ARTICLES

The Role of Secured Credit in Small-Business Lending*

RONALD J. MANN**

TABLE OF CONTENTS

INTRODUCTION .......................................................... 3

I. NOTES ON METHODOLOGY ........................................... 7
   A. AN INTERVIEW-BASED EMPIRICAL INQUIRY ....................... 7
   B. A DECISION-BASED MODEL OF SECURED AND UNSECURED LENDING 9

II. WHY SECURED CREDIT? ............................................. 11
   A. MARKET FAILURE: DO THEY HAVE A CHOICE? ................... 11
      1. Unsecured Bank Loans ........................................ 11
      2. Financing Other Than Bank Loans ............................ 14
   B. THE LIMITED UTILITY OF LIQUIDATION .......................... 15
   C. THE LIMITED VALUE OF THE LENDER’S LEVERAGE: EVERYBODY LOSES ON REPOSSESSION ........................................... 17
   D. THE LIMITED RELATIVE BENEFITS OF USING SECURED CREDIT TO REPAIR THE BORROWER’S RISK-PREFERENT INCENTIVES .......... 19
      1. The Ineffectiveness of Secured Credit for Repairing Incentives ................................................................. 19

* © Ronald J. Mann, 1997
** Assistant Professor of Law, The University of Michigan School of Law (rmann@umich.edu). I thank Stuart Banner, Lucian Bebchuk, Bernie Black, Jesse Fried, Dan Keating, Kyle Logue, Lynn LoPucki, Allison Mana, Bob Rasmussen, David Steel, Bob Thompson, and participants in the 1997 annual meeting of the American Law and Economics Association for comments on earlier drafts. David Royster provided able and diligent research assistance. The Israel Treiman Faculty Fellowship at Washington University School of Law provided generous financial support. I am particularly grateful for the time that the following individuals diverted to my academic inquiries from their more productive commercial pursuits: Michael Stout of BankAmerica; Randy Marshall of Bank of Oklahoma; E. Tracy Beckett and Charles M. Mohr of The Boatmen’s National Bank of St. Louis; Carmen Mastrolaini of Chase Manhattan Corp.; James R. McNutt of Comerica Bank – Texas; Mark Litterus of First Security Corporation; James D. Magara of 1st Source Bank; Carl Forsythe and Susan Holt of Home Savings of America, FSB; Sergio Ora of KeyBank, N.A.; Patricia A. O’Herin of Magna Bank; Joe DeKunder of NationsBank of Texas, N.A.; Marc Angle of SouthTrust Bank of Alabama, N.A.; and Michael R. James of Wells Fargo.
2. The Value of a Guaranty for Repairing Incentives .............. 22

E. LIMITING FUTURE BORROWINGS ............................................. 25

III. WHY UNSECURED CREDIT? .................................................. 26

A. THE RELATIVELY HIGH TRANSACTION COSTS OF SECURED LOANS .... 28

B. DECLINING CONSTRAINTS ON FUTURE BORROWING ..................... 28

C. THE AMBIGUOUS VALUE OF CONSTRAINTS ON FUTURE BORROWING . 29

D. ADVANCES IN INFORMATION TECHNOLOGY ............................ 30

1. Credit Scoring ................................................................. 30

2. Early-Warning Systems ..................................................... 34

IV. IMPLICATIONS ............................................................... 36

A. THE OBSOLESCENCE OF SMALL-BUSINESS SECURED CREDIT ....... 37

B. THE LIMITED USE OF SECURED CREDIT AS A TOOL FOR EXTERNALIZING RISK ........................................ 41

CONCLUSION ................................................................. 43

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

---

1. See, e.g., Barry E. Adler, An Equity-Agent 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.").
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.\footnote{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).} 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.\footnote{See, e.g., Adlers, 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).}

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.\footnote{I cannot take advantage of the analysis of prior scholars: discussion of small-business lending in existing work is almost uniformly a side issue.} 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,\footnote{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—System 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).} I cannot take advantage of the analysis of prior scholars: discussion of small-business lending in existing work is almost uniformly a side issue.\footnote{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).}

Small-business lending, however, is an important institution in its own right.\footnote{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).} 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\footnote{See supra note 7 (citing statistical studies).} has not escaped the notice of the
lending industry. 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. 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.

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, 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).


14. Several of my interview subjects made that point directly. See, e.g., Telephone Interview with Mark Litteras, President, Business Banking, First Security Corporation, transcript at 4 (Jan. 30, 1997) [hereinafter Litteras Interview] (transcript on file with author) (“We are making an effort to increase [our small-business portfolio].”); Telephone Interview with Michael Stoutt, Senior Credit Officer and Risk Manager, Business Banking Division, BankAmerica, transcript at 3 (Dec. 7, 1996) [hereinafter Stoutt 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 Zniszewski & 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 Dome’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);


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.\footnote{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.\footnote{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.\footnote{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

\footnote{17. See Mann, supra note 3, at 634-37 (explaining the decision-based model).}
\footnote{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).}
\footnote{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. 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-

Accordingly, I conducted about a dozen interviews with small-business bank lending officers during 1996 and 1997. 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. 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), 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). 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 CommerceA 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 135-142 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 20, 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), 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.\textsuperscript{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.\textsuperscript{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.\textsuperscript{33}

\textsuperscript{31} See Mann, supra note 3, at 638-38 (outlining general benefits of secured lending).

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

\textsuperscript{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.\textsuperscript{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.\textsuperscript{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

\textsuperscript{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 . . . ").

\textsuperscript{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.\textsuperscript{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.\textsuperscript{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.\textsuperscript{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\textsuperscript{39} and has increased its total portfolio of unsecured small-business loans to about $3 billion.\textsuperscript{40} Apparently, many small-business owners are happy to pay more for money that comes with fewer strings attached.\textsuperscript{41}

\textsuperscript{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 2-3 (Mar. 5, 1997) [hereinafter James Interview] (transcript on file with author), and two news articles describing the program, see Sara Oppenheim, \textit{Wells' Small-Business Lending Via Mail Pays Off}, \textit{AM. BANKER}, Dec. 23, 1996, at 10 (discussing Wells Fargo's mail-out program); Michael Selz, \textit{Struggling Entrepreneurs Find Bankers More Willing to Lend}, \textit{WALL ST. J.}, Jan. 13, 1997, at B1 (same).

\textsuperscript{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).

\textsuperscript{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).

\textsuperscript{39} See Selz, supra note 36, at B1.

\textsuperscript{40} See James Interview, supra note 36, at 5.

\textsuperscript{41} See Sara Oppenheim, \textit{Bank Financing up, Loans from Relatives down}, \textit{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. 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. 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. Finally, even banks that typically take collateral on small-business loans make a substantial number of those loans without taking a lien. 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); Stout 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 26, at 3 (explaining that the policy of not taking collateral does not depend on the credit profile of the particular borrower).
44. See Stout 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); Lleras 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

---

\(^{46}\) 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 Beckett, 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 Beckett 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.”); Forysth/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”); Litteras Interview, supra note 14, at 4 (describing competition from credit cards); Mastrolami 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”); Orr 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 “typical[. . . 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, GE Capital Services, and American Express. Equity financing is also available. 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. The foreclosure option, however, has quite a limited value for the small-business lender.

The option to foreclose is least valuable against businesses for which the primary assets are inventory and accounts receivable. 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 81 (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 (“SCORSs”).

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

57. See DeKinder 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.”); Stout 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. An officer at Chase Manhattan put it well:

[The 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.]

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.

The foreclosure option is even less valuable with respect to accounts receivable. 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 account receivable and inventory as collateral for general lines of credit to small businesses. See, e.g., Angle Interview, supra note 45, at 6; Littenas 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 (“By 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.\textsuperscript{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.\textsuperscript{64} And in that context, lenders do believe that they could recover some value on liquidation.\textsuperscript{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.

\section*{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...

\textsuperscript{63} DeKunder Interview, supra note 45, at 3.

\textsuperscript{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); Beckett Interview, supra note 49, at 1 (distinguishing between purchase-money term lending "for equipment, etc." and revolving lines of credit); Porsyth/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); Litteras 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").

\textsuperscript{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).\textsuperscript{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.\textsuperscript{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.\textsuperscript{68}

\textsuperscript{66} See Mann, \textit{supra} note 3, at 645-49 (explaining how secured credit enhances the lender’s leverage).

\textsuperscript{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., Beckett Interview, \textit{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, \textit{supra} note 11, at 2-9 (describing cash flow as the “primary source of repayment,” the personal guaranty as the secondary source, and relegating the collateral to a “tertiary” status); Lilteras Interview, \textit{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, \textit{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, \textit{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.”).

\textsuperscript{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, \textit{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-Preferring 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. 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. Similarly, even when lenders retained liens on accounts receivable, they did not customarily require the borrower to submit a periodic update of accounts receivable. 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."); Becketto 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 expedient 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); Liliaras 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 "[J]ar[ly]" and obtaining appraisals "[o]n 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 Becketto Interview, supra note 49, at 9 (statement of lender that he does not ask for summary of outstanding accounts receivable); Liliaras 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 ("[A]t least on loans below $250,000, there is very little on accounts receivable and inventory policing that we do."); see also DeKinder 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


75. See Angle Interview, supra note 45, at 7 (stating that financial statements “[t]ypically” are prepared by borrowers); Becket 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.”); Lititera Interview, supra note 14, at 7 (“[T]hey don’t 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); Becket Interview, supra note 49, at 4 (stating that he prefers 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); Becket 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.”); Lititera Interview, supra note 14, at 7 (stating that financial statements are analyzed only as part of annual review of lines of credit).

78. See Becket 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.\footnote{See Beckett 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).} Indeed, absent a cause for concern, the bank might renew the line of credit without even asking for a current financial statement.\footnote{See Beckett 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]").}

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.\footnote{See, e.g., Beckett 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.} 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-preferential 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-preferential 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.\footnote{See Marn, supra note 3, at 649-50 (discussing how loan transactions give borrowers unduly risk-preferential incentives).}

A personal guaranty mitigates that problem by enhancing the likelihood that the principal will feel any losses personally.\footnote{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).} When a lender can ensure that a business reverse confronts the borrower not only with a loss of its residual
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 II.C.

\(^{85}\) See supra note 45, at 4 (describing guaranty requirement for small-business loans); Becket Interview, supra note 49, at 2 (describing guaranty requirement as “the minimum” that his bank will accept); East-Coast Lender Interview, supra note 43, 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 guaranty . . .”); Forsythe 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”); Lleras Interview, supra note 14, at 4 (estimating that his institution receives guaranties between 90 and 100% of time); Magura Interview, supra note 45, at 3 (describing policy requiring individuals who operate closely held corporations to “personally sign” loans); Mastroslan 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); Studt 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 . . . .

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.”

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.

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 (“The 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. 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. 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.

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.

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. As one banker put it, “of course the argument for taking a filing

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 the author).

89. For a recent and detailed theoretical explanation 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 Steck 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 DeKinder 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]’s how you control how many times a customer leverages their business assets to multiple financial institutions.”); Litteras Interview, supra note 14, at 9 (“I think the primary [benefit of taking collateral] is [that] they cannot go anywhere else.”); Mager 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."

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.

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, 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 II, 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.

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. Stout 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 IIIA & IIIB) 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 an enforceable negative pledge would serve as a substitute for secured credit in some "specific areas"); see also Litteras 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

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 one-third of the entire amount of small-business, sub-$100,000 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—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

---

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.\footnote{See Angle Interview, supra note 45, at 9 (explaining that his ability to prevent his borrowers from "overleveraging themselves" is hindered by the ready availability of credit-card consumer debt to principals of his borrowers).} 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.\footnote{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 Leader Interview, supra note 45, at 3 ("A lot of times we find these small-business owners have $30,000 to $100,000 of credit-card debt that they have accumulated to fund the business."); Ho, supra note 48, at B2 (reporting similar anecdotes).}

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.\footnote{See Mastroianni Interview, supra note 38, at 8 ("[I]f the business were to fail, you would be able to get paid by the new lender.")} 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
value of a security interest as a way of securing repayment through liquidation is quite limited in small-business lending.\textsuperscript{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.\textsuperscript{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\textsuperscript{110}

\textsuperscript{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.").

\textsuperscript{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.").

\textsuperscript{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. 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.

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. 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.

---

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); Becket Interview, supra note 49, at 12-13 (same); East-Coast Lender Interview, supra note 45, at 4 (same); Fuzzy/Holt Interview, supra note 11, at 6 (same); Litters Interview, supra note 14, at 10-12 (same); Mastroianni Interview, supra note 38, at 4 (same); Stout 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 Fares 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 Becket 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 Becket 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. 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.”

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); Litteras 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 (recording 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 NativoBank 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 Boatsmen’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. Litteras 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 Outage “[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 75 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 Beckett 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 IIb 1.
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.\textsuperscript{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.\textsuperscript{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.\textsuperscript{125} If any of those transmissions include a negative item about any borrower in the lender’s system, the

---

\textsuperscript{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).

\textsuperscript{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); Mastrolauro Interview, supra note 38, at 9 (describing Chase Manhattan's early-warning system).

\textsuperscript{125} See Forsythe/Holt Interview, supra note 11, at 6 (discussing weekly updating of Home Savings's system); Mastrolauro 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.\textsuperscript{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.\textsuperscript{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.

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

\textsuperscript{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 Beckett 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); Mastrokiani Interview, supra note 38, at 1, 5 (no collateral on the 80% of his portfolio below $100,000); Studait 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); Magen 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 an economic downturn.”134

131. See supra note 114 (discussing widespread use of Fair, Isaac 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.\footnote{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, \textit{Efficiency Justifications for Personal Property Security}, 37 \textit{Va. L. Rev.} 473, 494-502 (1984).}

Of course, secured credit will disappear from the business lending market no more than it has disappeared from the consumer lending market.\footnote{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, \textit{The Appropriate Role of Security Interests in Consumer Transactions}, 7 \textit{Cardozo L. Rev.} 959 (1986) (providing a general discussion of that topic).} 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.\footnote{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. \textit{See also} Mann, supra note 30 (providing tentative explanation of continuing prevalence of liquidation in motor-vehicle lending).} 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.\footnote{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, \textit{see} Mann, supra note 3, at 671-74 (describing how unsecured lending is cheaper than secured lending for the most creditworthy companies).} 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
more intensive and hands-on than the small-business practices described above. Moreover, even the small-business lenders recognized the enhanced utility of intensive monitoring in larger-loan situations.

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, 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.

139. See McNutt Interview, supra note 123, at 7-9 (describing intensive monitoring and audit procedures for middle-market loans at ComericaA 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); Stout 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.\textsuperscript{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.\textsuperscript{144}

My evidence directly contradicts that vision of the lending market.\textsuperscript{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).\textsuperscript{146} In
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. 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. Moreover, he indicated that the percentage of corporations in fact decreases as the loans become smaller (and thus more likely to be unsecured). 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. 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.

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

---

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.

152. See generally Richard Nisbett & Lee Ross, HUMAN INERENCE: 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.
SEARCHING FOR NEGOTIABILITY IN PAYMENT AND CREDIT SYSTEMS

Ronald J. Mann*

I. NEGOTIABILITY: AN OUTM ODED SYSTEM FOR ENHANCING LIQUIDITY ........ 956
II. THE RARITY OF NEGOTIABLE INSTRUMENTS ............................. 962
  A. Nonchecking Payment Systems ........................................... 963
     1. Credit Cards ......................................................... 964
     2. Letters of Credit ..................................................... 965
  B. Credit Systems .......................................................... 966
     1. Consumer Credit Obligations ........................................... 967
        a. Notes for the Purchase of Goods and Services ................ 967
        b. Notes for the Purchase of a Home ............................. 968
           (1) Obstacles to Negotiability .................................. 969
           (2) The Absence of Negotiability ................................ 971
     2. Private Commercial Obligations ..................................... 973
        a. Obstacles to Negotiability ...................................... 973
        b. The Absence of Negotiability ................................... 976
     3. Publicly Traded Commercial Obligations ............................. 978
        a. Bonds .................................................................. 979
        b. Commercial Paper .................................................. 983

* Professor of Law, Washington University School of Law, and Research Fellow, Olin Center for Business, Law, and Economics. I dedicate this Article to Lazer Mann. I thank Dan Keating, Jim Rogers, and Bob Thompson for particularly helpful conversations and comments related to the direction of this project, Stuart Banner, John F. Dolan, Victor Goldberg, Steve Harris, Ted Janger, Bill Jones, Marcel Kahan, Lynn LoPucki, Curtis Milhaupt, Allison Mann, Nancy Rapoport, Steve Ware, Jay Westbrook, and Leila Wexler for comments on various drafts, and Bob Dorney and David Royster for able and diligent research assistance. I also received numerous helpful suggestions at workshops presenting versions of this Article at the Center for Law and Economics at Columbia University and the Center for the Study of American Business at Washington University. The Israel Treiman Faculty Fellowship at Washington University School of Law supported my research on this project.

