advantage of that leverage without destroying the lender's most likely source of repayment: the business's ongoing revenue stream. When the lender takes the collateral from the borrower, the likely result will be the termination of the borrower's ongoing business operations, especially in cases in which the lender exercises rights under a general lien on inventory and accounts receivable. If the lender takes possession of the inventory the borrower may have nothing left to sell. Similarly, although less dramatically, the borrower's customer base is likely to deteriorate rapidly when the lender advises the borrower's customers that the borrower is not paying its debts (a likely step in collecting the accounts). Once the stream of revenue from customers is destroyed, the lender's chances of complete payment are diminished considerably.[67]

Accordingly, the small-business borrower need not cower in fear of the lender's ability to shut down the business so as to obtain payment. The small-business borrower should understand that shutting the business down is the last thing the lender wants, and that the lender's need to have the business open to generate revenues to repay the loan will limit the lender's willingness to enforce its remedies vigorously.[68]

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66. *See* Mann, *supra* note 3, at 645-49 (explaining how secured credit enhances the lender's leverage).

67. The importance of the revenue stream to the lender's chances of repayment is illustrated by the emphasis in underwriting on debt-service coverage (the extent to which the cash flow from the business "covers" the debt service). Lenders often are willing to forgive shortcomings in what they perceive to be the liquidation value of collateral if they are persuaded that the loan has excellent debt-service coverage. *See, e.g.*, Beckette Interview, *supra* note 49, at 3 (describing coverage as "the number one thing we look at" and expressing a willingness in cases of 130% or higher coverage to "go above the rules" establishing appropriate loan amounts, even if the liquidation value of the collateral is questionable); Forsythe/Holt Interview, *supra* note 11, at 8-9 (describing cash flow as the "primary source of repayment," the personal guaranty as the secondary source, and relegating the collateral to a "tertiary" status); Lliteras Interview, *supra* note 14, at 6 (stating that "cash flow ultimately" is the primary source of repayment, with liquidation one of several "secondary source[s]"); Magera Interview, *supra* note 45, at 2 ("I've never looked at collateral to repay the loan—period. . . . I think if you have a good understanding of the cash flow of the business and the nature of the business, that's really where you can get paid back from."); Mastroianni Interview, *supra* note 38, at 5 (stating that value of collateral is "[n]ot very important" in underwriting and that "we basically are focused more on the cash flow and the guarantors" and that "[c]ollateral, for the kind of lending that I do, is not critical.").

68. The preceding two paragraphs summarize a point that I make at greater length in a forthcoming article that reports the results of a series of case studies of the practices of lenders in liquidating secured loans. Those studies provide empirical support for a surprising reluctance on the part of lenders to take possession of the collateral of their borrowers, based on a general perception that a lender's chances of obtaining complete repayment diminish considerably once a lender decides to take possession of the collateral. *See* Mann, *supra* note 30.

The second factor that limits the leverage attributable to secured credit is the ready availability of a substitute device for obtaining leverage: the personal guaranty. At its best, secured credit motivates the borrower by confronting the borrower with the loss of its business. The guaranty, by contrast, can motivate the principal of a small-business borrower by threatening the loss of the principal's personal assets. Given the likelihood that the principal of the borrower will take a loss of personal assets extremely seriously—perhaps even more seriously than a loss of the business—the leverage arising from a guaranty should match (or surpass) the leverage arising from a security interest. Accordingly, the small-business lender with a guaranty probably gains little additional leverage from its retention of a security interest.

D. THE LIMITED RELATIVE BENEFITS OF USING SECURED CREDIT TO REPAIR THE BORROWER'S RISK-PREFERENT INCENTIVES

Another major benefit of secured credit is its ability to repair the differentiation of the borrower's incentives created in any lending transaction. The basic problem is that when a borrower runs its business on somebody else's money—the lender's money in our situation—the borrower's incentives are distorted to favor activities that are riskier than those the borrower would favor had there been no lending transaction. Secured credit can minimize that problem in three different ways: it can allow the lender to focus its monitoring on specified assets; it can enhance the effectiveness of loan covenants; and it can improve the ability of the lender to use leverage to police unduly risky decisions.[69] Those mechanisms, however, do not provide a strong basis for use of secured credit in the small-business context. First, in that context such mechanisms are generally ineffective. Second, a personal guaranty serves as a readily available substitute to secured credit.

1. The Ineffectiveness of Secured Credit for Repairing Incentives

Although the incentive-repairing effects of secured credit seem to provide one of the principal reasons that parties choose to use secured credit, the small-business context limits the effectiveness of secured credit as a device for furthering that end.

The basic problem is that bank lenders do not generally find it cost-effective to expend significant time or money evaluating potential small-business customers up front or monitoring them after loans have been made.[70] Lenders generally agree that a profitable small-business lending operation must use fast and

69. *See* Mann, *supra* note 3, at 649-56 (explaining differentiation of incentives associated with loan transactions and how those mechanisms allow secured credit to mitigate costs associated with that problem).

70. *See* East-Coast Lender Interview, *supra* note 45, at 1 ("[W]e tend to treat loans secured by accounts receivable and inventory as tantamount to unsecured, given the fact that we don't monitor the collateral on an on-going basis . . . ."); Magera Interview, *supra* note 45, at 4 ("[I]f we've got somebody that's just basically line-of-credit coverage with some working capital needs, we probably don't pay a lot of attention to it . . . .").

routine evaluation procedures.[71] Thus, for example, none of the lenders to whom I spoke had regular practices requiring appraisal of collateral or regular inventory audits; few even conducted regularly scheduled site visits.[72] Similarly, even when lenders retained liens on accounts receivable, they did not customarily require the borrower to submit a periodic update of accounts receivable.[73] The limited willingness to expend funds evaluating potential borrowers is exemplified by the statement of one lender that his institution does not even conduct Uniform Commercial Code (U.C.C.) searches on its smallest

71. *See* Wantland, *supra* note 13, at 18 ("Banks that are focused on the small-business market are redesigning their processes to become simpler and more efficient to meet the demand of the hundreds of new businesses being started each year in almost every city."); Angle Interview, *supra* note 45, at 7 ("You cannot look at each deal and spend three or four days and have three or four people looking at these deals."); Beckette Interview, *supra* note 49, at 3-5 (describing reliance on standardized collateral values rather than appraisals and describing how his institution requires significantly less documentation and internal paperwork for small-business loans); Forsythe/Holt Interview, *supra* note 11, at 7 (discussing "low touch" treatment for loans under $35,000); Stoudt Interview, *supra* note 14, at 8 ("[Y]ou have to understand in a high-volume operation you have to do it in a very efficient and expeditious manner as much as possible. You can't spend all day trying to [evaluate prospective loans.]").

72. *See* Angle Interview, *supra* note 45, at 6, 8 (explaining that his bank has no regularly scheduled monitoring or site visits and that his bank does not require appraisals, but relies on invoices to determine how much it is willing to advance on purchase-money loans); Forsythe/Holt Interview, *supra* note 11, at 8 (stating that their institution does not do site visits on loans below $100,000 or inventory audits on loans below $500,000); James Interview, *supra* note 36, at 9-10 (agreeing with the suggestion that his institution does not conduct any auditing or on-site monitoring on its small-business loans); Lliteras Interview, *supra* note 14, at 7-8 (stating that his institution does appraisals only to the limited extent required by banking regulations, does not audit inventory or accounts receivable, and makes site visits only as part of initial underwriting decisions); Magera Interview, *supra* note 45, at 5 ("[A] lot of our small loans, we put them on a two-year line of credit, we follow the financial statements, but if the asset is performing, we don't monitor too closely.... I'm not going in there and count every piece of inventory. I'm going to look at the receivables and the aging list and go from there."); Mastroianni Interview, *supra* note 38, at 6-7 (describing practice of doing site visits to audit inventory "[r]arely" and obtaining appraisals "[o]nly on real estate"); Ora Interview, *supra* note 45, at 7-8 (describing practice of requiring appraisals only in the limited circumstances required by banking regulations, and stating that "there is very little on accounts receivable and inventory policing that we do"); Stoudt Interview, *supra* note 14, at 7 (explaining that on loans below $100,000 "it kind of looks more like a credit-card type of thing, there is very little if any in terms of going out, doing actual site visits or anything like that"); *id.* (explaining that his bank "generally [does] not" get appraisals except on real estate or equipment loans). Those that did conduct site visits indicated that the principal purpose of site visits was promotion of their lending services and solidifying their relationship with the borrower, not close examination of the borrower's business practices: the visits are sales and marketing visits, not monitoring visits. *See* Magera Interview, *supra* note 45, at 5 (discussing need to "spend similar amounts of time" with large and small borrowers to satisfy "all these other needs" for insurance and personal banking services); Ora Interview, *supra* note 45, at 8 (stating that he "probably tend[s] to use [site visits] more for business development and relationship management" than for monitoring).

73. *See* Beckette Interview, *supra* note 49, at 9 (statement of lender that he does not ask for summary of outstanding accounts receivable); Lliteras Interview, *supra* note 14, at 7 (stating that his institution does not monitor accounts receivable or inventory during the term of general line of credit); Ora Interview, *supra* note 45, at 7 ("[At least on loans below $250,000], there is very little on accounts receivable and inventory policing that we do."); *see also* DeKunder Interview, *supra* note 45, at 3 (explaining that lockbox procedures—which require checks to be mailed directly to the bank from the borrower's customers—typically are not cost-effective on loans below $500,000).

business loans (under $35,000).[74]

Nor can small-business bank lenders perform any substantial monitoring of borrowers through review of financial statements. For starters, the costs of producing audited financial statements make it wholly implausible for bankers to seek such statements from small businesses. Thus, although a few businesses might prepare statements reviewed or compiled by third-party accountants, bankers are not in a position to insist on such statements.[75] Rather, they accept owner-prepared statements or (most frequently) tax returns.[76] Moreover, some lenders do not review statements at all during the term of the loan, except in connection with annual reviews of lines of credit.[77] Those practices do not offer lenders the kind of information necessary to check borrower opportunism.