I am particularly grateful for the time that the following individuals diverted from their productive pursuits to my academic inquiries: Loc McNew (of American General Corporation); Rembert R. Owen, Jr., and Jocelyn Sears (of American General Realty Advisers, Inc.); Thomas Larson (of Anheuser-Busch Companies, Inc.); Robert L. Proost and Clayton Erickson (of A.C. Edwards & Sons, Inc.); William W. Barks and Linda Jenkins (of the Boatmen's National Bank of St. Louis); H. Eugene Bradford and Christopher S. Hilcoat (of Boatmen's Trust Company); Judith C. Rehbolz and Harley M. Smith (of Emerson Electric Co.); Dale Granchalek (of the First National Bank of Chicago); Susan G. Holt (of Home Savings of America, FSB); Joe DeKinder (of NationsBank of Texas, N.A.); Frank Trotter (of Mark Twain Bancshares); Daniel A. Naert (of Smith Barney, Inc.); Susan E.D. Neuberg (of The Travelers Insurance Company); and Clifford H. Stein (of Windels, Marx, Davers & Ives).
III. THE IRRELEVANCE OF NEGOTIABILITY TO THE MODERN
PAYMENT SYSTEM ............................................. 985
A. Reliance on the Physical Object .......................... 986
B. Signatures as a Device for Transferring Title and Accepting Liability .. 990
   1. Indorsements ........................................... 991
   2. Drawers' Signatures ................................. 994
C. Rights of a Holder in Due Course ......................... 998
IV. PAYMENT SYSTEMS OF THE FUTURE: THE KING IS DEAD,
   LONG LIVE THE KING! .................................... 1004

The casual observer of the legal academy would assume that negotiability is a legal principle of foundational importance to our nation's payment and credit systems. All of the obvious indicators support that assumption. Among other things, the 1980s witnessed a major effort by the American Law Institute and the National Conference of Commissioners on Uniform State Laws to update and revise the relevant provisions of the Uniform Commercial Code. Similarly, negotiability continues to occupy a safe position in law school curricula, as prominent academicians at our most elite schools continue to write casebooks focusing on negotiability. Most recently, for example, Clayton Gillette, Alan Schwartz, and Bob Scott have published a prominent new casebook on Payment Systems and Credit Instruments, which presents a course organized around a detailed discussion of negotiability and its consequences. And Gillette, Schwartz, and Scott are not outliers. They are working in the heartland of academic attention: This decade has produced several other major casebooks for courses with a similar focus on the principles of negotiability, as well as a number of


2. CLAYTON P. GILLETTE ET AL., PAYMENT SYSTEMS AND CREDIT INSTRUMENTS (1996). The authors follow a brief introductory chapter with three lengthy chapters covering "negotiability and its consequences," "the contract liability of parties to a negotiable instrument," and "holder in due course." Id. chs. 2–4, at 37–299. The centrality of negotiability as an organizing principle is evident from their decision to incorporate into their chapter on holders in due course discussions of plainly nonnegotiable systems such as credit cards. See id. at 288–99.

treatises and related works that offer detailed doctrinal analyses of negotiability.\textsuperscript{4}

But it would be wrong to accept those indicators. At least in the payment and credit contexts (the subjects on which academics have focused their analysis of negotiability), negotiability is an outmoded and decaying relic. Moreover, even in the checking system—the most significant context where negotiable instruments survive—legal and practical developments have rendered principles of negotiability all but irrelevant to the operation of the system. To be sure, I am not the first to bear witness to the declining role of negotiability. A few previous scholars, most notably Jim Rogers, have noticed some aspects of the decline in the doctrinal significance of the rules of negotiability.\textsuperscript{5} Others have speculated as to the limited use of negotiable instruments in modern commerce.\textsuperscript{6} But those limited efforts have done little or nothing to dispel the general impression that negotiability remains significant. Certainly, negotiability must be important in some context or so many people would not be devoting so much time to industrious examination and explanation of the system. Right?

No. That impression is wrong, in a most fundamental way. In an effort to lay that impression finally to rest, this Article moves beyond the existing literature in two ways. First, by looking at payment and credit systems from a broad, functional perspective, I can illustrate how underlying systemic forces (predominantly technological, but sometimes law-

\textsuperscript{4} See, e.g., FRED H. MILLER & ALVIN C. HARRELL, THE LAW OF MODERN PAYMENT SYSTEMS AND NOTES (2d ed. 1992) (a ten-chapter treatise with seven chapters on negotiable instruments, two chapters on checks, and one chapter on payment systems other than negotiable instruments); STEVE H. NICKLES, NEGOTIABLE INSTRUMENTS AND OTHER RELATED COMMERCIAL PAPER (2d ed. 1993).


\textsuperscript{6} I also should mention the somewhat darker perspective offered by Grant Gilmore, Formalism and the Law of Negotiable Instruments, 13 CREIGHTON L. REV. 441, 446–58 (1979), which argues not that negotiable instruments law disappeared because of changes in economic conditions, but instead that bankers called it into service to further their personal interests in transactions to which negotiable instruments law never should have been applied.
related) have undermined the usefulness of negotiability in all of its manifestations. Like all legal institutions, negotiability was called into existence to respond to problems of a particular time and place. The complete transformation of the technology of financial activity that has taken place during the closing decades of this century has created a transactional setting that bears no significant resemblance to the pre-Industrial Revolution world in which negotiability first came to be used in payment systems. Accordingly, it should come as no surprise that it is hard to discern a useful role for negotiability in the financial world of the twenty-first century.

Secondly, and more importantly, I present several different categories of empirical evidence designed to demonstrate that my general view of the underlying technological forces is reflected in what actually has happened in our nation's financial markets. The evidence includes the results of a series of more than a dozen interviews with individuals experienced in various kinds of financial transactions. I also collected actual documents used in a variety of payment and credit transactions, enabling me to present evidence regarding the actual usage of negotiability in those contexts. Similarly, to get a firsthand look at the practicalities of check processing, I visited the check-collection facilities of two major banks located in different Federal Reserve districts. Finally, in order to evaluate the accuracy of my impressions about the irrelevance of holder-in-due-course status to the check-collection process, I conducted a survey of reported cases decided since 1985 that mention holder-in-due-course status in the checking context.

This Article presents my analysis in four steps. I start in Part I with a general discussion of negotiability that focuses on two major points. The first is an explanation of the basic premise of negotiability: a system that fosters exclusive reliance on a document can enhance the liquidity of the assets covered by that document. The second is a discussion of why that premise is obsolete: designed for transactions in a horse-and-buggy economy, negotiability's focus on physical documents imposes a significant burden on transactions in the current age of electronic information processing.

---

7. To enhance the accuracy and verifiability of my records of the interviews, I recorded and transcribed the interviews whenever practicable. In most of the cases in which that was not practicable, I took contemporaneous handwritten or typed notes of the interviews, from which I promptly produced a typescript record of the interview. Copies of those transcripts and records are available upon request.

8. Copies of any of the documents cited in this Article are available upon request.

9. The two banks were The Boatmen's National Bank of St. Louis and The First National Bank of Chicago.
Part II turns from the abstract analysis of Part I to present empirical evidence about actual current financial practices. The sections of Part II survey the various types of payment and credit systems used most commonly in our economy. My analysis includes the major nonchecking payment systems in which documents reflect the payment obligation (credit cards and letters of credit), as well as the most important types of credit obligations in our economy (consumer promissory notes used to purchase personal property or homes, private commercial obligations, and long-term and short-term publicly traded commercial obligations). Relying on the interviews and sample documents that I have collected, I can show that negotiability is rarely used in any of those systems.¹⁰

Analysis of the checking system is reserved for Part III. Based on my interviews and site visits, Part III shows how the exigencies of commerce have rendered the basic concepts of negotiability irrelevant to the current check-processing system. Although most previous scholars have focused on doctrinal niceties to show how the applicable legal rules can be explained without reference to traditional rules of negotiability, my focus on the practicalities of the processing system allows me to present a much broader critique. The irrelevance of negotiability is much more complete than previous scholars suggest because its cause is more fundamental than a simple revision of the applicable legal rules. The pressure of technological change has rendered the most basic features of the negotiable instrument a positive hindrance to any modern payment system. The legal rules accommodating the passage of negotiability are mere patchwork details that reflect a situation brought about by developments external to the law.

Finally, Part IV summarizes the implications of my analysis for the ongoing development of payment systems. The time has passed when it is sensible to complete payment transactions by transporting physical objects and examining them to determine the nature of the signatures that appear on them. To function effectively, a modern payment system must follow

¹⁰. I do not assert that negotiability is never used in any system. Indeed, it is clear that negotiability still plays some role in transactions that use documents of title. See, e.g., John F. Dolan, Changing Commercial Practices and the Uniform Commercial Code, 26 LOY. L.A. L. REV. 579, 589–92 (1993). Moreover, even in the context of payment and credit systems (the subject of this Article), my research has been limited to a survey of the major domestic systems and has focused on dispelling the notion that negotiability has any significance to the overall structure of our financial system. Accordingly, even though it is likely that negotiability persists in some range of transactions that I do not discuss, I do not think that that possibility establishes a significant role for negotiability. The fact that the transactions in which it persists are so unusual underscores my basic point: technological developments have marginalized a legal institution that once was central to financial transactions.
the lead already taken by most of the highly liquid credit systems. It must abandon all of the features that made negotiability useful in the pre-Industrial Revolution economies in which it developed. The demands of a modern economy call for payment systems that focus on data instead of documents, and that provide for contemporaneous approvals by the ultimate payor rather than the cumbersome and time-consuming clearing process that characterizes transactions using checks and other negotiable instruments.

Thus, the decline and fall of negotiability does not mean the end of the law of payment systems. It calls for new law-related systems designed to defuse the issues that arise in new data-based payment systems. To accomplish that task, the law must abandon its fixation with the paradigm of negotiability and focus instead on the practical realities of the contexts in which new payment systems are used.

I. NEGOTIABILITY: AN OUTMODED SYSTEM FOR ENHANCING LIQUIDITY

To say anything useful about negotiability, it is necessary to start by offering a general explanation of what negotiability is and why anybody would want to use it. The easiest way to do that is to work from an idealized model transaction that uses a negotiable instrument to make payment. Because my account is designed to illustrate how the benefits of negotiability could make it a useful device in payment and credit transactions, I start with a transaction in which negotiability in fact would be useful, modeled on the seventeenth- and eighteenth-century transactions in which negotiable instruments first came to play a significant role in payment transactions.

Thus, posit a clothier ("Clothier") attempting to purchase wool from a wool merchant ("Merchant"). Clothier's principal source of income is from

11. I compensate for the simplification and abstraction of the discussion in this Part with the concrete empirical evidence about current usage that I present in Parts II and III of this Article.

12. Although it is feasible to use negotiability as a system to enhance the liquidity of many different kinds of assets, this Article focuses on the use of negotiability in connection with payment and credit systems, the area in which legal academics traditionally have shown the most interest. Thus, this Article does not consider the use of negotiability under U.C.C. Article 7 to cover bills of lading, warehouse receipts, or other documents of title.

the sale of finished clothes to a factor ("Factor") that is in the business of buying finished clothes and reselling them to retailers. In an economy in which cash was the sole nonbarter payment medium, Clothier probably would obtain cash by selling finished clothes to Factor, and then would use that cash to pay Merchant for the wool. It would be considerably more convenient, however (particularly in economies that are short of cash),\(^14\) if Clothier could pay Merchant with a bill of exchange (or some other form of instrument); with a documentary noncash payment, Clothier could pay Merchant without first obtaining cash from Factor. In the typical transaction using a negotiable instrument, Clothier would pay Merchant with a "draft" drawn on Factor. The draft would represent funds that Factor already owes, or in the future might owe, to Clothier for clothes purchased, or to be purchased, from Clothier.\(^15\) Merchant, in turn, could obtain cash by seeking payment from Factor or by selling the draft to a third party. Alternatively, Merchant could use the draft to pay for other goods and services it purchased from a third party.\(^16\)

From an economic perspective, the biggest problem with that arrangement is the difficulty in which it places Merchant: how can Merchant be sure that Factor or anybody else will be willing to give Merchant money or other valuable goods and services in exchange for the draft? Absent some strong reason to expect that the draft will be valuable, Merchant will be unlikely to accept the draft without insisting upon a substantial premium over the price at which it would sell goods for cash. The rules of negotiability respond directly to that problem by making it easier for Merchant to sell the draft—by enhancing its liquidity.

The benefits of enhanced liquidity are obvious. At least in commercial contexts, an asset that is easy to sell normally is more valuable than an otherwise similar asset that is hard to sell.\(^17\) That is true both because of

\(^14\) See id. at 109 (describing the development of bills as a payment medium in "a community [that] is unlikely to have a sufficient volume of specie or specie substitutes to settle all of its transactions"); Gilmore, supra note 5, at 447 (attributing development of negotiable instruments law in part to the "chronically . . . short supply" of metallic currency).

\(^15\) In modern parlance, a draft is an instrument signed by one party (Clothier in this case) directing another party (Factor in this case) to pay money to yet another party (Merchant in this case). See U.C.C. § 3-104(e) (1991) (defining "draft" as an instrument that contains an "order"); id. § 3-103(a)(6) (defining "order").

\(^16\) See ROGERS, supra note 13, at 111–12 (describing a transaction of this type as common in England in the 17th and 18th centuries).

\(^17\) See CARL MENCER, PRINCIPLES OF ECONOMICS 248–56 (1950) (discussing factors affecting the "marketability" of assets); GERALD P. O'BRIEN, JR., & MARIO J. RIZZO, THE ECONOMICS OF TIME AND IGNORANCE 193 (1996) (explaining why "entrepreneur-traders will prefer holding their wealth in more marketable commodities").
the enhanced flexibility available to the owner of a readily salable asset,\textsuperscript{18} and because of the increased price that the owner is likely-to obtain upon the sale of an asset that is highly liquid. Given two assets with the same expected economic productivity, the more liquid asset usually can be sold for more than the less liquid one.\textsuperscript{19} Thus, all other things being equal, rules that enhance the liquidity of negotiable instruments should enhance the relative attractiveness, and thus the relative value, of negotiable payment instruments.

The general tactic by which negotiability responds to the problem of illiquidity is to centralize all rights to the underlying asset (a right of payment in this context) in a single physical document. The classic terminology describes the obligation to pay as “merged” in the document.\textsuperscript{20} That approach enhances liquidity by reducing the costs a prospective purchaser incurs in acquiring two related types of information about the asset: information about claims that undermine the value of the payment obligation that the instrument represents, and information about title to the payment obligation.

To the modern observer, the most salient enhancement of liquidity is associated with holder-in-due-course status.\textsuperscript{21} The value of holder-in-due-course status is that it reduces the incentive for the purchaser to inquire about claims that might undermine the value of the asset by the forceful mechanism of cutting off many of those claims. Thus, a party that follows the rules of the negotiability system when it acquires a negotiable instru-

\textsuperscript{18} See Menger, supra note 17, at 249 (“[T]he commodity whose market is poorly organized can be brought to its final destination only with economic sacrifices, and in some cases not at all.”); O’Driscoll & Rizzo, supra note 17, at 194 (“Liquidity provides economic agents with flexibility, flexibility that lowers cost.”).

\textsuperscript{19} For an illustrative example, see Tania Padgett, Mark Twain Stock Jumps as Bank Unveils Plan for Listing on N.Y. Exchange, AM. BANKER, Aug. 7, 1996, at 24, which notes that the stock of Mark Twain Bancshares rose more than 2% on a day when Standard & Poor’s bank index fell by 0.02%, and attributes the increased price to investors’ anticipation of increased liquidity based upon an anticipated shift of trading in the stock from NASDAQ to the New York Stock Exchange.

\textsuperscript{20} As Grant Gilmore put it, “[T]he idea which was basic to the structure was the idea that the piece of paper on which the bill was written or printed should be treated as if it—the piece of paper—was itself the claim or debt which it evidenced. This idea came to be known as the doctrine of merger—the debt was merged in the instrument.” Gilmore, supra note 5, at 449.

\textsuperscript{21} As Jim Rogers has shown, the importance of holder-in-due-course status is a relatively recent development. See Rogers, supra note 13, at 189–93.
ment takes free of most types of defenses to payment, even if those defenses would have been valid against the seller of the instrument.\textsuperscript{22}

To use my model transaction as an example, suppose that Clothier purchased wool on credit and discovered before paying for it that the wool Merchant had sold failed to conform to the agreement between Merchant and Clothier. Under ordinary contract principles, a sufficiently serious defect would entitle Clothier to withhold all or some portion of the remaining price.\textsuperscript{23} But if Clothier had given Merchant a negotiable draft for the purchase price, and Merchant had negotiated that draft to a third party that became a holder in due course (Bank), Clothier would be obligated to pay Bank even if Merchant itself never could have forced Clothier to pay for the wool.\textsuperscript{24}

However unfair that rule might seem to Clothier, it can lower Clothier’s overall costs if it lowers the transaction costs that Merchant must incur in obtaining cash or something else of value in exchange for Clothier’s obligation to pay. By giving Bank immunity from most of the plausible defenses to payment that Clothier might assert, holder-in-due-course status can obviate the need for Bank to inquire about the existence of those defenses. Thus, the holder-in-due-course rules enhance the liquidity of obligations by enhancing the ability of a purchaser to rely solely on the document in evaluating the nature of the obligation. If the document is in proper form and the seller transfers it properly, the purchaser takes the instrument free of all but a few specialized defenses that Clothier might interpose.\textsuperscript{25} If that benefit makes the instrument more valuable to Bank, then it makes the instrument more valuable to Merchant, and thus should make Merchant more willing to accept the instrument as payment from Clothier.

\textsuperscript{22} For the rights of a “holder in due course” under Article 3, see U.C.C. §§ 3-305, 3-306 (1991).

\textsuperscript{23} See id. § 2-717 (1995).

\textsuperscript{24} See id. § 3-305(a)(2), (b) (1991) (stating that a holder in due course takes free of “a defense of the obligor . . . that would be available if the person entitled to enforce the instrument were enforcing a right to payment under a simple contract”).

\textsuperscript{25} The remaining defenses are the so-called “real” defenses set out in U.C.C. section 3-305(a)(1). See id. § 3-305(b) (“The right of a holder in due course to enforce the obligation of a party to pay the instrument is subject to defenses of the obligor stated in [U.C.C. section 3-305(a)(1)].”). None of those real defenses—infancy, duress, lack of capacity, illegality of the transaction, fraud in fact (execution of the instrument without an opportunity to understand it), and insolvency—present claims likely to be raised by a party with any hope of continuing to engage in commercial transactions.
The second major benefit of negotiability is a simplification of title issues, which can lower the costs that a purchaser expends in investigating title. When a document is negotiable, substantially all of the information necessary to evaluate title to the asset appears on the face of the document in its original terms or in indorsements subsequently placed on the document. At least in the absence of forgery, a person who wishes to purchase a negotiable document can verify that the purported seller can convey good title without any inquiry other than the examination of the document. If the document is in bearer form, then mere possession is enough to obtain title. The inquiry is more complicated if the document is in order form, but even then the buyer need only examine the document (including any indorsements that appear on the document) to determine whether the seller is the person to whose order the document runs. If so, the seller can convey title to the purchaser by the simple acts of indorsement and delivery of the document.