As a result, the dominant trend in small-business lending, especially on smaller loans, is to abjure any effort at monitoring whatsoever. Lender after lender explained that once the loan is "put to bed," the lender will do nothing to monitor the loan on an ongoing basis: as long as the borrower makes the scheduled payments, the loan is completely ignored.[78] For lines of credit subject to periodic review, the review often is limited to examination of information readily available from the records of the bank or other public sources. As long as nothing reveals a serious problem—a substantial deterioration of the business

74. *See* Interview with Charles M. Mohr, Assistant Vice-President, Business Banking Center, The Boatmen's National Bank of St. Louis, in St. Louis, Missouri (Aug. 13, 1996) [hereinafter Mohr Interview] (notes of interview on file with author).

75. *See* Angle Interview, *supra* note 45, at 7 (stating that financial statements "[t]ypically" are prepared by borrowers); Beckette Interview, *supra* note 49, at 3 (explaining that his borrowers "[g]enerally" do not provide audited statements); Forsythe/Holt Interview, *supra* note 11, at 10 ("We rarely get audited financial statements."); Lliteras Interview, *supra* note 14, at 7 ("[T]hey do not tend to be audited. At best, they will be reviewed . . . ."); Mastroianni Interview, *supra* note 38, at 6 ("Rarely do we see an audited statement.").

76. *See* Angle Interview, *supra* note 45, at 7 (stating that he normally accepts owner-prepared financial statements); Beckette Interview, *supra* note 49, at 4 (stating that he "prefer[s] to get tax returns [rather than ordinary owner-prepared statements] because they are declaring to the government that the numbers are truthful"); Forsythe/Holt Interview, *supra* note 11, at 10-11 (explaining practice of asking for tax returns to "support and validate the information on [owner-prepared] financial statements"); Mastroianni Interview, *supra* note 38, at 6 ("We accept tax returns [and] compilations."); Ora Interview, *supra* note 45, at 7 (stating that his institution normally does not get accountant-prepared statements of any form, but only tax returns).

77. *See* Angle Interview, *supra* note 45, at 7 (stating that "[a]s long as it stays current we won't go back for financials," and explaining that his bank looks at borrower financial statements only in connection with annual reviews of lines of credit); Beckette Interview, *supra* note 49, at 5, 9 (indicating that his division does not routinely review borrower financial statements, except in connection with annual reviews of lines of credit); Forsythe/Holt Interview, *supra* note 11, at 7 (explaining that their institution requires updated financial statements only on the largest 20% of loans in portfolio); James Interview, *supra* note 36, at 10 ("There are customers that since we booked the loan we've never gotten financial statements from them."); Lliteras Interview, *supra* note 14, at 7 (stating that financial statements are analyzed only as part of annual review of lines of credit).

78. *See* Beckette Interview, *supra* note 49, at 5 ("We book a loan and we place it on the . . . system, . . . and we handle it just like a car loan. We don't review it again, we don't do anything with it."); East-Coast Lender Interview, *supra* note 45, at 7 ("[O]nce the loan is made, we really monitor on the basis of recency of payment.").

or the borrower's financial condition (such as a foreclosure or other outstanding judgment)—the line of credit normally will be renewed without further scrutiny.[79] Indeed, absent a cause for concern, the bank might renew the line of credit without even asking for a current financial statement.[80]

Given that absence of monitoring, secured credit does nothing to repair the borrower's incentives. However much the lien might permit the lender to focus its monitoring on the collateral, the theoretical ability to focus monitoring has no value in an environment where the lender does not monitor. Similarly, the lender that does not monitor the borrower's assets cannot use loan covenants to restrict the use of those assets. Again, the dominant trend is to abjure any substantial loan covenants at all.[81] Finally, if the lender knows little or nothing about the borrower's daily operations, the borrower has little to fear from a decision by the lender to exercise its leverage to police risk-preferent actions by the borrower.

2. The Value of a Guaranty for Repairing Incentives

The small-business context presents the lender with a particularly effective tool for limiting the borrower's risk-preferent incentives that is distinct from any lien the lender has on the business assets: a personal guaranty from the principal of the borrower. Borrowers' incentives for risk pose a problem for lenders; borrowers have an undue preference for risk when they are able to shift to lenders the risk of losses from decisions that turn out poorly. The paradigm is the highly leveraged borrower that garners the upside wins and passes on any downside losses to the lender.[82]

A personal guaranty mitigates that problem by enhancing the likelihood that the principal will feel any losses personally.[83] When a lender can ensure that a business reverse confronts the borrower not only with a loss of its residual

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79. *See* Beckette Interview, *supra* note 49, at 9 (describing procedures for annual review of lines of credit); East-Coast Lender Interview, *supra* note 45, at 7 (same).

80. *See* Beckette Interview, *supra* note 49, at 9 (explaining that his institution asks for financial statements in connection with annual review only "[i]f the loan is not performing or we see an indicator of weakness"); East-Coast Lender Interview, *supra* note 45, at 7 (stating that "hopefully" his bank gets financial statements in connection with its annual review of lines of credit); James Interview, *supra* note 36, at 10 (stating that "you can't afford to do it [i.e., an annual financial-statement review on all loans]").

81. *See, e.g.*, Beckette Interview, *supra* note 49, at 6 (stating that his institution does not impose financial covenants on small-business borrowers); East-Coast Lender Interview, *supra* note 45, at 7 (stating that "we don't do these loans with financial covenants" and agreeing with the statement that there is nothing borrowers can do wrong as long as they are paying the loan). Similarly, the documents from Wells Fargo's successful BusinessLine program (on file with author) include no financial covenants of any kind.

82. *See* Mann, *supra* note 3, at 649-50 (discussing how loan transactions give borrowers unduly risk-preferent incentives).

83. That effect closely resembles one of the traditional agency-cost problems that afflicts corporate organizations: individual representatives of a corporation may be excessively averse to risk if they bear personal liability for their mistakes. *See, e.g.*, Bruce Chapman, *Corporate Tort Liability and the Problem of Overcompliance*, 69 S. CAL. L. REV. 1679, 1688-89 (1996).

equity in its business, but also with a loss of the principal's home, the lender reduces the borrower's incentives for risk. Indeed, given the likelihood mentioned above[84]—that many principals will place extraordinarily high values on their homes and other personal assets—the lender that has enforceable rights against those assets probably has reduced the borrower's incentives for risk more than a lender that relies on a conventional lien against business assets.

The practices of small-business lenders support that analysis. The lenders to whom I spoke uniformly reported policies requiring personal guaranties by the principals of their borrowers in all but the most unusual circumstances.[85] Of course, it is possible that small-business lenders seek guaranties for an alternative reason, to enhance the relatively weak credit strength of small businesses. Specifically, because small businesses tend to have less financial strength than larger companies, lenders might seek guaranties more frequently from smaller companies in an effort to enhance the questionable financial strength of the borrowing entity.

But the evidence suggests that enhancement of financial strength does not motivate lenders to require these guaranties. If that were the case, lenders would not obtain guaranties when the principals had few nonbusiness assets, because guaranties in those cases would provide little enhancement of the borrower's credit. Conversely, lenders would not seek guaranties when the borrowers had strong financial records, because the enhancement would be unnecessary.

In fact, the actual pattern is quite different. Lenders to small businesses generally insist on guaranties in all but extremely rare cases of prodigious financial strength. No lender suggested a willingness to forgo a guaranty based on the weakness of the principal's nonbusiness financial strength. On the contrary, when questioned, lenders insisted that they would want a guaranty

84. *See supra* Part IIc.

85. *See* Angle Interview, *supra* note 45, at 4 (describing guaranty requirement for small-business loans); Beckette Interview, *supra* note 49, at 2 (describing guaranty requirement as "the minimum" that his bank will accept); East-Coast Lender Interview, *supra* note 45, at 3 (stating that his institution gets guaranties "100% of the time"); *id.* at 8 ("I can't think of a single loan we've made without a guarant[y] . . . ."); Forsythe/Holt Interview, *supra* note 11, at 5 (discussing requirement of guaranties on loans for which borrower is corporation or limited liability company); *id.* at 8 (characterizing guaranty as more important source of repayment than collateral); James Interview, *supra* note 36, at 7 (stating that he requires guaranties "99% of the time"); Lliteras Interview, *supra* note 14, at 4 (estimating that his institution receives guaranties between 90 and 100% of time); Magera Interview, *supra* note 45, at 3 (describing policy requiring individuals who operate closely held corporations to "personally sign" loans); Mastroianni Interview, *supra* note 38, at 3 (describing practice of obtaining guaranty "[a]lmost always . . . I would say 99.9%"); Ora Interview, *supra* note 45, at 4 (stating that his institution obtains guaranties on about 90% of its loans); Stoudt Interview, *supra* note 14, at 4 (describing it as "very rare that you would not get the personal guaranty"); *see also* Lawrence Gardner, *Protecting the Small Business Owner's Personal Assets—Borrower's Viewpoint*, J. LENDING & CREDIT RISK MGMT., Dec. 1996, at 48, 48 ("Up to 99.5% of loans to closely held companies require . . . the personal guaranty of the owner."). I did not question the lenders closely enough to determine whether those percentages refer to the total portfolio or only to those loans in which the borrower is a limited liability entity. In either case, loans in which the borrower's principals are not personally liable are quite unusual.

even if it added nothing to the credit strength of their borrower. For example, one lender explained:

> The fact that [the potential guarantor] did not have a lot of non-business assets would not be a reason to make that exception [that is, to make the loan without taking a guaranty.] Even then, I still want to tie that individual to that business. Generally speaking, if the individual were not going to be as financially committed to the business as I am, if they are not willing to put their whatever on the line, I'm going to be a bit dubious . . . .[86]