Centralization of title information on the document distinguishes assets covered by negotiable documents from other kinds of assets. When a person purchases goods, for example, he ordinarily acquires only the "title which his transferor had." Thus, a party that purchases goods without verifying the source of the seller's title must accept the risk that the seller in fact does not have good title to convey. Evaluating that risk may be more or less burdensome depending on particular circumstances, but in many cases it will be much harder for a purchaser to evaluate its seller's title to goods than it would be if the asset in question were in negotiable form. It is much easier to read the face of a check to verify that the named payee is the individual at the front of the teller line than it is to obtain and verify an invoice through which a prospective seller purchased goods that somebody wishes to buy. Similarly, the purchaser of real estate cannot satisfy itself that its seller has title solely by determining that the seller has unchallenged possession of the land. Instead, the purchaser ordinarily must review public real-estate records in order to determine whether those re-

26. To determine whether a document is in bearer form, a prospective purchaser need only compare the terms of the document and its indorsements to the statutory requirements for bearer and order form. See id. § 3-109 (rules for making instruments payable to bearer and to order); id. § 3-205(a), (b) (rules for changing the form of paper by indorsement).
27. Id.
28. Id. § 1-201(20) (1996); id. § 3-205(a) (1991).
29. Id. § 2-403(1) (1995).
cords reveal any competing claims to the land. By obviating the need for such inquiries, negotiability can reduce the search costs that a purchaser incurs to determine whether a purported seller in fact owns the asset that the purchaser wishes to acquire.

The abstract theoretical benefits of negotiability, however, are only one side of the story. The core mechanism by which negotiability offers those benefits—streamlining investigation and transfer to focus on the physical object that represents the underlying obligation—carries with it the fatal flaw that has driven negotiability’s declining relevance. Negotiability arose in an economy of payment transactions among parties well known to all. In transactions occurring during that era, both Merchant and Bank should have been familiar not only with Clothier’s general financial responsibility and signature, but also with Factor’s financial responsibility and its relationship with Clothier. In that context, negotiability provided a significant benefit by enabling parties like Merchant and Bank reliably to streamline a sale transaction into a simple transfer of possession of a document.

But times have changed and with them the size and interrelations of our economy, as well as the state of information technology. In this modern age of multiple and rapid transactions in a national and perhaps global market, negotiability’s emphasis on the physical document is a hindrance rather than a benefit. In many transactions, transporting a document from buyer to seller is no longer a simple matter of pushing a piece of paper across a table. Furthermore, even if the buyer and the seller meet face-to-face, the financial institution on whom the instrument is drawn commonly is located at a distance from one or both of the parties to the underlying transaction. The frequent need to transport the document thousands of


31. See, e.g., Dolan, supra note 10, at 580 (stating that “knowledge [of other merchant’s signatures] was essential to the circulation of the payments system’s paper”).

32. For a similar account in a related context, see Stuart Banner, “Not a Fancy Man on the Board”: American Securities Regulation, 1800–1860, at 15–16 (unpublished manuscript, on file with author) (explaining how the desire to facilitate the transfer of stock certificates motivated American courts in the early decades of the nineteenth century to adopt negotiability-like rules that permitted valid transfers of stock solely by delivery of the instrument, even if the parties failed to comply with corporate charters that required stock transfers to be noted on the books of the issuer).
miles is a much more common problem now than it was in the era when our country was founded.

Similarly, with the rise of computers, it is no longer so easy to see the benefit of rules that limit the purchaser’s inquiry to an examination of a physical document. In many contexts, a purchaser could examine electronically stored records much more expeditiously than it could examine the physical signatures and form of an individual document. Furthermore, the dramatic increase in the number of transactions and transacting parties makes it impractical for a party to obtain the information it needs simply from the examination of a signature. Modern technology offers mechanisms for confirming payment authorizations that are much more effective than the physical signature that is central to the negotiability system.

In sum, the historical conditions that called negotiability into service to enhance the liquidity of payment obligations have passed from our economy. In the absence of those conditions, the document- and signature-based concepts of negotiability no longer provide significant benefits to the parties that choose to use them. Accordingly, it should be no surprise to find, as Parts II and III demonstrate, that modern financial systems relegate negotiability to a position of small and continually decreasing significance.

II. THE RARITY OF NEGOTIABLE INSTRUMENTS

One of the most telling but least acknowledged facts about negotiability is the limited extent to which it still appears in payment and credit transactions. To realize just how far negotiability has fallen, one must recognize how rarely it is used. Putting checks aside for the moment,\textsuperscript{33} none of the major payment or credit systems\textsuperscript{34} in our economy appears commonly in a form that satisfies the technical requirements of negotiability. The reasons for the limited impact of negotiability differ from area to area. In some cases, direct and indirect legal restrictions reflect legislative and administrative decisions to reject negotiability for policy reasons. In most areas, however, the decline of negotiability has been driven by technological change. Thus, technological advances commonly leave negotiability with such an insignificant value to the modern transaction that the parties simply do not care whether the obligations are put in

\textsuperscript{33} Part III discusses the irrelevance of negotiability concepts to the operation of the checking system.

\textsuperscript{34} For a brief explanation of the distinction I draw between payment systems and credit systems, see LOFUCKI, WARREN, KEATING & MANN, supra note 3 (manuscript assign. 15, at 1–2, on file with author); id. (manuscript assign. 23, at 1–2, on file with author).
negotiable form. Moreover, in at least one area (commercial paper), technological developments have gone so far as to render negotiability so positively harmful that the transactions do not use instruments of negotiable form even though the positive law formally requires negotiability.

I start in Subpart A with the major nonchecking payment systems. Subpart B then considers the main forms of credit obligations: consumer promissory notes, private commercial obligations, and publicly traded commercial obligations.

A. Nonchecking Payment Systems

Aside from the obvious example of checking, few of the payment systems in common usage in this country use documents in any significant way. For example, there is no place for paper in the trillion-dollar-a-day system for wire transfers,\(^{35}\) and no significant place for paper in the rapidly growing\(^{36}\) debit-card system.\(^{37}\) The paperless nature of developing payment systems involving stored-value cards and electronic money will leave negotiability similarly irrelevant to those systems.\(^{38}\) But negotiability also is notably absent from the two common nonchecking payment systems that involve written commitments to pay: credit cards and letters of credit. Although the absence of negotiability from those systems is not surprising, it is important to understand that the absence of negotiability from those systems is not fortuitous. Those systems refrain from using negotiability because negotiability is directly incompatible with important aspects of those systems as they currently operate. Thus, a discussion of those systems

---

35. For statistics on the volume of wire transfers in this country, see Federal Reserve Bank Services, 60 Fed. Reg. 111, 112 (1995) (reporting an average daily volume in 1993 of about $1.8 trillion of transfers made over Fedwire and the Clearing House Interbank Payments System (CHIPS)). For a general discussion of the wire-transfer system, see LoPucki, Warren, Keating & Mann, supra note 3 (manuscript assign. 20, on file with author).

36. Industry sources estimate that the number of point-of-sale debit-card terminals has grown from just 17,000 in 1986 to about 130,000 by 1993. See 1 The Bankers Roundtable, Banking's Role in Tomorrow's Payment System 51 (1994) (reporting statistics). In 1993, consumers used those terminals to conduct about 400 million point-of-sale transactions. See 2 id. at 97 (reporting statistics).

37. Although the Electronic Fund Transfer Act requires the institution to provide the consumer "written documentation" of each debit-card transfer, Consumer Credit Protection Act § 906(a), 15 U.S.C. § 1693d(a) (1994), the consumer ordinary does not sign the slip. The slip is simply a record of a previously authorized transaction, which has no role in demonstrating the consumer's obligation. For a general discussion of the debit-card system, see LoPucki, Warren, Keating & Mann, supra note 3 (manuscript assign. 18, on file with author).

38. For a general discussion of those systems, see LoPucki, Warren, Keating & Mann, supra note 3 (manuscript assign. 22, on file with author).
provides a good introduction to the contextual reasons that limit the significance of negotiability in modern financial transactions.

1. Credit Cards

Credit cards are a good place to start because they are one of the most successful and common payment systems used by consumers, and because negotiability obviously has no relevance whatsoever to the credit-card system. Although consumers ordinarily do sign credit-card slips to reflect the payment obligation when they engage in face-to-face credit-card transactions, the slip in its customary form plainly is not a negotiable instrument. Most obviously, the slip fails to satisfy the requirement that it be payable to "bearer" or "order." Of course, if it were just a matter of form in the wording of the slip, the credit-card industry could obtain the benefits of negotiability by redesigning credit-card slips to put them into negotiable form. Even if the credit-card industry did so, however, federal law would prevent the institutions that purchase the slips from merchants from gaining the practical benefits of holder-in-case status. Specifically, the Truth in Lending Act generally requires that consumers retain defenses to payment obligations that they incur with credit cards.

This rule reflects a firm rejection of one of the basic policies of negotiability: the idea that enhancing the liquidity of a payment instrument (in this case, the credit-card slip) provides more benefits to the parties than any harm that the payor suffers through losing the ability to assert defenses against subsequent holders of the instrument. In this area, the Truth in

39. Although the credit-card transaction involves an at least transient extension of credit to the purchaser, the fact that it provides substantially contemporaneous payment to the payee leads me to treat the credit-card system as a payment system rather than a credit system.

40. See U.C.C. § 3-104(a)(1) (1991) (negotiable instruments must be "payable to bearer or to order"); see also id. § 3-109 (explaining the bearer-or-order requirement).

41. Truth in Lending Act § 170, 15 U.S.C. § 166d (1994) (allowing consumers to assert against the banks issuing their credit cards all defenses to payment that would be valid in suits on the underlying transactions); see 12 C.F.R. § 226.12(c) (1990) (regulatory explication of that rule). Although the rule is subject to a number of exceptions that might limit its effectiveness in current practice, see LOPUCKI, WARREN, KEATING & MANN, supra note 3 (manuscript assign. 19, at 7-16, on file with author), it would prevent the industry from making holder-in-case status the norm.

42. The credit-card system as it currently operates also rejects the document-centered focus of negotiability, for credit-card transactions increasingly are processed through electronic transmission of the transaction information rather than through physical transportation of the credit-card slip itself. See Jeremy Quittner, Processing Paper on Ware, But Still Lucrative, AM. BANKER,
Lending Act reflects the contrary view: any adverse impact on the availability of credit-card lending to consumers will be counterbalanced by the advantage that consumers gain from the right to challenge their obligation to pay for goods purchased by credit card. The continuing healthy level of credit-card transactions (1995 saw 280 million active credit-card accounts, which were used to purchase $600 billion worth of goods and services\textsuperscript{49}) suggests that the rule has not unduly constricted merchants' willingness to accept credit cards.\textsuperscript{44} At bottom, it is unlikely that the absence of holder-in-due-course status and the other benefits of negotiability has held back the credit-card industry significantly.

2. Letters of Credit

A glance at a typical letter of credit evidences a similar absence of negotiability. As with the credit-card slip, the most definitive technical defect is the absence of "bearer" or "order" language in a letter of credit.\textsuperscript{45} As with credit cards, however, the reason for the absence of negotiability is more fundamental than some technical form of words. The most basic difficulty\textsuperscript{46} is that a letter of credit is not intended to be an unconditional obligation of the bank that issues it. On the contrary, a letter of credit is by its nature a conditional obligation—the bank is obligated to pay only if the beneficiary or some permitted assignee of the beneficiary submits a draft

---

Nov. 1, 1996, at 10 (estimating that only five percent of 1996 domestic credit-card transactions would use paper-based processing).


44. On that point, I note that general purpose credit-card purchases grew by 18% in 1995 alone. \textit{id}. For a general discussion of the rise of the credit card, see Elizabeth Warren, Mortgaging the Future: The Consumer Debt Binge of the 1980s, at ch. 2 (Aug. 31, 1994) (unpublished manuscript, on file with author).

45. For a readily available and authoritative form, see \textit{INTERNATIONAL CHAMBER OF COMMERCE, ICC GUIDE TO DOCUMENTARY CREDIT OPERATIONS 47} (ICC Publication No. 515) (1994) [hereinafter ICC PUBL. NO. 515] (reprinting a standard form for an irrevocable confirmed documentary letter of credit). In connection with this Article, I also have reviewed the forms used by the Boatmen's National Bank of St. Louis and NationsBank of Texas, N.A. Those forms are similar in all relevant respects to the ICC form cited above. Copies of those forms are available on request.

46. There are other reasons that a negotiable letter of credit would be unpalatable to an issuing bank. The most obvious is the reluctance of banks to accept free transfers of the letters of credit that they issue. See James J. White, The Influence of International Practice on the Revision of Article 5 of the U.C.C., 16 NW. J. INT'L L. & BUS. 189, 202–03 (1995) (discussing the reluctance of issuers to permit free assignment of letters of credit). The problem discussed in the text, however, seems to me to be the most fundamental and thus most generally illustrative of the difficulties of accommodating negotiability to the broad variety of payment transactions.
that complies with the conditions stated in the letter of credit.\textsuperscript{47} Because the rules for negotiability are not sufficiently flexible to cover conditional obligations,\textsuperscript{48} negotiability has no significant role to play in the domestic letter-of-credit system.\textsuperscript{49}

B. Credit Systems

When we turn from transactions in which payment is made contemporaneously with the underlying transaction to transactions in which payment is deferred through the extension of credit, we must confront a considerably less standardized set of systems. Because of the broad variety of mechanisms for extending credit, I cannot claim that I have surveyed all of the systems that are present in our economy. Thus, I acknowledge that there probably are some negotiable credit documents still being issued, but the evidence that I present does suggest that those documents are increasingly unusual. For purposes of this discussion, I analyze three different types of credit transactions: consumer credit obligations, private commercial obligations (promissory notes), and publicly traded commercial obligations (bonds and commercial paper).

\textsuperscript{47} See U.C.C. § 5-106(a) (1996); INTERNATIONAL CHAMBER OF COMMERCE, UNIFORM CUSTOMS AND PRACTICE FOR DOCUMENTARY CREDITS art. 9 (1993) [ICC Publication No. 500] [hereinafter UCP].

\textsuperscript{48} See U.C.C. § 3-104(a) (1991) (imposing requirement that instrument be unconditional); id. § 3-106 (explaining what features make an obligation unconditional).

\textsuperscript{49} Negotiability may play some limited role in international transactions, in which letters of credit are used to confirm a buyer's commitment to pay for purchased goods. See LOUCKS, WARREN, KRATING & MANN, supra note 3 (manuscript assign. 21, at 2–5, on file with author) (describing that transaction); Dolan, supra note 10, at 588 (same). The buyer in such a transaction might present the draft to a party other than the issuer, and the party acquiring that draft might negotiate it to a holder in due course. See ICC PUBL. NO. 515, supra note 45, at 92–93 (describing the mechanics of such transactions). Although I have no hard evidence on the question, my sense from informal conversations with American bankers is that it is not common for such a draft to be negotiated to a party other than the issuer of the letter of credit or some other bank that has confirmed or advised the credit. In those circumstances, holder-in-due-course status would have limited relevance because the holder of the draft normally would have rights against the beneficiary directly under letter-of-credit law, without regard to rules of negotiability. See U.C.C. § 5-111 (1996). Moreover, at least one commentator believes that even in the international context, drafts are becoming less common as parties increasingly turn to simpler procedures for open-account sales. See Dolan, supra note 10, at 588.
1. Consumer Credit Obligations

The most significant situation in which consumers receive credit is in the form of a loan extended in connection with a purchase by the consumer. Because different legal rules have fostered practices for sales of goods and services that differ from the practices for sales of homes, I treat those two types of obligations separately.

a. Notes for the Purchase of Goods and Services

There is no need to examine the customary terms and conditions of the promissory notes that consumers sign when they receive credit in connection with their purchase of goods or services, because federal law generally bars the exercise of holder-in due course rights against consumers in that context.

Specifically, the Federal Trade Commission has promulgated a regulation that bars holder-in due course status for consumer credit transactions involving goods and services. That regulation makes it an unfair trade practice to receive a promissory note in a consumer credit sale transaction unless the note includes the following legend: “Any holder of this consumer credit contract is subject to all claims and defenses which the debtor could assert against the seller of goods and services obtained pursuant hereto or with the proceeds hereof.” Violation of the regulation is punishable by a penalty of up to $10,000 for each violation.

As the FTC explained when it adopted that regulation, the rule reflects a considered rejection of one of the cornerstones of negotiability: the benefits of holder-in due course status. As discussed above, negotiability rests on the idea that all parties to a lending transaction benefit from a rule that enhances the liquidity of the payment instrument. From the FTC’s

50. FTC Preservation of Consumers' Claims and Defenses Rule, 16 C.F.R. § 433.2(a) (1996). The regulation requires a similar notice in transactions in which the seller receives funds generated by a loan that a separate entity issues. Id. § 433.2(b). The only major exception applies in situations in which the seller has no relationship with the creditor “by common control, contract, or business arrangement.” Id. § 433.1(d).
52. See supra pp. 957-62.
perspective, by contrast, holder-in-due-course status is unfair to consumers because it "make[s] the consumer's duty to pay independent of the seller's duty to fulfill [its contractual] obligations." Thus, the FTC reasoned, consumers should not be forced by the holder-in-due-course rule to pay for goods and services that sellers do not actually deliver to them.

Although the FTC legend imposes a condition on the consumer's obligation to pay that ordinarily would deprive the note of negotiability, Article 3 includes a provision designed to treat a promissory note including that legend as a negotiable instrument. Nevertheless, the ordinary holder-in-due-course protections of negotiability have nothing to do with enforcement of such notes. The statute expressly acknowledges that "there cannot be a holder in due course of [such an] instrument." Accordingly, the consumer in this context (just as in the credit-card context) generally has the right to withhold payment from the ultimate holder of the instrument on the same terms under which the consumer could withhold payment from the merchant with whom the consumer dealt directly.

b. Notes for the Purchase of a Home

The FTC regulation does not apply to notes given in connection with the purchase of a home. Accordingly, nothing in federal law prevents the issuers of home mortgages from obtaining negotiable instruments from

54. See id.
55. See U.C.C. §§ 3-104(a), 3-106 (1991); JAMES J. WHITE & ROBERT S. SUMMERS, UNIFORM COMMERCIAL CODE § 14-9, at 532 (4th ed. 1995). As Michael Sturley has shown, the FTC probably did not mean to exclude consumer finance notes from Article 3 entirely, but simply wanted to preclude holder-in-due-course status. Michael F. Sturley, The Legal Impact of the Federal Trade Commission's Holder in Due Course Notice on a Negotiable Instrument: How Clever Are the Rascals at the FTC?, 68 N.C. L. REV. 953, 956-63 (1990). The recently added provisions discussed in the rest of the paragraph in the text solve that problem by allowing notes covered by the FTC rule to retain negotiability status as a technical matter.
57. Id.
58. Although that conclusion is not controversial, extracting it from the FTC regulations requires a trail through several definitional provisions, starting with 16 C.F.R. § 433.2, which imposes the notice requirement only on "consumer credit contract[s]." FTC Preservation of Consumers' Claims and Defenses Rule, 16 C.F.R. § 433.2 (1990). Section 433.1(d) limits that term to contracts described in sections 433.1(d) ("Purchase money loan[s]") and (e) ("Financing a sale"). Id. § 433.1(e). Those provisions, in turn, are limited to contracts with a "consumer." Id. § 433.1(d), (e). Finally, because the regulatory definition of consumer is limited to a person purchasing goods or services, a person engaged in the purchase of a home is not a consumer for purposes of the regulation. See id. § 433.1(b) (defining "Consumer" as someone "who seeks or acquires goods or services for personal, family, or household use").
borrowers purchasing homes. Given the ubiquitous use of a written document to reflect the borrower’s obligation to pay, as well as the thriving secondary market for home-mortgage notes, the home-mortgage note would seem to be the ideal arena for use of negotiability. If negotiability has faded from the home-mortgage market, negotiability is not likely to endure much longer in any significant financial market.

But a look at the current operations of the home-mortgage market reveals two related points: (I) the home-mortgage market in this country has grown too large and too complicated to rely practically on the transportation and evaluation of physical documents contemplated by negotiability; and (II) as the importance of negotiability has faded, the importance of using negotiable instruments has declined, making it uncommon for home-mortgage notes to conform to the technical limitations of negotiability. Thus, the home-mortgage market has replaced negotiability with more developed liquidity systems—principally devices for pooling and securitizing the underlying notes—that make the home-mortgage note highly liquid.  

(1) Obstacles to Negotiability

It is at least plausible to believe that negotiability could work reasonably well for a market in which individual mortgage bankers issued loans to home buyers and then resold each of those loans to one of a limited number of investors active in their geographic region. The mortgage banker could indorse each of the promissory notes and then deliver each one to the investor that purchased that particular note. The investor, in turn, could hold the promissory note, receive the payments as they became due, and attend to any miscellaneous business that might arise, such as administering any escrow accounts for payment of taxes and insurance, canceling or returning the note if it was paid in full, or suing the borrower for payment upon default.

59. More than $100 billion of home mortgages were securitized in the first quarter of 1996 alone. See Karen Talley, Wall Street Watch: Securitization Seen Tapering off Now, AM. BANKER, Oct. 1, 1996, at 10. That process dominates the supply of money for new mortgages (reaching 64% by the end of 1994) and is slowly converting the body of older outstanding mortgages (covering 40% of all mortgages outstanding at the end of 1994). KENNETH G. LOVE, MORTGAGE-BACKED SECURITIES: DEVELOPMENTS AND TRENDS IN THE SECONDARY MORTGAGE MARKET 1-7 (1996).

60. As Victor Goldberg has pointed out to me, the reputation of the underwriter is a key element of those liquidity systems, because the underwriters’ investment in their reputation makes it rational for investors to purchase these securities without independent investigation of the underlying assets.
The modern home-mortgage market, however, bears little resemblance to that simple idealized picture. In the first place, the benefits of specialization have resulted in an almost complete bifurcation of the duties of administration (referred to as loan servicing) from the benefits of ownership. Loan servicing generally is performed by separate companies that are paid by fees deducted from payments on the notes, and that ordinarily have little or no ownership interest in the notes in question. Thus, the party to whom the homeowner is obligated to make payments no longer owns the document. That situation is completely at odds with the classic idea of negotiability as a system in which the maker is obligated to pay whatever party owns the instrument from time to time.

Furthermore, the process of securitization of home mortgages has resulted in highly complicated ownership structures that render it ridiculous to focus on "possession" of the instrument by the "owner." In the ordinary case, many, if not most, home-mortgage notes are packaged shortly after issuance with a large group of similar notes. In the simplest transaction, one of the large quasi-governmental entities such as the Federal National Mortgage Association (FNMA or Fannie Mae) or the Federal Home Loan Mortgage Corporation (FHLMC or Freddie Mac) might purchase the entire package. Those entities, in turn, would issue a large body of securities representing minute pro rata ownership interests in each of the promissory notes covered by the package. The physical notes would not be transferred to the purchasers of the securities. Instead, they would remain "warehoused" at a central storage facility in case of the occurrence of some event that might require their physical production.

Nothing about that system resembles the classic system of negotiability. The notes are not being transferred by indorsement and delivery. Indeed, the ultimate owners of the notes—investors in the securities that

61. See LOVE, supra note 59, at 1-8 ("With mortgages, the original holder generally continues to service the loan after the sale [of a mortgage securitization pool]."). Indeed, servicing has become such a completely separate function that the ability to buy and sell mortgage servicing rights can be seen as "an essential part of the mortgage delivery system." See id. at 1-9.


63. See, e.g., Bankruptcy Reform Act of 1978: Hearings on S.2266 and S.R. 8200 Before the Subcomm. on Improvements in Judicial Machinery of the Senate Comm. on the Judiciary (Memorandum Submitted by the Federal Home Loan Mortgage Corporation), 95th Cong. 1136, 1146 (1977) ("To permit servicing to be conducted effectively and efficiently, the seller will retain unendorsed the original mortgage notes and the purchaser will not record under the various state recording statutes the purchaser's ownership interest in the [notes that it has] purchased."); Phyllis K. Slesinger & Daniel McLaughlin, Mortgage Electronic Registration System, 31 IDAHO L. REV. 805, 809–10 (1996) (explaining why it is impractical to execute item-by-item assignments in connection with the packaging and securitization of home-mortgage notes).
the notes support—are extraordinarily unlikely to have any idea whatsoever as to the actual location of the notes covered by their securities, much less any information about the individuals liable on those notes. Rather, they will know only that they have purchased a security bearing a specified interest rate that is backed up by an interest in a pool of home mortgages of a specified size, and that is underwritten as being of a specific quality. 64

(2) The Absence of Negotiability

The irrelevance of negotiability to home-mortgage note transactions is best demonstrated by the fact that the standard form of promissory note used for those transactions fails to satisfy the requirements of negotiability. Because of the strong interest in uniformity in the large securitized home-mortgage note transactions, Fannie Mae and Freddie Mac have promulgated a number of standard forms for use in those transactions. Transactions that do not use those forms are not eligible for repurchase by Fannie Mae or Freddie Mac. 65 Accordingly, although a significant number of home-mortgage notes are not securitized for various reasons, the Fannie Mae/Freddie Mac forms dominate the market, even for transactions in which the lender does not contemplate an immediate sale to Fannie Mae or Freddie Mac. 66

The most basic of these forms is the FNMA/FHLMC Multistate Fixed Rate Note—Single Family. Section 4 of that Note provides as follows:

4. Borrower’s Right to Prepay

I have the right to make payments of principal at any time before they are due. A payment of principal only is known as a “prepayment.” When I make a prepayment, I will tell the Note Holder in writing that I am doing so. 67

The italicized sentence of that provision appears to constitute an “undertaking ... to do a[n] act in addition to the payment of money.” For

64. See LOVE, supra note 59, at 4-105 to -106 (describing disclosure of “issue date, maturity, issuer, coupon rate, and principal balance of the mortgages in the pool”); Id. at 4-111 to -114 (describing Ginnie Mae, Fannie Mae, and Freddie Mac disclosures related to credit issues, which do not include any information about individual borrowers, but instead statistical information about number of loans, range of loan size, geographic location, loan-to-value ratios, insurance coverage, and information about delinquencies and foreclosures in the pool as a whole).

65. See 2 NELSON & WHITMAN, supra note 30, at 316.

66. See id. For example, the note for my home is on the FNMA/FHLMC form even though it is held by a single investor.

historical reasons codified in section 3-104(a)(3) of the U.C.C., a promissory note cannot be an instrument if it contains such an undertaking: the rules of negotiability apply only to promises to pay money, not to other, non-monetary undertakings. Sending a notice certainly is an act “in addition to the payment of money,” and the note’s language seems to constitute an “undertaking” to perform that act (albeit only on certain conditions). Accordingly, it seems unlikely that the Fannie Mae/Freddie Mac form qualifies as negotiable. Thus, the rules of Article 3 (including its holder-in-course protections) do not apply.

Most people to whom I have mentioned that peculiarity find it bizarre. The requirement that a homeowner send a written notice of prepayment does not seem crucial to the administration of a mortgage note. After all, the receipt of a payment that exceeds the required minimum amount should provide some notice to the servicer. The patron of negotiability must wonder why any sensible drafter would allow all the wonderful benefits of negotiability to slip away for such a trivial provision.

But the preceding paragraphs offer an obvious answer: the benefits of negotiability have no practical significance to the operation of the current system. Parties could take advantage of those benefits only if they were willing to be careful to obtain indorsements and take possession of each promissory note that they purchased. Given the practical difficulties that would accompany any attempt to satisfy those requirements and the uncertain prospects for victory even upon full compliance with the technical

68. For a general discussion of that requirement, see Fred H. Miller & Alvin C. Harrell, supra note 4, ¶ 2.02[1][a][ii], at 2-19 to -27.

69. Of course, it would be easy for a strong-willed court to ignore the problem and treat the document as an instrument, reasoning that the clause is not an “undertaking” because the requirement comes into effect only if the borrower voluntarily chooses to make a prepayment. That line of reasoning seems unlikely to me to persuade most courts. Remember, the issue would be most likely to arise in the context of a suit by a (presumably not impeccious) holder of the mortgage note attempting to claim holder-in-course status against a homeowner asserting a defense to payment of the note that would have been valid against the original lender. My sense is that most courts that let strong-willed preconceptions influence their reasoning are likely to hold preconceptions favoring the homeowner, not the holder.

70. That is not to say that no home-mortgage notes are covered by Article 3. In fact, it is quite likely that individual mortgage bankers scattered throughout the country still close home-mortgage transactions on old standard forms that do not qualify for transfer to Fannie Mae or Freddie Mac. The absence of negotiability from the most widely used forms, coupled with the market pressure to close loans that are eligible for securitization, however, should steadily drive those older forms from the market.
requirements, it is far more sensible to leave negotiability by the wayside in order to pursue the financial advantages promised by access to a large and highly liquid secondary market. Because the home-mortgage note market cannot practically assure the benefits of negotiability, there is no reason why the parties drafting the notes that the system uses should take any great care to ensure that the notes retain technical negotiability. Furthermore, the absence of negotiability from the most common form of note suggests that the parties that draft those notes in fact do not take care to protect the negotiability of the obligations in question.

2. Private Commercial Obligations

Negotiable instruments are just as hard to find in the commercial context as they are in the consumer realm discussed above. With respect to privately placed obligations—the garden-variety commercial promissory note—the pattern is the same as it is in the home-mortgage market. Notwithstanding the absence of any overarchinig legal prohibition, a group of practical difficulties have made negotiability more trouble than it is worth, leading to a general absence of negotiability from the forms of instruments commonly in use.

a. Obstacles to Negotiability

The market for privately placed business obligations presents a situation that in some ways is diametrically opposed to the home-mortgage market. In the home-mortgage context discussed above, sales of the notes are the norm, and retention by the original issuer is an unusual occurrence. The opposite situation prevails with respect to most private commercial promissory notes: although not unheard of, sales are relatively unusual occurrences. Thus, most portfolios appear to be filled almost entirely with promissory notes issued by the original investor or some closely affiliated

71 Indeed, even if the investors in home-mortgage transactions bothered with the formalities, they would face a substantial risk of losing the benefits of holder-in-du-e-course status given the relatively consistent holdings barring holder-in-du-e-course status for holders that engage in so many transactions with an originating lender as to be "closely connected" with the originating lender. See, e.g., LOPUCKI, WARREN, KEATING & MANN, supra note 3 (manuscript assign. 28, at 5, on file with author) (summarizing the doctrinal basis for those holdings).
party. The relative rarity of transfer means that negotiability in this context would not face the practical difficulties of handling massive numbers of transactions that render negotiability so unsuitable for the home-mortgage market. Unfortunately for the patron of negotiability, however, the infrequency of transfer also undermines the value of negotiability because a device that facilitates transfer has little value in a market where transfer is unusual.

The reason for the rarity of transfer is not hard to discern. As a detailed empirical study conducted by the Federal Reserve has shown, the market for private commercial loans (by which I mean loans that will not be publicly traded) is a very "information-intensive market." Lending to private commercial borrowers normally entails a considerable factual investigation of the borrower and any collateral offered to secure the borrower's obligation to repay the loan. Once an investor completes that investigation and advances funds to the borrower, the initial investor's store of information about the transaction allows that investor to place a higher value on the note than any third party. A rational investor purchasing such a note would have to conduct a second and largely duplicative factual investigation in order to satisfy itself that the initial investor correctly evaluated the risks and potential benefits of the transaction. Thus, to the extent that sales of such notes occur, they tend not to be the sale of an individual note for which negotiability is helpful, but instead bulk sales of large groups of such notes, frequently in connection with a sale of all or a

72. See Dolan, supra note 10, at 586 ("The note usually sits in the vault of the commercial lender from the time of utterance until the time it is satisfied and stamped 'paid.'").
73. In addition to the general limitations discussed in the text, the securities laws may prohibit or limit transfer of some kinds of private placements. See MARK CAREY ET AL., THE ECONOMICS OF THE PRIVATE PLACEMENT MARKET 43-44 (Board of Governors of the Fed. Reserve Sys. Staff Study No. 166, 1993) (discussing the market for securities issued under Rule 144A).
74. See id. at i.
75. See id. at 15 ("Borrowers in the private placement market generally are information-problematic firms or, if they are not, their financings are complex enough that only information-intensive lenders are willing to buy them."); id. at 3 (characterizing borrowers in the bank-loan market as "substantially more information problematic" than borrowers in the private-placement market).
76. Interviews with officers responsible for servicing loans at a major life insurance company indicate that the only common circumstance in which that lender sells individual promissory notes is a circumstance in which negotiability has no relevance—a workout with the borrower in which the note is transferred to a guarantor or some other entity affiliated with the borrower. See Telephone Interview with Loc McNew, American General Corporation (Aug. 5, 1996); Telephone Interview with Jocelyn Sears, American General Realty Advisers, Inc. (Aug. 5, 1996) [hereinafter Sears Interview]. It is unlikely that the borrower or its principal purchases its own promissory note with a view to using holder-in-due-course status to enforce the note.
substantial portion of the portfolio of the original investor. In many cases, such a transaction is effected not through individual transfers of the underlying notes, but through a transfer of the stock of the company whose portfolio is being sold. In sum, the relative infrequency of item-by-item transfers of private commercial promissory notes limits the benefits that investors can obtain by ensuring that those instruments are negotiable in form.

Of course, as long as the notes are sold at all, negotiability at least theoretically could provide some benefit by enhancing the value of the notes in the few transactions in which they are sold. But even in those transactions, commercial parties are unlikely to perceive a substantial benefit to obtaining holder-in-due-course status. Negotiability assumes a transaction in which the seller transfers the asset to the purchaser without any effort by the purchaser to discover the existence of any claims or defenses that might undermine the borrower’s willingness to pay. Any investigation by the purchaser would put holder-in-due-course status at risk because the purchaser would be unprotected if its investigation revealed a claim. Thus, a purchaser that wishes to rely on holder-in-due-course status should refrain from inquiry about the promissory note in order to ensure that it does not discover any existing claims.

Most commercial parties, however, are likely to view that strategy as something akin to sticking their head in the sand. Commercial actors are much more likely to adopt a strategy designed to flush out any claims before acquiring the note. For example, the purchaser might attempt to obtain an estoppel certificate or an acknowledgment from the borrower evidencing the borrower’s obligation to pay and including a statement that the borrower does not have any defenses to payment. Alternatively, the poten-

77. See Telephone Interview with Rembert R. Owen, Jr., American General Realty Advisers, Inc. (Aug. 7, 1996) [hereinafter Owen Interview]. Informal interviews with bank and insurance company executives also suggest a burgeoning market for purchases of distressed debt. Investors who specialize in holding and liquidating questionable loans purchase large packages of such loans from the portfolios of banks and insurance companies, who are anxious to enhance the credit quality of their portfolio by disposing of such loans rapidly.

78. See id.


80. See Sears Interview, supra note 76. An estoppel certificate puts the purchaser in a better position than holder-in-due-course status because the purchaser is protected from claims that the note fails negotiability for some technical reason or that the circumstances of the purchaser’s acquisition prevents it from acquiring holder-in-due-course status. See supra note 71 (discussing potential for “closely connected” doctrine to deprive institutional lenders of holder-in-due-course status). Also, less definitively, a purchaser probably would be able to portray itself in a better light in subsequent litigation to enforce the note if it could show that the borrower disclaimed any defenses at the time the purchaser acquired the note than if the purchaser had to
tial purchaser might send a letter to the borrower advising the borrower that the purchaser is purchasing the note and giving the borrower an opportunity to raise any defenses that the borrower might have. In either event, however, the purchaser would not be able to use holder-in-due-course status to defeat any claims that it discovered because it would have had notice of those claims at the time that it purchased the note. Of course, it could use holder-in-due-course status to protect itself from claims that it did not discover in spite of its inquiry, but given the purchaser's ability to rely on the borrower's express or implicit denial of any defenses, it seems unlikely that holder-in-due-course status would add any significant strength to the purchaser's claim.

b. The Absence of Negotiability

If my analysis of the limited value of negotiability in the commercial lending context is correct, one would expect to find the same relative lack of concern about maintaining negotiability in the form of the notes that appears in the home-mortgage market. To test that thesis, I examined a number of form promissory notes used by commercial-lending institutions. None of those promissory notes were unquestionably negotiable. The most common problem for negotiability was the presence of a usury savings clause. The following clause is typical:

Interest paid or agreed to be paid shall not exceed the maximum amount permissible under applicable law and, in any contingency whatsoever, if Lender shall receive anything of value deemed interest under applicable law which would exceed the maximum amount of interest permissible under applicable law, the excessive interest shall

admit that it was relying on the "technicality" of holder-in-due-course status to defeat any defense that the borrower might have.