Lenders indicated that they are just as concerned with binding the guarantors to the ongoing business as they are with any financial enhancement to be obtained from the guaranties. As one lender put it, "I have a philosophy that I want that owner to be willing to say 'I'm willing to step up and stand behind this business,' and if someone's not comfortable doing that, it's pretty tough for me to get comfortable lending them money."[87]

At bottom, it is unlikely that the use of secured credit for small-business loans is motivated by secured credit's capacity to repair the risk-preferent incentives of small-business principals. Secured credit does relatively little to repair those incentives, and lenders can use guaranties to repair those incentives much more effectively.[88]

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86. Telephone Interview with Michael Stoudt, Senior Credit Officer and Risk Manager, BankAmerica, Business Banking Division, transcript at 2 (Feb. 6, 1997) [hereinafter Supplemental Stoudt Interview] (transcript on file with author). The other lenders whom I pressed on that point gave similar responses. *See* James Interview, *supra* note 36, at 7-8 (stating that he would require guaranty even if principal of business had no nonbusiness assets); Lliteras Interview, *supra* note 14, at 4 (explaining that he would require guaranties even if principal had no assets, "in order to keep attention on the business"); Telephone Interview with Carmen Mastroianni, Senior Vice-President, Chase Manhattan Corp., transcript at 1 (Feb. 14, 1997) [hereinafter Supplemental Mastroianni Interview] (transcript on file with author) (stating that he would not be willing to waive guaranty in cases where principal had no nonbusiness assets); Ora Interview, *supra* note 45, at 5 ("[T]he answer to that [namely, the question whether he would waive guaranty requirement for principal with insubstantial assets]—personally—is no. The other thing that I use the guaranty for is to ensure the commitment of the individual—the owner—to the business and to the transaction.").

87. James Interview, *supra* note 36, at 8. For similar comments, see Angle Interview, *supra* note 45, at 4 ("We like to see somebody stand behind their name and behind their company because, obviously, we don't want the keys to it, we just want the loan paid back."); Supplemental Mastroianni Interview, *supra* note 86, at 1 ("When we get into trouble, where the company runs into difficulty, we find that the borrower's owners are much more willing to help us when they're personally liable."); Interview with Patricia A. O'Herin, Vice-President, Magna Bank, in St. Louis, Missouri, transcript at 4 (July 24, 1996) [hereinafter O'Herin interview] (transcript on file with author) (describing purpose of guaranty as "a combination of a psychological ploy as well as a financial net worth ploy," so that "you've got him standing behind it saying 'I won't walk away from it because this is my life.' "); Ora Interview, *supra* note 45, at 5 ("I look at [the guaranty] more from a moral persuasion standpoint . . . ."); *see also* Gardner, *supra* note 85, at 50 ("The personal guaranty acts as a motivator to the business owner to take a 'personal interest' in repaying the business loan because the owner's personal assets are at risk.").

88. Of course, another possible explanation for the prevalence of guaranties is that borrowers prefer the combination of a corporation with a guaranty to the simple sole proprietorship because of the potential of the corporate structure to allow the principals of the borrower to avoid involuntary liability. *See, e.g.*, LoPucki, *The Death of Liability*, *supra* note 2, at 19-23. But the possibility that borrowers are adopting that structure for the purpose of avoiding liability is irrelevant to my point here, which focuses

E. LIMITING FUTURE BORROWINGS

The borrower's grant of a lien also can benefit the lender by limiting the borrower's ability to obtain future borrowings.[89] Bankers understand that the legal system will do little to protect a lender from the harms that it suffers if a second lender advances money to the first lender's borrower in violation of a negative-debt or a negative-pledge covenant made by the borrower. The likelihood that the first lender will succeed in a suit against the second lender for tortious interference with its negative-lending covenant is too small to be a satisfactory remedy.[90] Moreover, a right against the borrower has little value given the high likelihood that the issue will arise at a time when the borrower's solvency is (at best) questionable.[91]

A security interest is the most effective way that the banker can ensure that second lenders are aware of the first lender's presence. A security interest gives the banker a mechanism for giving public notice of its interest in the borrower's affairs. Furthermore, a second lender aware of the first lender's presence is relatively unlikely to advance funds that would cause the borrower's financial position to become precarious: the lender that participates in that financing has to take its chances on recovering its loan from the borrower that it has financed into an overleveraged position.[92]

Nor is that analysis purely theoretical. Several of the bankers to whom I spoke recognized the borrowing-limiting capacity of a security interest as one of the principal reasons for a bank to take a security interest from a small-business borrower.[93] As one banker put it, "of course the argument for taking a filing

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on the relation between the guaranty and the benefits of secured credit. For a forceful explanation of the errors in LoPucki's description of the subsidiary/guaranty structure, see James J. White, *Ignorant and Unashamed,* 107 YALE L.J. (forthcoming 1998) (undated manuscript at 43–51, on file with author).

89. For a recent and detailed theoretical explication of the benefits of covenants limiting later debt, and the reasons that security can substitute for those covenants, see Alan Schwartz, *Priority Contracts and Priority in Bankruptcy,* 82 CORNELL L. REV. (forthcoming Sept. 1997).

90. Lenders understand the difficulty of trying to sue another lender for tortious interference. *See, e.g.,* East-Coast Lender Interview, *supra* note 45, at 6 (acknowledging difficulty of advancing such claim).

91. In my view, the aspect of a security interest that is most effective in limiting future borrowing is its ability to give notice of the first lender's transaction, not its ability to give priority to the first lender's right to repayment. The priority right standing alone has a relatively limited value given the limited value of the assets of the business likely to be available for liquidation in the event that the business fails. I thank Lucian Bebchuk and David Skeel for illuminating that point for me.

92. *See* Mann, *supra* note 3, at 641-45 (explaining how parties can use secured credit to allow borrower to give credible commitment against future borrowing).

93. *See* DeKunder Interview, *supra* note 45, at 2 ("I think in [the small-business] situation it would be a control factor in the fact that the borrower would know that he or she could not go out and pledge . . . those receivables somewhere else."); Forsythe/Holt Interview, *supra* note 11, at 6 (explaining use of secured credit to avoid an " 'equity-squeeze' position with another lender" and thus "to control the entire access of capital that company has"); *id.* ("[I]t's how you control how many times a customer leverages their business assets to multiple financial institutions."); Lliteras Interview, *supra* note 14, at 9 ("I think the primary [benefit of taking collateral] is [that] they cannot go anywhere else."); Magera Interview, *supra* note 45, at 6 ("[I]f you don't pick up [i.e., take a security interest in] the collateral, somebody else will and you don't want somebody to leverage twice, which can happen. . . . If you

[that is, a security interest accompanied by a U.C.C. financing statement] is that, if nothing else, it might put other lenders on notice that somebody else has already got something going with these folks."[94] Indeed, when questioned about the value to banks of a legal rule that would allow them to receive an enforceable negative-pledge covenant rather than a lien, those bankers saw no substantial distinction between the effects of that rule and their current practices.[95]

In sum, to the extent that lenders seek security interests from small-business borrowers—especially blanket security interests—they do so primarily to limit the borrower's ability to obtain future debt from other lenders. Those lenders typically omit the covenants and monitoring necessary to obtain the other significant benefits of secured credit, generally because of a belief that collateral in the small-business context has such limited liquidation value that the transaction costs of those practices exceed any benefits they provide.

III. WHY UNSECURED CREDIT?

Part II provides an empirical snapshot of the considerations that motivate small-business lenders to take secured credit. Given the abundant preexisting evidence of unsecured small-business lending,[96] however, I also must examine the considerations that motivate small-business lenders to accept unsecured credit. More generally, if secured credit provides the protection against further borrowing discussed in Part IIE, why don't all small-business lenders insist on security interests?

My answer is that the market is in flux; the relevant considerations are changing, and as they change the balance of considerations shifts increasingly toward unsecured credit. Accordingly, I contend that the use of secured credit will decline significantly in the small-business market in the coming years, especially in the burgeoning market for general line-of-credit lending to very small businesses. I justify that contention in two ways: direct observation of an existing shift toward unsecured credit in the small business market, and indirect observation of four factors that support that shift and should cause it to accelerate in the years to come.

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encumber things at least it eliminates them from going someplace else and maybe overleveraging themselves . . . ."); Mastroianni Interview, *supra* note 38, at 7 (stating that "the only down side for not taking [a security interest]" is that it leaves the borrower free to obtain additional funds from other lenders).

94. Stoudt Interview, *supra* note 14, at 9. That lender explained that he thought his perception was widely shared, at least until recent developments (discussed *infra* Parts IIIB & IIID) undermined the ability of secured credit to provide that benefit. *Id.* ("I think generally, in the past, most banks have tended to operate that way.").

95. *See* DeKunder Interview, *supra* note 45, at 4-5 (questioning significance of such legal reform); Forsythe/Holt Interview, *supra* note 11, at 13-14 (stating that an enforceable negative pledge would satisfy their institution's motivations for taking security interest); Ora Interview, *supra* note 45, at 8 (stating that enforceable negative pledge would serve as a substitute for secured credit in some "specific areas"); *see also* Lliteras Interview, *supra* note 14, at 10 (stating that his institution might accept an enforceable negative pledge instead of a security interest in some cases).

96. *See, e.g., supra* note 7.

Perhaps the shift toward unsecured credit is the most suggestive. Three of the lenders to whom I spoke (officers at Wells Fargo, Chase Manhattan, and BankAmerica) told me that their banks have stopped taking security interests on general-purpose business loans of less than $100,000.[97] The prominence of those institutions in the marketplace—their unsecured loan portfolios alone constitute several percent of all small-business bank loans in the country—suggest that unsecured lending to small businesses is more than an odd quirk.[98]

The reasoning behind those practices is even more persuasive. The officers all held a general belief that in their market a grant of a security interest provided at best a minor benefit, and generally provided no net benefit at all. Their reasons generally followed the analysis set forth in Part II: the general conditions of the small-business market limit the potential for secured credit to provide most of its traditional benefits; the only substantial benefit it can provide is to limit subsequent borrowings.