81. See Owen Interview, supra note 77. The potential purchaser might ask the seller to provide a warranty that the borrower has no defenses to payment. Most institutional investors, however, would be unwilling to give such a warranty because the possibility of continuing liability on the warranty effectively would prevent the investor from treating the note as completely sold: an investor giving such a warranty would have to accept the possibility that it might have exposure on the note even after the sale. See Sess Interview, supra note 76.


83. See supra note 80.

84. I obtained five form promissory notes; three used by insurance companies (American General Corporation, Travelers Insurance, and an anonymous New York life insurance company) and two used by depository institutions (Home Savings of America, FSB and NationsBank of Texas, N.A.). Copies of those forms are available on request.
be applied to the reduction of the unpaid Amount of Note or re-
refunded to Maker. 85

Because that provision expressly conditions the maker's obligation to
repay the stated principal and interest on the lawfulness of the negotiated
payment terms, there is a strong argument that it deprives the note of nego-
tiability. 86 Although the previous sentences of the note obligate the
maker to pay a stated sum of principal and interest—a "fixed amount of
money," for purposes of U.C.C. section 3-104(a)—the quoted sentence
renders that obligation conditional because the borrower is obligated to pay
the stated "fixed amount" only if that amount is consistent with applicable
laws. If some aspect of the transaction (perhaps an aspect not evident from
the face of the instrument, such as a loan application fee or other form of
consideration to the lender) renders that fixed amount usurious, 87 no
holder of the note would be entitled to insist upon payment of the fixed
amount stated in the note. Although it is possible to advance plausible
arguments to support negotiability, 88 the provision at best places a sub-
stantial cloud on the instrument's negotiability. That cloud would make it
imprudent for any purchaser of such a note to rely on its negotiability.

NationsBank Note] (on file with author). For similar provisions, see American General Corpora-
tion, Promissory Note § 8, at 4-5 (n.d.) [hereinafter American General Note] (on file with
author); Consolidated Promissory Note 3 (n.d.) [hereinafter New York Insurance Company Note]
(used by anonymous New York life insurance company) (on file with author); The Travelers In-
urance Company, Promissory Note § 5.1, at 17 (July 10, 1996) [hereinafter Travelers Note] (on file
with author).

86. See U.C.C. § 3-104(a) (1991) (a negotiable instrument must be "unconditional"); see also
id. § 3-106(a) (defining requirement that a negotiable instrument be unconditional).

87. See Foust, WARREN, KEATING & MANN, supra note 3 (manuscript assign. 23, at
14-15, on file with author) (discussing that usury problem).

88. For example, one could argue that the provision is irrelevant because it simply restates
what would be implied into the note without the express condition: The maker cannot be forced
to pay unlawful interest. The most obvious problem with that argument is that negotiability law
treats implied conditions and express conditions quite differently. Under U.C.C. section
3-106(a), only express conditions bar negotiability. U.C.C. § 3-106(a) (1991). Thus, the implied
condition limiting payment to amounts lawfully owed would not deprive the note of negotiability
however much it might alter the holder's ability to enforce the letter of the note. By including
an express condition, however, the parties have gone further and thus probably have deprived the
document of negotiability.

Ted Janger has suggested to me that the provision is permissible because it is nothing but a
description of the interest rate, something expressly permitted by U.C.C. section 3-112(b) (1991).
Although that argument is plausible, it is subject to the difficulty that the clause not only limits
the amount of interest to be paid, it also (at least theoretically) would justify the borrower in
withholding a portion of the stated principal amount of the note.
Although they are the most common problems, usury savings clauses are not the only provisions that appear in commercial promissory notes that undermine their negotiability. For example, provisions that require notice of prepayment like the provision in the Fannie Mae home-mortgage note are not uncommon, and neither are a variety of other minor provisions that impose nonmonetary obligations that probably transgress the "courier-without-luggage" restriction in section 3-104(a)(3) of the U.C.C. The frequency with which such provisions appear in my sample cannot prove that no institutional lenders still use negotiable promissory notes, but it does provide strong support for my view that the parties in the market are driven by the same forces here as they are in the home-mortgage note context. In sum, the parties that draft both types of notes are not concerned about satisfying the technical requirements of negotiability because negotiability has no practical significance to the parties that invest in those obligations.

3. Publicly Traded Commercial Obligations

If the main reason that negotiability has nothing to offer "retail" commercial promissory notes is the difficulty of separating the payment obligation from the relationship between the borrower and the lender, then it should be fruitful to turn the search for negotiability to the impersonal market for publicly traded business obligations, where information about borrowers is publicly available to all. Here we enter an area where negotiability historically played a large role. Again, however, negotiability's ties to a rapidly receding historical context have proven its downfall. Although the end results are similar, the paths to the demise of negotiability have been slightly different in the market for long-term obligations (bonds) and short-term obligations (commercial paper). Accordingly, I discuss each of those topics separately.

89. See Travelers Note, supra note 85, § 3-4(b), at 12.
90. See American General Note, supra note 85, § 10, at 5 (representation by the borrower that the loan proceeds will be utilized for commercial, investment, or business purposes and not for personal, family, or household purposes); Home Savings of America, FSB, Promissory Note, at 1 ("Borrower agrees upon Lender's request to submit to the jurisdiction of the courts of LOS ANGELES County, the State of California."); New York Insurance Company Note, supra note 85, at 4-5 (agreement by the borrower that it will be liable for any damages suffered by the lender because of such matters as environmental liability or the collection by the borrower of rents after it has received notice of default); Travelers Note, supra note 85, § 5.11(b), at 20 (agreement by the borrower that the proceeds of the loan "will not be used for the purchase of registered equity securities").
a. Bonds

Although bearer bonds once played a large role in our economy, their demise presents a problem with negotiability not raised by the prior systems—the conflict between the privacy interests of parties to payment transactions and the desire of the government to obtain information about financial transactions. One somewhat fortuitous advantage for the negotiable instrument in the twentieth century is that it offers its holder more privacy than most alternative arrangements. Because the obligor on the instrument is obligated to pay whomever has possession of the instrument, a person can acquire a valuable right to payment but maintain anonymity until the payment actually is due. If the purchaser wishes to keep its identity anonymous, the obligor might have no record of the parties to whom it owes money and no way of knowing who those parties are until those parties present the document entitling them to payment. 91

That scenario poses significant problems for law enforcement officials. For example, one industry professional to whom I spoke told a story of a common device under which a wealthy aging individual would use cash to purchase bearer bonds that would be placed in a safety-deposit box with the knowledge of the individual's children. At periodic intervals the individual would go to the safety-deposit box to remove the coupons from the bonds and have them transmitted to the issuer to receive the periodic interest payments. Upon the individual's death, the children would go to the safety-deposit box, remove the bonds, and sell them without including them in the decedent's estate. Because the government would not be able to obtain a record of the decedent's ownership of the bonds from the issuer, it would be difficult for the government to learn that the bonds had been transferred to the decedent's children without payment of the appropriate estate tax. 92 The reason that bonds are so valuable for such a scheme is that they accrue interest while stored in the safety-deposit box; cash would not. As the individual telling me the anecdote explained: "[A] million dollars in cash isn't producing any income and the bonds are." 93

91. See Interview with Clayton Erickson, Manager, Municipal Trading and Underwriting, A.C. Edwards & Sons, Inc., in St. Louis, Mo. 5–6 (Aug. 1, 1996) [hereinafter Erickson Interview] (describing the inability of an issuer of bonds to give notice to holders of bonds when it calls them) (transcript on file with author). Indeed, it would be relatively easy to maintain anonymity even at the time of payment through the simple device of using a reliable intermediary to present the document evidencing the right to payment.
92. See Erickson Interview, supra note 91, at 6–7.
93. Id. at 7.
Congress responded in the Tax Equity and Fiscal Responsibility Act of 1982. In connection with the well-known provisions of the tax code that require payors of interest to report interest payments to the Internal Revenue Service, Congress enacted a provision that effectively outlawed the issuance of bearer bonds by generally barring any deduction for interest paid on a publicly traded bearer obligation with a maturity of more than a year.94 As the legislative history explains, Congress viewed the prohibition of long-term bearer obligations as a crucial feature of a system allowing the Internal Revenue Service to monitor ownership of securities and the profits derived from them.95

The law appears to have been effective; industry experts to whom I spoke told me that American companies have not issued bonds in negotiable form since 1982.96 Instead, bonds are issued either in registered form or by means of a book-entry system, which dispenses with the physical document entirely and relies on entries made on the books of an agent of the issuer.97 The book-entry securities obviously are not negotiable in the Article 3 sense of the term, because no document represents the payment obligation.98 Similarly, the registered securities are not negotiable because they provide on their face that they cannot be transferred by delivery (even

---

95. The Senate Report explained:

The committee believes that a fair and efficient system of information reporting and withholding cannot be achieved with respect to interest-bearing obligations as long as a significant volume of long-term bearer instruments is issued. A system of book-entry registration will preserve the liquidity of obligations while requiring the creation of ownership records that can produce useful information reports with respect to both the payment of interest and the sale of obligations prior to maturity through brokers. Furthermore, registration will reduce the ability of noncompliant taxpayers to conceal income and property from the reach of the income, estate, and gift taxes. Finally, the registration requirement may reduce the volume of readily negotiable substitutes for cash available to persons engaged in illegal activities.

96. See Telephone Interview with H. Eugene Bradford, Senior Vice President, and Christopher S. Hilco, Senior Vice President, Boatmen’s Trust Company (July 21, 1996) [hereinafter Bradford/Hilco Interview]; Erickson Interview, supra note 91, at 1–2; Interview with Daniel A. Naert, First Vice President-Investments, Smith Barney, Inc., in St. Louis, Mo. 1 (Aug. 9, 1996) [hereinafter Naert Interview] (transcript on file with author).
97. See Bradford/Hilco Interview, supra note 96; Erickson Interview, supra note 91, at 2–3; Naert Interview, supra note 96, at 1–3.
98. See Bradford/Hilco Interview, supra note 96; Naert Interview, supra note 96, at 3. For purposes of U.C.C. Article 8, book-entry securities are uncertificated securities. See U.C.C. § 8-102(a)(18) (1996) (defining “[u]ncertificated security” as “a security that is not represented by a certificate”).
with indorsement); a transfer is valid only if registered on the books of the designated agent of the issuer.99

To be sure, Article 8 allows certain purchasers of registered and book-entry securities to take free of defenses and adverse claims just as a holder in due course takes free of defenses and claims to a negotiable instrument.100 But that hardly suggests that Article 8 is a continuing forum for negotiability. Article 8 offers legal rules to accommodate a system for liquidity that is as far as possible from the documentary focus of negotiability. Among other things, Article 8 grants "protected-purchaser" status for documents like registered securities that cannot be transferred solely by possession.101 Indeed, Article 8's abandonment of the negotiability system is shown most clearly by its willingness to grant protected-purchaser status even to purchasers that do not have possession of a document representing rights in the security.102

The way to make sense of Article 8 is not to attempt to analogize the nonpossessory rights that it articulates to the legal rules arising from posses-

99. A typical provision states:

[T]his Debenture is transferable on the Debenture Register of the Company, upon surren-
der of this Debenture for transfer at the office or agency of the Company in . . . duly
dorsed by, or accompanied by a written instrument of transfer in form satisfactory to
the Company and Debenture Registrar duly executed by, the registered Holder hereof or
his attorney duly authorized in writing, and thereupon one or more new Debentures, of
authorized denominations and for the same aggregate principal amount, will be issued to
the designated transferee or transferees.

American Bar Found., Model Debenture Indenture Provisions: All Registered Issues § 202, re-
printed in AMERICAN BAR FOUND., COMMENTARIES ON MODEL DEBENTURE
INDENTURE PROVISIONS app. C at 13 (1986). I reviewed several registered bonds provided by Boatsmen's
Trust Company and Smith Barney, Inc. Each of them contained a similar provision. For a sim-
pler standardized provision, see Model Simplified Indenture, 38 BUS. LAW. 741, 776 (1983), which
states that "[t]he Company will pay interest on the Securities . . . to the persons who are regis-
tered holders of Securities at the close of business on the record date."

100. See U.C.C. §§ 8-202(d), 8-303 (1996).

101. Sections 8-202(d) and 8-303 extend protected-purchaser status to purchasers of a certifi-
cated security. Id. §§ 8-202(d), 8-303. Under section 8-102(a)(4) and 8-102(a)(15)(i), that term
includes registered securities. Id. § 8-102(a)(4), (15)(i).

102. Section 8-202 expressly extends its protection to parties that have only indirect posses-
sion. Id. § 8-202(i). Section 8-303(a)(3) reaches the same result a bit less directly—by protecting
the purchaser so long as it "obtains control of the . . . security." Id. § 8-303(a)(3). As the second
paragraph of comment 2 indicates, that test permits the status to extend to holders of un-
certificated securities (book-entry securities for which there is no document to possess). Id.
§ 8-303 cntt. 2. The first paragraph of that comment also allows considerable flexibility in the re-
quirement that the purchaser obtain possession of securities for which there is a certificate. See
id. (explaining that a purchaser can obtain control through delivery under U.C.C. section 8-301,
which is met when an intermediary takes possession "on behalf of" the purchaser).
sion of negotiable instruments. Instead, the best way to make sense of Article 8 is to acknowledge that the same practical considerations that have made negotiability impractical for home-mortgage notes have rendered negotiability impractical for corporate bonds.\textsuperscript{103} The basic problem is the immense growth in the market for securities, which results in a volume of trading unheard of even a few decades ago.\textsuperscript{104} In an era of negotiable documents, each trade would be closed by a physical transfer of the relevant document from one broker to the other. Industry experts remember (with little fondness) armies of couriers scurrying up and down Wall Street in the late afternoon carrying immense numbers of securities to settle the day’s trades.\textsuperscript{105}

The advent of electronic information systems provided an opportunity to develop a system for transferring securities that dispensed with the problems raised by the document-centered transfer mechanisms of the negotiability system. Not surprisingly, the industry has created a system that relies increasingly on central depositories (usually Depository Trust Company, commonly referred to as DTC) to hold the share certificates: transfers are made not by transportation of pieces of paper, but by electronic messages to the depository that alter the records of the depository. Accordingly, the owner need not obtain possession of the security, and thus the security need not be moved from one place to another. The reasons may be slightly different from those discussed in the preceding sections, but the end result is the same. The financial institutions and practices have moved beyond the transactions for which negotiability was designed, developing new mechanisms for transfer in which documents are a hindrance rather than an aid.

\textsuperscript{103} For a thorough discussion of Article 8 and a thoughtful effort to justify its rules by reference to the modern trading system for which Article 8 was designed, see James Steven Rogers, \textit{Policy Perspectives on Revised U.C.C. Article 8}, 43 UCLA L. REV. 1431 (1996).

\textsuperscript{104} To get an idea from stock trading, trading volume on the New York Stock Exchange was in the range of ten million shares per day during the “paperwork crunch” of the 1960s, which required the exchange to close periodically to catch up on the paperwork necessary for an era that relied on physical transfers of share certificates. See Erickson Interview, \textit{supra} note 91, at 7 (describing the need to close the New York Stock Exchange on Wednesdays to accommodate 12 million trades per day). Volume in more recent years has exceeded 600 million shares per day without taxing the modern nondocumentary transfer systems. See Rogers, \textit{supra} note 103, at 1445.

\textsuperscript{105} See Erickson Interview, \textit{supra} note 91, at 7 (“A hundred runners running through Wall Street with briefcases making deliveries was not the answer.”).
b. Commercial Paper

The last major credit system discussed in this Part is commercial paper, which presents perhaps the most interesting scenario—an almost complete abandonment of negotiability in the face of a legal system that at least nominally continues to demand negotiability. Although legal academics frequently use the term “commercial paper” generically to describe all types of commercial negotiable instruments, its meaning in the financial markets is quite different. In modern markets, references to commercial paper describe a specific type of short-term obligation issued by highly credit-worthy companies. The key boundary to the market is formed by the provision of section 3(a)(3) of the Securities Act of 1933 that exempts from the Securities Act certain promissory notes with a maturity of less than nine months. Large credit-worthy corporations frequently use these notes—known as commercial paper—to satisfy a significant part of their companies’ financing needs.

At first glance, the applicable legal rules suggest (in accordance with the common legal usage mentioned above) that commercial paper does provide a significant continuing market for negotiability. The Securities and Exchange Commission Release that refines the terms of the section 3(a)(3) exemption states that the exemption is limited “to prime quality

106. The tax code provision that bars deductions for interest on bonds does not apply to commercial paper because, as discussed below, commercial paper always has a maturity of less than nine months. See 26 U.S.C. § 163(i)(2)(A)(iii) (1994) (prohibition on interest deduction that does not apply to bearer obligations with a maturity of “not more than 1 year”).

107. See, e.g., NICKLES, supra note 4 (study aid on “Negotiable Instruments and Other Related Commercial Paper”); NICKLES ET AL., supra note 3 (casebook on “Modern Commercial Paper”); CHARLES M. WEBER & RICHARD E. SPEIDEL, COMMERCIAL PAPER IN A NUTSHELL at xix (3d ed. 1982) (“As used in the title and throughout the book, ‘commercial paper’ refers to promissory notes, drafts, checks and certificates of deposit—the subject matter of Article 3.”).