Moreover, a combination of four practical points indicates that the minor benefits of secured credit are outweighed by the relative costs. The power of those points convinces me that the question of whether to use secured or unsecured credit for small-business lending is not a close call that ends up being a matter of personal belief or experience. Rather, I see a story of a legal/financial institution that has come to the end of its useful life.[99] Accordingly, I

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97. *See* James Interview, *supra* note 36, at 2 (stating that his institution's lines of credit for less than $100,000 "are almost always unsecured"); Mastroianni Interview, *supra* note 38, at 1, 5 (stating that his institution does not take security interests on loans under $100,000, which constitute the "vast majority—I would say over 80%"—of its portfolio); Stoudt Interview, *supra* note 14, at 6 ("[A]t the lower end . . . $50,000 and below . . . we never do that [i.e., take a security interest]. Generally, on loans of under $100,000 it would be rare that we would . . . ."). Although it is difficult to make generalizations, most of those loans appear to be the primary capital sources for the businesses, not simply small unsecured loans covering an overflow above some other lender's secured line of credit. *See* Mastroianni Interview, *supra* note 38, at 7 (stating that his institution has "concluded that most of our companies just borrow with us"); Stoudt Interview, *supra* note 14, at 6 (describing efforts to ensure that his borrowers do not borrow from other lenders, but acknowledging difficulties in verifying compliance). That may not be true, however, for Wells Fargo's mailout BusinessLine program. The Wells Fargo executive to whom I spoke acknowledged that his product frequently served as a backstop behind other lending relationships, which might or might not be secured. *See* James Interview, *supra* note 36, at 8.

98. Wells Fargo holds an unsecured small-business portfolio of about $3 billion. James Interview, *supra* note 36, at 5. BankAmerica's program has more than a third of its entire loan portfolio in unsecured small-business loans, an amount substantially exceeding $1 billion. *See* Stoudt Interview, *supra* note 14, at 3, 9 (describing $3 billion dollar total portfolio, including $2 billion of small-business loans, 60% of which fall below the $100,000 cutoff for taking security interests). If only 50% of Chase's $2.5 billion sub-$1,000,000 portfolio is in the under-$100,000 range (*see* Oppenheim, *supra* note 24, at 11 (reporting size of Chase's portfolio of business loans below $1 million)), Wells Fargo, BankAmerica, and Chase alone hold $5.5 billion in unsecured small-business loans. That figure is more than three percent of the entire amount of sub-$1,000,000 bank loans from all FDIC-insured institutions; it obviously represents a much higher percentage of the small-business, sub-$100,000 market on which I am focusing. Unfortunately, I have not been able to locate statistics on the precise size of that market.

99. For a similar argument, see Mann, *Searching for Negotiability*, *supra* note 16, *passim* (arguing that negotiability has faded from use because of changes in the physical environment that deprive negotiability of any ongoing utility).

believe that much if not all of the industry soon will follow in the footsteps of the institutions whose lenders I interviewed.

A. THE RELATIVELY HIGH TRANSACTION COSTS OF SECURED LOANS

Small-business lending typically involves small individual transactions, normally loans below $100,000.[100] Given the small size of those loans, filing fees and other fixed-amount transaction costs that would be trivial in larger transactions have the potential to become significant relative to the value of the transactions. Indeed, two of my interview subjects (officers at Chase Manhattan and Wells Fargo) emphasized that in the current small-business market—with loans so small and competition so fierce—the profit margins of lending transactions are so slim that the documentation and filing costs of taking a security interest in fact do become significant. As one officer put it, in a secured transaction "[t]here are more papers that need to be signed, you have to make U.C.C. [filings] in the state and county in which the business is operating. Then you have to renew it every few years. So, it's very expensive. We do 18,000 loans a year."[101] When I expressed skepticism that those costs could be significant[102]—involving only the nominal U.C.C. filing fee and the costs of signing a few more pieces of paper—he insisted that his transactions were so tight that those costs were a significant factor weighing against a lender's insistence on a security interest.[103]

B. DECLINING CONSTRAINTS ON FUTURE BORROWING

The second point undermining the value of security interests in the small-business context is the increasing feebleness of a security interest's ability to limit future borrowing. Several lenders mentioned the ready ability of their borrowers to obtain additional funds through credit-card borrowing.[104] Given the typical underwriting practices of credit-card issuers, the existence of a lien on the borrower's business assets is unlikely to stop credit-card issuers from offering credit to the small-business owner. Indeed, credit-card issuers may not even be aware of the lien. In any event, the lenders to whom I spoke believed that their borrowers easily can obtain substantial amounts of funds for their businesses from credit-card borrowings, notwithstanding the bank lender's lien

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100. I have to admit that I was surprised at the uniform $100,000 ceiling selected by the three institutions I interviewed that have large, completely unsecured small-business loan portfolios.

101. Mastroianni Interview, *supra* note 38, at 7.

102. I previously have argued that these costs are generally not significant. Mann, *supra* note 3, at 661-63.

103. "Mann: And you're saying on loans that you do, it's actually a significant expense to do that stuff? Mastroianni: Yes, it is." Mastroianni Interview, *supra* note 38, at 8. I heard a similar perspective from a Wells Fargo executive. When I asked him to explain a statement that it was "too expensive to take collateral there [i.e., in the sub-$100,000 market]," he stated simply: "It's the costs of documenting and filing." James Interview, *supra* note 36, at 3.

104. *See supra* note 49.

on the business assets.[105] Remember, the businesses in that market are operating on a line of credit with a maximum amount of less than $100,000. Given the ease with which relatively solvent individuals can borrow tens of thousands of dollars on credit cards, credit-card debt often can increase the funds available to the business significantly beyond the amount available from the bank.[106]

C. THE AMBIGUOUS VALUE OF CONSTRAINTS ON FUTURE BORROWING

The third point undermining the use of secured credit is the ambiguous value of the restriction on subsequent lending. One lender argued to me cogently that the ability of the first lender to limit subsequent borrowings does not materially aid the first lender's chances of recovering its debt. His point is that, even in cases in which the borrower is in sufficiently desperate straits to want to obtain money from a future lender, it is unclear that the consequences of the first bank's willingness to forgo a security interest will be negative. Several scenarios are possible, most of which do not harm the first lender's position.

The first scenario is perhaps the most likely: with or without the lien, the borrower's condition will be so poor that the second lender will be unwilling to advance substantial new funds to the borrower. In that event, the absence of the lien has no effect. In the second scenario, the second lender advances funds to the borrower in return for a security interest in the borrower's assets, and the infusion of new funds saves the business, thus resuscitating the first lender's chances of repayment.[107] Here, the absence of the lien indeed might be positive because it lowers the transaction costs of the second lender's transaction; the second lender doubtless would be more cautious about advancing new funds behind an existing lien than it would be about advancing new funds to a borrower with outstanding unsecured debt.

The third scenario is the only instance in which the absence of a security interest puts the first lender at risk: the new lender advances funds to the borrower but the borrower still fails. Because that scenario suggests a serious loss following a voluntary decision by two successive lenders to advance funds to the borrower, it probably is the least likely scenario. Moreover, even in that circumstance the effect on the first lender is not unambiguously negative. If the borrower's business is so weak that a second loan cannot resuscitate it, it is highly likely that the first lender would have taken a substantial loss on its loan even if it had retained a security interest. For the reasons discussed above, the

105. *See* Angle Interview, *supra* note 45, at 9 (explaining that his ability to prevent his borrowers from "overleverag[ing] themselves" is hindered by the ready availability of credit-card consumer debt to principals of his borrowers).

106. *See, e.g., id.* at 9 (suggesting that the principals of distressed small-business borrowers frequently have $30,000-$40,000 of credit-card debt); East-Coast Lender Interview, *supra* note 45, at 3 ("A lot of times we find these small-business owners have $50,000 to $100,000 of credit-card debt that they have accumulated to fund the business."); Ho, *supra* note 48, at B2 (reporting similar anecdotes).

107. *See* Mastroianni Interview, *supra* note 38, at 8 ("[B]est case scenario, the money that they lent you will keep you afloat and allow you to continue paying my loan.").

value of a security interest as a way of securing repayment through liquidation is quite limited in small-business lending.[108] Thus, the absence of a security interest will impose a loss on the first lender only if the first lender receives even less on liquidation after the intervention of the second lender than it would have received if the business had failed because the first lender's security interest kept the second lender from intervening.

Granted, such losses will occur—small businesses fail, and banks lose money when they do—but losses stemming from a failure to require secured instead of unsecured credit seem relatively unlikely. And that is the key point for the secured-credit decision. If the losses the parties can prevent by granting a security interest are small and unlikely even in cases of total business failures, then the pre-loan value of taking a security interest is quite limited.

D. ADVANCES IN INFORMATION TECHNOLOGY

The fourth point relates to the role of advances in information technology in the small-business lending market. In particular, two technological developments significantly enhance the information available to small-business lenders, thus allowing lenders to evaluate small-business loans more carefully at lower cost.[109] By lowering the general riskiness of those loans, the technological developments limit the opportunities for secured credit to offer an improvement in the lender's position. Thus, those technological developments limit the relative attractiveness of a secured transaction.

1. Credit Scoring

The first technological development is the creation of credit-scoring systems for underwriting small-business loans. The traditional underwriting process required an individual lender to assess individual loans based on the lender's personal experience with prior loans to other borrowers. Three separate costs made the traditional system relatively expensive: the costs of obtaining information adequate to make an informed judgment; the extensive time required to assess each lending transaction; and the likelihood that individual lenders would make loans that reflected poor assessment of the underlying risks.

Automated systems available for modern small-business lenders can lower all three of these costs significantly. Use of the automated system typically[110]

108. *See id.* at 8 ("Worst case scenario—you make several more payments on my loan, then you go bankrupt and the collateral to bank B isn't worth much anyway. . . . We don't really view the assets as being very valuable to begin with.").