110. See, e.g., Telephone Interview with Thomas Larson, Associate General Counsel, Anheuser-Busch Companies, Inc. 1 (Aug. 28, 1996) [hereinafter Larson Interview] (stating that Anheuser-Busch has about $1 billion in commercial paper outstanding) (transcript on file with author); Interview with Harley M. Smith, Assistant General Counsel, and Judith C. Rehbolz, Manager-Cash & Short Term Funding, Emerson Electric Co., in St. Louis, Mo. (Sept. 11, 1996) [hereinafter Smith/Rehbolz Interview] (describing Emerson Electric Co.'s $500-million commercial-paper portfolio).
negotiable commercial paper." The leading securities-law commentators have taken that statement seriously, suggesting that it imposes a specific requirement that all commercial paper be negotiable. But a closer examination of the materials suggests that the statement should not be taken at face value. Rather, the Release appears to demand negotiability only in the sense of free transferability. It does not seem to refer to negotiability in the technical Article 3 sense. For example, Professors Loss and Seligman state that "the requirement of negotiability is not of much consequence," "because there is little secondary trading in commercial paper." Similarly, Professor Lowenstein states: "Because there is not a significant secondary market in commercial paper, the requirement of negotiability does not appear to be a legal factor that issuers need consider." That view was confirmed to me in a telephone interview with an attorney working in the relevant office of the Securities and Exchange Commission. He explained: "When we say 'negotiable,' the key is that it has to be transferable."

The limited force of any legal requirement of negotiability is evident from the practices of commercial-paper issuers. First, although at one time commercial paper tended to be issued in bearer form, issuers for some time have issued paper in registered form, which would not satisfy technical "negotiability" requirements. More significantly, although a few issuers apparently still issue physical pieces of paper, the clear trend in the industry is toward paperless paper, where electronic communications handle all issuance, sale, and transfer of the "paper." In that system, the issuer

113. 3 LOSS & SELIGMAN, supra note 112, at 1190.
114. Lowenstein, supra note 112, at 142.
116. See STIGUM, supra note 108, at 1024-25 (reproducing commercial paper characterised as "bearer" paper, which states that it is payable "to the order of" the investor).
117. As explained above, supra note 99 and accompanying text, registered obligations are by definition not negotiable because they cannot be transferred by delivery and indorsement.
118. One industry professional suggested that General Electric and General Motors Acceptance Corporation still currently issue their commercial paper in documentary form. Erickson Interview, supra note 91, at 11.
119. The following summary of the procedures for issuing commercial paper is based on the Smith/Reibholz Interview, supra note 110, and on the Larson Interview, supra note 110, at 7, as well as a sample set of commercial-paper documents that I obtained from Anheuser-Busch Companies, Inc., in connection with the Larson Interview. Copies of those documents are available
entering into an arrangement with a central recordkeeping depository (normally DTC), under which DTC maintains a central electronic record of all of the issuer's outstanding commercial paper. Each day when the issuer wishes to issue commercial paper, its investment bank attempts to locate entities that wish to invest in the paper. Before noon, the issuer, investment bank, and investors agree upon the major terms of the transaction—the amount, interest rate, and date of maturity—and send the necessary data on to the issuer's paying agent (normally a New York bank such as Chemical Bank). The paying agent in turn sends an electronic message to DTC describing the purchases the investors have made. DTC's record of those purchases is the definitive record of the obligation. The investor's interest plainly is not negotiable because the issuer does not provide any separate promissory note payable to each individual investor. The only promissory note involved in the transaction is a master note from the issuer to Cede & Co. (DTC's street nominee) covering the issuer's entire commercial-paper program.

In sum, whatever role negotiability once might have played in the commercial-paper market, the same pressures that have limited the use of negotiability for bonds are pushing commercial paper inevitably to the same end result—an electronic transfer system in which any document is a mere vestige of former practices that have become obsolete in the face of the pressures of increasing volume and new technology.

III. THE IRRELEVANCE OF NEGOTIABILITY TO THE MODERN PAYMENT SYSTEM

Part II illustrated a wide variety of developments that have limited the use of negotiable instruments in most contexts, but it could not show that negotiable instruments have disappeared entirely. In addition to whatever scattered usages of negotiability might persist in odd corners of the financial marketplace, one major payment system remains in which the payment continues to be evidenced by a negotiable instrument—the checking system.

But the continued use of negotiable instruments in the checking system does not suggest that negotiability has any continuing significance. Rather, negotiability has little or no role in the practices by which payments are made and collected in the checking system. Although the sys-
tem has retained the technical form of negotiability, it has abandoned in practice all of the major concepts by which negotiability can facilitate transactions. The reason for this change should be clear by now: In the modern checking system, negotiability is not an aid to the effectiveness of the system, but an obstacle for the industry to overcome. 120

A. Reliance on the Physical Object

The central premise of negotiability is that assets can be transferred more readily in a system that allows a physical object to represent all rights in the assets. As Part I explained, all of the benefits that negotiability offers arise from the system's use of the document as the ultimate indicator of rights in the assets. The clearest evidence of the true irrelevance of negotiability to the checking system is the growing push to adopt "truncated" processing devices that rid the system of the physical document as much as possible.

The checking system faces the same technological pressures as the various payment and credit systems discussed in Part II, but it must deal with those pressures on a canvas of daunting size, in a system called upon to process more than sixty billion checks a year. 121 The absurdity of reliance on the physical document is evidenced by the need for the banks where checks are deposited (depositary banks) to sort those checks and then have them transported (normally by truck or airplane) to locations designated by the various banks on whom the checks are drawn (the payor banks). 122 One study concludes that the current collection process expends approximately 2.5 cents to process each paper check, 123 but the costs can be much higher. For instance, the Federal Reserve in some cases may charge

120. My conclusion is similar in some respects to the argument presented by Jim Rogers in his work in this area. We both argue that negotiability concepts have no relevance to the modern checking system. See Rogers, The Irrelevance of Negotiable Instruments Concepts, supra note 5. My argument, however, is considerably broader, because it rests more on the physical attributes of the system than on the legal developments on which Rogers focuses.

121. See 1 BANKERS ROUNDTABLE, supra note 36, fig.25, at 53 (reporting statistics).

122. My description of the check-collection process is based on two site visits to check-processing centers. The first was a March 7, 1996 visit to the check-processing center for the First National Bank of Chicago [hereinafter First Chicago Site Visit]. (Because my tour at First Chicago was conducted by several different people, it is not practical to attribute information to any particular individual.) The second site visit was a September 18, 1996 visit to the check-processing center for the Boatmen's National Bank of St. Louis, where I received a tour conducted by William W. Banks, Assistant Vice President [hereinafter Boatmen's Site Visit].

more than twenty-five cents per check. The fact is, in the checking system just as much as in any other payment system, the notion of centralizing legal rights in the physical document is no longer the benefit it might have been centuries ago: It is an albatross that drags down the entire system.

The key intellectual challenge is to realize that however central the "document" might be to a negotiability-based system, there is no reason for the checking system to continue to operate a document-based system for collection of checks. The collection process needs to facilitate two actions by the payor bank: a decision whether to honor the check; and transmission of payment or notice of dishonor to the depositary bank. Given the capabilities of existing technology, physically transporting the check from place to place is not the simplest way to perform those two functions. It makes much more sense and should be dramatically cheaper in the long run to perform those functions electronically—by a transmission from the depositary bank to the payor bank advising of the deposit of the check; and a return transmission from the payor bank agreeing or declining to honor the check. Indeed, the inevitability of the demise of the paper-based processing system has been obvious for so long that the revisers of Article 4 in the 1980s took several conscious steps to give the statute the flexibility to accommodate the truncated electronic system that should replace the current system over the next few decades.

Indeed, the beginnings of a truncated system already are in place. In 1994, some form of electronic presentment was used for over 650 million checks, which was just over one percent of the total volume. For checks cleared through the Federal Reserve system, truncation is even more

124. Boatmen’s Site Visit, supra note 122 (describing per-item charges by the Federal Reserve Bank in St. Louis that go as high as 27 cents).

125. Of course, a truncated system need not require a return transmission from the payor bank agreeing to honor the check. Like the current system, the system instead could assume that the payor bank will pay all checks unless it sends a contrary notice within some specified time. In my view, a system requiring a return message expressing a decision to honor or dishonor would be likely to expedite the system. Similar messages are characteristic in those systems that already rely on electronic presentment. See LOUCKS, WARREN, KEATING & MANN, supra note 3 (manuscript assign. 18, at 3-4, on file with author) (describing authorization of payment in debit-card transactions); id. (manuscript assign. 19, at 3, on file with author) (describing authorization of payment in credit-card transactions).


127. ECP: Gateway to Truncation, CORPORATE EFT REPORT, May 31, 1995, at 5 (reporting that electronic presentment doubled to about 650 million items in 1994). Electronic presentment need not involve complete truncation. As discussed below with respect to electronic cash letters, electronic presentment often still requires the depositary bank to forward the paper checks to the payor bank. See id.
common, in the range of two percent of all checks.\textsuperscript{128} Under that system, the check stops when it reaches the depositary bank. Instead of transmitting the check to the payor bank or an intermediary, the payor bank creates a record of the check, either a photographic image or a digital record of the relevant data.\textsuperscript{129} The depositary bank then transmits an electronic message seeking collection.\textsuperscript{130} Depending on the agreement between the parties (or, perhaps more likely in the future, on standardized rules implemented by the Federal Reserve), the message might consist of the entire image or simply include data summarizing relevant facts about the check, such as the payor bank, account number, amount, date, and payee. Ideally, the message would be sent directly to the payor bank, but currently many of those transactions still pass through an intermediary such as the Federal Reserve.\textsuperscript{131}

The payor bank receiving the message has the same options as it has under the conventional paper-based clearing process—it can honor the check or dishonor it. If it chooses to dishonor the check, it advises the depositary bank electronically of its decision.\textsuperscript{132} If the payor bank chooses to honor the check, it has no obligation to do anything.\textsuperscript{133} At the end of the month, the payor bank cannot return the actual checks to its customers because those checks are still at the depositary bank. Therefore, it sends its customers either images of the checks (much like the images of credit-card slips that come with American Express bills) or


\textsuperscript{129} Banks already create photographic images when they process checks to enable them to reconstruct a check in the event that the paper object is lost or destroyed during the collection process. See Boatmen's Site Visit, supra note 122; First Chicago Site Visit, supra note 122. Some banks also create digital records as well, although that technology is only now becoming widely used. See Boatmen's Site Visit, supra note 122 (describing electronic cash letters).

\textsuperscript{130} See U.C.C. § 4-110 (1991) (permitting a depositary bank to transmit "an image of an item or information describing the item . . . rather than . . . the item itself"); Availability of Funds and Collection of Checks (Regulation CC), 12 C.F.R. § 229.36(e) (1996) (permitting a bank to "present a check to a paying bank by transmission of information describing the check in accordance with an agreement with the paying bank").

\textsuperscript{131} See E.C.C.S May Significantly Improve Check Collection, CORPORATE EFF REPORT, May 5, 1993, at 1-3 (describing electronic presentment services offered by the Federal Reserve Bank of Minneapolis).

\textsuperscript{132} See U.C.C. § 4-301(a)(2) (1991) (permitting written notice of dishonor rather than return "if the item is unavailable for return"); 12 C.F.R. § 229.31(f) (permitting return of a copy of a check "[i]f a check is unavailable for return").

\textsuperscript{133} As discussed above, it probably would be better for the system in the long run to require payors to send a return message honoring the check contemporaneously with presentment. See supra note 125.
detailed statements describing the transactions reflected by the checks. Finally, the depositary bank retains the image of the check for a period of time sufficient to resolve disputes that might arise.

The outmoded nature of the document-based processing system is made even clearer by the burgeoning use of electronic cash letters, also known as electronic presentment. In that system, a depositary bank runs checks through a machine that produces a computer file containing the relevant information about the checks and sends that file directly to the payor bank by electronic mail. The payor bank then must decide on an expedited basis whether it wishes to honor or dishonor the checks. In accordance with customary practice, the paper copies of the check are transmitted later by ordinary procedures. Because the payor bank has made and communicated all of the relevant decisions long before the paper checks arrive at the depositary bank, the transportation of those checks expends a great deal of resources for no useful purpose. The physical transportation of the checks, the last surviving vestige of negotiability, should succumb to budgetary pressures in the immediate future.

But there is more at stake here than cost savings. An electronic system is not only cheaper than a document-based system, it should be much faster as well. An electronic presentment system should be able to clear checks nationwide on a same-day or same-hour basis, so that check recipients would receive final payment almost immediately upon deposit. The skeptic should consider how easily banks are able to process electronic payments made by debit cards. Although there are some differences, there is no fundamental reason why the system could not develop so that payor banks respond with the same promptness to payment directions made by way of check as they presently do to payment directions made by way of a debit card.

134. See 1 BANKERS ROUNDTABLE, supra note 36, at 54 (discussing plans for image statement processing and for truncated statements); Boatmen's Site Visit, supra note 122 (same).
135. See Boatmen's Site Visit, supra note 122 (stating that the bank retains the information for seven years); see also U.C.C. § 4-406(b) & cmt. 3 (1996) (discussing the relation between check retention plans and the obligation of a payor bank to provide canceled checks to its customers).
136. My description of electronic cash letters is based on the Boatmen's Site Visit, supra note 122. For a similar but less detailed account, see ECP May Be Best for Now, CORPORATE EFT REPORT, May 31, 1995, at 5.
137. The reason the checks are transported is that the payor bank could not allow the depositary bank to abandon transportation of the checks and move to complete truncation unless the payor bank was willing to give up the capability of providing its customers canceled checks with their statements. See Boatmen's Site Visit, supra note 122.
Of course, an electronic system would impose some costs on the entities that wrote checks, because they would lose the "float" they gain in the current system during the time that passes between their writing a check and the removal of the funds from their account. Unfortunately, however fond of float we may be as individuals, a system in which expedited processing minimizes the float available to check writers should improve the checking system as a whole by increasing the value of the check as a payment system. Presently, a merchant gets paid more when it gets immediate cash than when it gets a check, both because it gets use of the funds earlier, and because payment is far more certain. And the increase in certainty means that a system that provides contemporaneous clearing does something more than transfer the time value of the float from the consumer writing the check to the merchant that receives it. By increasing the certainty of collection, contemporaneous clearing lowers the costs of collection and thus increases the effectiveness of the system as a whole. 138

The ability of the system to develop such a completely electronic collection system does not prove the irrelevance of the document-based negotiability system, for current procedures still transport tens of billions of checks for physical collection each year. Nevertheless, the potential for a development that would eliminate physical collection entirely strongly suggests that the concept of negotiability no longer plays any useful role in the system. The following subparts illustrate that point by explaining the two main ways in which negotiability concepts have faded from the checking system in current practice.

B. Signatures as a Device for Transferring Title and Accepting Liability

As discussed in Part I, one of the central benefits that negotiability offers is the simplification of title transfer procedures that arises from a system in which title is transferred by delivery of the document, supplemented only by inscription on the document of any necessary signatures. Article 3 codifies those principles of negotiability with an elegant array of rules that describe what types of signatures are effective to transfer complete

138. Absent some other change to the system, contemporaneous clearing would harm consumers not only by depriving them of the float they currently have, but also by limiting their ability to stop payment. That problem, however, is not inevitable. As the credit-card system shows, it is possible for a system to provide a merchant substantially contemporaneous payment and also provide the purchaser a realistic ability to stop payment at a later date.
title to a negotiable instrument and create a complex set of liabilities on the instrument depending on the type of signature.

As it happens, however, those rules have little influence on the mechanics of the check-collection process, largely because of the impracticability of determining the validity of a purported signature. Instead, for the most part the system in practice ignores the signatures (or the absence of signatures) and relies on other more effective mechanisms for limiting losses from theft and fraud.

1. Indorsements

I start with the simpler topic: the mechanisms for evaluating the transfers of an instrument that was validly issued. Under the classic principles of negotiability, a party that receives an instrument payable to order (such as a check) can transfer full rights in the instrument only by signing the instrument. Thus, the principles of negotiability contemplate a process in which a party acquiring an instrument examines the instrument in order to determine whether the required indorsements are present and then requires the transferor of the instrument to provide any necessary indorsement that is not already present.

In practice, however, many banks find it impractical to examine each check to determine if the appropriate indorsements are present. To be sure, an employee who examines a check presented for cashing or deposit at a teller window might, and probably should, examine the check to see if the appropriate indorsement appears to be present. If the indorsement is not present, the employee can ask the person at the window to add the required indorsement. As a practical matter, however, tellers frequently fail to examine checks presented for deposit.

140. Id. §§ 3-409, 3-412 to -415.
141. Without the indorsement, the purchaser of the instrument cannot become a holder because the seller would remain the identified person to whom the instrument is payable, see id. § 1-201(20) (1996), and thus, cannot become a holder in due course. See id. § 3-302(b) (1991) (a holder in due course must be a holder). To be sure, the transferee without an indorsement does acquire some rights in the instrument under U.C.C. section 3-203(b), including the right to enforce it under U.C.C. section 3-301(ii), but that package of rights is distinctly less than the rights as a holder in due course that it could acquire with an indorsement. See id. § 3-203 cmt. 2 (discussing the procedural disadvantages of failing to obtain holder status on acquisition of an instrument).
142. See Boatmen's Site Visit, supra note 122 (noting that tellers are particularly unlikely to notice missing indorsements on checks presented with deposits that contain numerous items).
Moreover, an increasingly large share of deposits are made at automatic teller machines where the depository bank cannot readily seek the appropriate indorsement. 143 Indeed, banks are encouraging customers to use remote deposit locations in order to save on the substantial144 costs that banks incur in receiving deposits directly through tellers.145 In that context, the bank cannot simply ask for the indorsement; it would have to return the check to the customer to obtain the indorsement. Although some banks do return those checks, many do not. Instead, even if they notice the absence of the indorsement, many banks simply process the check without the indorsement.146

Common financing practices also make reliance on the indorsement requirement impractical. For example, one common practice requires borrowers to have their customers mail payments not to the borrower, but directly to a depository bank for deposit to a “lockbox” account. That account technically is in the borrower’s name, but the depository bank ordinarily has agreed to prevent the borrower from removing funds from the lockbox without the lender’s permission. The idea is that the lender can limit the borrower’s ability to misuse funds it receives from its business if the lender can cause the funds to be deposited directly into an account from which the borrower cannot readily obtain the funds. In the lockbox scenario, the checks will have come straight from the depositor’s customers, so none of them will bear indorsements by the customer.147

Banks would be within their rights in refusing to take undorsed checks and instead returning them to their customers. But two obvious reasons justify the common (though not universal) practice of accepting the checks. First, however central the indorsement may be to negotiating the check in the abstract, the bank in practice has little to gain by wasting the

143. See Janice Fioravante, Marching to 2000 with a Range of Functions, AM. BANKER, Nov. 27, 1995, at 6A (reporting that about 15% of bank customers make deposits at ATMs).
144. One industry source recently estimated the cost of a teller deposit transaction at almost three times the cost of an ATM deposit transaction (75 cents versus 27 cents). See Technology: Shift a Gear, BANKER, Nov. 1, 1995, at 94, available in 1995 WL 9701387.
145. See Denise Duclaux, How to Handle Fees? Very Carefully, AM. BANKING J., June 1996, at 32, 32–33 (reporting that within a month of the bank’s imposing a three-dollar fee on deposits made at teller windows, customer deposits at First National Bank of Chicago ATMs doubled, and that ATM deposits have risen by another fifty percent since then, even though the teller-deposit fee subsequently was reduced to $1.50).
146. See Boatsmen’s Site Visit, supra note 122; First Chicago Site Visit, supra note 122. In response to skeptical comments by several readers of drafts of the Article, I tested the practice empirically in February and March of 1997 by the simple device of making several ATM deposits into my personal banking account that included undorsed checks. In each case the depository bank processed the check without inquiry or a request for indorsement.
time and effort that would be necessary to obtain its customer's indorsement. Because the payor bank is unlikely to check for the presence of an indorsement before deciding whether to honor the check, the absence of the indorsement is unlikely to affect the payor's decision whether to honor the check. If the check in fact clears, as the overwhelming majority of checks do, the absence of an indorsement will be irrelevant unless the drawer subsequently challenges the depositor's right to the funds. Nor will the absence of an indorsement harm the depositor bank in the unusual event that the check does not clear, because the bank's right to charge the bounced check back to its depositor does not depend on the depositor's having indorsed the check.

The second reason arises from the first. Recognizing the impracticality of requiring customer indorsements (especially in the lockbox situation), the drafters of the revised Article 4 in the 1980s added a relatively obscure provision to Article 4 (U.C.C. section 4-205) that creates an exception to the indorsement requirement for checks. Under that provision, if a customer that is a holder of an item deposits it at its bank without the required indorsement, the bank becomes a holder of the item even if the customer neglects to make the indorsement. Thus, the brief phrasing of U.C.C. section 4-205 effectively removes the indorsement requirement from the ordinary course of check processing. The fact that the provision has gained so little attention only demonstrates the irrelevance of the indorsement; enactment of that provision only reflected the obsolescence of the indorsement; it did not cause it.

That provision does not completely vitiate the need for a bank to consider indorsements, because it only forgives the absence of an indorsement of the customer. If the customer is not a holder at the time of the deposit (most likely because the customer obtained the check without obtaining an indorsement from the prior holder), then the bank will not

148. See Boatsman's Site Visit, supra note 122; First Chicago Site Visit, supra note 122.
149. A recent industry survey suggests that the rate of clearance is about 99.4% at large banks (that is, that 0.6% of processed checks are returned), but drops to about 98.5% for small banks. American Bankers Ass'n, supra note 128, tbl.33, at 37. Those statistics are consistent with the estimate I received at one of the banks I visited. The officer guiding me around the processing center estimated that only 10,000 checks are returned each day out of the 1,700,000 checks that the bank processes, a return rate of less than two-thirds of one percent. See Boatsman's Site Visit, supra note 122.
150. See Boatsman's Site Visit, supra note 122 (explaining that the right to charge back the check justifies the bank's willingness to process the check notwithstanding the absence of the indorsement); see also Rogers, The Irrelevance of Negotiable Instruments Concepts, supra note 5, at 943-46 (discussing the depositary bank's rights to charge back a dishonored check).
become a holder even under the lenient rules of Article 4. That scenario, however, is not common, because the overwhelming majority of checks are deposited directly by the original named payees; only a small percentage of checks are transferred before deposit.\footnote{152} In any event, for the reasons outlined above, banks are relatively unlikely to reject a check for deposit solely because it is deposited into an account that bears a name different from the name of the payee identified on the check.\footnote{153}

In sum, the central place of indorsements in transferring title and allocating liability for negotiable instruments has no significant role in the modern check-processing system. Checks are deposited, processed for collection, and paid without any significant attention to the presence or absence of the indorsements required by Article 3.

2. Drawers' Signatures

The absence of a drawer's signature is more serious than the absence of an indorsement because an instrument that does not have a valid signature of the purported drawer is completely invalid. Thus, unlike the situation with indorsements, it is much less common for the check-processing system consciously to accommodate checks that do not even purport to bear the drawer's signature.

But whatever the problem, it is not practicable for the payor bank to rely on a verification of the physical signature as a predicate for determining whether it will honor the check. The biggest problem is the sheer volume of checks that a payor bank must process. A large check-processing center will receive something on the order of one million checks each

\footnote{152} Although it is difficult to obtain precise statistics, a general idea of the relative rarity with which checks are transferred before they are deposited can be obtained by comparing the size of the commercial check-cashing industry (estimated at 128 million checks in 1990) with the total volume of checks (55 billion during that same year); less than one-quarter of one percent. See \textit{John P. Caskey, Fringe Banking: Check-Cashing Outlets, Pawnshops, and The Poor} 64 (1994) (reporting that the commercial check-cashing industry cashed 128 million checks in 1990); \textit{Bankers Roundtable} supra note 36, at 53 (reporting a total volume of 55.3 billion checks in 1990). Two of my colleagues offered interesting anecdotes on that point. Leila Wexler explained to me that the personal checks normally offered by banks in France come preprinted in a "barred" form that prohibits negotiation of the check except in connection with a deposit by the named payee. Similarly, Lynn LoPucki told me of a cash-management account that a stock brokerage firm offers as a checking-account substitute. That account accepts checks for deposit only if the depositor is the named payee; it does not accept third-party checks.

\footnote{153} See \textit{supra} note 146.
It would take an army of signature examiners to compare the signatures on that many checks with the signature cards for the relevant accounts. To be sure, some small banks still verify signatures on the checks their customers write. More commonly, however, banks limit signature verification to a small group of the checks that they receive. For example, one of the processing centers that I visited examines the signatures on 20,000 checks per day, less than one-half of one percent of the checks that it receives. Thus, although 20,000 checks per day might seem like a large number in the abstract, that sample is highly unlikely to include all of the fraudulently issued checks: the payor bank’s evaluation of more than 99.5% of the checks proceeds without any examination at all of the drawer’s signature.

The difficulty of determining whether a signature is valid heightens the impracticality of examining signatures. Absent a striking lack of competence, a forger with a sample of a valid signature should be able to provide a signature that would pass muster even if the check is in the small sample a bank chooses for examination. Thus, the bank cannot be

154. See Boatsmen’s Site Visit, supra note 122 (reporting that it processes about 1,700,000 checks per business day); First Chicago Site Visit, supra note 122 (reporting commercial processing alone of 500,000–700,000 checks per business day).

155. The enormity of the task of examining signatures is magnified by the elaborate signature cards for large commercial enterprises, which describe dozens of people that have varying levels of authority on various accounts. See First Chicago Site Visit, supra note 122.

156. See American Bankers Ass’n, supra note 128, tbl.55, at 45 (reporting survey indicating that 33% of small banks, but only 7.3% of medium banks and 1.7% of large banks, verify signatures on all checks).

157. Banks understandably are reluctant to offer specifics about how they select checks for signature verification, but most appear to rely on some combination of random sampling, dollar size of check, source of deposit, type of account, and requests from their customers. See id. (reporting results of survey on signature-verification criteria); Boatsmen’s Site Visit, supra note 122; First Chicago Site Visit, supra note 122.

158. See First Chicago Site Visit, supra note 122. The process for examining checks that I observed at First Chicago is impressively efficient: each examiner examines about 3500 items per day. As mentioned above, the examiners do not examine the checks to determine if they appear to bear the required endorsements—they look only at the drawer’s signatures. See First Chicago Site Visit, supra note 122.

159. The 20,000 checks per day works out to about 5,000,000 checks per year. During the previous year, the bank’s examination of 5,000,000 checks identified 500 forgeries for a total of $1.5 million. See First Chicago Site Visit, supra note 122. Discovery of those forgeries may have justified the cost of the operation, but it cannot plausibly be thought to have captured all of the fraudulently issued checks.

160. To be sure, in many cases a legitimate business that takes a check may require the person writing the check to present identification to verify the check writer’s identity. That practice, however, does not protect the bank at all against the common scheme in which a forger
sure that the signature is valid even on the few checks that it does examine. ¹⁶¹

In the end, banks are faced with a reality in which the signature provides little significant protection against losses from fraud. To have any realistic protection against those losses, banks must move beyond negotiability and develop other, nonsignatory devices to protect themselves. The most prominent of those devices are systems in which the drawer of the check directly authorizes payment so that the payor bank can rely on that authorization rather than the signature. For example, consider the “positive-pay” system of check verification that is coming into common use for large business accounts.¹⁶² In that system, the bank provides its customer with a software package that allows the customer to send the bank a computer file at the close of each business day that describes each check that the customer has issued. When checks are presented to the bank for payment, the bank can rely on computerized sorting and analysis of the checks to determine if the checks presented for payment match checks described in the daily transmissions. If the checks are described in those transmissions, then the payor bank need not examine the signature on the check because the bank has something better than a signature to evidence the drawer’s willingness to pay—a direct electronic message from the customer verifying its willingness to pay. Conversely, a check that is not described in the transmissions can be dishonored even if it is such an excellent forgery that it appears on its face to be a validly issued check.¹⁶³

It is encouraging that the checking system has begun to move beyond reliance on the signature and to develop nonsignatory devices for verifying

writes a check payable to itself, drawn on the account of some innocent third party, deposits the forged check in its own account, and abandons with the funds when the payor bank mistakenly honors the check.

¹⁶¹ For a general discussion of the relative difficulty of determining that a physical signature is valid, see Benjamin Wright, Eggs in Baskets: Distributing the Risks of Electronic Signatures 1–3 (visited Feb. 16, 1997) <http://www.srn.com/cyberlaw/lawpaper.html>.

¹⁶² A recent survey by the American Bankers Association suggests that positive-pay systems are gaining popularity rapidly, especially with large banks. See AMERICAN BANKERS ASS’N, 1994 ABA CHECK FRAUD SURVEY 66 (1994) (reporting results of 1993 survey indicating that positive-pay systems were being marketed by 54.5% of large banks, but by only 6.5% of medium-sized banks and 2% of small banks).

¹⁶³ My description of positive-pay systems rests on conversations during my visit to First National Bank of Chicago. See First Chicago Site Visit, supra note 122. Boatmen’s Bank does not yet use positive-pay systems, although it does use a similar system described as “pay-on-issue” authorization. In that system, the bank sends an electronic message to designated customers each day describing the checks that have been presented for payment. The customers compare the checks listed in the message to the checks that they have authorized and indicate to the bank directly which checks should be honored and dishonored. Boatmen’s Site Visit, supra note 122.
the drawer's authorization of the instrument. But those nonsignatory verification devices do not solve the difficulty with physical signatures as much as they highlight two fundamental problems with a payment system that relies on physical signatures. First, a system that relies on physical signatures cannot even make a pretense of verifying the signature without comparing the signature to a specimen signature of the customer; and the logistics of getting the check to a place where it can be compared to the signature and of effecting that comparison are relatively time consuming. Second, even if the system goes to the trouble of making the comparison, the comparison of a physical signature to a specimen signature is necessarily inexact and cannot significantly deter a determined forger.

Those problems are directly attributable to the document-based system of negotiability out of which the checking system has developed. Nonsignatory verification systems may mitigate those problems, but they cannot solve them completely, if only because of the expense of grafting a universal nonsignatory verification system onto the current checking system. To completely solve those problems, the system would have to cut loose from the documentary moorings of negotiability and move to an entirely non-documentary system, perhaps one that relies on digital signatures. A digital-signature system would fulfill the verification function much more effectively than the current system because digital signatures can be verified much more inexpensively and reliably than conventional physical signatures.

In its most common current form, a digital signature is a unique identifier that a signer imprints onto a document with a secret key (the “private key”). The process of imprinting that signature encrypts the message and performs a numerical calculation based on the text of the message to which the signature is attached; the signature appears in the form of a number (the “hash value”) that is the end result of the calculation. Readers of the message can check the validity of the signature with a second key (the “public key”). Using the public key, the digital-signature software performs a second numerical calculation on the text of the signed message. If nobody has altered the message, and the signer executed it with the private key that corresponds to the public key that the software is using, then the hash value in the digital signature will bear the correct relation to

164. Most obviously, it is difficult to contemplate a system that would require consumers to make a nonsignatory verification of each check that they write.

the message, so that the public-key calculation will decode the encrypted message and produce an intelligible document. If the message has been altered or if the message was encrypted without the correct private key, the public key will fail to decode the message and the forgery or alteration will be evident.

When compared to the conventional system of verifying authorizations based on physical signatures, the digital-signature system has several advantages. First, in the digital-signature system, the process of signature verification is completely objective, making the likelihood of error quite small. Second, because the process is computerized, it does not require the intervention, time, or judgment of individual employees. Third, the likelihood of forgery is considerably diminished: absent a theft of the private key, it is highly unlikely that a forger successfully could imprint a signature that would appear to be valid. Finally, and of particular importance, the use of a digital signature makes alteration extraordinarily difficult. If the document is changed after the signature is imprinted, then assuming that the altering party does not have the private key, the public-key calculation will not decode the message because the signature will not bear the proper (private-key generated) relation to the message as it reaches the reader. Thus, any attempt to verify the signature of an altered document will reveal the alteration.

In the end, the focus of negotiability on the signature is just as cumbersome as its focus on the physical check. However much sense a signature requirement might have made in simpler days when purchasers of negotiable instruments could be expected to have some personal knowledge of the parties whose signatures purported to appear on instruments, it makes no sense at all in a modern checking system that presents a single institution with millions of checks to evaluate every single day. In a world in which banks lose hundreds of millions of dollars to check fraud each year, the ready availability of more effective and reliable substitutes indicates that the system can only be improved by a prompt move beyond a signature-based system.

C. Rights of a Holder in Due Course

To the lay observer, the most prominent attribute of negotiability is the ability of the holder in due course to defeat a variety of defenses and

claims related to an instrument that would have been valid against prior parties to the payment transaction. In practice, however, that legal right has even less relevance to the daily operation of the checking system than the signature requirement discussed above.

The reason that holder-in-due-course status is irrelevant is simple: The parties that qualify as holders in due course in the checking system almost invariably have other remedies that in the overwhelming flow of cases are much more effective than a suit relying on holder-in-due-course status. Consider a standard check transaction based on the model transaction from Part I, in which Clothier writes a check to Merchant to purchase wool. Merchant promptly deposits the check into its account at Depositary Bank. Depositary Bank then forwards the check for collection to Payor Bank, the bank at which Clothier maintains its account. Next, suppose that Clothier stops payment on the check because it is unsatisfied with the wool. Accordingly, Payor Bank dishonors the check and returns it to Depositary Bank. The only party that could be a holder in due course in the transaction would be Depositary Bank. Merchant would be subject to Clothier’s claims because it was the original party to the sale transaction in which Clothier issued the check. Thus, the relevance of holder-in-due-course status to that transaction is that it would enable Depositary Bank to enforce the check against Clothier (the drawer of the check) without regard to the merits of Clothier’s claims against Merchant (the original payee of the check).

But that right is almost completely nugatory because the depositary bank has a much more effective remedy at hand in its right of charge-back. The right of charge-back allows the depositary bank to protect

168. See id. § 4-301(a) (allowing a payor bank to revoke a provisional settlement if it returns an item and sends written notice of dishonor by its midnight deadline).
169. See id. § 3-305(b) (1991) (even a holder in due course is subject to claims made against itself).
170. Depositary Bank would have that right only if it became a holder in due course. Assuming that Depositary Bank had no notice of Clothier’s complaint, Depositary Bank would become a holder in due course if it gave “value” for the check. Id. § 3-302(a)(2). To give value generally would require Depositary to make the funds represented by the check available to Merchant for withdrawal. Id. § 4-211 (1995) (depositary bank gives value when it obtains a security interest); id. § 4-210(a)(1), (2) (depositary bank obtains security interest when funds are withdrawn or when credit is “available for withdrawal as of right”).
171. See id. § 3-305(b) (1991) (holder in due course takes free of personal defenses of the obligor against a party other than the holder).
172. I am not the first academic to note the relative attractiveness of the charge-back option. Professor Rosenthal noted it 25 years ago, but concluded that banks at that time still regularly exercised their holder-in-due-course rights. See Albert J. Rosenthal, Negotiability—Who Needs It?
itself directly by the simple device of charging the check back to the depositor’s account, removing any provisional credit that it gave the depositor at the time of the deposit.\textsuperscript{173} From the perspective of the depository bank, the charge-back remedy is much more effective than the right to sue the drawer offered by holder-in-due-course status. Ordinarily, the depository bank can make itself completely whole by reversing any credit in the depositor’s account—making a single simple computer entry—and by sending a written notice to the depositor of the charge-back.\textsuperscript{174}

The bankers with whom I have discussed the topic generally agree that the depository bank normally would not respond to dishonor by pursuing the drawer. For example, one banker remarked, “I’ve never even heard of that.”\textsuperscript{175} Rather, the typical procedure upon return of a check is to charge the check back to the depositing customer.\textsuperscript{176} When pressed for the existence of any alternative responses, the only practicable alternative the bankers suggested was to send the check through for collection a second time.\textsuperscript{177}

The aversion to relying on holder-in-due-course status to pursue the drawer is easy to understand. Where a charge-back generally should make the depository bank whole in a few moments,\textsuperscript{178} the right against the drawer is much less likely to make the depository bank whole, either

\textsuperscript{71} COLUM. L. REV. 375, 382–85 (1971) (describing a “steady stream of reported cases”). He argued that the unfairness of that result to check writers justified abolition of holder-in-due-course status. Id. at 402. As I argue below, the current situation seems to be different from the situation he observed—in current practice, banks seem to rely on the holder-in-due-course option quite rarely. Accordingly, abolishing holder-in-due-course status would have no significant direct effect on rights against check writers.