109. *See* Glassman, *supra* note 14, at 28 ("Technology has increased the attractiveness of [the small-business] market by enabling effective target marketing, streamlined underwriting, and large-scale operations."); Forsythe/Holt Interview, *supra* note 11, at 2 ("[A]utomation, scoring, imaging, and those types of processes will help bring down the costs of delivering these types of products."); Stoudt Interview, *supra* note 14, at 8 ("Computers don't make the business—but they certainly help. . . . [C]omputers give us that extra horsepower to be able to do a lot of stuff quickly.").

110. My description of credit-scoring systems in operation rests on a site visit to the St. Louis-based business banking division at Boatmen's Bank [hereinafter Boatmen's Site Visit], during which I

involves a simple application (often a single page and rarely if ever more than two pages), which an employee of the bank enters into a computer system.[111] The stripped-down application calls for a much narrower spectrum of information than the more traditional loan application. Thus, it significantly diminishes the costs to the borrower of putting the information together and the costs to the lender of evaluating it.[112]

The computer system automatically obtains credit information related to the business and its principals, analyzes that information, and assigns a score to the proposed loan.[113] The system reports that score to the loan officer a few minutes later. Typically, the system works from a presumption that the officer will approve loan requests above a certain score, reject loan requests below a certain score, and exercise discretion on approving or rejecting loan requests within a certain middle range.[114]

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observed a loan officer processing applications with a credit scoring system. Several of my interviews also provided information about credit scoring in their particular institutions. *See* Angle Interview, *supra* note 45, at 3, 7 (describing credit-scoring process for small-business loans); Beckette Interview, *supra* note 49, at 12-13 (same); East-Coast Lender Interview, *supra* note 45, at 4 (same); Forsythe/Holt Interview, *supra* note 11, at 6 (same); Lliteras Interview, *supra* note 14, at 10-12 (same); Mastroianni Interview, *supra* note 38, at 4 (same); Stoudt Interview, *supra* note 14, at 5, 7-8 (same). For a useful secondary source on credit scoring systems, see *Credit-Scoring as a Part of Small Business Lending Process Development: A Case Study*, J. LENDING & CREDIT RISK MGMT., Dec. 1996, at 61, 63-65 (Beverly Foster ed.) [hereinafter Foster, *Small Business Credit-Scoring*] (discussing adoption of credit scoring at a regional bank).

111. At Boatmen's, the application would be taken by an officer at a branch, who would transmit that application by telecopy or electronic mail to a central location that evaluated small-business loans for the entire system. *See* Boatmen's Site Visit, *supra* note 110. For applications over $35,000, the borrower also must submit a business tax return and personal financial statement. *See id.*

112. *See* Foster, *Small Business Credit-Scoring*, *supra* note 110, at 64 (noting that none of the commercially available scoring systems require financial statements from borrowers and discussing reduction of small-business loan application from six pages to one); Wantland, *supra* note 13, at 19 (comparing traditional application requirements with two-page application now used by Bank One); Sara Oppenheim, *Chase Pares down Loan Application to One Page*, AM. BANKER, Oct. 28, 1996, at 12 (discussing minimal application requirements for Chase small-business program).

113. At Boatmen's, the system automatically orders a personal credit report and a Dun & Bradstreet report, which collectively cost about $11/application, and then checks corporate good standing records and fictitious name records. For loans over $35,000, the system also orders a U.C.C. search. *See* Mohr Interview, *supra* note 74, at 1-2.

114. One case study explains that 60% of applications processed using a credit-scoring system are approved. Of the denials, half are decided automatically. Of the approvals, 25% are decided "automatically"; the other 75% require "an abbreviated, handwritten approval memo . . . , requiring no more than 5 to 10 minutes of additional work per application." Foster, *Small Business Credit-Scoring*, *supra* note 110, at 65-66; *see also* Beckette Interview, *supra* note 49, at 13 (discussing "gray area" in which loan officers have discretion and reasons why he might refuse loan even if the system gave it a high score).

Boatmen's, like most banks that use credit scoring for small-business loans, relies on a proprietary scoring system developed by Fair, Issac. *See* Beckette Interview, *supra* note 49, at 12; Boatmen's Site Visit, *supra* note 110. For discussion of the Fair, Issac system, see Sara Oppenheim, *Would Credit Scoring Backfire in a Recession?*, AM. BANKER, Nov. 18, 1996, at 16 ("More than 250 small-business lenders use the Fair, Issac system, which was designed with information compiled from the small-business portfolios of 17 banks."). Several of my interview subjects were among those lenders. *See* Angle Interview, *supra* note 45, at 3 (explaining that his bank uses Fair, Issac because "[w]e don't

In scoring the loan, the system relies on a database of previous loan transactions that have been analyzed to assess the correlation between the likelihood of payment (or nonpayment) and the objective information available to the lender up front, including, for example, the cash flow of the business, the time the business has been in operation, and the personal credit history of the principal. Because the system rests on statistical correlations between payment and certain objective factors, the system limits significantly the costs of gathering information to assess the loan transaction. The system is designed to function with a relatively small number of facts. There is no need for investigation to discover other facts. The system operates on the premise that the effect of other facts on the likelihood of payment is relatively unpredictable. Accordingly, the addition of such facts should have no effect on the decision whether to extend credit.

The system also limits significantly the time that the individual officer must devote to the loan transaction. In the transactions I observed, the individual loan officer spent about five minutes from start to finish on each transaction: the officer needed only to glance at the application to evaluate the plausibility of the information provided by the borrower and determine if any serious problems were apparent from the application; glance at the score provided by the system and ascertain the reasons for the score provided by the system; and make a snap decision whether to accept the system's recommendation.[115] The expedited processing dramatically shortens the time to evaluate an application: banks that use credit scoring routinely process loan applications within one or two business days. As one lender put it, with credit scoring "we are typically turning [loan applications] around in half a day or less in the great majority of cases, whereas before by the time we got done tinkering with them, we'd have spent two or three days at the process."[116]

really have the empirical data to do an 'in-house' [scoring system]"); East-Coast Lender Interview, *supra* note 45, at 4 (discussing use of Fair, Issac system for business loans); Lliteras Interview, *supra* note 14, at 10-12 (same); *see also* Foster, *Small Business Credit-Scoring*, *supra* note 110, at 63-65 (case study of regional bank that adopted modified Fair, Issac scoring system); Wantland, *supra* note 13, at 20 (recommending adoption of Fair, Issac scoring system). Only the largest banks have sufficiently large portfolios to develop scoring systems that reflect their own lending experience. *See* Wantland, *supra* note 13, at 21 (discussing three-year process for Bank One to implement use of scorecard based on its own loan experience); Oppenheim, *supra* note 36, at 10 (discussing Wells Fargo's development of scorecard based on proprietary loan experience); Oppenheim, *supra*, at 16 (stating that only Wells Fargo, BankAmerica, Citicorp, and NationsBank have implemented scorecards based on their own portfolios); James Interview, *supra* note 36, at 9 (discussing advantages of Wells Fargo's proprietary scorecard).

115. *See* Boatmen's Site Visit, *supra* note 110; James Interview, *supra* note 36, at 10 (stating that the average time for evaluating an application at Wells Fargo "is probably less than 30 minutes"); *see also* Oppenheim, *supra* note 114, at 16 (stating that credit scoring has "reduce[d] the time spent reviewing loan applications from an average of 12 hours to as little as 25 minutes").

116. Lliteras Interview, *supra* note 14, at 11; *see* Foster, *Small Business Credit-Scoring*, *supra* note 110, at 65 (stating that with adoption of credit scoring at Ontarget "[l]oan turnaround time has been reduced from eight days to just under two days"); Wantland, *supra* note 13, at 22 (stating that "turnaround time" at Bank One in traditional underwriting process was 45 to 60 days, and that with automation "the bank is driving toward not days but hours and minutes in turnaround time"); Mastroianni Interview, *supra* note 38, at 4 (describing ability to make decision on loan application "by the end of the next business day—at the latest").

The expedited and simplified loan application process offers considerable cost savings: money saved by the applicants who do not have to complete lengthy applications; and money saved by banks that can employ fewer officers with less lending experience and still evaluate applications more uniformly and more rapidly. The total amount of the savings is difficult to gauge, but it seems to be significant. For example, one executive familiar with the adoption of credit scoring at one of the country's five largest small-business lenders (Bank One) has estimated that adoption of credit scoring lowers the expense of underwriting a loan by more than 80%, for a total savings to the bank on each loan of 3.5% of the loan amount.[117]

Finally, the system should limit poor assessment of the risks of nonpayment. Assessing the viability of a small-business loan request is difficult because it requires considerable experience, expertise, and judgment. Accordingly, any system that relies on large numbers of individuals to make those judgments inevitably will experience cases in which individuals make those judgments incorrectly, in the sense that they approve—or reject—loan requests that a more experienced or able lender would have treated differently. By regularizing those decisions so that they are based on factors that have been proven to have a significant statistical connection with the likelihood of payment and nonpayment, the automated systems improve the "correctness" of the underwriting process—lowering not only the rate of bad loans that the bank makes, but also the rate of good loans that the bank declines to make.[118]

Of course, proof that credit scoring has reduced lending costs does not directly explain why credit scoring has enhanced the relative attractiveness of unsecured small-business lending; there is no reason why banks cannot use credit scoring on secured small-business loans.[119] For two reasons, however, I believe that the advent of credit scoring enhances the attractiveness of unsecured lending relative to secured lending. First, credit scoring reduces risk. To the extent credit scoring provides an absolute reduction in the riskiness of

117. *See* Wantland, *supra* note 13, at 20 (arguing that redesigned credit process using credit scoring lowers underwriting expenses from 446 basis points (4.46% of the loan amount) to 76 basis points (76% of the loan amount)). A case study of adoption of a credit-scoring system by another lender describes that lender's rationale as follows:

> Ontarget's small business unit knew that the traditional judgmental process for loan applications could not be profitable in cases in which the average loan size is small because of the time involved and the higher salaries paid to underwriters. The unit's director found credit-scoring would allow quick and efficient processing of small loans using lower salary employees.