\textsuperscript{173} See U.C.C. § 4-214(b) (1995) (allowing depository bank to charge a check back to its customer if the payor bank does not honor the check).

\textsuperscript{174} See id. (describing mechanics of charge-back).

\textsuperscript{175} See Boatmen’s Site Visit, supra note 122.

\textsuperscript{176} See id.; First Chicago Site Visit, supra note 122; Interview with Frank Trotter, Director, International Markets Division, Mark Twain Bancshares, in St. Louis, Mo. (Apr. 1996); Telephone Interview with Joe DeKunder, Vice President, NationsBank of Texas, N.A. (Apr. 1996) (hereinafter DeKunder Interview).

\textsuperscript{177} See Boatmen’s Site Visit, supra note 122; DeKunder Interview, supra note 176. The officer at Boatmen’s explained that their large customers pay a fee to have checks under $100 reprocessed automatically. About two-thirds to three-quarters of the checks are honored the second time through. The depository bank then charges any remaining checks back to the depositor. See Boatmen’s Site Visit, supra note 122.

\textsuperscript{178} The only exception would be situations in which the depository bank has allowed its customer to withdraw funds represented by the check before the check has cleared. Even in that situation, the bank would have a right to recover the funds from its customer. See U.C.C. § 4-214(b)(1) (1995) (charge-back is available even after funds are withdrawn).
because the drawer is insolvent or because the drawer does not wish to pay as a result of some disagreement with the payee.\textsuperscript{179}

To be sure, that does not demonstrate that holder-in-deed-course status never matters. After all, theoretically there should be cases in which for some reason a bank cannot charge a check back to its depositor and must rely on holder-in-deed-course status to recover from the original drawer. But consider all the circumstances that would have to occur for holder-in-deed-course status to become relevant to enforcement of a check: (a) a bank lets its customer withdraw uncollected funds, (b) the bank is unable to recover the funds from its customer, (c) the amount of the claim is sufficient to justify pursuing the drawer, (d) the drawer’s financial strength is sufficient to make pursuit worthwhile, (e) the drawer has a defense that would be valid against the original payee,\textsuperscript{180} (f) the bank successfully defeats that claim because it is a holder in due course,\textsuperscript{181} and (g) the bank successfully collects on its claim. The conjunction of all of those characteristics seems so rare that it resembles a stroke of lightning more than a fundamental organizing feature of the system.

\textsuperscript{179} Neither of which would be a surprising circumstance in a case in which a check was dishonored.

\textsuperscript{180} In some cases, of course, the drawer will have no valid defense, so holder-in-deed-course status will not be necessary to the depositor’s action. See, e.g., First Fed. Sav. & Loan Ass’n v. Chrysler Credit Corp., 981 F.2d 127, 132–34 (4th Cir. 1992) (holding that lack of good faith deprives bank of holder-in-deed-course status, but allowing it to enforce checks anyway because of the failure of a drawer to establish a personal defense); Diamond Sav. Loan Co. v. Holsington, No. 88AP-976, 1989 WL 104389, at *1–*6 (Ohio Ct. App. Sep. 12, 1989) (rejecting a series of purely procedural defenses interposed by the drawer), appeal dismissed, 550 N.E.2d 479 (Ohio 1990); see also, e.g., Citizens First Bank v. Intercontinental Express, Inc., 713 F.2d 1097, 1097–99 (Or. Ct. App. 1986) (ruling in favor of bank without suggesting any defense to enforcement of the check).

\textsuperscript{181} In some cases, the bank’s suit will fail because the bank will not be able to establish holder-in-deed-course status. See, e.g., M & I Marshall & Ilsley Bank v. National Fin. Servs. Corp., 704 F. Supp. 890, 891–92 (E.D. Wis. 1989) (bank was not a holder because it was not in possession of the check); Great Western Bank & Trust Co. v. Pima Sav. & Loan Ass’n, 718 P.2d 1017, 1018–21 (Ariz. Ct. App. 1986) (depository bank took subject to personal defenses because it had knowledge of them when it took a check); Key Bank, N.A. v. Strober Bros., Inc., 523 N.Y.S.2d 855, 856–58 (App. Div. 1988) (mortgage on a check put depository bank on notice of claims). In other cases, the bank’s suit may not fail directly, but the bank’s efforts to establish holder-in-deed-course status will require considerable litigation. See also Robbins v. Hasan, 625 N.Y.S.2d 160, 161 (App. Div. 1995) (affirming the trial court’s denial of summary judgment for holder based on issues of fact about holder-in-deed-course status); Central Trust Co. v. Fricker, No. 47-CA-85, 1986 WL 3921, at *1–*2 (Ohio Ct. App. Mar. 25, 1986) (reversing trial court’s decision ruling against a holder for insufficient evidence and remanding for a second trial); Oostburg State Bank v. United Sav. & Loan Ass’n, 386 N.W.2d 53, 54–59 (Wis. 1986) (reversing a trial court’s default judgment in favor of the holder and remanding for further proceedings).
To verify that hypothesis, I undertook a survey of reported cases in an
effort to assess the frequency-of-litigation over holder-in-due-course status in
the enforcement of checks. I conducted a broad search on Westlaw for all
cases decided since 1985 that mention holder-in-due-course status and
checks.\textsuperscript{182} Examination of the cases recovered by that search\textsuperscript{183}
revealed only fifteen cases in which a depository bank relied on holder-in-
due-course status to enforce a check (a little less than 1.5 cases per
year),\textsuperscript{184} only one of which was decided in the last three years.\textsuperscript{185} In a
world in which hundreds of millions of checks bounce each year,\textsuperscript{186} one
or two reported opinions per year is a truly tiny number.

I generally am skeptical about the use of reported opinions as a device
to discover commercial practices because of the high probability that the
sample of reported cases will differ significantly from the patterns of con-
duct in cases that do not lead to litigation or, even if they do lead to litiga-
tion,\textsuperscript{187} do not produce reported opinions.\textsuperscript{188} That problem seems to

\textsuperscript{182} I ran a search in the ALLCASES database for CHECK AND "HOLDER IN DUE
COURSE" AND DATE (AFT 1985).

\textsuperscript{183} I ran the search on November 25, 1996, and recovered 346 cases.

\textsuperscript{184} The search period was more than ten years, beginning on January 1, 1986, and including
all cases posted to the ALLCASES database by October 4, 1996.

\textsuperscript{185} In reverse chronological order, the fifteen cases were: Braden Corp. v. Citizens National
Ct. Jul. 20, 1990); Union Bank & Trust Co. v. Polkinghorne, 801 P.2d 725 (Okl Okla. Ct. App. 1990);
Management Corp., 719 P.2d 301 (Ariz. Ct. App. 1986); Western Bank v. Radec Construction Co.,
382 N.W.2d 406 (S.D. 1986).

\textsuperscript{186} If I use the generous assumption that only 0.50% of all checks are returned unpaid, see
supra note 149 (reporting evidence that between 0.60% and 1.5% of the checks are returned at a
typical bank), then based on the 60-plus billion checks a year written in this country, see supra
note 121 (reporting statistics), the volume of returned checks each year would be about 300 mil-

\textsuperscript{187} Sam Gross and Kent Syverud's recent empirical study of the dynamics that force cases
to trial rather than settlement underscores that problem because they provide persuasive evidence
of the oddity of those few cases that proceed to trial. See Samuel R. Gross & Kent D. Syverud,

\textsuperscript{188} For a defense of an analysis based on studies of reported opinions, see Jason Scott
Johnston, The Statutes of Frauds and Business Norms: A Testable Game-Theoretic Model, 144 U. PA.
L. REV. 1859, 1902-05 (1996). That methodology is significantly different from the directly
valuable examination of reported opinions to obtain empirical data as to the factors that influ-
me particularly likely to afflict the sample I present here given the small amounts likely to be in dispute in most cases of dishonored checks. Nevertheless, taken together with the results of my interviews, the tiny number of reported cases in which depository banks rely on holder-in-duty-course status to enforce checks seems to provide some support for my hypothesis.

One final qualification is necessary to complete the analysis: the possibility that holder-in-duty-course status could matter in cases where the depositor was not itself the original payee because the check was negotiated to a merchant or a check-cashing service before it was deposited. But that possibility seems just as unlikely to offer great relevance to holder-in-duty-course status. First, as mentioned above, it is relatively uncommon for a check to be negotiated to a third party before deposit. 189 Second, the bulk of the checks cashed by check-cashing services apparently are payroll checks or government support checks that are extraordinarily unlikely to be subject to personal defenses. 190 Indeed, when they do cash personal checks, check-cashing services normally check with the payor bank in advance to diminish the risk of dishonor. 191 Finally, even in cases where such a check is dishonored, the value of the holder-in-duty-course defense will be limited to the rare case in which the party that interposes the defense has both (I) a valid defense 192 that can be defeated 193 by the check cashier’s holder-in-duty-course status, 194 and (II) sufficient assets to

cense trial courts in resolving ill-defined inquiries such as the propriety of piercing the corporate veil. See Robert B. Thompson, Piercing the Corporate Veil: An Empirical Study, 76 CORNELL L. REV. 1036 (1991) (reporting the results of such an inquiry).

189. See supra note 152 (reporting statistics indicating that commercial check-cashing services cash less than 0.25% of checks each year).

190. See CASKEY, supra note 152, at 55 ("[M]any check-cashing outlets cash only customers’ payroll or government assistance and entitlement checks.").

191. See id. at 55–56.

192. In some cases, holder-in-duty-course status will be irrelevant because the drawer will not interpose even a personal defense. See, e.g., Evers v. Money Masters, Inc., 417 S.E.2d 160, 161–62 (Ga. Ct. App. 1992) (enforcing check without suggesting that the drawer raised a personal defense).

193. In some cases, the party trying to enforce the check will face a defense that it cannot defeat even if it does have holder-in-duty-course status. See, e.g., Kovash v. McCluskey, 386 N.W.2d 32, 32–35 (N.D. 1986) (a holder in due course cannot prevail against a party that signed check only in a representative capacity); Columbus Checkers, Inc. v. Stiles, 565 N.E.2d 883, 885–87 (Ohio Ct. App. 1990) (a holder in due course cannot enforce a check issued in an illegal transaction); Check Cashing Place, Inc. v. Benefit Plan Admin., Inc., No. 87-1329, 1988 WL 23203, at *1–*2 (Wis. Ct. App. Jan. 15, 1988) (judgment noted at 421 N.W.2d 117 (Table)) (a holder in due course cannot prevail against a drawer that did not authorize execution of check).

194. Like banks, nonbanks that attempt to enforce checks sometimes lose because they are unable to establish holder-in-duty-course status. See, e.g., Alarcon v. Ferrari, 490 So. 2d 1047, 1048 (Fla. Dist. Ct. App. 1986) (denying holder-in-duty-course status because "under the circumstances, the plaintiffs herein should have been on notice as to the need for further inquiry regard-
make pursuit of that party worthwhile.195 My survey of reported decisions in this decade discovered only twelve such cases (fewer than 1.2 cases per year), only one of which was decided in the last three years.196 All things considered, it seems highly unlikely that any substantial number of those cases exists.

IV. PAYMENT SYSTEMS OF THE FUTURE: THE KING IS DEAD, LONG LIVE THE KING!

The final interment of the negotiable instrument need not result in any serious dislocation for the credit and payment systems in which negotiable instruments have been used. Rather, as this Article suggests, the movement away from negotiable instruments has occurred with so little dislocation that it has passed largely unnoticed by the affected academic community.

In the generally large-dollar world of credit systems, the passage already has been completed. Negotiability is gone, not only practically but also as a matter of form. For high-credit borrowers whose obligations are publicly traded, negotiability has given way to more effective systems that record the issue, transfer, and satisfaction of the obligations electronically. Home-mortgage notes—susceptible of public trading only through securitization—have moved more slowly, but even there systems for electronic transfer are

---

195. The generally poor financial condition of persons that use check-cashing services is well documented. See Caskey, supra note 152, at 73–78.

moving into place. 197 Finally, in contexts involving nonuniform obligations that are not suitable for trading, the negotiable instrument has passed away for the less definitive but nonetheless forceful reason that negotiability has so little to offer the parties that they are better off focusing their attentions on more direct devices to diminish the likelihood that the borrower will become recalcitrant after the transfer.

The forces of advancing financial sophistication move just as surely to remove negotiability from payment systems. The only context in which it retains significance even as a formal matter is in the retail transaction where the payor “pays” the payee by transferring a claim against a bank. 198 Even in that context it appears only in the checking system, not the functionally similar card-related systems. As Part III explains, however, technological pressures have stripped all of the practical effects of negotiability from the checking system.

It is only natural to close by asking what the passing of negotiability can tell us about the future. Two implications are obvious: one related to the practical mechanisms of payment systems, and the other to the legal aspects. As a practical matter, the uniformity with which technological and practical pressures push retail payment systems suggests to me that the current melange of diverse payment options will converge into systems that are substantially identical to the consumer, differing only in the identity of the third party that ultimately commits to pay the payee. Although the available systems currently differ significantly on such fundamental questions as how the financial institution becomes obligated to pay and when the payor loses its right to stop payment, it seems clear that the future will bring all systems to the same result—final payment by the payee will be substantially contemporaneous with the underlying transaction. That contemporaneous commitment to pay already occurs in transactions with credit and debit cards, 199 as well as in, some of the developing electronic-
money systems. The impracticalities of the current check-collection process suggest that the "float" that the checking system provides through deferred collection cannot survive. Indeed, I would expect that the only transactions in which the payee will not obtain a contemporaneous commitment from the financial institution will be those in which payment is made with cash or some cash substitute like a stored-value card that allows the payor itself to provide a reliable indicator that payment will be forthcoming.

Thus, although the consumer now sees numerous systems—bank-operated check and debit-card systems, network-operated credit-card systems, and developing electronic-money and stored-value card systems not necessarily affiliated with any financial institution—the lesson from the demise of negotiability is that all the systems will converge. None of those systems can survive if they ignore the technology that makes it practical to make payments more rapidly, more certainly, or more securely. Thus, any system that fails to adopt the best technological option will follow negotiability into extinction.

The passage of negotiability also has lessons for people who design the legal aspects of financial systems. Negotiability is an area in which legal academics have not served their constituencies well. As this Article demonstrates, negotiability is now almost purely a conceptual system: an intricate and elegant array of rules for resolving hypothetical situations that do not occur with any frequency in actual financial transactions. Yet, however severed from reality negotiability may be, legal academics continue not only to spend whole courses teaching it to their students (a waste of educational opportunity that is bad enough in itself), but also to use it as a tool for analyzing issues of significance in transactions that do occur.

To offer a single example, consider the discussion in drafts for the recently adopted Restatement of Mortgages of the validity of payments that a homeowner makes to the last known holder of its mortgage. The Reporters quite sensibly concluded that such payments should bind the actual holder of the note even if (unbeknownst to the homeowner) the actual holder is a

200. See id. (manuscript assign. 22, at 11-18, on file with author).
201. See id. at 1-11 (discussing stored-value card systems).
203. I thank Jim Rogers for a conversation out of which the following thoughts developed. For his analogous thoughts, see Rogers, Horseless Carriages, supra note 5, at 695-98, which discusses how the use of outmoded legal concepts obstructs clear thinking about policy issues concerning conflicting claims to ownership of securities.
third party that never receives the payment. That conclusion flies in the face of classic rules of negotiability, which use possession as the touchstone for enforceability and thus grant no credit for payments made to a party that is no longer in possession of the instrument. Working within the conceptual framework of negotiability, the Reporters were not content to justify that conclusion by reference to the obvious practicalities of the situation: it obviously makes more sense to require the servicer of a mortgage note to advise the homeowner where to send payments than it does to obligate the homeowner to investigate that question on a monthly basis. Instead, the Reporters felt compelled to present a forced and ultimately unpersuasive argument that the result called for by the practicalities of the situation could be reconciled with the rules for negotiability articulated in Article 3. The Reporters never mention that the rules of Article 3 have little or no applicability to the context in question because of the relative rarity of negotiable home-mortgage notes.

At the end, the goal of this Article, like much of my prior work, is to illustrate the importance of context. Legal academics do not add a lot of value to the financial system by attempting to fit twenty-first-century financial transactions into a system developed to facilitate pre–Industrial Revolution financial transactions. We would provide much more service if we attempted to understand the functions served by the systems that facilitate modern transactions and used that understanding to develop legal rules that enhance those systems in the contexts where they actually operate.

204. See Restatement (Third) of Property: Mortgages § 5.5 (Tentative Draft No. 5, 1996).
205. See U.C.C. § 3-602(a) (1991) (“[A]n instrument is paid to the extent payment is made to a person entitled to enforce the instrument.”). A party that has sold the instrument to a third party is no longer a person entitled to enforce the instrument. Thus, payments made to such a party do not constitute payments on the instrument.
206. See Restatement (Third) of Property: Mortgages § 5.5 cmt. 9 (Tentative Draft No. 5, 1996) (“In theory the mortgagor could discover the transfer by demanding that the mortgagee exhibit the evidence of the obligation (typically a promissory note) before making each payment, but such a demand would be extremely cumbersome for both mortgagor and mortgagee, and is an entirely unrealistic expectation.”).
207. See id. Reporters’ note. I understand from conversations with Steve Harris that discussion on the floor of the American Law Institute strongly criticized the Reporters’ efforts to accommodate their result to Article 3, and that some revision of that discussion is anticipated before final publication of the Restatement.