Foster, *Small Business Credit-Scoring*, *supra* note 110, at 63.

118. *See* Foster, *Small Business Credit-Scoring*, *supra* note 110, at 61-66 (describing experience with credit scoring at small regional bank, at which approval rate held steady at 60% and, of 1,800 loans on books for average of six months, only one scored loan went more than 30 days past due); Wantland, *supra* note 13, at 22 ("Bank One has experienced lower charge-offs and delinquencies after becoming a centralized, standardized common-practice organization. Credit quality actually improved.").

119. Many banks do. Indeed, at Boatmen's Bank all small-business loans are secured. *See* Beckette Interview, *supra* note 49, at 2.

small-business lending by enhancing the sophistication and accuracy of the underwriting process, credit scoring narrows the window of risk available for reduction through a grant of collateral: the safer the loan portfolio can be made, the lower the potential benefits of secured credit.[120]

The second reason focuses on the information that credit-scoring systems use to evaluate risk. For the most part the required information relates to the general financial strength of the individual principals and of their businesses. Credit scoring provides a way to make decisions based on a surprisingly limited set of standardized data points about the borrower and its principals. For secured credit to provide any significant benefits, the bank would have to expand that set of data points to take account of the particular collateral available from the borrower in question. If the bank does not evaluate the collateral, it has no way of knowing what benefit (if any) the grant of collateral brings to the transaction. Thus, the need for evaluation of the collateral undercuts the benefit of using credit scoring.

To be sure, it is easy to posit cases in which that problem will be manageable—cases in which the value of the asset as collateral can be evaluated through a standardized minimal set of data points.[121] In many cases, however, the task of evaluating the collateral would require the bank to expand significantly the amount of data that it collects as well as the time and expertise that it expends in evaluating the data. That problem should diminish as technology develops, because incorporating more sophisticated collateral-evaluation techniques into scoring systems should become progressively easier. But it seems likely that those techniques always will be something of a patchwork fix, providing a mechanism for getting *some* of the benefits of credit scoring, while still giving weight to collateral in the application evaluation process. Only pure unsecured lending will allow the lender to take advantage of the full potential for streamlining that credit scoring offers. Thus, in the end, I conclude that the continuing spread of credit scoring will enhance the attractiveness of unsecured lending relative to secured lending.

2. Early-Warning Systems

The second technological development is the increasing availability of early-warning systems that can provide valuable ongoing information about a borrower's financial and legal position. For reasons discussed above,[122] it is impractical for small-business lenders to monitor the current financial and legal position of their borrowers.

120. *See* Mann, *supra* note 3, at 671-74 (relying on similar relation to explain the rarity of secured borrowing by highly creditworthy companies).

121. As I suggest below, I think there will continue to be a market for small-business secured credit in the area of purchase-money loans for highly standardized and liquid collateral such as motor vehicles.

122. *See supra* Part IID1.

The main obstacle to monitoring is inherent in the nature of a small business: there is little reliable information about the precise financial position of many small businesses. Even the information that does exist can be difficult and costly for the lender to obtain. The information is scattered in hundreds of public and private sources throughout the country: the U.C.C., real property, and judgment lien records of each of the country's territorial jurisdictions; the proprietary records of credit bureaus collecting information on repayment patterns of the borrower's principals; and the proprietary records of bureaus collecting information on the business itself. Third-party providers of credit information—Dun & Bradstreet and its competitors—have been unable to provide that information in a manner sufficiently reliable and cost-effective to allow small-business lenders to use it as a general ongoing monitoring tool. Small-business loans are simply too small to justify the routine purchase of such reports.[123]

With the rapidly decreasing costs of information collection and analysis, however, some large lenders have developed more sophisticated proprietary systems—usually called "early-warning" systems—that respond to that difficulty.[124] Those lenders create and update their own proprietary databases of information about financial and legal matters relevant to their borrowers. They can use those databases to obtain up-to-date information about many significant events that otherwise might escape their notice for weeks or even months. The typical system obtains daily or weekly transmissions of all additions to the relevant information sources, including not only judgment lien records, but even, in some cases, private credit-bureau sources.[125] If any of those transmissions include a negative item about any borrower in the lender's system, the

123. *See* Mann, *supra* note 3, at 643-44 (discussing reluctance of lenders to rely on conventional Dun & Bradstreet reports to monitor ongoing performance of their borrowers). Despite considerable inquiry, the only evidence I have found of routine use of Dun & Bradstreet reports to monitor borrowers appears in transactions much larger than the standard small-business loan. *See* Telephone Interview with James R. McNutt, Vice-President, ComericA Bank–Texas, transcript at 1, 7 (Oct. 10, 1996) [hereinafter McNutt Interview] (transcript on file with author) (statement of middle-market lender, with typical credit lines in range of one to six million dollars, that his institution uses Dun & Bradstreet reports as part of its ongoing monitoring of its borrowers).

124. *See* Wantland, *supra* note 13, at 21 (describing early-warning systems as a "[n]ew [n]ecessity" for small-business lenders); Forsythe/Holt Interview, *supra* note 11, at 6-7 (describing Home Savings's early-warning system); James Interview, *supra* note 36, at 8-9 (discussing Wells Fargo's proprietary early-warning system and the advantages it gives Wells Fargo); Mastroianni Interview, *supra* note 38, at 9 (describing Chase Manhattan's early-warning system).

125. *See* Forsythe/Holt Interview, *supra* note 11, at 6 (discussing weekly updating of Home Savings's system); Mastroianni Interview, *supra* note 38, at 9 (discussing daily updating of Chase Manhattan's system). The Home Savings system does not, however, include updates of U.C.C. filings, on the theory that new U.C.C. filings would not disturb the lender's priority or the borrower's ongoing business activities. *See* Forsythe/Holt Interview, *supra* note 11, at 7. *But cf.* LoPucki, *The Unsecured Creditor's Bargain*, *supra* note 1, at 1943-44 (suggesting that creditors monitor their borrowers primarily by watching for U.C.C. filings by their borrowers). Wells Fargo's system appears to be distinct, because it includes a behavioral-analysis algorithm designed to identify patterns of unusual behavior before an objective event of distress. Wells Fargo runs that program only monthly. *See* James Interview, *supra* note 36, at 8-9 (discussing program).

loan officer responsible for that borrower can be notified promptly.[126]

The benefits of such a system are obvious. By providing the individual loan officer with up-to-date information on a borrower's difficulties, the system substantially enhances the ability of the lender to learn of difficulties at a time when the lender can protect itself by reacting to the information. On the other hand, the overhead costs of obtaining, evaluating, and disseminating that information on a daily basis appear to be so large that those systems currently are cost-effective only for the largest lenders. But continuing improvements in information technology should reduce the costs of such systems significantly, lowering the threshold size for making such a system profitable, and increasing the likelihood that third-party providers can collect such information and provide it in a useful manner.[127]

As with credit scoring, the natural question is whether the cost savings attributable to early-warning systems make secured lending more or less attractive relative to unsecured lending. Again, my sense is that the benefits of early-warning systems enhance the comparative attractiveness of unsecured lending. Unsecured lending provides the lender only limited protection in the event of financial reverses for the borrower. Secured lending, by contrast, provides more protection against financial reverses through its claim against particular assets. Because the unsecured creditor is more at risk of loss from financial distress, the benefits of the early-warning system should provide a disproportionate benefit to the unsecured lender, thus enhancing the relative attractiveness of unsecured lending.

IV. IMPLICATIONS

The evidence discussed in Parts II and III paints a rich and complicated picture valuable in its own right for the glimpse it provides of the practices that businesses employ to lower the costs of lending transactions. But that evidence also provides a foundation for further understanding deeper questions. I believe the evidence has two significant implications. The first is predictive. If my analysis of the factors discussed in Part II is correct, the evidence suggests a rapid decline in the use of secured credit as a mechanism in institutional small-business lending. The second is more theoretical. If I am correct about the decline in the use of secured credit, then my evidence contradicts the dominant academic perception of secured credit as an institution that has grown rapidly during the last half of this century because of its capacity to allow businesses to externalize the costs of liability to unsuspecting and unsophisticated creditors.

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126. *See* Forsythe/Holt Interview, *supra* note 11, at 6-7 (discussing monthly reports of negative activity on any loan in its portfolio).

127. Indeed, the most prominent provider of that kind of information—Dun & Bradstreet—offers such a service, which at least one of the lenders in my sample uses. *See* East-Coast Lender Interview, *supra* note 45, at 7.

A. THE OBSOLESCENCE OF SMALL-BUSINESS SECURED CREDIT

The pattern of secured credit revealed by the evidence in Parts II and III is not simple. Some banks' small-business loans are entirely or predominantly secured.[128] Other banks' small-business loans are entirely or predominantly unsecured (at least when they are below $100,000).[129] Still other banks have a mix of the two.[130] One interpretation of the evidence would be static—that the relevant considerations are so closely balanced that little or no economic advantage favors either secured or unsecured transactions. Under that view, the choice between secured and unsecured credit matters so little that the choice by a particular bank can end up resting on the "philosophy" of that particular institution, with neither choice leading to a significant competitive disadvantage.

That interpretation, however, ignores the dynamic character of the market. The small-business lending market is not some sleepy corner of the economy in which lending transactions are structured "the way we've always done it." Rather, it is an arena into which the largest financial institutions in our economy are throwing tremendous resources, motivated by the perception that technology provides an opportunity for profitable lending opportunities in areas banks historically have left underserved.

Moreover, the dynamic nature of the market as a whole is replicated in the factors relevant to my study. Two of the most powerful factors proffered in Part III to justify the use of unsecured credit—declining constraints on future borrowing and advances in information technology—have changed dramatically during the last few decades and significantly during the last few years alone. Consider first the ability of secured credit to constrain future borrowing. The main source of funding defeating that use of secured credit is the credit card. Twenty-five years ago the credit-card market was in its infancy. Few individuals operating small businesses could have obtained tens of thousands of dollars of credit-card debt to fund their businesses, a phenomenon that occurs regularly today, as repeatedly described in my interviews. Indeed, anyone with a telephone or mailing address is painfully aware of the tremendous glut of opportunities for credit-card borrowing that have been thrust on any reasonably solvent individual during the last few years.

The story of information technology is the same. Twenty-five years ago it would have been completely impractical for banks to develop standardized

128. *See* Beckette Interview, *supra* note 49, at 2 (almost entirely secured); East-Coast Lender Interview, *supra* note 45, at 1 ("invariably" secured).

129. *See* James Interview, *supra* note 36, at 3 (no collateral on the $3 billion portion of portfolio in loans below $100,000); Mastroianni Interview, *supra* note 38, at 1, 5 (no collateral on the 80% of his portfolio below $100,000); Stoudt Interview, *supra* note 14, at 1, 6 (no collateral on the 60% of his portfolio below $100,000).

130. *See* Angle Interview, *supra* note 45, at 1 (some secured, some unsecured); DeKunder Interview, *supra* note 45, at 1 (discussing secured and unsecured loans); Forsythe/Holt Interview, *supra* note 11, at 1 (discussing secured and unsecured products); Magera Interview, *supra* note 45, at 2 ("lion's share" secured).

scoring criteria for evaluating small-business loan applications. Only in the last few years have computers developed to the point where credit-scoring and early-warning systems are cost-effective. Indeed, even now the costs of those technologies give the largest institutions a considerable advantage in their use. Only a massive small-business portfolio will support a completely cutting-edge credit-scoring and early-warning system. Thus, although hundreds of U.S. banks are using credit scoring in some manner, only a handful have developed systems that reflect their own loan experience; the others rely on a standardized third-party scorecard developed from a sampling of several banks' portfolios.[131] It is not surprising, then, that the only institutions I interviewed with proprietary early-warning systems were Home Savings of America (the largest savings bank in the United States) and Chase Manhattan Corporation (one of the largest banks in the United States).[132]

Based on the rapid development of those two factors, I prefer a dynamic interpretation of the mixed pattern of secured and unsecured credit. As I see it, only in the last few years has the comparative advantage passed from secured credit to unsecured credit. From that perspective, the small-business bank lending market is experiencing a shift of institutions, with unsecured credit becoming increasingly dominant.

I am not suggesting, however, that the trend away from secured credit is inevitable. For example, a serious business downturn could change the dynamic completely.[133] Consider the ready availability of massive amounts of credit-card debt. If credit-card lending became significantly more risk averse, that debt would be much harder to obtain and secured credit again might provide a credible restraint on future borrowing. Similarly, a pattern of severe losses from unsecured business-loan portfolios in an economic downturn might undermine lenders' willingness to experiment with unsecured business lending.

I doubt, however, that such a downturn would do more than slow the trend I identify in this article. Both lenders and government regulators are well aware of the risks inherent in the recent run-up of small-business bank lending. As a Senior Vice-President at Chase Manhattan Corporation stated: "The true test will be to see how the loans perform in a[n] economic downturn."[134] The

131. *See supra* note 114 (discussing widespread use of Fair, Issac credit-scoring system).

132. Moreover, the market for small-business bank loans is rapidly becoming more concentrated. *See* Oppenheim, *supra* note 24, at 1, 9-12 (reporting statistics indicating that top 50% of small-business lenders held 45% of market in 1996 compared to only 39% in 1995). If the technological advances at the heart of the trend toward unsecured credit are most effective only for the largest portfolios, economies of scale would support increasing concentration in the industry.

133. The ideas in this paragraph and the one that follows developed from conversations I had with Bob Thompson.

134. Oppenheim, *supra* note 112, at 16 (quoting Carmen Mastroianni, Senior Vice-President for small-business lending at Chase Manhattan Corp.); *see id.* (discussing consideration by Office of the Comptroller of the Currency of guidelines intended to prevent credit scoring from leading to unduly risky small-business lending).

institutions leading the conversion to unsecured small-business lending—Chase Manhattan, Wells Fargo, and BankAmerica—might be proven wrong in their assessment of the risks, and an economic downturn might illustrate their error. But I cannot believe that they will be proven *badly* wrong. I have presented substantial reasons to believe that unsecured credit in the small-business market provides real cost savings to the parties that choose it. If I am right, then caution and risk aversion on the part of lenders are unlikely to reverse the long-term growth of unsecured credit.[135]

Of course, secured credit will disappear from the business lending market no more than it has disappeared from the consumer lending market.[136] Secured credit in business lending, however, is likely to become relatively unusual in the coming years except in two sets of circumstances. The first is the market for purchase-money loans for extremely liquid and standardized collateral such as motor vehicles. In that context, collateral retains two features that distinguish it from the inventory and accounts receivable that are the classic assets available for the general working-capital loans that are the focus of this article. First, highly liquid assets like motor vehicles retain a significant liquidation value that the lender plausibly can expect to obtain without undue difficulty.[137] Second, because those assets are relatively standardized, banks can take account of their characteristics without losing the benefits of sophisticated credit-scoring systems. Accordingly, I expect secured credit to continue playing a role in those loans for the foreseeable future.

The second niche for secured credit is larger businesses—the "middle-market" borrowers—whose borrowing needs are big enough to support the kind of hands-on, intensive relationship in which secured credit can cut lending costs.[138] In an effort to test the bounds of my analysis, I interviewed two middle-market lenders for this project. Both described procedures that are much

135. For an argument that risk aversion by individual bank lenders can affect the market for secured lending in other ways, see James J. White, *Efficiency Justifications for Personal Property Security*, 37 VAND. L. REV. 473, 494-502 (1984).

136. As is the case in my prior work, none of the analysis in this article accounts for the special features of the consumer-lending market, in which (based on the limited evidence available to me) it appears that secured credit continues to play a significant role. For a tentative discussion of that topic, see Mann, *supra* note 30; *see also* William C. Whitford, *The Appropriate Role of Security Interests in Consumer Transactions*, 7 CARDOZO L. REV. 959 (1986) (providing a general discussion of that topic).

137. I am indebted to Jim White and Steve Harris for relaying discussions with car lenders that convince me of the continued significance of liquidation in loans secured by motor vehicles. *See also* Mann, *supra* note 30 (providing tentative explanation of continuing prevalence of liquidation in motor-vehicle lending).

138. Although banking professionals commonly refer to "middle-market" lending, the term seems to have no precisely delineated usage. For purposes of this analysis, it refers to borrowers who are in between the two major areas of unsecured lending: the unsecured lending to small-business described in this article, and the unsecured lending to large, creditworthy companies described in my prior work, *see* Mann, *supra* note 3, at 671-74 (describing how unsecured lending is cheaper than secured lending for the most creditworthy companies).

more intensive and hands-on than the small-business practices described above.[139] Moreover, even the small-business lenders recognized the enhanced utility of intensive monitoring in larger-loan situations.[140]

Thus, even in the current environment, there are economies of scale that limit the utility of secured credit to larger loans, in which the amounts exceed the needs of the small businesses on which I focus here. Although the lower boundary of the middle-market secured lending (and the upper boundary of the small-business unsecured lending market) might drift up or down as technology develops, I see no reason to believe that middle-market lending will become predominantly unsecured in the foreseeable future. My evidence suggests that secured credit continues to provide real benefits in ways that reflect significant differences from the small-business market.

Before proceeding, I should respond to a concern expressed by several readers of early drafts of this article, who suggested that my acceptance of a continued role for secured credit in middle-market lending robs my thesis of significance. Those readers reasoned that big companies still use unsecured credit, that other companies (what I call "middle-market" companies) use secured credit, and that my thesis applies only to unusually small companies that use unsecured credit. This reading does not do justice to the relative size of the markets. Although it is difficult to quantify middle-market lending by banks,[141] for many banks middle-market lending is no more significant than the loans of $100,000 or less I discuss here. Indeed, three of the four lenders that gave me specific information about the breakdown of their portfolio by size stated that the small loans dominated their portfolios.[142]

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139. *See* McNutt Interview, *supra* note 123, at 7-9 (describing intensive monitoring and audit procedures for middle-market loans at ComericA Bank); O'Herin Interview, *supra* note 87, at 9-10 (same, at Magna Bank).

140. *See* DeKunder Interview, *supra* note 45, at 2-3 (stating that NationsBank does not use lock-box procedures for receivables financing until loans get "in the $500,000 range"); Forsythe/Holt Interview, *supra* note 11, at 8, 10 (describing site inspections limited to loans over $100,000, inventory audits limited to loans greater than $500,000, and quarterly financial statement requirements limited to loans over $250,000); Magera Interview, *supra* note 45, at 5 (describing willingness to omit monitoring on "our small loans"); Mastroianni Interview, *supra* note 38, at 5 (explaining that on larger loans Chase Manhattan still is "able to monitor that collateral . . . [and] give those loans much more attention than we do the real small loans"); Ora Interview, *supra* note 45, at 7-8 (describing financial statement requirements limited to loans above $50,000 and appraisal and environmental evaluation requirements limited to loans above $250,000).

141. The vagueness of the term middle-market lending makes such quantification difficult. *See supra* note 138.

142. *See, e.g.*, Mastroianni Interview, *supra* note 38, at 5 (stating that the vast majority of Chase Manhattan's business banking portfolio is in loans below $100,000); Ora Interview, *supra* note 45, at 2 (stating that 60-70% of KeyBank's borrowers have credit facilities of about $70,000); Stoudt Interview, *supra* note 14, at 9 (stating that 80% by number and 60% by dollars of BankAmerica's business banking portfolio is below $100,000); *see also* Forsythe/Holt Interview, *supra* note 11, at 1 (describing Home Savings's small-business portfolio as having an average business loan amount between $60,000 and $100,000 and a median business loan amount in the range of $35,000 to $40,000, and stating that 97% of all business loans go to companies with annual sales below $10,000,000). The sole exception was Wells Fargo. Even though its $3 billion small-business portfolio is one of the largest in the country,

B. THE LIMITED USE OF SECURED CREDIT AS A TOOL FOR EXTERNALIZING RISK

The developments chronicled in Parts II and III also contribute significantly to our understanding of the factors that motivate the use of collateral in lending transactions. I consistently have adhered to a vision of lending in which borrowers and lenders decide whether to use collateral based on the ability of collateral to lower the overall costs of that lending transaction.[143] To the reader unsullied with knowledge of the existing academic literature, that perspective might seem mundane. It is, however, in considerable tension with the dominant academic perspective, in which the primary motivation and effect of the use of collateral is to enable borrowers to shift costs to third parties.

The dominant perspective focuses on the effect of a security interest on an involuntary creditor of the borrower. If the borrower becomes insolvent, the security interest enhances the chances that the secured creditor will be paid in full, and just as surely enhances the chances that the involuntary creditor will take nothing. Because the security interest decreases the likelihood that the borrower will pay the involuntary creditor, it allows the borrower to pass the risk—and costs—of nonpayment to those creditors. If secured credit allows borrowers to pass those costs to creditors that will not (or cannot) adjust the terms of their transactions to reflect the increased risk of nonpayment caused by a grant of collateral to another creditor, secured credit gives borrowers an excessive incentive to engage in risky transactions.[144]

My evidence directly contradicts that vision of the lending market.[145] As explained above, I discern a nascent but accelerating decline in the use of collateral in the small-business lending market. If avoidance of liability were a significant motivation for borrowers' use of collateral, we would expect an increase in the use of collateral, or at least a constant level of use (depending on whether we believe claims about the burgeoning level of tort liability).[146] In

its middle-market portfolio is about twice as large. *See* James Interview, *supra* note 36, at 5. The small-business loans nonetheless are a crucial part of the bank's entire portfolio.

143. In addition to Parts II and III of this article, see Mann, *supra* note 3; Mann, *supra* note 30.

144. *See, e.g.*, Bebchuk & Fried, *supra* note 10, at 864, 882-91; John Hudson, *The Case Against Secured Lending*, 15 INT'L REV. L. & ECON. 47, 48-53 (1995); LoPucki, *The Unsecured Creditor's Bargain*, *supra* note 1, at 1896-1906; Schwartz, *supra* note 20, at 30-31, 33-34; *see also* Michelle J. White, *Public Policy Toward Bankruptcy: Me-First and Other Priority Rules*, 11 BELL J. ECON. 550, 556-61 (1980) (presenting mathematical model of effect of priority rules on firm's incentives to engage in risky projects). *But see* Scott, *supra* note 1, at 908 (discussing that perspective but concluding that it is inconsistent with the observed pattern).

145. I do not suggest that the dominant perspective errs in identifying the potential for the externalization of risk. On the contrary, I myself have argued that peculiarities of the construction-loan market lead to similar externalization of risks. Accordingly, I argue, construction lenders' priority should be subordinated to the priority of those who provide services and materials to construction projects. *See* Mann, *The First Shall Be Last*, *supra* note 16. Here, I argue only that existing empirical evidence suggests that the ability to externalize risk plays a trivial role in the organization of lending transactions.

146. *See* LoPucki, *The Death of Liability*, *supra* note 2, at 5-7, 14-19 (chronicling common use of secured debt by small businesses as one of mechanisms that have created irreversible trend toward "death of liability"); LoPucki, *The Unsecured Creditor's Bargain*, *supra* note 1, at 1903 ("As the

contrast, the evidence I present of a connection between declining transaction-related benefits of collateral and declining use of collateral suggests that the avoidance of liability is not a significant motivation for borrowers' use of collateral.

Consider the common use of small-business unsecured credit by borrowers that have not been formed as limited-liability entities. From the dominant perspective, it is natural to argue that borrowers can use secured credit or corporations and other limited-liability entities as alternative mechanisms to defeat liability.[147] But if a desire to become judgment-proof is a dominating motivation of those who structure businesses, we would expect to see corporations, limited partnerships, and other limited-liability forms dominating in the areas where borrowers have not used secured credit to protect their assets from involuntary creditors.

In fact, the evidence from my study suggests that free-liability entities—sole proprietorships and general partnerships—are at least common and probably dominant among the portfolios of small-business bankers that lend on an unsecured basis. For example, the lender from BankAmerica who takes no security interests on his small-business loans estimated the composition of his portfolio to be about sixty percent sole proprietorships and twenty percent partnerships.[148] Moreover, he indicated that the percentage of corporations in fact decreases as the loans become smaller (and thus more likely to be unsecured).[149] Similarly, the Wells Fargo lender stated that about seventy percent of his borrowers are sole proprietorships, in addition to fifteen percent general partnerships and only about fifteen percent corporations. Furthermore, like the BankAmerica officer, he reported a significantly lower percentage of corporations among the smaller loans that are less likely to be secured.[150] The Chase Manhattan lender perceived a much higher share of corporations in his small-business portfolio than did the lenders from Wells Fargo and BankAmerica, but, like them, he did not think that corporations were more common in the unsecured portion of his portfolio.[151]

In sum, the evidence does not suggest that small-business borrowers receiving unsecured loans incorporate to ensure that their principal's personal assets are shielded from the borrower's judgment creditors. If anything, the evidence suggests that the opportunity to become judgment-proof is irrelevant to the decisions of the borrowers. My evidence does not prove that the use of

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transaction costs of secured financing fall, the use of security as a means of shifting tort risk back to the victims will tend to expand.").

147. *See* LoPucki, *The Death of Liability*, *supra* note 2, at 19-23.

148. *See* Stoudt Interview, *supra* note 14, at 4. The lender did not specify how many of those partnerships were general partnerships, and how many were limited-liability entities (limited partnerships or limited-liability partnerships). He noted, however, that the partnerships "tend to be general partnerships." *See* Supplemental Stoudt Interview, *supra* note 86, at 1.

149. *See* Supplemental Stoudt Interview, *supra* note 86, at 1.

150. *See* James Interview, *supra* note 36, at 7.

151. *See* Supplemental Mastroianni Interview, *supra* note 86, at 1.

collateral cannot have the effect of allowing the debtor to avoid liability; of course it can (a possibility that would raise efficiency concerns if it were significant). It does suggest, however, that the costs of liability, and thus the benefits of avoiding it, are relatively trivial in the universe of factors that motivate borrowers and lenders trying to finance small businesses.

That conclusion should come as no surprise, given the widely recognized tendency of individuals to give inappropriately low weights to the possibility of unusually bad outcomes.[152] Do we really expect small-business borrowers structuring their lending decisions to engage in a precise and judicious evaluation of the aspects of the transaction that would be relevant only in the event that the business fails and the principals face a loss of all personal assets as well?[153] In the end, I continue to believe that the primary goal of business borrowers and lenders attempting to arrange their affairs is straightforward—to identify the least expensive transaction that will provide the borrower the funds needed for its business.[154]

CONCLUSION

All things must pass. Economic and legal institutions—including secured credit and the institutions that make it useful—are no exception. Good reasons justified the broad acceptance of secured lending during the last half of this century. The simplification and unification of the legal rules by Article 9 of the U.C.C. facilitated that acceptance. But there is nothing inevitable about the widespread use of secured credit. Like all other law-supported institutions, it will become less useful if the businesses that use it can devise other transactions that work more cheaply than the law-supported transaction. And the ability of businesses to devise new transactional forms accelerates whenever new technology limits the comparative advantage of the law-supported transaction. In the secured-credit area, the widespread use of the guaranty and the tremendous advances in the technology for acquiring and evaluating information have undermined the traditional advantages of secured credit.

To put it all together, I see the pattern of secured and unsecured credit dividing the market for business loans into three segments. The first segment is the small-business segment that I discuss in this article. That segment will be characterized increasingly by unsecured lending, with pockets of secured lending for particularly liquid or stable collateral like motor vehicles and real estate.

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152. *See generally* Richard Nisbett & Lee Ross, HUMAN INFERENCE: STRATEGIES AND SHORTCOMINGS OF SOCIAL JUDGMENT 18-28 (1980) (discussing how the "availability" heuristic causes individuals to discount the likelihood of certain types of events).

153. I am indebted to Dan Keating for that point. *See also* THOMAS H. JACKSON, THE LOGIC AND LIMITS OF BANKRUPTCY LAW 258 (1986) (suggesting that the tendency of impulsive behavior and incomplete heuristics to cause consumer overconsumption and undersaving justifies provisions exempting certain consumer property from forcible repossession by debt collectors).

154. For a more general refutation of LoPucki's argument that judgment proofing is ubiquitous, see White, *supra* note 88.

The upper boundary of that segment will be the lower boundary of the second, middle-market segment.

The middle-market segment will be characterized by predominantly secured lending. The boundary between those segments will be defined by transaction-cost concerns related to size: the point at which the economies of scale of larger transactions justify the more time-intensive practices that make secured credit useful. It is difficult to predict how that boundary will move over time. The boundary might fall if technological advances decrease the costs of the more time-intensive practices. Conversely, the boundary might rise as the technologies discussed in this article increase in efficiency and thus decrease the relative attractiveness of secured credit even more than they have already.

The final segment is the large-company segment, which is characterized by unsecured lending, with pockets of secured lending by large companies that have less impressive credit strength. As I suggested in my previous work on large-firm borrowing, the boundary between the middle-market and large-company segments is defined not by the kinds of transaction-cost concerns that separate the first two segments. Rather, it is defined by a different type of economy of scale—the point in size of firms at which firms generally exhibit the credit strength that makes secured credit a futile exercise. Although I have no empirical support for my view, I expect that boundary to fall over time, as increasing sophistication in underwriting enhances the ability of ever-smaller firms to gain access to public debt and equity markets. With access to public capital markets, firms can more quickly exhibit the strong reputation for financial strength that leads to predominantly unsecured lending.